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Abstracts

OP-1

R1 Rectal Cancer: An Analysis of Survival

N. M. Ormsby [1],, H. Joshi 1, S. Kelly [2], K. Whitmarsh [3], M. Chadwick [1], A. Samad [1], D. Maitra [1], M. Scott [1], R. Rajaganeshan*[1]

[1]Colorectal Surgery,[2]Department of Histopathology, [3]Department of Oncology, St Helens and Knowsley TeachingHospitals NHS Foundation Trust, Liverpool, United Kingdom

Background: Evidence has shown that a positive resection margin (R1) is a key determinant of subsequent local recurrence and a poor prognostic factor in rectal cancer. The aim of this study was to evaluate the outcomes of patients with R1 resection of rectal cancer. **Method:** Retrospective study of all patients operatively managed within our institution between April 2008-April 2013 for rectal cancer. Baseline demographics and multiple outcome measures recorded. Overall survival(OS), disease free survival(DFS) and recurrence were the primary outcome measures. **Results:** Overall there were 306 primary rectal cancers. 76% were grade T3/4 tumours. OS of 30 months.R1 rate was 16% (48 patients). 31 patients underwent APR, and 17 AR. 32 patients underwent neo-adjuvant treatment. In responders, overall survival was 55 months, with no EMV. In non-responders OS was 29 months, with EMV in 48%. In patients who did not receive NAC, OS was 23 months, with EMV in 74%. EMV is the strongest predictor for poor survival following R1 (p=0. 001). We found a correlation between number of positive nodes, and OS/DFS(p=0. 004). **Conclusion:** R1 rectal cancer is not an automatic death sentence. We have demonstrated relatively positive OS in this cohort. In particular, those who respond to NAC have the potential for very good OS and DFS, with the potential for remission. We have shown EMV to be the strongest predictor for poor survival. Perhaps these patients could benefit from intraoperative frozen section histo-pathological analysis and intraoperative radiotherapy to improve survival and reduce recurrence rate.

OP-2

Plasma microRNA to monitor treatment response in patients with colorectal neoplasia

J. Carter MBChB, J. Rice MD, M. McClain BS, R. Farmer MD, S. Galandiuk MD

Hiram C. Polk Jr. MD Department of Surgery, University of Louisville School of Medicine, Price Institute of Surgical Research and the Section of Colorectal Surgery, Louisville, KY, USA

Background and Aims: MicroRNAs (miRNAs) are small, non-protein-encoding RNAs that play an important role in oncogenesis by regulating gene expression. Plasma miRNAs are promising biomarkers for colorectal neoplasia. We believe miRNA can be used to prospectively monitor patients with colorectal advanced adenoma (CAA) as well as colorectal cancer (CRC). The ideal plasma-based biomarkers for neoplasia would revert to normal levels after treatment to enable prospective therapy monitoring. **Methods:** Plasma was isolated from 5 patients with CAA >0. 6cm, before and after polypectomy, and 4 patients with CRC without metastasis, before and after surgery.Each sample was screened for 380 plasma-miRNAs using microfluidic array technology (Applied BioSystems®) and pre and post-treatment miRNA expression was compared. Statistical analysis was performed using SPSS® and dysregulated miRNAs were identified. **Results:** In CAA, 269/380 miRNA were consistently expressed in pre- and post-treatment samples, as compared to 276/380 miRNA in CRC patients. Eighty-nine percent of these miRNA were present in both CAA and CRC samples. Notably several miRNA showed significant changes in expression in post-treatment compared to pre-treatment samples. Of these, miRNA-302a and miRNA-490 are of particular interest. They have been shown to function as tumour suppressor and inhibitors of cell proliferation in cancer. In line with this, expression of these miRNA were higher in post-treatment samples. **Conclusions:** Plasma miRNA may provide a non-invasive method of determining response to treatment. This has significant implications particularly in the era of watchful waiting following neoadjuvant therapy for rectal cancer. Clearly much more work in field is needed.

OP-3

Neutrophil Extracellular Trap Formation is Increased in Patients with Colorectal Cancer In-vivo.

Richardson[1,2], Charles Hendrickse[1], Fang Gao-Smith[2], David Thickett[2]

[1]Department of General Surgery, Heart of England NHS Foundation Trust, Birmingham, United Kingdom
[2]Centre of Experimental Medicine, University of Birmingham, Birmingham, United Kingdom

Background: Emerging evidence suggests that neutrophils, which function as the first line of defence during infections and have been shown to have a multitude of additional roles in immunity, facilitate cancer progression. Neutrophil Extracellular Traps (NETs) are extra-cellular neutrophil derived DNA webs that trap and kill invading pathogens. NETs have been implicated in the promotion of cancer progression and to the development of metastases by sequestering circulating tumour cells. Although NETs have

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been detected in infection their role in-vivo is unclear. **Objectives:** This study was performed to evaluate any differences in NET formation in patients with Colorectal Cancer compared to healthy individuals. **Patients and Methods:** Systemic neutrophils were isolated from consecutive consenting patients with a confirmed diagnosis of Colorectal Cancer and from consenting age-matched Healthy Controls (in the absence of infection). NETs were measured in response to No-Stimulant, IL-8, LPS and f-MLP by fluorescence video-microscopy. **Results:** 41 patients with a confirmed diagnosis of Colorectal Cancer were evaluated (mean 68. 6years, 95%CI 65. 2–71. 5) and compared to 20 Healthy Controls (mean 69. 9years, 95%CI 66. 3-73. 5).Increases in NET formation were demonstrated in patients with Colorectal Cancer compared with Healthy Controls: No-Stimulant (12,440AFU vs. 9,251AFU, p=0. 0264), IL-8 (13,210AFU vs. 8,620AFU, p=0. 0014), LPS (13,850AFU vs. 11,650AFU, p=0. 0275), f-MLP (12,810AFU vs. 10,790AFU, p=0. 3293). **Conclusions:** Significant increases in NET formation have been demonstrated in patients with Colorectal Cancer. These findings suggest that NETs are implicated in cancer development and progression. NETs could represent potential therapeutic targets and merit further investigation in the context of Colorectal Cancer.

OP-4

Characterisation of Systemic Neutrophil Function in Patients Undergoing Colorectal Cancer Resection

J. Richardson[1,2], C. Hendrickse[1], F. Gao-Smith[2], D. Thickett[2]

[1]Department of General Surgery, Heart of England NHS Foundation Trust, Birmingham, United Kingdom
[2]Centre of Experimental Medicine, University of Birmingham, Birmingham, United Kingdom

Background: Surgical resection is fundamental in achieving cure in patients with Colorectal Cancer. The generation and maintenance of a systemic inflammatory response, with subsequent compromise of the anti-tumour immune response, has been associated with poor outcome. Neutrophils have been implicated in the prognosis of such patients, but little is known about their functional response under pathological conditions. **Objectives:** This study was designed to characterise neutrophil function in the peri-operative period. **Patients and Methods:** Systemic neutrophils were isolated from consecutive consenting patients undergoing elective Colorectal Cancer Resection on Day-0 (pre-op) and Day-1 (post-op). Neutrophil Extracellular Traps (NETs) were measured by fluorescence video-microscopy. Neutrophil Apoptosis and Phagocytosis were measured by fluorescence activated cell sorting. **Results:** 41 patients undergoing Colorectal Cancer Resection were evaluated. A significant reduction in NET formation was observed from Day-0 to Day-1 in response to: No-stimulant (12,440AFU vs. 8683AFU, p=0. 0005), IL-8 (13,210AFU vs. 9,589AFU, p=0. 0002), LPS (13,850AFU vs. 9,661AFU, p<0. 0001), f-MLP (12,810AFU vs. 8,826AFU, p<0. 0001). At 4-hours there were no significant differences in neutrophil apoptosis from Day-0 to Day-1. At 24-hours significant differences favouring cell survival were demonstrated: Alive (16. 79% vs. 36. 77%, p<0. 0001), Early Apoptosis (67. 17% vs. 52. 33%, p<0. 001), Late Apoptosis (15. 52% vs. 10. 03%, p=0. 0278), Necrosis (0. 52% vs. 0. 88%, p=0. 0135). There were demonstrable, but non-significant, increases in neutrophil phagocytosis in response to *Staph. Aureus* and *E. Coli* from Day-0 to Day-1. **Conclusions:** Colorectal Cancer Resection is associated with significant changes in systemic neutrophil function. Increased understanding may allow clinicians to predict complications, survival and explore therapeutic interventions to modify the cellular innate immune response.

OP-5

MicroRNA-137 is inversely correlated with DCLK1, a potential marker for colon cancer stem cells

M. Sakaguchi, S. Hisamori, N. Oshima, Y. Sakai

Department of Surgery, Kyoto University

Background: Cancer stem cells (CSCs) are considered to be a potential therapeutic target. However, most of CSC markers are also expressed in normal stem cells (NSCs). DCLK1, which was reported to distinguish between tumor and normal stem cells in the small intestine, has been proposed to be a distinct marker for colon CSCs. Meanwhile, microRNAs are important regulators of CSCs. We aimed to uncover the expression pattern of DCLK1 in colon cancer and normal colon and identify microRNAs that potentially target DCLK1. **Material and Methods:** Human colon cancer and normal colon specimens dissociated into single cells were sorted by flow cytometry to concentrate the stem cell ($EpCAM^+/CD66a^-/CD44^+$) population and the differentiated ($EpCAM^+/CD66a^+/CD44^-$) population, respectively. The expression patterns of 384 microRNAs and DCLK1 in colon CSCs and NSCs were analyzed using qRT-PCR. Luciferase assay and Western blotting were performed to evaluate the relationship between the microRNA and DCLK1. Lentiviral expression system with SW480 was designed to investigate the phenotype of the microRNA. **Results:** The mRNA expression of DCLK1 was significantly upregulated in colon CSCs whereas microRNA-137 was highly expressed in colon NSCs. We confirmed that the activity of the luciferase gene linked to the 3'UTR of DCLK1 was decreased and that the protein level of DCLK1 was suppressed in the microRNA-137 transduced SW480 cells. Tumor growth in the microRNA-137 transduced SW480 cell-injected mice was markedly suppressed. **Conclusions:** These results suggest that microRNA-137 has clearly the potential to suppress a portion of the colon CSC properties by inhibiting the expression of DCLK1.

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OP-6

Morphine and cytotoxic chemotherapeutics: an unlikely ally in the fight against cancer

Dr. D. Brinkman[1,2], Dr. T O'Donovan[2], Dr. S. McKenna[2], Dr. J. H. Wang[1], Prof. H. P. Redmond[1].

[1]Department of Surgery, Cork University Hospital, Cork.
[2]Cork Cancer Research Centre, University College Cork, Cork.

Background: Morphine is used regularly for pain management. Its action on the growth of various cancers has been explored with varying results. 5-fluorouracil (5-FU) and cisplatin are commonly used in chemotherapeutic regimens for colon cancer, and can often be given with morphine. Autophagy is a cell survival mechanism that can occur when stress is applied. By digesting non-essential organelles, the cell can continue to fuel essential processes. We wished to investigate the effect of the combination of morphine and cytotoxics on tumour growth and determine whether this effect was due to a change in autophagic flux. **Methods**: Human colon cancer cell lines (SW480and SW620, primary and metastatic respectively) were treated with varying doses of 5-FU, cisplatin and morphine alone and a combination for various time points in vitro. Various parameters were assessed: morphology by cytospin, apoptosis by active caspase-3 detection, autophagosome levels by 'Cyto-ID' assay and recovery from treatment by a modified clonogenic assay. Paired samples t-tests were used to determine statistical significance. P-values <0.05 were considered significant. **Results**: Morphine alone had little effect compared to control. Chemotherapeutics alone predictably increased apoptosis and autophagosome levels and reduced the colony count. Chemotherapeutics and morphine in combination had a significantly increased effect in suppressing tumour colony growth/recovery (p<0. 05). Together, they suppressed autophagosome levels and apoptosis in both cell lines. **Conclusion**: Morphine in combination with 5FU and cisplatin potentiates the effect of these chemotherapeutic agents. Further study is required to confirm the effect is due to the suppressed survival mechanism, autophagy.

OP-7

Optimisation of a Negative Depletion Approach for CTC Detection which does not rely on the Persistence of an Epithelial Phenotype

C. Smith[a], N. Bryan[b], D. Bond[c], C. Stanley[c] and J. A. Hunt[a]

[a]Clinical Engineering (UKCTE), Institute of Ageing and Chronic Disease, Duncan Building, Daulby Street, Liverpool, L69 3GA
[b]Pharmacy and Biomedical Science, Liverpool John Moore's University, James Parsons Building, Byrom Street, Liverpool, UK, L3 3AF
[c]ProKyma Technologies Ltd,Liverpool Science Park, 131 Mount Pleasant, Liverpool, Merseyside, L3 5TF

Background: Circulating tumour cells (CTC's) in the blood of cancer patients represents a minimally invasive target for the detection of metastasis along with a dynamic tool for accessing the effectiveness during and post treatment. Current CTC isolation technologies focus on the positive depletion of CTC's from whole blood by using antibodies specific to EPCAM antigens expressed on the surface of CTC's. However positive depletion risks leaving behind CTC cells that do not directly interact with the enrichment device from being antigenically invisible. This is a particular issue when we consider the EMT paradigm of tumour metastasis and the associated transience of the epithelial phenotype during distant tumour migration. 5 or more EPCAM expressing CTC/7.5ml of blood is linked to negative clinical outcomes. We propose an alternative negative depletion procedure that removes white blood cells; leaving CTC's untouched for genomic analysis, without being influenced by their surface antigenicity.**Methods:** In the first stage of these investigations anti human polyclonal antibodies against CD3, CD14, and 2 anti CD45 isoforms (CD45-1&CD-45-2) antibodies were isolated from sheep antisera and bound to slides to create a prototype cell binding surface.The kinetics of this cell binding surface was investigated in conjunction followed by the ability and specificity of the surface to bind relevant competitor populations of cells in the study of CTCs. **Results:**CD3, CD14 and CD45-2 effectively bound WBC's to slides at a concentration of 10µg, comparatively 20µg of CD45-1 bound approximately half the number of cells captured by the other 3 antibodies. Cocktails of our 4 chosen antibodies proved to have varying degrees of greater WBC binding compared to individual antibodies alone. A combination of all 4 antibodies at 10µg of antibody each had the greatest apparent binding efficiency of cells.**Conclusion:**Initial results indicate that WBC's are most effectively bound to slides by an antibody cocktail; further investigation is still required to quantify the best concentration of each antibody to obtain complete WBC binding and translate the findings from the findings deduced from this model system into a whole blood model.

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OP-8

Treatment with lithium reduce ischemia-reperfusion injury in steatotic liver in rats via modulation of autophagy

C. Kan[1,4], A. Liu[2], O. Dirsch[3], U. Dahmen[1]

[1] Jena University Hospital, Department of General, Visceral and Vascular Surgery, Jena, Germany
[2] Tongji Hospital, Tongji Medical College, Huazhong University of Science and Technology, Experimental Medicine Center, Wuhan, China
[1] Jena University Hospital, Institute of Pathology, Jena, Germany
[1]Wuhan Central Hospital, Department of Obstetrics and Gynecology, Wuhan, China

Background: Lithium has been widely used in the treatment of mental illness. It acts on many stress and survival pathways especially on autophagy pathways. Recent studies showed that treatment with lithium can reduce ischemia-reperfusion (I/R) injury in liver via an upregulation of autophagy. In this study, we aimed to evaluate the effects of lithium in selective warm I/R model of steatotic liver in rats. **Methods:** Moderate hepatic steatosis was induced in male Lewis rats by feeding a high fat and methionine-choline reduced diet for 14 days. Treatment groups received lithium (2 mmol/kg/day, 3 days before and after ischemia). Selective warm ischemia/ reperfusion was induced by clamping the hepatoduodenal ligament of the left lateral and median lobe for 60min. Animals were observed for 30min, 6h, 24h and 48h (n=6/group). Read-out parameters consisted of serum liver enzymes level, HMGB1 translocation and release, inflammatory cytokines level, liver neutrophil infiltration, MAPK, Caspase 3 and LC3 expression level. **Results:** Treatment with lithium protected against I/R injury in steatotic liver, as indicated by lower serum aminotransferase levels, as well as higher MAPK pathway activation (higher p-MAPK expression level), lower inflammatory response (less neutrophil infiltration), lower intracellular stress (less HMGB1 translocation), less apoptosis (lower Caspase 3 expression level) and more autophagy (higher LC3b expression level). **Conclusion:** On the basis of these data, we conclude that treatment with lithium may be a simple way for protecting against I/R injury in steatotic liver. The mechanism of action of lithium appears to involve its ability to activated MAPK pathways, induce autophagy, as well as reduces inflammation, reduces I/R-induced intracellular stress, and reduces apoptosis.

OP-9

Visualization of liver regeneration after 70%PH in mice

C. Xie[1], W. Wei[1], A. Schenk[3], O. Schwen[3], S. Zafarnia[2], U. Dahmen[1]

1. Jena University Hospital, Department of General, Visceral and Vascular Surgery, Germany
2. RWTH Aachen University, Germany
3. Fraunhofer Institute for Medical Image Computing MEVIS, Germany

Background: Little is known about the kinetics of vascular regeneration after liver resection in mice. The aim of this study was to establish a method to visualize vascular regeneration by injecting a contrast agent and subsequent CT-imaging of the explanted regenerating mouse liver. **Methods: Specimen preparation:** (1) Portal venous system: Microfil was perfused into portal vein after heparinization via 26G catheter. (2) Hepatic venous system: inferior vena cava was cannulated with another 26G catheter. Microfil was perfused into hepatic vein after the branches of IVC were ligated and suprahepatic IVC was clamped. **Micro-CT scanning:** as described by Josef Ehling. **Results:** Comparing the Micro-CT images on POD2 with those obtained immediately after PH, the vessel diameter doubled by POD2. In contrast, the number of third order branchesfrom both portal and hepatic venous tree did increase by POD2, but even more by POD7, leading to an increased vascular density. **Conclusion:** CT imaging of explanted livers after microfil contrasting the vascular tree represents a useful tool for visualizing vascular regeneration after PH. Vascular growth consists of enlarging the diameter of the vascular stem with its main branches and outgrowth of additional terminal branches in both the portal venous and hepatic venous tree.

OP-10

Cytoplasmic HMGB1 interacts with partner proteins resulting in hepatocellular damage in warm ischemia/reperfusion injury

T. Zhang, O. Dirsch, U. Dahmen

Department of general, visceral and vascular surgery, University hospital, Jena

Background: HMGB1 plays an essential role in hepatic WI/R injury and the subsequent inflammatory reaction. Previous studies confirmed that HMGB1 is located in nucleus in normal liver tissue and translocated to cytoplasm during WI/R injury. Then HMGB1 is released into circulation, and extracellular HMGB1 induces excretion of various pro-inflammatory cytokines and aggravates the inflammatory

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progress. The function of HMGB1 in cytoplasm is still unknown. We hypothesize that cytoplasmic HMGB1 interacts with partner proteins involved in hepatic WI/R injury. The aim of this study is to (i) identify the partner proteins of cytoplasmic HMGB1 in hepatic WI/R injury, and (ii) investigate the roles of cytoplasmic HMGB1-partner protein complex in the damage response of hepatocytes. **Material and Method:** 6h WI/R and normal liver tissues from Lewis rats were subjected to cytoplasmic protein isolation. Co-immunoprecipitation (co-IP) was performed using cytoplasmic extractions to enrich of HMGB1 protein complexes. Two anti-HMGB1 antibodies, which target different immunogens, and anti-beta tubulin as control were used in co-IP. To separate and identify the immunoprecipitated proteins in co-IP elutions, two-dimensional electrophoresis (2-DE), silver stain and Obitrap mass spectrometry (MS) detection were performed. **Result:** 2-DE using elutions prepared with samples from normal versus WI/R liver tissues resulted in different protein distribution patterns. Combined MS detection and 2-DE image analysis, 4 candidate proteins were identified. **Conclusion:** Comparable and reproducible 2-DE results suggest that specific partner proteins interact with HMGB1 in cytoplasm during hepatic WI/R injury. MS detection results indicate several candidates to be confirmed and further studied.

OP-11

Effect of Portal Vein Ligation on Hepatic Lobar Function in a Rat Model

A. Fülöp,[1]; A. Budai[1]; D. Tihanyi[1]; Z. Turóczi[1]; Z. Czigány[1]; G. Lotz[2]; L. Harsányi[1]; A. Szijártó[1]

[1]1st Department of Surgery; Semmelweis University; Budapest; Hungary
[2]2nd Department of Pathology; Semmelweis University; Budapest; Hungary

Background and Aims: Selective portal vein ligation (PVL) induced atrophy of portal deprived liver lobes and compensatory hypertrophy of contralateral liver segments. Although, the PVL induced morphological alterations is well-documented, the parallel changes in liver function is still the subject of controversy. Therefore, the aim of the present study was to assess the effect of PVL on hepatic lobar function. **Material and Methods:** In male Wistar rats (n=44) 80% PVL was performed. Before, as well as 1-,2-,3-,5 and 7 days after the operation, circulatory, morphological, and functional (laboratory blood test; hepatic bile flow; plasma disappearance rate of indocyanine-green (PDR); biliary indocyanine-green excretion) alterations were evaluated. **Results:** PVL induced the well-know morphological (atrophy-hypertrophy complex) and circulatory alterations. Although serum albumin-, bilirubin levels and total hepatic bile flow did not change significantly after the operation, the PDR and biliary indocyanine-green excretion indicated a temporary impairment in total liver function with the lowest value on the 2nd day. The bile production and biliary indocyanine-green excretion of ligated lobes rapidly decreased after the operation and remained persistently suppressed, while the secretory function of non-ligated lobes - after a temporary decline - increased in a higher extent than would be expected according to the volumetric alterations. **Conclusions:** Our results indicates that the PVL induced regenerative process is initially promoted at the expense of liver function. After the peak of cell division, however, an overcompensatory response occurs in the non-ligated lobes, during which the lobar liver function increases more dramatically than the liver weight.

OP-12

Inhaled methane limits experimental hepatic reperfusion injury by the modulation of mitochondrial electron transport chain

G. Strifler[1], Eszter Tuboly[1], Edit Szél[2], Enikő Kaszonyi[1], Cao Chun[1], József Kaszaki[1], András Mészáros[1], Petra Hartmann[1], Mihály Boros[1]

[1]Institute of Surgical Research, University of Szeged, Szeged, Hungary
[2]Department of Dermatology and Allergology, University of Szeged, Szeged, Hungary

Background and Aims: As primary sources of intracellular reactive oxygen species (ROS) generation, we aimed at studying the effects of methane (CH_4) inhalation on the respiratory activity and ROS production of mitochondria in partial hepatic ischemia-reperfusion (I/R). **Material and Methods:** 60 min I/R of left liver lobes was induced in the presence or absence of CH_4 inhalation with normoxic artificial air with 2. 2% CH_4, 10 min prior to the end of ischemia and during the 60 min reperfusion.For measuring the function of mitochondria, samples were subjected to high-resolution respirometry (OROBOROS). After steady-state flux, the rate of respiration was determined by adding complex I inhibitor rotenon with succinate and ADP. Cytochrome-C release and whole blood ROS production were also measured. Apoptotic liver cells were detected with TUNEL staining while LSCM was applied for the in vivo observation in the liver tissue. **Results:** Significantly decreased complex II basal respiration was found in the IR group at t=-5 and lower respiratory capacity (~60%) at t=-5 and t=5 min. CH_4 inhalation preserved maximal respiratory capacity at the end of ischemic period (t=-5) and significantly improved the basal respiration during the first 30 min of reperfusion. IR-induced cytochrome-C release together with ROS production and hepatocyte apoptosis were also significantly reduced. **Conclusions:** IR injury was accompanied by the damage of the inner mitochondrial membrane as evidenced by the increased cytochrome-C release, and the dysfunction of mitochondrial electron transport leading to elevated ROS production. These

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damages could effectively be modified by a normoxic methane inhalation protocol.
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OP-13

Is There Any Benefit Of Neuromonitoring During Descending And Thoracoabdominal Aortic Aneurysm Repair?

Ibrahim Mahmood[1], Matthew Fok[2], Fatemeh Jafarzadeh[1], Elaina Sancho[1], David Abello[1], Lara Rimmer[3], Callum Howard[1], Mohamad Bashir[3]

[1]Liverpool Heartand Chest Hospital, Thoracic Aortic Aneurysm Service, Thomas Drive, L14 3PE, UK.
[2]Liverpool John Moores University, Liverpool, L3 5UA
[3]University of Liverpool, Liverpool, L69 3BX

Background: Paraplegia remains the most feared and a devastating complication following descending and thoracoabdominal aneurysm operative repair (DTA and TAAAR). Neuromonitoring, particularly use of motor evoked potentials (MEPs), for this surgery has gained popularity. However, ambiguity remains regarding its use and benefit. We systematically reviewed the literatureto assess the benefit and applicability of neuromonitoring in DTA and TAAAR. **Methods**: Electronic searches were performed onfour major databases from inception until February 2014 to identify relevant studies. Eligibility decisions, method quality, data extraction, and analysis were performed according to predefined clinical criteria and endpoints. **Results:** Amongst the studies matching our inclusion criteria, 1297 patients had MEP monitoring during DTA and TAAAR. In-hospital mortality was low (6. 9% ± 3. 6). Immediate neurological deficit was low (3. 5% ± 2. 6). In one third of patients (30. 4% ± 14. 2) the MEPs dropped below threshold,which was30. 4% and 29.4% with threshold levels of 75% and 50% respectively. A range of surgical techniques were applied following reduction in MEPs. The majority of patients where MEPs dropped and remained below threshold suffered immediate permanent neurological deficit (92. 0% ± 23. 6). Somatosensory Evoked Potentials (SSEPs) were reported in one third of papers with little association between loss of SSEPs and permanent neurological deficit (16. 7% ± 28. 9). **Conclusions**: We demonstrate MEPs are useful at predicting paraplegia in patients who lose their MEPs and do not regain them intra-operatively. To date, there is no consensus regarding the applicability and use of MEPs. Current evidence does not mandate or support MEP use.

OP-14

Aortic arch debranching and thoracic endovascular repair for treating aortic arch pathologies

F. Eforakopoulos [1], Ch. Kalogeropoulou [2], P Zambakis [2], E. Koletsis [1], C. Prokakis [1], N Charoulis [1], A. Sambalioti [3], F Fligou [3], Ch. Stroubos [1], P Papadopoulos [1], P. Alexopoulos [1], M. Margaritis [1], A Kizilis [1], D Dougenis [1].

Departments of Cardiothoracic Surgery[1], Radiology[2],and Anesthesiology and Intensive Care Medicine[3]. Patras' University School of Medicine, Patras, Greece.

Background: Thoracic endovascular aortic repair (TEVAR) is part of the Cardiothoracic Surgeon's armamentarium to treat acute and chronic thoracic aortic pathologies. **Objectives:** Our aim was to evaluate the efficacy ofaortic arch debranching or re-rooting (AAR) and TEVAR as an alternative method to conventional aortic surgery in patients with multisegmental thoracic aortic pathology, who would have otherwise required an extensive open, probably two step conventional surgical approach. **Material/Patientsand Methods**: Between 12/2005 and 1/2014, 37 TEVAR (Gore36, Jotec/1) patients and procedures were performed. Among them, there were 11 pts (8M, 3F, mean age 66,2), who requiredAAR mainly for degenerative aneurysms/7, post traumatic pseudoaneurysms/2 and acute dissection/2. For stent introduction the femoral artery/5, iliac/1, lower thoracic aorta/1 and ascending aorta/4 were used. Landing zones were Z0/3,Z1/4, Z2/4. Spinal fluid drainage was electively used in 3. AAR procedures performed were: Atypical/2 typical/1 Bavaria Type A, carotid-carotid bypass/4, carotid-subclavian/7. **Results:** There were no deaths, no leaks and no spinal cord ischemia. However, there was a right hemiplegia, resolved after aorto-left carotid bypass and a temporal left hand ischemia. In a mean F/U of 3.8 years, no other events were noted. **Conclusion**: AAR hybrid aortic arch replacementis a safe treatment modality especially in elderly and compromised patients. Endoleaks, as well as brain and spinal cord complications are acceptable.

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OP-15

Could Cerebrospinal Fluid Biomarkers Offer Better Predictive Value For Spinal Cord Ischaemia Than Current Neuromonitoring Techniques During Thoracocabdominal Aortic Aneurysm Repair – A Systematic Review

Dr Matthew Fok[1], Lara Rimmer[2], Holly Fraser[2], Tom Kennedy[2],DrMohamad Bashir[2]

[1]Liverpool John Moores University, Liverpool, L3 5UA
[2]University of Liverpool, Liverpool, L69 3GE

Background: Thoraco-abdominal aortic aneurysm repair (TAAAR) is an extensive and major operation, which comprises blood supply to brain and spinal cord and consequently, is associated with high risk of spinal cord injury (SCI). Cerebrospinal fluid (CSF) drainage is a technique that has significantly reduced the incidence of SCI. We believe CSF holds clinically vital information of impending SCI and our current research is investigating this. We present results of a systematic review to assess the literature on CSF biomarkers during TAAAR and its relation to SCI. **Methods:** Major medical databases were searched to identify papers related to CSF biomarkers measured during TAAAR. The articles selected were chosen by two reviewers and relevant data extracted and validated by a further reviewer. **Results:** In total 15 papers reported measurements of CSF biomarkers during TAAAR which represented 265 patients. CSF biomarkers measured included S100β, neuro-specific endolase (NSE), lactate, Glial fibrillary acidic protein A (GFPa), Tau, heat shock protein 70 and 27 (HSP70, HSP27), and pro-inflammatory cytokines. Lactate and S100β were reported the most, but did not correlate with SCI, which was also the case with NSE and TAU. GFPa showed significant CSF level rises, both intra and post-operative in patients who suffered SCI and warrants further investigation, similar results were seen with HSP70, HSP27 and IL-8. **Conclusions:** Although there is significant interest there still remains a significant lack of studies investigating CSF biomarkers during TAAAR to detect SCI. However, potential candidates include GFPa, HSP70 and 27, our future studies will utilise these biomarkers.

OP-16

A systematic review of outcomes of composite mechanical root replacement compared to biological root replacement

Haroon Mahmood[1], Melissa Bautista[1],Ali Abdelnour[2], Matthew Fok[3], Dr Mohamad Bashir[1]

[1]University of Liverpool, Liverpool L69 3GE,
[2]Liverpool Heart and Chest Hospital, Thomas Drive, Liverpool, L14 3PE
[3]Liverpool John Moores University, Liverpool, L3 5UA

Background: Aortic root dilation with aortic valve disease can potentially progress to rupture or dissection which subjects the patient to a high risk of mortality. Composite root replacement is the procedure of choice for aortic root replacement, achieved with either a biological or mechanical valve. This systematic review analyses the published literature of biological and mechanical composite root replacements in order to compare the postoperative surgical Outcomes. **Methods:** Major medical databases were searched in order to identify papers where composite root replacement was performed. The articles selected were chosen by one reviewer and the relevant data was then extracted. **Results:** We identified 8 studies that conformed to our inclusion criteria and incorporated 3434patients (2662 mechanical and 1442 biological). In hospital mortality was higher but non-significant in the mechanical group (3. 7% vs 4. 0% respectively). Mechanical composite root was not associated with a significant increased risk of perioperative bleeding (RR = 0. 97, p<0. 21). There was no significant difference in; endocarditis, in-hospital or late stroke,1 year mortality, 5 year mortality, weighted reoperation rates, mean cardiopulmonary or aortic cross clamp time. **Conclusion:** Mechanical composite root replacement is associated with a significant increased risk of perioperative bleeding and non-significant higher in-hospital mortality when compared to biological composite root replacement.

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OP-17

A Systematic Review of Valve-sparing Aortic Root Replacement Compared to Composite Replacement

Maxwell Knipe[1], Mohammad Ahmad[1], James Kimptom[2], Andrea Furnari[2], Mr Ali Abdelnour[2],Dr Matthew Fok[2], Dr Mohamad Bashir[2]

[1]School of Medicine, University of Liverpool, Cedar House, Ashton Street, Liverpool L69 3GE
[2]Liverpool Heart and Chest Hospital, Thomas Drive, Liverpool, L14 3PE

Background: Aortic root dilation represents a potentially life threatening cardiovascular disease. Composite root replacement was the original gold standard for aortic root replacement surgery. Over the past two decades however there has been a movement towards valve-sparing techniques preserving the native aortic valve. This aims to avoid prosthetic valve complications and maintain native valve haemodynamic benefits. **Methods:** A systematic review was carried out on electronic databases to identify all relevant papers. Articles were excluded if they contained less than 50 patients, or were entirely Marfan's or paediatric populations. **Results:** A total of 13 comparative papers were identified encompassing 2123 patients (656 valve-sparing and 1467 composite). Average age 57.3, male 67.3%, mean follow-up time 4. 6 years, Marfans 10. 6%. Perioperative bleeding was significantly higher in mechanical composite group compared to the biological composite and valve-sparing groups (9. 8% ± 6. 4 *vs* 4. 4% ±6. 2 *vs* 3. 3% ± 4. 2 respectively, p < 0. 01). In-hospital mortality was low and non-significant between all groups. Only one study reported long-term follow up. Reoperation rates were higher in the valve sparing group compared to the composite group (6. 7% vs 2. 8%, p <0. 001). **Conclusions:** Little difference was found in early post-operative outcomes of the two techniques. Similar hospital mortality rates indicate similar safety profiles. The only notable difference was the association of mechanical composite valves with an increased post-operative bleeding risk. Further research is needed to compare the long term outcomes to see whether they diverge, particularly in terms of reoperation rates.

OP-18

National outcomes of thoracic aortic aneurysm repair in Marfan syndrome patients

M Bashir[1],MAhmad[1], M Shaw[2], GL Hickey[3], S Grant[4], M Fok[2], B Bridgewater[5], A Oo[2]

[1]School of Medicine, University of Liverpool, Cedar House, Ashton Street, Liverpool L69 3GE
[2]Liverpool Heartand Chest Hospital, L14 3PE, UK
[3]Department of Epidemiology and Population Health, University of Liverpool, L69 3BX, UK
[4]Institute of Cardiovascular Sciences, University of Manchester, Manchester, M23 9LT, UK
[5]University Hospitals of South Manchester, Manchester, M23 9LT, UK

Objective: To identify the UK outcomes of aortic aneurysm repair in Marfan patients. **Methods:** Between April 2007 and March 2013, 354 patients with Marfan syndrome were identified from NICOR database undergoing aortic surgery. We have examined the pre-operative and operative characteristics of these patients along with in-hospital outcomes and follow up survival based on type of operation. **Results:** Marfan syndrome accounted for 3. 6% of the total patients recorded by NICOR as undergoing aortic surgery.Mean age was 40 years (SD = 134) and 31. 6% were female. 18. 6% of patients were treated non-electively. 70. 4% of patients underwent aortic root surgery, 16. 4% on the ascending aorta, 3.8% on the aortic arch, 4.7% on the descending arch and 4.7% on the abdominal aorta.59. 6% of patients had a concomitant valve procedure. 8. 5% of patients had a reoperation for bleeding, 3. 4% of patients suffered a neurological event, in-hospital mortality was recorded in 4. 5% of patients.Follow-up mortality at 1 year was 4. 5% in patients who had an operation on the root +/- ascending root aortic segment, 27. 8% in arch segment patients, 22. 2% in descending segment patients and 18. 8% in abdominal segment patients.**Conclusion:** The outcomes of aortic surgery in Marfan patients in the UK is favourable, however, there was an increased mortality at 1 year amongst patients who underwent surgery of arch, descending and abdominal segments. This area requires further segments.

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OP-19

Sutureless aortic valve replacement: Early clinical and echocardiographic results

K. Ahmadov[1], P. O. Myers[1], S. Karaca[1], T. Syburra[1], S. Noble[2], H. Muller[2], M. Licker[3], A. Kalangos[1], M. Cikirikcioglu[1]

Division of Cardiovascular Surgery, [2]Division of Cardiology and [3]Department of Anaesthesiology, University Hospitals and Medical Faculty of Geneva, Switzerland

Background: Although technically feasible, minimally invasive aortic valve replacement hasn't been universally adopted.New sutureless aortic valves aim to simplify valve replacement, potentially making minimally invasive approaches more surgeon friendly.The aim of this study is to review the early results of our sutureless aortic valve replacement program and compare them with conventional aortic valve replacement. **Methods:** Demographic and perioperative parameters of the patients who underwent aortic valve replacement during the last year by using sutureless bioprosthesis - Edwards Intuity Elite (Group I,n=6) or conventional biological valves - CE Perimount Magna Ease (Group II,n=6) are compared. Non-parametric values are reported as median (min and max).Mann-Whitney U test was used to compare non-parametric values(SPSS 18).**Results:** The median age was 75(71-78) and 62(43-82) years(p=0.01) and the median size of the implanted valves was 22(21-27) and 24(23-27)(p>0.05) for Group I and II, respectively.Three and 2 patients in group I and II underwent simultaneous coronary artery bypass operations.Pre- and postoperative trans-aortic max/mean pressure gradients were 69(30-95)/46(16-61) and 15(8-19)/9(8-13) versus 47(28-79)/25(21-51) and 29(20-47)/15(11-24) mmHg for Group I and II respectively(p > 0.05 for all).Mean aortic cross clamp and cardio-pulmonary bypass times were 71(45-133) and 98(58-218) vs 76(52-118) and 105(68-158) minutes for Group I and II respectively(p>0.05 for all).No heart block or paravalvular and valvular leak were observed.**Conclusion:** Although, it is not statistically significant, the patients with sutureless aortic bioprostheses had shorter operative times and better hemodynamic performance postoperatively, without an increase in heart block or paravalvular leaks.This new technology may help make the operation simpler, faster and less traumatic.

OP-20

A retrospective comparative study of imaging guided excisional biopsy in high-risk non-palpable breast lesions: Factors for predicting malignity

N. Iflazoglu[1], O. Ureyen[2], M. K. Atahan[1], U. M. Meral[3], G. Sezgin[4], E. Tarcan[1]

[1]Department of General Surgery, Ataturk Training and Research Hospital, Katip Celebi University, Izmir/Turkey
[2] Department of General Surgery, Bozyaka Training and Research Hospital. Izmir/Turkey
[3] Department of General Surgery, Izmir Military Hospital.Izmir/Turkey
[4] Department of Radiology, Ataturk Training and Research Hospital, Katip Celebi University, Izmir/Turkey

Background and Aim: The use of mammography(MM) in breast cancer screening programs has been increasing in recent years. Thus, increasing the number of detected nonpalpable breast cancer patients, through early diagnosis and treatment also increased survival rates. In our study, we wanted to share the factors about imaging-guided exicional biopsies for non-palpable breast lesions in postoperative proven breast carcinoma patients. **Material and Methods:** The surgical data were reviewed for 83 patients (age range 32-80 years) with non-palpabl high-riski breast lesions undergoing imaging-guided surgery in our department between January, 2006 and May, 2011. Age, localization of lesion, ultrasound(US) and MM image results, BI-RADS categorization, histopathologic results were assessed retrospectively in patients with US/MM guided wire or radio-guided occult lesion localization(ROLL) technique. **Results:** Mean age was 53,5(32-80). 29(34,9%) of patients were malign in histopathologic results. In four patient, re-excision performed because of positive surgical margins. Axillary examination results were normal in 24(82,7%) of malignant patients. In MM examination; microcalcifications and nodular opasity were diagnosed in 74,6% of patients before surgery. There were no differance about malignity in these groups after surgery(p: 0,428). 59% and 32,7% of patients were BI-RADS 4 and 3,respectively. Postoperative diagnosed malignancies in BI-RADS 4 group were significantly higher than BI-RADS 3 group(p: <0,001). **Conclusion:** Radiologically detected non-palpabl breast lesions may be the early presentation of breast carcinoma. In our study; we concluded that, preoperative BI-RADS categorization of US and MM is correlated with histopathologic findings after surgery and imaging-guided breast surgery is effective for diagnosis and treatment of early-stage breast carcinoma.

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OP-21

The internet as a source ofinformation on breast augmentation

C. Sethu[1], D. LH Ching[2], S. KM Lee[3], K. Y. Wong[1]

[1] Department of Plastic and Reconstructive Surgery, Queen Alexandra Hospital, Portsmouth, UK
[2] Kingston Hospital NHS Foundation Trust, UK
[3] University Hospital Southampton NHS Foundation Trust, UK

Background: The internet is a key source of information for patients. Breast augmentation is one of the most common cosmetic procedures carried out in the United Kingdom. To provide a better regulatory framework for cosmetic interventions, the recent Keogh report made a number of recommendations. **Objectives:** We evaluate breast augmentation information on the internet. **Material/Patients and Methods**: The three most popular search engines were used to search the term "breast augmentation". The first 100 websites of each search engine were visited and categorised. Using a customised tool, four independent reviewers assessed information for accessibility, readability, quality and accuracy. This included use of existing validated tools such as DISCERN, SMOG index, Gunning-Fog score, Flesch-Kincaid grade leveland Flesh-Kincaid reading ease. Accuracy assessment included whether there were any misleading, inaccurate or unsubstantiated claims, such as with regard to benefits, risks and complications. Results were correlated with hit number and category of information. All sites providing cosmetic services were also evaluated for their adherence to the recent United Kingdom cosmetic recommendations. **Results**: A total of 115 unique websites were included for analysis. Of these, 20% provided patient information and 70% provided services. The average DISCERN score was 34. Only 19% of websites referenced an independent source of information. Cosmetic providers used financial incentives to promote services in 19%, and 25% practitioners were not on the GMC Specialist Register. **Conclusion**: It is difficult for the average layperson to easily access, identify and obtain accurate and quality breast augmentation information on the internet.

OP-22

Analysis of the breast false-negative needle biopsies: Our experiences

M. Urkan, R. Yıldız, E. Ozturk, M. O. Mentes, G. Yagcı

Department of General Surgery, Gulhane Military Medical Academy, Turkey;

Background: A benign diagnosis in a core needle biopsy (CNBx) of the breast performed for a clinically and/or radiologically suspicious abnormality is often due to a nonrepresentative sample. However, the discordance may not be recognized, resulting in a logistic delay in the diagnosis. **Methods**: Twelve false-negative preoperative needle biopsy were identified in 633 diagnosing of the breast (169 benign, 464 malignant) during theirs period time. Radiologic findings, biopsy type, type of malignancy and biopsy results were analyzed. Also, the patients with a benign needle biopsy result analyzed, either underwent excision or had a minimum of 1-year follow-up time. **Results:** Seven ductal carcinomas in situ, 15 invasive carcinomas (11 ductal, 4 lobular) missing result included in the present retrospective analyses. The overall false-negative rate was 4,7%. For palpable lesions, ultrasound-guided needle biopsy had a lower rate of missed cancer(1. 6%), while biopsy without image guidance with the rate of 9. 3%. The discordance between the radiologic and pathologic findings was promptly recognized due to their standard follow-up protocol. **Conclusion:** A false-negative diagnosis of breast carcinoma was found to be more common in needle biopsy performed without image guidance but occurred to a lesser degree in image-guided biopsies. With a standard follow-up protocol, A delay in diagnosis can be avoided.

OP-23

The use of a portable ultrasound to guide fat-grafting for breast asymmetry

Katrina Mason, Georgette Oni, Evgenia Theodorakopoulou, Lubna Khan, Whitney Chow, Matt Griffiths

St Andrews Centre for Plastic Surgery and Burns, Broomfield Hospital, Essex, United Kingdom

Background and Aims: Fat-grafting is an established technique that is increasingly being used to correct contour and volume deficit after breast reconstructive surgery. The authors set out to assess the feasibility of using high frequency ultrasound intra-operatively to guide fat-grafting in patients with previous breast reconstructive surgery. **Material and Methods:** Three patients who required fat-grafting for breast asymmetries and contour irregularities were included in this study. One patient had had previous failed Deep Inferior Epigastric Perforator (DIEP) reconstruction, one had tethered scarring and volume deficit post DIEP reconstruction, the third required fat grafting over a previous implant based reconstruction. The Sonosite S-Nerve™ portable ultrasound machine (SonoSite ltd, Herts, UK) was used intra-operatively by the surgeon to guide safe fat placement. **Results:** The portable ultrasound machine allowed direct visualization of important structures intra-operatively. Ribs, pleura and the breast implant were easily identifiable and permitted injection of fat graft into the correct tissue plane. No patient suffered any complication. **Conclusions:** Ultrasound guided fat-grafting allows direct visualization not only of the injection cannula and fat graft in

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real time, but also the underlying anatomy/anatomical planes in a non invasive, safe manner. This study supports the feasibility of surgeon-performed ultrasound as an adjunct to fat-grafting for reconstructive breast surgery.

OP-24

The need for core outcome reporting in autologous fat grafting for breast reconstruction

R. A Agha MBBS MRCS FRSPH[1,2], A. J Fowler BSc[1,3], T. Edward Pidgeon BMedSc MBChB[1,4], G. Wellstead BSc[1,3], D. P Orgill MD PhD[1,5]; The Academic Surgical Collaborative[1]

[1] The Academic Surgical Collaborative
[2]Department of Plastic Surgery, Mid-Yorkshire Hospitals NHS Trust.Wakefield, UK
[3]Barts and the London School of Medicine and Dentistry, QMUL, London UK
[4]University Hospital Coventry and Warwickshire NHS Trust, Coventry, CV2 2DX UK
[5]Division of Plastic Surgery, Brigham and Women's Hospital, Boston, MA 02115, USA

Background: There is growing interest in autologous fat grafting (AFG) for breast reconstruction. This systematic review examines the range of outcomes used across studies of AFG, their definitions and whether there is a need for a core outcome set to aid reporting. **Methods:** Following the protocol of our previous systematic review, a search of 20 databases (1986 to March 2014) returned 35 studies which met the inclusion criteria for our systematic review. These were assessed independently by two authors. Disagreements were resolved by consensus. **Results:** Of 35 studies, 27 (77%) were case series, 5 (14. 3%) were cohort studies and 3 (8. 6%) were case reports. A total of 51 different outcomes were reported. These studies each reported a median of 5 separate outcomes (range 2-14), of which a median of 3 outcomes were defined (range 0-14). A median of 2 outcomes per paper were pre-specified in the study methods (range 0-12) and a median of only 2 outcomes per paper (range 0-12) were both defined *and* pre-specified. The most commonly reported outcome in studies of AFG was that of "Operative details", reported by 26 studies, and 8 different outcome definitions were used. "Cancer recurrence" was reported by 20 studies, with the use of 10 different outcome definitions. Overall, there was a poor proportion of defined and pre-specified outcomes that employed a wide range of different outcome definitions. **Conclusion:** There is a need for a core outcomes set for autologous fat grafting to minimise outcome and reporting bias and aid evidence synthesis.

OP-25

Levels of Evidence in Plastic Surgery – Bibliometric Trends and Comparison with Five Other Surgical Specialties

Riaz Agha[1], Mariana Devesa[2], Katharine Whitehurst [3], Alexander Fowler[4], Georgina Wellstead[4], Robert Coe[5], Dennis Orgill[6], Peter McCulloch[7]

[1]Balliol College, University of Oxford, UK, [2]University of East Anglia Medical School, UK, [3]University College London Medical School, UK, [4]Barts and the London Medical School, UK, [5]Queen's Hospital, Romford, UK, [6]Brigham and Women's Hospital and Harvard Medical School, Boston, USA, [7]Nuffield Department of Surgical Sciences, University of Oxford, UK

Background: Categorising research by level of evidence (LEV) is an important evidence-based medicine initiative within Plastic Surgery and more generally. Our objective was to assess how the LEVs in plastic surgery have changed from 2003 to 2013, and how this trend compared with five other surgical specialties. **Methods:** All articles published in the top three general plastic surgery journals by 2013 Thomson Reuters Impact Factor (IF) was conducted for 2003 and 2013. Articles then being labeled as LEV 1-5 as defined by the American Society of Plastic Surgeons and comparisons made with five other surgical specialties. **Results:** Mean LEV for plastic surgery improved by 4. 1% from 3.86 (95% confidence interval 3. 81-3. 91) to 3.70 (95% confidence interval 3. 64 to 3. 74) in 2003 to 2013 respectively.Journals representing all six surgical specialties improved their mean LEV (range 3. 7% to 10. 9%). By mean LEV in 2013, Plastic Surgery ranks five out of six, as in 2003. Overall, the specialty journals decreased the proportion of published level five and increased level two and three evidence, except for plastic surgery, where only level three evidence increased significantly. There was a slight trend towards higher LEV with higher weighted or mean IF but this did not reach significance (p=0. 0065 and 0. 079 respectively). **Conclusion:** Plastic Surgery is tending towards higher levels of evidence but the pace of change is slow. The specialty must continue to drive towards higher levels of evidence to improve the corpora of research utilised for evidence-based decision-making.

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OP-26

RGD-Magnetic-Nanoparticles induced hyperthermia was followed by necrosis of colorectal cancer cells growing in the rat liver

Borja Herrero de la Parte[1], Ignacio García-Alonso[1], E. Garaio[1], Maite Insausti[1], Jesús María Aizpurua[1], Nestor Etxebarria-Loizate[1], A. Saiz-Lopez[2], José Javier Echevarria-Uraga[2]

[1]Dpt. of Surgery, Dpt. of Physics, Dpt. of Chemistry, University of The Basque Country, [2]Dpt. of Radiology, Hospital Galdakao-Usansolo. Spain.

Background: RGD are thought to selectively adhere to integrins from cancer cells and endothelial cells from tumor vessels. Hyperthermia induced with RGD-Magnetic-Nanoparticles (MNp) might induce necrosis of liver tumors. **Methods:** CC-531 colorectal cancer cells were inoculated into the liver of WAG syngeneic rats. One month later, MNp were inoculated into the liver through the hepatic artery. Group A: 12 h later, MRI was performed and the livers removed for histology and ICP-MS detection of Fe. Group B: after 24 h, the animals were subjected to high-intensity short wave radiofrequency [RF] electric-field (16 min. at 16 kA/mand 5 min. at 10 kA/m), and the temperature in the peritoneum, normal liver and tumor was recorded. **Results:** RGD-MNp infusion increased Fe content by 45% in the tumor (71. 25 µg vs 49. 0 µg). Fe was selectively located beside the endothelium of tumor vessels and inside the peripheral stroma of the tumor. In the normal liver tissue Fe was retained inside the Kupffer cells. [RF] increased 6°C both in liver and tumor tissue of control animals. When RGD-MNp were administered, the temperature rose to 9. 4°C and 8.8°C, respectively, though Fe in tumor tissue was doubled (85. 8 µg vs 49. 0 µg). In three out of four animals, a strikingly high percentage of tumor tissue was necrotic (85%-99%), while only those hepatocytes more close to the tumor were affected. **Conclusions:** MNp adhere to endothelial tumor cells and are also retained inside the fibrovascular tumor tissue. [RF] applied to MNp-treated animals induced necrosis of the tumor.

OP-27

Parstatin 1-26 Reduces Myocardial Ischemia/Reperfusion Injury In A Rabbit Model

Alexopoulos P. ,[1,2] Panoutsopoulou K. ,[2] Koletsis E. ,[1] Tsopanoglou N. E. [2], and Dougenis D. [1]

[1]Department of Cardiothoracic Surgery,
[2]Department of Pharmacology, Medical School, University of Patras, Greece

Background: Parstatin fragment 1-26 has been recently demonstrated to be active in protecting myocardium in a rat model of ischemia and reperfusion injury. **Objectives:** To increase its potential for translation into the clinical practice, we tested the therapeutic efficacy of parstatin 1-26 in myocardium in a larger animal model. **Materials and Methods:** Male rabbits (n=85) underwent 40 minutes ischemia by left coronary artery ligation followed by 2 hours of reperfusion. Ischemic risk zone (area at risk, AAR) was delineated by infusion of green fluorescent microspheres and necrosis (infarct size) by tetrazolium staining. Endpoint of the study was the infarct size expressed as percentage of the AAR. Fifteen minutes before the initiation of ischemia (n=33) or thirty minutes after ischemia (n=52), animals received intravenously either vehicle or different doses of parstatin 1-26. **Results:** There were no statistically significant differences in the extent of the AAR within the groups. In preischemic treatment, the infarct sizewas 32.4±4.6 in the control group.The administration of parstatin 1-26 resulted in dose-dependant changes of infarct size with the dose of 1µg/Kg to cause a reduction of 39% (19. 8±3. 1, *P*=0. 041). Parstatin 1-26 was also able to efficiently protect myocardium when it was administered 30 minutes after the initiation of ischemia. At dose of 0.1µg/kg parstatin 1-26 reduced infarct size by 41% compared to control (34. 3± 3. 9 vs 20. 3 ±2. 2, *P*=0. 021). **Conclusions:** Parstatin 1-26 reduces infarct size in rabbits after myocardial I/R. Thus, it is a promising therapeutic adjunct in potentially treating patients with acute myocardial infarction.

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OP-28

Subnormothermic Machine Perfusion Preservation of >30% Macro-steatotic Livers; A New Means to Expand the Donor Pool?

Y. Okamura[1], K. Hata[1], H. Tanaka[1], H. Hirao[1], T. Kubota[1], O. Inamoto[1], K. Kadono[1], S. Kageyama[1], B. M Doorschodt[2], R. H Tolba[2], and S. Uemoto[1]

[1] Department of Surgery, Division of Hepato-Biliary-Pancreatic Surgery and Transplantation, Kyoto University Graduate School of Medicine, Kyoto 606-8507, Japan.

[2] Institute for Laboratory Animal Scienceand Experimental Surgery, RWTH Aachen University, Germany.

Background: The current drastic shortage of donor organs has led to increased acceptance of marginal liversfor transplantation, despite higher risk of primary non-function (PNF). Here we report the impact of subnormothermic machine perfusion (SMP) preservation of >30% macro-steatotic livers, compared with the gold standard, cold storage (CS). **Methods:** Dietary hepatic steatosis was induced in Wistar rats by 2-day fasting and subsequent 3-day re-feeding with fat-free, carbohydrate-rich diet. This protocol induces 50-60% macrovesicular steatosis, which should be discarded when preserved by CS. Fatty livers were retrieved, flushed and preserved for 4 hours either by CS (HTK) or by SMP (modified-Polysol). In SMP, the livers were perfused both from the portal vein (1ml/g-liver/minute) and from the hepatic artery (0. 1ml/g-liver/minute) at room temperature. Functional integrity of the grafts was evaluated by isolated reperfusion at 37°C for 2 hours. **Results:** SMP resulted in significant reduction of not only parenchymal (ALT: p<0. 001) but also mitochondrial (GLDH: p<0. 001) enzyme release. Moreover, PVP (p=0. 047), tissue ATP concentration after 2-hour reperfusion (p=0. 001), bile production (p=0. 018), HMGB-1 release (p<0. 001), lipid-peroxidation (p=0. 037) and glutathione (p=0. 011) were all better preserved by SMP. Furthermore, electron microscopy revealed SMP significantly alleviated deleterious alterations of sinusoidal microvasculature and hepatocellular mitochondria, which are both characteristic disadvantages of steatotic liver grafts. **Conclusions**: SMP could prevent PNF of 50-60% macro-steatotic livers, thus providing a new possibility to resuscitating fatty livers for transplantation.

OP-29

Modulating TLR-4 mucosal expression via postconditioning the small intestine following mesenteric occlusion

O. Rosero[1], P. Ónody[1],T. Kovács[1], A. Fülöp[1], D. Molnár[2], T. Balazsa [2], G. Lotz[3], L. Harsányi[1], A. Szijártó[1]

[1]1st Department of Surgery, Semmelweis University, Hungary

[2]Department of Human Morphology and Developmental Biology, Semmelweis University, Hungary

[3]2nd Department of Pathology, Semmelweis University, Hungary

Background and Aims: Postconditioning is a suitable method to reduce ischemia-reperfusion (IR) induced injury of the intestine following mesenteric arterial occlusion. Toll-like-receptor (TLR)-4 was shown to be involved in the pathophysiology of organ damage after IR, therefore the aim of our study was to investigate the effect of postconditioning on the mucosal expression of TLR-4. **Material and Methods:** Male Wistar rats (n=10/group) underwent 60 minutes of superior mesenteric artery (SMA) occlusion followed by 6 hours of reperfusion in three groups: sham-operated, IR- and postconditioned-group. Postconditioning was performed by 6 alternating cycles of 10 seconds reperfusion/reocclusion. Blood and tissue samples were collected at the end of reperfusion. Small intestinal histolopathological changes, mucosal cleaved caspase-3, antioxidant status, HMGB-1 and TLR-4 expression rates were assessed. Mucosal and serum IL-6 and TNF-α levels were measured. **Results:** Milder histological alterations of the postconditioned-group were associated with significantly (p<0. 01) decreased number of caspase-3 positive cells, lower TLR-4 mRNA and significantly (p<0. 05) minor amount ofHMGB-1 and TLR-4 protein expression in the intestinal villi compared to the IR-group samples. Furthermore, significantly improved antioxidant state of intestinal mucosa and lower mucosal and serum IL-6, TNF-α levels were detected in the postconditioned-group. **Conclusion:** Small intestinal IR-injury caused by the occlusion of the SMA was substantially ameliorated by the use of postconditioning, delivering a more favorable inflammatory response, which may partly be attributed to the decreased mucosal expression of TLR-4.

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OP-30

Lidocaine down-regulates systemic inflammatory response secondary to lung resection surgery with one-lung ventilation

L. Huerta[1], C. Simón[1], L. Rancan[2], M. Lema[3], G. Hernández-Fernández[3], J. Casanova[3], I. Garutti[3], E. Vara[2]

[1]Service of Thoracic Surgery, Hospital General Universitario Gregorio Marañón, C/ Doctor Esquerdo, 46, 28007 Madrid, Spain
[2]Department of Biochemistry and Molecular Biology III, School of Medicine, Complutense University of Madrid, Avda. Complutense, s/n, 28040 Madrid, Spain
[3]Service of Anesthesiology and Intensive Care, Hospital General Universitario Gregorio Marañón, C/ Doctor Esquerdo, 46, 28007 Madrid, Spain

Background: Lung resection surgery (LRS) with one-lung ventilation (OLV) is associated with an intense local and systemic inflammatory response. Lidocaine is a commonly used local anesthetic agent which has also been found to possess anti-inflammatory activity in several disorders. The aim of this study was to investigate the effect of OLV on liver injury secondary to LRS. A possible protective effect of lidocaine was also investigated. **Methods:** Eighteen pigs undergoing LRS with OLV were randomly assigned to one of these study groups: Animals receiving anesthesia with intravenously applied propofol alone (control) or plus lidocaine. Two additional procedures without lobectomy or OLV (Sham-A), and without lobectomy but with OLV (Sham-B) were performed. Liver tissue and blood samples were taken in order to measure mRNA as well as protein expression of IL-1, TNFα, MCP-1, IL-10, iNOS and eNOS. **Results:** Sham-B group showed a higher liver expression of TNFα ($p<0.01$), IL-1 ($p<0.01$), MCP-1 ($p<0.05$), and iNOS ($p<0.05$) compared to Sham-A. This increase was even higher in the control group ($p<0.05$). On the contrary, IL-10 expression was decreased. These effects were blocked by lidocaine. OLV also increased plasma levels of TNFα ($p<0.01$), IL-1 ($p<0.01$), and NO ($p<0.05$), and again, these effects were blocked by lidocaine. No changes in eNOS expression were observed. **Conclusion:** These results indicate that the systemic inflammatory response induced by LRS+OLV is attenuated by intravenous administration of lidocaine, suggesting a possible protective effect for this anesthetic against liver injury secondary to LRS. Supported by FIS/RETIC: PI13/00700 and PI13/0002.

OP-31

Reversible portal vein embolization in a rabbit model using fibrin glue and aprotinin

P. B. Olthof,[1] F. Huisman,[1] K. P. van Lienden,[2] J. C. Meijer,[3] J. Verheij,[4] T. M. van Gulik[1]

[1]Department of Surgery, [2]Department of Radiology, [3]Department of Vascular Medicine, [4]Department of Pathology,
Academic Medical Center, University of Amsterdam, Amsterdam, The Netherlands

Background: Portal vein embolization (PVE) is used to increase future remnant liver volume in patients requiring major hepatic resections. The aim of this study was to modulate lysis time of a fibrin-glue (FG) based embolization material by addition of the fibrinolysis inhibiting agent aprotinin to establish reversible PVE. **Material and Methods:** PVE of the cranial liver lobes was performed in 30 rabbits, divided into 6 groups using FG with 150 to 1000 KIU aprotinin. Caudal liver lobe hypertrophy was determined by CT-volumetry and recanalization of the embolized segments was asessed by portal reperfusion on CT images. The rabbits were sacrificed after 7 or 49 days and results were compared to a previous series using permanent embolization materials. **Results:** A dose dependant effect of aprotinin on caudal lobe hypertrophy was found, with 500 KIU providing the highest regeneration rate over the first 3 days ($P<0.05$ compared to 300, 150 and permanent embolization groups). Lower concentrations of aprotinin (150, 300 KIU) resulted in fast recanalization of the embolized segments. Despite adequate embolization, higher concentrations of aprotinin (700, 1000 KIU) also displayed a lower hypertrophy response. When using 500 KIU aprotinin, 4 of 5 animals had adequate recanalization after 49 days. **Conclusion:** PVE using FG with a concentration of 500KIU aprotinin resulted in adequate hypertrophy with 80% recanalization after 49 days. At higher concentrations, an inhibitory effect of aprotinin on the hypertrophy response was found.

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OP-32

Characterization of ischaemia-reperfusion injury after a prolonged but not life-threatening induced lower limb ischaemia in a murine model

I. Cearra[1], T. Chaoui-El-Kaid[2],B. Herrero de la Parte[3], F. J. Aguayo[2], J. A. Atucha[4], I. Garcia-Alonso[3]

[1]Dpt of Traumatology and Orthopaedic Surgery;
[2]Clinical Chemistry Laboratory;
[3]Laboratory of Experimental Surgery. University of the Basque Country. Spain.
[4]Dpt of Haematology. University Hospital of Basurto.

Background: To describe the biochemical injury resulting from an ischaemic period similar to that used in routine extremity surgery. **Methods:** We tested four different reperfusion times following 3 hours of non-invasive right lower limb ischemia in 24 WAG male rats: Group2 had 10 minutes of reperfusion (n=6); Group3 had 1 hour (n=6); Group4 had 3 hours (n=6); and Group5 had 6 hours (n=6). There was also a control group (Group1, n=6). Na, K, Cl, Urea, Creatinine, CK, ALP, LD, ALT and AST were measured (media ± standard deviation). Statistical comparison amongst groups was made with Newman-Keuls Multiple Comparison Test. **Results:** After 3 hours of ischaemia no significant systemic injury (p<0. 05) was found at any time in Na, K, Cl, Urea, Creatinine, ALP, ALT and AST. However, we observed muscular injury with increased CK and LD levels (p<0. 05) in Group2 (4870±1623; 770±376) and Group3 (4784±3019; 684. 3±385. 1). In Group4, at 3 hours of reperfusion, the increase (p<0. 05) almost doubled all other groups (9459±1467; 1395±262). Afterward, levels decreased in Group5 (5796±3140; 937±393). **Conclusion:** Prolonged but not life-threatening induced lower limb ischaemia periods, as used in routine extremity surgery, can cause a biochemically quantifiable muscular injury. While CK and LD levels detected after 10 minutes and 1 hour of reperfusion could be attributable to the injury resulting from tourniquet compression and anoxia, the subsequent increase at 3 hours might be mainly due to Ischaemia-reperfusion Syndrome. Thus, future experimental therapies treating this syndrome should minimize the 3 hours after reperfusion peak.

OP-33

Proximal humeral bone loss treatment :is massive composite allograft+reverse shoulder prosthesis a viable option ?

J-L Raynier, P.Gendre, O.Gastaud, T d'Ollonne, C.Trojani, P.Boileau

University Hospital of Nice, Service de Chirurgie Orthopédique et Traumatologique.

Background: Proximal humeral bone loss, secondary to tumor resection or prior to revision shoulder arthroplasty is a rare but increasingly frequent situation with limited reliable therapeutic options and an important functional issue. **Methods:** 11 patients were included and reviewed with an average follow up of 30 months. Surgery consisted in replacing the proximal humerus with a composite massive humeral allograft associated to a Reverse Shoulder Arthroplasty ± a musculotendinous transfer. **Results:** At a mean follow up of 30 months , among 11 patients were available for evaluation, and the average Constant score was 55 (59,2 p) ,the Subjective Shoulder Value averaged 60,7% and 80% of the patient were satisfied or very satisfied.The ADLER score reached. Mean forward active elevation was 130°,side external rotation was 20° and internal rotation was 3 (sacrum). Complication rate was 27% of all instability episodes. Radiographic evaluation found notchings in 27% cases. **Conclusion:** Use of composite allograft RSA after massive humeral bone loss seems to be a viable option to preserve mobility and function,with correct longevity. However, a more numerous cohort and an extended follow up is necessary to fully validate this therapeutic option. Complications are not rare, 3/11 cases. **Level of evidence:**Level IV,case series treatment study.

OP-34

Atypical Femoral Fractures and Bisphosphonate Use - A Major Trauma Centre 5-Year Retrospective Review

Eisenstein N. [1,2,3], Bhavsar D. [1], Khan F. 1, Rees R. [1]

[1]Royal Stoke University Hospital, Trauma and Orthopaedics, Stoke-On-Trent, United Kingdom, [2]University of Birmingham, Biochemical Engineering, Birmingham, United Kingdom, [3]Royal Centre for Defence Medicine, Birmingham, United Kingdom

Background: Over the last 10 years atypical femoral fractures (AFFs) have become recognised as a complication of standard-dose bisphosphonate use. In 2014 the American Society for Bone and Mineral Research published updated

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diagnostic criteria for AFF. We undertook a 5-year retrospective analysis of the trauma admission database at a major trauma centre to establish the incidence of this problem in our patient population. **Methods:** Initial screening was performed using keyword-matching methodology to produce a shortlist of patients with low-energy femoral fractures. These patients' case notes, radiographs, and electronic discharge summaries were reviewed to discriminate AFF from typical femoral fractures. **Results:** Initial filtering identified a total of 112 low energy femoral fractures. Of these, 12 were confirmed as AFFs. 58% (7/12) of the AFF group were on bisphosphonates compared to 15% (15/100) of the typical femoral fracture group. This finding was statistically significant (p = 0. 0004). **Conclusion(s):** These data show that there is a link between bisphosphonate use and AFF. However, a causal relationship cannot be inferred. The incidence of AFF in our study is broadly in line with the published data. **Implications:** Surgeons treating femoral fracture patients need to maintain a high level of suspicion of AFFs as they are rare and may be difficult to diagnose. Decisions relating to the cessation of bisphosphonate use are best taken in a multidisciplinary setting with input from rheumatologists.

OP-35
Effectiveness of Surgical Intervention For Adolescent Hallux Valgus

O. Beaumont[1], A. Mitra[2], M. Chichero[2], R. Clegg[2], S. Irby[2]

[1]Bristol University, UK;
[2]Department of Orthopaedics, Great Western Hospital Swindon, UK,

Background and Aims: In the adolescent population, operative management of hallux valgus is controversial. To our knowledge, there are no published data on its effectiveness. This study assesses the radiographic, functional and qualitative outcomes of these procedures. **Patientsand Methods:** We reviewed all procedures performed on patients under the age of 18 who underwent surgery for hallux valgus correction. Three independent reviewers analysed pre and post-operative radiological markers of hallux valgus severity (hallux valgus angle (HVA), inter-metatarsal angle (IMA) and the metatarsal protrusion distance). Functional outcome was measured by a validated outcome tool (MOXFQ) via telephone interview and patient notes were reviewed for any evidence of complications par-operatively or at follow-up. **Results:** There was no evidence of NICE recognised complications, however there was persistence/recurrence in 20. 8%, requiring a second operation in 10. 3%. Radiologically, there was a mean reduction of HVA by 18. 0 degrees (16. 3-19. 7) and IMA by 7. 3 degrees (6. 55-8. 14). The mean increase in the second metatarsal length relative to the first was 1. 38 mm (0. 73-2. 02). 93% of operations resulted in an excellent MOXFQ outcome score of less than 20. Outcomes improved with age in a statistically significant manner (p=0. 03) but had no significant correlation with BMI. **Conclusions:** All patients had a reduction in HVA with no complications. A reduction in HVA correlates with improved functional and qualitative outcome. However, there was a high recurrence rate, which was particularly prevalent amongst the younger patients. In resistant cases, surgery offers an appropriate alternative to treat hallux valgus in adolescents.

OP-36
Mean Platelet Volume in Elderly Hip Fracture Patients

S. Bilgic[1], O. Ersen[2], U. Yener[1],F. Colakoglu[1], O. F. Dirican[1]

[1]Gulhane Military Medical Academy, Istanbul, Turkey
[2]Maresal Cakmak Military Hospital, Erzurum, Turkey

Background: Mean platelet volume (MPV) is a marker of platelet function and activation. Previous studies have shown that MPV reflects both proinflammatory and prothrombotic conditions, where thrombopoietin and numerous inflammatory cytokines (IL-1, IL-6 and TNFa) regulate thrombopoiesis. In this study, we aimed to research if MPV results differ in hip fracture patients in the elderly ages according to non fractured patients. **Methods**: Between February 2013 and September 2014 fifty-five surgically treated hip fracture patients in the elderly ages enrolled in this study. Blood counts before the surgery were evaluated retrospectively. As a control group 52 voluntary patients(17 male, 35 female) elder than 50 who admitted to our outpatient clinic in one week were determined. MPV of the groups were compared. **Results**: Forty-seven patients in hip fracture group and thirty-eight patients in control group have a chronic disease. Average age was 76,7±9,3 in fracture group and 63,4±8,73 in control group. Average MPV was 7,7±1,5 in fracture group and 7,4±1,1 in control group. Differences between the 2 groups were analyzed using an independent sample t-test. The differences were considered significant at P <0. 05. we found no difference between the groups. **Conclusions:** Trauma is an inflammatory process and WBC and Plt level changes in this process are well known. Similarly, we expect MPV may be helpful for trauma. But ın this study no relation between hip trauma and MPV was found ih the elderly ages. Further comprehensive prospective trials are needed for considering the role of MPV levels for determining this issue.

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OP-37

Arthroscopic Skills Acquisition Tools (ASATs): an online simulator to develop core skills for arthroscopy

M. J. Gandhi[1], M.J. Anderton[2], L. Funk[3]

[1] Orthopaedic Specialty Trainee, West Midlands Deanery (Stoke/Oswestry), Orthopaedic Institute, Robert Jones and Agnes Hunt Orthopaedic Hospital NHS Foundation Trust, Oswestry, Shropshire, SY10 7AG, England, UK.
[2] Orthopaedic Specialty Trainee, North West Deanery, England, UK
[3] Orthopaedic Consultant, Wrightington Hospital, Hall Lane, Appley Bridge, Wigan Lancashire, WN6 9EP, England, UK

Background: Surgical simulation attempts to standardise surgical training within a safe environment and overcome constraints such as time and case exposure. This study objective was to evaluate correlations between objective performances measured by a new online arthroscopic skills acquisition tool (ASAT, in which the "shape match" with inverted control ASAT requires lifting shapes and releasing them into their corresponding silhouettes) and a validated virtual reality shoulder arthroscopy simulator (Insight Arthro VR).**Methods:**Sixty-five participants familiarised themselves with five ASATs. They were then assessed using a sixth ASAT ("shape match" with inverted controls) and four VR tasks ("*operating room*", "*visualize*", "*locate and palpate*", and "*pendulum*") on the VR simulator. Correlations were assessed between 11 ASAT measures and 15 VR measures using Pearson's correlation coefficients.**Results:**"Time taken" and "delta distance" (actual distance minus minimum distance travelled) were the most frequent and correlated ASAT measures. Time taken correlated with the VR *operating room* time (r=0.318, p=0.010), *locate and palpate* time (r=0.598, p<0.001), *visualize* time (r=0.422, p=0.005), and *pendulum* time (r=0.633, p<0.001), while delta distance correlated with *operating room* distance (r=0.373, p=0.002), *locate and palpate* camera distance (r=0.610, p<0.001), instrument distance (r=0.588, p<0.001), *visualize* distance (r=0.351, p=0.004), *pendulum* camera distance (r=0.494, p<0.001), and instrument distance (r=0.501, p<0.001).**Conclusions:**There were significant correlations between performance measures on the ASAT and a validated arthroscopic VR simulator. Arthroscopic simulators are available but are limited by their high cost and availability. ASATs may overcome these limitations by employing widely available internet-based software and basic input devices.

OP-38

Implantation of left ventricular assist device: the experience of a single centre

A. Medresova [1],S. Novikova[1], M. Murzagaliyev[1], S. Bekbossynov[1], M. Bekbossynova[2], Y. Pya[3]

[1]Department of Cardiac Surgery, JSC «National Research Centre for Cardiac Surgery», Astana, Kazakhstan;
[2]Deputy Director, JSC «National Research Centre for Cardiac Surgery», Astana, Kazakhstan;
[3]CEO, JSC «National Research Centre for Cardiac Surgery», Astana, Kazakhstan

Background: to assess the results of left ventricular assist device implantation in the Republic of Kazakhstan. **Methods:** 144 implantations of left ventricular assist device in patients with heart failure were performed in JSC "National Research Centre for Cardiac Surgery" from 2011 to 2014. The following types of devices were implanted: HeartMateII – 94, HeartWare – 45, TAH (HW+HW) – 1, BiVAD (HMII + HW) – 1, LVAD Replacement– 3. In47. 5% of patients the cause of heart failure was ischemic cardiomyopathy, in 41% of patients - dilated cardiomyopathy. The average left ventricular ejection fraction was 23. 1%. In 40% of patients the implantation of assist devices emerged as a "bridge to transplantation», and in 30% as an alternative to transplantation - as a «destination therapy». **Results:** The survival rate at3 months in patients at INTERMACS level 1-2was52. 17%, and 80. 36% at INTERMACS level 3-4. 55 patients (72. 73%) at INTERMACS level 1-2 survived 1-year,and 87. 5% at INTERMACS level 3-4. The main causes of death were multi organ failure (n = 18) and stroke (n = 14). **Conclusions:** Presented data shows good results of implementation and development of heart failure surgical treatment program.

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OP-39

Multivariate prediction model of cardiac surgery in-hospital mortality: a retrospective cohort study in Greece

Konstantinos Giakoumidakis[1], Vasileios Patris[2], Mihalis Argiriou[3], Marianna Kachri[1], Athena Patelarou[4], Aggelos Laliotis[5], Christina Katzilieri[6], Hero Brokalaki[7]

[1] Cardiac Surgery ICU, "Evangelismos" General Hospital of Athens, Athens, Greece
[2] Department of Cardiac Surgery, Heart and Chest Hospital, Liverpool, UK
[3] Department of Cardiac Surgery, "Evangelismos" General Hospital of Athens, Athens, Greece
[4] Department of Anaesthesiology, University Hospital of Heraklion, Crete, Greece
[5] Department of Surgery, St Thomas' Hospital, Guy's and St Thomas' NHS Foundation Trust, Westminster Bridge Road, London, UK
[6] ICU, "Korgalenio - Benakio Hellenic Red Cross" General Hospital of Athens, Athens, Greece
[7]Faculty of Nursing, Nationaland Kapodistrian University of Athens, Athens, Greece

Background and Aims: In-hospital mortality is an indicator of the quality of care and patient safety. Its prediction contributes to the more effective patient care planning. The aim of the present study was both to investigate the risk factors and to establish a prediction model for increased in-hospital cardiac surgery mortality. **Material and Methods:** A retrospective cohort study of 595 consecutive patients who were admitted to the cardiac surgery intensive care unit of a tertiary hospital of Athens – Greece during a 1-year period was conducted. Data collection was carried out, retrospectively, by the use of a short questionnaire and based on the review of medical and nursing patient records. **Results:** In-hospital mortality rates were 8. 2% (49/595). Multivariate analysis showed that female gender [for males odds ratio (OR) 0. 48, 95% confidence interval (CI) 0. 25-0. 93], high logistic EuroSCORE (OR 4. 36, 95% CI 2. 20-8. 65), emergency status (OR 2. 65, 95% CI 1. 14-6. 14) and a history of diabetes (OR 2. 14, 95% CI 1. 12-4. 09) were the independent risk factors for increased mortality. The multivariate logistic regression model of in-hospital mortality had an area under the receiving operating characteristic curve (ROC) of 0. 78 (p<0. 001). **Conclusions:** The ROC area under the curve of 0. 78 demonstrates a meaningful predicting model for cardiac surgery mortality. The good performance and predictive value of our multivariate model allows the early identification of cardiac operated patient at high risk for in-hospital mortality and could increase the awareness of the healthcare team to these patients for whom more aggressive therapy may be beneficial.

OP-40

Long Term Outcome up to 24 years after the Senning operation: a single centre study

A. Mohamed [1], M. El Hammami[1], A. Kalangos[2]

[1] Division of Cardiac Surgery, University Hospital of Alexandria, Egypt
[2] Division of Cardiac Surgery, University Hospitals of Geneva, Switzerland

Background: To assess long term outcome of patients who underwent Senning repair for transposition of great arteries up to 24 years earlier. **Methods:** 77 patients of late presenting of transposition of great arteries were reviewedretrospectively through the medical records. **Results:** The mean age of patients at the time of surgery was 18. 65±25 months, overall mortality was 16. 2%, Early mortality (<30 days after surgery) accounted for 3. 9%, late mortality for 11. 7%. Actuarial survival of survivors at 24 years after surgery was 86. 1%. 65% discharged in sinus rhythm which decreased to 58% on the latest follow up,moderate and severe tricuspid regurgitationoccurred in 27% at the time of discharge which increased to 65% at the lastest follow up. Reoperation occurred in 3 patients (3. 9%) in form of tricuspid valve repair and replacement. **Conclusion :** The long term outcome for patients surviving the Senning operation was favourable in terms of late mortality and morbidity.

OP-41

The treatment of atrial fibrillation at the open heart surgeries using radiofrequency ablation

T. Lesbekov[1], D. Suigenbayev[1], E. Kuatbayev[1], S. Bekbossynov[1], A. Ydyryshova[1], A. Kurmalayev[1], D. Biktashev[1],
G. Turganbayeva[1], M. Makhmutov[2], Y. Klochan[2], Y. Pya[3]

[1]Department of Cardiac Surgery, JSC «National Research Centre for Cardiac Surgery», Astana, Kazakhstan;
[2]Department of Anaesthesiology and Reanimation, JSC «National Research Centre for Cardiac Surgery», Astana, Kazakhstan;
[3]CEO, JSC «National Research Centre for Cardiac Surgery», Astana, Kazakhstan

Background: To assess the results of the surgical radiofrequency ablation (RFA) for atrial fibrillation (AF)

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treatment during open heart surgery. **Methods:** 182 surgical radiofrequency ablations were performed from October 2011 to January 2015. Cardio pulmonary bypass was used in all cases. In 94 (51,6%) patients left atrial monopolar RFA were performed. Cava-tricuspid *isthmus (CTI) ablation* was added in 38 (40,4%) patients*. Transmural bipolar* RFA of the *pulmonary veins* was performed in 50(27,5%) patients. RFA was performed during mitral or aortic valves replacement/repair, ascending aorta replacement, congenital heart defect corrections in adults, coronary artery bypass grafting. **Results:** There was no hospital mortality. 80% of patients converted to sinus rhythm after the operation. 128 (70,3%) patients preserved sinus rhythm during post-operative period and after discharge in early post-operative period. AF persisted in 50 (27,5%) patients; 4 (2,2%) patients required a pacemaker implantation. **Conclusion:** RFA is an effective and safe method fo comprehended treatment of AF at open heart surgeries. In the majority of cases patients have long-term persistent AF, which indicates the delayed detection of the latter. The most successful outcomes were in patients with paroxysmal and persistent AF types.

OP-42

2 Years experience of endoscopic vein harvesting in CDH

A. Mohamed, A. Abdel Salam, T. ALeinati

Division of cardiac surgery, chest disease hospital (CDH), Kuwait.

Background: coronary artery bypass surgery performed through median sternotomy remains an invasive approach. Efforts to reduce invasineness include minimally invasive conduit harvesting, already widely practiced in USA, despite initial concerns regarding long term vein grafting patency, several studies have now demonstrated the safety of EVH. European guidelines of CABG referred EVH as class lla with a level of evidence A in its latest version. **PATIENTS:** 513 patients underwent CABG procedure using EVH in the period of December 2012 to October 2014, mid-term follow up was done using telephone and planned outpatients' visits. **RESULTS:** The use of EVH increased from 40% in 2013 to 75% in 2014. Overall 513 patients underwent EVH during this period. Of these patients, EVH was performed in 496 with conversion to open technique 3. 3%. Leg wound infection occurred in 3 casa with incidence of 0. 5%. 7 cases came back for recurrent chest pain, with coronary angiography showed only 1 case of occluded grafts. Neurological complications in form of a temporary foot drop occurred in 1 case. CABG related wound infection in our hospital dropped from 3. 9% in 2012 to less than 0. 5% in 2014. **CONCLUSION:** our initial results showed a superior outcomes of EVH over open technique especially in wound related infection and patient satisfaction.

OP-43

The clinical management of patients with infectious complications of left ventricular assist device output cable

M. Murzagaliyev[1], S. Novikova[1], S. Bekbossynov[1], Y. Pya[2]

[1]Department of Cardiac Surgery, JSC «National Research Centre for Cardiac Surgery», Astana, Kazakhstan;
[2]CEO, JSC «National Research Centre for Cardiac Surgery», Astana, Kazakhstan

Background: To assess the frequency and degree of infectious complications of the output cable in patients with implanted left ventricular assist device (LVAD). **Methods:** The study included 139 patients: 65 patients (46,7%) with dilated cardiomyopathy and 20 patients (14,3%) with a dilatation syndrome with heart failure NYHA class III-IV, who had undergone the implantation of HeartMate II (n=94) and Heart Ware (n=45) LVADs. The mean age was 46 ± 15 years. Left ventricular ejection fraction was 22,8±5,9%. Blood cultures, catheters and VAD cable exit site were analysed. The gradation of inflammation was performed according to the infection scale of the output cable. **Results:** The primary causative agents were gram-positive cocci, mainly staphylococci, nosocomial gram-negative rods Pseudomonas aeruginosa. 26 patients in the long-term experienced infection of an output cable of LVAD, which required re-hospitalization for surgical debridement. When the conservative therapy was ineffective, surgical treatment was performed at the cable exit site including: draining of the wound, the use of antiseptics, necrectomy with the relocation of the LVAD cable. The latter was performed in 14 patients. The conditions of 2 patients were complicated by sepsis, leading to fatalities. **Conclusion:** surgical treatment is preferred in presence of infectious complications of left LVAD output cable.

OP-44

External stenting of the saphenous vein bypass grafts: Control of the peri-operative results

K. Ahmadov, P. O. Myers, S. Karaca, P. Mootosamy, J. Jolou, A. Ngompe, A. Kalangos, M. Cikirikcioglu
Division of Cardiovascular Surgery, University Hospitals and Medical Faculty of Geneva, Switzerland

Objective: The theoretical advantages of external stenting of the saphenous vein bypass grafts have been shown on long

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term permeability. The aim of this study is to compare the peri-operative results of our patients who had external stented (eSVS-mesh) or bare saphenous vein grafts. **Methods:** Demographic and perioperative parameters of the patients who underwent elective coronary artery revascularization with external stented (eSVS-mesh)(Group I, n=10) or bare saphenous vein grafts (Group II, n=13) are compared. The quality of the anastomoses and intra-operative permeabilities are controlled by transit time flow measurement(ml/min- PI). Non-parametric values are reported as median(min-max). Mann-Whitney U test was used to compare non-parametric values(SPSS 18). **Results:**The median age was 65(52-82) and 64(59-80) years and the median number of bypass grafts was 3(1-4) and 3(2-4) for Group I and II, respectively. Three and 2 patients in Group I and II underwent concomittant operations. Mean aortic cross clamp and cardio-pulmonary bypass times were 66(34-122) and 111(57-161) vs. 63(28-96) and 94(52-134) minutes for Group I and II respectively. All of the saphenous grafts were patent and the measured TTFM values (flow and PI values) were in the normal limits [60(19-106)ml/min and PI-1.9(1.2-4.9) versus 43(30-155)ml/min and PI-2.3(1.3-2.9) for Group I and II respectively ($p > 0.05$ for all).**Conclusion:** External stenting of saphenous vein grafts does not extend the operative times, which indirectly shows that it does not affect the operative characteristics of the saphenous vein grafts. All vein grafts were patent, whether bare or stented. It is feasible to measure the transit time flow over the stent covered saphenous vein segments as a quality control as adviced by recent guidelines.

OP-45

Protective effects of L-alpha-glycerylphosphorylcholine treatment on acetylsalicylic acid induced gasric mucosal injury

M. Ugocsai, G. Varga, N. Lajkó, G. Strifler, M. Ghyczy, M. Boros

Institute of Surgical Research, University of Szeged Faculty of Medicine

Background and aims: The L-alpha-glycerylphosphorylcholine (GPC) has efficacy in preventing lipid peroxydation and oxidoreductive membrane damage, its anti-inflammatory effect is proven (Tőkés, 2014). The commonly used anti-inflammatory acetylsalicylic acid (ASA) has serious gastrointestinal side effects, originated from inhibition of cyclooxigenase-1 and functional mitochondrial disorders. Our aim was to characterize the functional, structural and mitochondrial consequences of ASA-induced gastritis and to determine the effects of GPC-treatment. **Materials and Methods:** 3 groups of Sprague-Dawley rats (control, ASA, ASA+GPC, n=7) were examined. In ASA and ASA+GPC groups were treated with ASA (100 mg/kg; 3 times daily for 3 days) intragastrically. Control rats were given vehicle only. The GPC-pretreated animals received a GPC-enriched diet (Ssniff Spezialdiäten, Germany) for 3 days before and during the ASA treatment. Control and ASA groups were fed with standard laboratory chow. The gastric mucosal injury was monitored by confocal laser scanning endomicroscopy. The levels of inflammatory mediators (myeloperoxidase, xanthine-oxidoreductase, NO end-products, malondialdehide, citochrome-C-oxidase, plasma TNF-alpha) were measured. The respiratory activity of liver mitochondria were determinated by high-resolution respirometry (Oroboros Oxygraph-2k, Austria). **Results:** ASA treatment caused severe gastric mucosal lesions (score: 5,25) and significantly elevated inflammatory mediators with the functional lesions of mitochondria (decreased respiratory capacity, and deterioration of oxidative phosphorilation). GPC pretreatment alleviated morphological (score: 0,2) injury and functional impairment of mitochondria and decreased the inflammatory mediator levels. **Conclusion:** GPC-therapy was effective against the ASA-induced gastric injury; dysfunction of respiratory capacity and damage of oxidative phosphorilation in mitochondria could effectively be modified by a GPC-treatment. Supported by OTKA-K104656

OP-46

LaNt α31 overexpression in human umbilical vein endothelial cells impairs cell migration; implications for angiogenesis

V. Chohan, K. Hamill

Department of Eye and Vision Science, Institute of Ageing and Chronic Disease, University of Liverpool, UK

Background: The Laminin N-terminus proteins (LaNts) are a recently identified family of secreted proteins. To date, they have been studied only in epidermal keratinocytes where they influence cell adhesion and migration through interaction with laminins in the extracellular matrix. LaNtα31 is regulated by a promoter known to also be active in endothelial cells, however, the laminin matrix deposited by endothelial cells structurally differs from that of the epithelium. These structural differences in microenvironment may result in LaNtα31 playing a context specific role and therefore be involved in regulating angiogenesis through modulating cell-matrix attachment. **Hypothesis**: LaNtα31 is expressed by endothelial cells and modifying its expression level influences cell spreading and motility. **Method:** Cell extracts from primary human umbilical vein endothelial cells (HUVECs) were processed for western immunoblotting with antibodies against LaNtα31. Overexpression was induced through adenoviral infection with constructs encoding GFP tagged LaNtα31. Cell length, width, surface area and aspect ratio were calculated from phase contrast images. Cell speed and directionality were determined through analysis of phase contrast images taken every 2 minutes over 2 hours. LaNtα31 expression influence on the actin cytoskeleton was determined by phalloidin

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staining. **Results**: LaNtα31 is expressed by HUVECs. HUVECs induced to overexpress LaNtα31 displayed decreased migration speed however, polarity of migration and cell morphology were unaffected. Migration rate differences were not due to gross differences in the arrangement of the actin cytoskeleton. **Conclusion**: LaNt is present is in HUVEC cells and influences cell motility suggesting a putative role in the regulation of angiogenesis.

OP-47

Effects of L-alfpha-glycerylphosphorylcholine in case of low intake

M. Olias Ibor[1,2],A. Görbe[1], R. Gáspár[1], E. Tuboly[2], M. Boros[2]

[1]Cardiovascular Research Group, Department of Biochemistry; University of Szeged, Hungary
[2]Institute of Surgical Research, University of Szeged, Hungary

Background: It is described that L-alpha-glycerylphosphorylcholine (GPC) is present in the daily diet. The possible daily uptake can vary up to 500mg (2mM) according to the different dietary habits. Moreover, GPC is being use in the clinical field in high concentrations (around 1000mg/day). The exact mechanism of action is still unclear, therefore, our aim was to investigate the cellular effects of GPC in a dose dependent manner. **Methods:** 1-3 days-old Sprague-Dawley rat primary cardiomyocytes cultures were exposed to 3-hours GPC treatments in 1 μM-1 mM concentration ranges (n=16-70) to investigate the effects in normoxic conditions. Cell viability was measured by calcein staining, the generation of reactive oxygen species (ROS) was detected by DHE (superoxide) and H2DCF (general ROS) methods; while proliferation by the BrDU incorporation assay. **Results:** The GPC treatments had no significant influence on either the viability or the proliferation of cardiomyocytes. The 10μM GPC treatment significantly decreased superoxide level ($p<0.005$), but resulted a significant increase in general ROS production ($p<0.001$) in the same concentration in comparison to the untreated control. **Conclusion:** GPC has a superoxide scavenging effect, but on the other had could increase the overall ROS generation. The possible background could be the changes in the ROS/superoxide ratio in the cardiomyocytes. Further experiments should be performed targeting the anti and pro-oxidant enzymes. **Support**: TÁMOP-4. 2. 2. A-11/1/KONV-2012-0035, OTKA-K104656, TÁMOP4. 2. 4. A/2-11/1-2012-0001, OKTA-PD106001

OP-48

Kaolin distribution in the body and pulmonary changes after intrapleural injection: study in an animal model

G. Polychronopoulos,T. Dosios,I. Androulaki,D. Perrea

Laboratory of Experimental Surgery and Surgical Research, "Laiko" General Hospital, Medical School, University of Athens, Athens, Greece

Background: Talc has significant pulmonary toxicity when given intrapleurally. In its slurry form, it has been used in malignant pleural effusions to achieve adhesion formation in the pleural space. Kaolin, a chemical substance similar to talc, has been used less. **Objectives:** The current study evaluates kaolin distribution in various organs and tissues and effect in the lung parenchyma when injected intrapleurally. **Materials and methods:** Forty rabbits were divided into four groups. Group A was the control group; animals were sacrificed seven hours after thoracotomy. Groups B, C, and D received intrapleural kaolin in the right hemithorax and were sacrificed after 7, 24 hours, and 7 days respectively. Lungs, mediastinal and abdominal organs were analyzed. Lungs were examined for eosinophils, hyaline membranes and parenchymal destruction. Tissues were examined for kaolin crystals. **Results:** Kaolin concentration in the right lung was higher in groups C and D. Eosinophilic cell count and hyaline membranes were higher in groups B, C, and D as compared to the control. Group D had the highest eosinophilic cell count. Groups B, C, and D showed parenchymal lung changes; groups C and D had more changes than group B ($p<0.001$, and $p=0.009$, respectively). Group D showed more kaolin crystals in the inner surface of the right chest wall and the superior mediastinal fat. Finally, with regards to intra-abdominal organs, kaolin concentration was similar in all groups. **Conclusion:** Kaolin accumulates in the lung parenchyma and mediastinum when administered intrapleurally; it does not affect abdominal organs therefore it can be used as an alternative to talc in malignant pleural effusions.

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OP-49

Minipig model of in vivo biocompatibility and function following autotransplantation of alginate-macroencapsulated islets

M. Chetboun[1-2], T. Hubert[1-5], A. Quenon[1], S. Vériter[4], C. Debouche[4], V. Gmyr[1], N. Delalleau[1], J. Kerr-Conte[1], D. Dufrane[4], F. Pattou[1-3]

[1]*University Hospital of Lille, Inserm U1190, Recherche Translationnelle sur le Diabète, Faculté de Médecine, Lille, France.*
[2]*Service de Chirurgie Générale et Endocrinienne, Centre Hospitalier Universitaire de Reims, Reims, France.*
[3]*Service de Chirurgie Générale et Endocrinienne, Centre Hospitalier Régional et Universitaire de Lille, Lille, France.*
[4]*Centre de Thérapie Tissulaire et Cellulaire des Cliniques Saint-Luc, Brussels, Belgium.*
[5]*Département Hospitalo-Universitaire de Recherche Expérimentale, Lille, France.*

Background & Aims : The field of β-cell replacement therapies has progressed over the last decades and an attractive alternative to immunosuppressive drugs is cell immunoisolation by encapsulation in a semipermeable matrix. In this study, using the minipig, we compared biocompatibility of autotransplanted alginate macroencapsulated islets in several potential engraftment sites. This could be an alternative to the gold standard intraportal site in which islets infusion is associated with portal thrombosis and hepatic ischemia. **Material & Methods** : A caudal pancreatectomy was performed in adult minipigs. After isolation, islets were arranged on a human collagen matrix and encapsulated with alginate. Several devices were autoimplanted in subcutaneous, omental, intramuscular sites, with control implants without islet. 15 and 30 days after autotransplantation, devices were explanted and sections used to assess angiogenesis, fibrosis and immune response with fluorescence microscopy (anti-vWF, anti-CD3, anti-CD68 staining). β-cell function was evaluated with insuline secretion ex vivo by performing static glucose incubation challenge after explantation and in vivo function with an intravenous glucose tolerance test at days 4, 14 and 29. **Results:** Preliminary results on several minipigs showed that islets survived and explanted devices proved insuline secretion. Furthermore the omental site provided preliminary benefits with significant neovascularization. **Conclusions**: Alginate macroencapsulated islets is an original bioengineered technology biocompatible with β-cell survival and function. This could change islets transplantation outcomes with the use of safe engraftment sites and could also improve the management of diabetes in the future.

OP-50

Microscopic evaluation of parecoxib's effects on intestinal and abdominal wound healing process in a rat model

E. Martinou[1,2], G. P. Fragoulidis[2], S. Drakopoulou[2], E. Aravidou[3], A. Kondi-Pafiti[2], E. Argyra[2], D. Voros[2].

[1] Department of Surgery, Royal Surrey County Hospital, Guildford, UK.
[2]Department of Clinicaland Experimental Surgery, Aretaieion University Hospital, Athens, Greece.
[3]Veterinary Department, University of Athens, Greece.

Background: Several experimental studies were conducted questioning the safety of the postoperative usage of Cox-2 inhibitors as analgesics. **Objective:** To investigate microscopically the effects of parecoxib on intestinal anastomotic and abdominal wound healing. **Methods:** 24 adult male Wistar rats underwent a midline laparotomy, ascending colon transection and an end-to-end re-anastomosis. The rats were randomized into two groups and postoperatively received, by intraperitoneal injection, either parecoxib 0. 05mg/kg BD or placebo (normal saline 0. 9%, BD). Animals were killed either on the 3rd or on the 7th postoperative day. Haematoxylin and eosin stained intestinal anastomoses and abdominal wound specimens, were microscopically evaluated for: inflammatory cell composition, angiogenesis, fibroblasts, glanular tissue, collagen deposition and epithelization. In each wound a score was assigned from 1 to 4 (1: absent, 2: minimally present, 3: moderately present, 4: markedly present). Statistical analysis was conducted with Mann-Whitney U test. **Results:** Macroscopically neither anastomotic leakage nor abdominal wound dehiscence was observed. Regarding the inflammatory intestinal healing phase the density of neutrophils and macrophages appeared to be more prominent in the parecoxib group ($p<0.05$), whereas in the abdominal wound specimens parecoxib group demonstrated lesser density of neutrophils ($p<0.05$). No statistically significant differences were observed in angiogenesis, fibroblasts, granular tissue and collagen formation in both groups. However epithelisation was less prominent in the parecoxib group, both in the colonic and in the abdominal wound specimens ($p<0.05$). **Conclusion:** Minimal effects were observed suggesting that it might be safe for parecoxib to be used in the early postoperative period after colonic surgery.

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OP-51

Further characterization of *HDAC* and *SIRT* gene expression patterns in pancreatic cancer and their relation to disease outcome

M. Ouaïssi[1,2,3], F. Silvy[1,2], C. Loncle[5,6], D. Ferraz da Silva[1,2,4], C. M. Abreu[1,2,4], E. Martinez[1,2], P. Berthézene[5,6], S. Cadra[5,6], Y. Patrice Le Treut[7,8], J. Hardwigsen[7,8], B. Sastre[1,2,3], L. Benkoel[2], J. Delgrande[9], A. Ouaissi[4],J. Iovanna[5,6], D. Lombardo[1,2], E. Mas[1,2]

[1]Aix-Marseille University, CRO2, UMR_S 911, F-13005, Marseille, France
[2]INSERM UMR 911, F-13005, Marseille, France
[3]AP-HM, Timone Hospital, Department of Digestive and visceral Surgery.F-13005, Marseille, France
[4]Faculdade de Farmácia da Universidade do Porto, Porto, 4050-313, Portugal
[5]Aix-Marseille University, CRCM, UMR_S 1068, Institut Paoli-Calmettes, CNRS, UMR7258, F-13009, Marseille, France
[6]INSERM, UMR 1068, F-13009, Marseille, France
[7]AP-HM, La Conception Hospital, Department of hepatic transplantation and generalsurgery, F-13005, Marseille, France
[8]Aix-Marseille University, F-13284, Marseille, France
[9]AP-HM, Timone Hospital, Department of histopathology .F-13005, Marseille, France

Background: Ductal adenocarcinoma of the pancreas is ranking 4 for patient' death from malignant disease in Western countries, with no satisfactory treatment.We re-examined more precisely the histone deacetylases *(HDAC)* and Sirtuin (*SIRT)* gene expression patterns in pancreatic cancer with more pancreatic tumors and normal tissues.We also examined the possible relationship between *HDAC* gene expression levels and long term disease outcome. We analyzed 29 pancreatic adenocarcinoma (PA), 9 chronic pancreatitis (CP), 8 benign pancreatic (BP) and 11 normal pancreatic tissues. Concerning pancreatic adenocarcinoma, we were able to collect biopsies at the tumor periphery. To assess the possible involvement of HDAC7 in cell proliferation capacity, we have generated recombinant human Panc-1 tumor which underexpressedor overexpressed HDAC7.The expression of *HDAC1,2,3,4,7 and Nur77* increased in PA samples at levels significantly higher than those observed in the CP group (p= 0.0160; 0.0114; 0.0227; 0.0440; 0.0136; 0.0004, respectively). The expression of HDAC7, was significantly greater in the PA compared with BP tissue samples (p=0.05).Mean mRNA transcription levels of PA for *HDAC7* and *HDAC2 were* higher when compared to their counterpart biopsies taken at the tumor periphery (p=0.0346, 0.0053, respectively). The number of deaths and recurrences at the end of follow up were significantly greater in patients with overexpression of *HDAC7*. Interestingly, the rate of growth was significantly reduced in the case of cell carrying shRNA construct targeting HDAC7 encoding gene when compared to the parental Panc-1 tumor This study strongly support the notion that HDAC7play a role in pancreatic adenocarcinoma progression. **Grant support:**This workwassupported by institutionalfundingfrom INSERM (Paris, France) and the Aix-Marseille Université (Marseille, France) and by a grantINCa-DGSO-INSERM 6038 from Sites de Recherche Intégrée sur le Cancer (SIRIC).

OP-52

Value of E-PASS models for predicting postoperative morbidity and mortality in biliary cancer resection without pancreatic resection

Y. Haga[1], A. Miyamoto[2], Y. Wada[3], Y. Takami[4], H. Takeuchi[5]

[1]Institute for Clinical Research, National Hospital Organization Kumamoto Medical Center, Japan
[2]Department of Surgery, National Hospital Organization Osaka National Hospital, Japan
[3]Department of Surgery, National Hospital Organization Himeji Medical Center, Japan
[4]Department of Surgery, National Hospital Organization Kyushu Medical Center, Japan
[5]Department of Surgery, National Hospital Organization Iwakuni Clinical Center, Japan

Background: Pancreatobiliary carcinoma is a challenging area for surgeons due to its high morbidity and mortality rates. We previously reported that our general surgery risk model, Estimation of Physiologic Ability and Surgical Stress (E-PASS), and its modified version, mE-PASS, had moderate predictive powers for postoperative mortality and morbidity in pancreatic resection for pancreatobiliary carcinoma. In this study,we aim to evaluate their utility in biliary cancer resection without pancreatic resection. **Methods:** We collected data for E-PASS variables and postoperative course in patients undergoing extrahepatic biliary cancer resection without pancreatic resection in 16 referral hospitals in Japan. **Results:** We analyzed 125 patients with gallbladder cancer and 97 patients with cholangiocarcinoma. Hepatectomy was performed in 81% of patients (180/222). The overall in-hospital mortality and postoperative morbidity rates were 9% (20/222) and 45% (99/222), respectively. The E-PASS models showed high discrimination powers to predict in-hospital mortality; areas under the receiver operating characteristic curve (95% confidence intervals) were 0·85 (0·76–0·94) for E-PASS and 0·82 (0·73–0·91) for mE-PASS. The predicted mortality rates of these models correlated with the severity

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of postoperative complications as determined by Clavien-Dindo Classification(Spearman's rank correlation coefficient: ρ = 0·51, P < 0·001 for E-PASS; ρ = 0·47, P < 0·001 for mE-PASS). **Conclusion:** Our results suggest that the E-PASS models accurately predicted postoperative morbidity and mortality in biliary cancer resection without pancreatic resection. These models will be useful for surgical decision-making, informed consent, and case-mix adjustments in surgical audits.

OP-53

Single institution experience with surgical resection for recurrent pancreatic cancer after curative intent pancreas resections

M. F. Can, Ismail Ozerhan, Gokhan Yagci, Orhan Kozak, Yusuf Peker

Gulhane School of Medicine, Department of Surgery, Ankara, Turkey

Background and Aims: Recurrence near primary site or metastatic disease after surgical resection for pancreatic cancer is highly frequent. While pancreas resection in patients with resectable primary disease is mainstay of treatment, controversy exists on whether surgical removal of recurrent lesions is of value as well. **Patient and Methods:** Medical records of patients with pancreatic cancer who underwent surgical resection with curative intent were retrospectively evaluated. Information on those patients who readmitted with recurrent disease was retrieved to perform more in-depth review of documents. **Results:** Some thirty-two patients with recurrent or metastatic disease after primary curative resection were determined. Of these, seven were treated with resection of recurrent/metastatic disease. Five of them presented with recurrent lesions at or around the primary site after pancreaticoduodenectomy, one for isolated liver metastasis and one for recurrent mass after distal pancreatectomy. The duration of disease free survival from the initial surgery to tumor recurrence was median 19 months. Five patients underwent completion pancreatectomy, one completion pancreaticoduodenectomy, and one liver metastasectomy. The rate of R0 resection for the second operation was %71. No perioperative mortality occurred. The median survival after the second operation was 13 months. **Conclusions:** Our results suggest that surgical resection for recurrent pancreatic cancer is safe and feasible. Single lesion near the primary site detected by computed tomography and/or PET-CT should warrant surgical resection, especially in those who have had a disease free survival over one year.

OP-54

Target therapy agents other than sorafenib in the treatment of advance stage HCC

M. Urkan[1], U. Alakus[2], U. M. Meral[3], G. Yagci[1]

[1]Depeartment of General Surgery, Gulhane Military Medical Academy, Turkey;
[2]Department of General Surgery, Elazıg Military Hospital, Elazıg/Turkey
[3]Department of General Surgery, Izmir Military Hospital, Izmir/Turkey

Background: Hepatocellular carcinoma (HCC) is a aggressive and lethal disease, due to its course and a lack of effective systemic therapies for advanced disease. Although, surgery (resection, transplantation) can be the only curative options in early stages. Now, sorafenib (multi-kinase inhibitor) is the onlysystemictherapythat has demonstrated an overall survival (OS) benefit in advanced HCC patients. **Objectives:** We aim to focuses on the evaluation of targeted therapy agents except sorafenib**. Materials and Methods:** Medline®/PubMed® resources search was undertaken using terms "hepatocellular carcinoma", "sorafenib", "targeted therapy," and "immunotherapy. " to identify relevant articles. Directly related articles with the topic of interest were reviewed in detail. **Results:** HCC has a particularly complex molecular and genetic pathogenesis and there is not any persuasible proof overall survival for advance HCC. Sorafenib, has been shown to prolong survival of these patients and also it has become the standard of treatment and has encouraged a number of novel agents being tested in clinical trials. 35 combination therapy studies for HCC ongoing, and numerous reagents are being tested targeting novel signaling cascades. Numerous agents are under various phases of clinical development, and combination therapy is gaining importance with multiple trials currently ongoing. **Conclusion:** Treatment ofadvanced HCC remains a challenge for cliniquies. Some new agents for HCC are presently under investigation and the results have been promote in preclinical evaluations. In the future, new therapeutic treatments can define the molecular targeted agents which is effective for a specific subgroup, will hopefully lead to personalized therapy.

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OP-55

Identification of a Molecular Signature for CTCs in Whole Blood after Resection of Primary Tumour

T. Hanna[a], N. Bryan[b],H. Pufal[a], L. Yan[a], D. Bond[c], J.A. Hunt[d], C. Stanley[c], P. Ghaneh[a], J. Neoptolemos[a] and W. Greenhalf[a]

[a]NIHR, Pancreatic Biomedical Research Unit, Liverpool University, Liverpool, UK
[b]Pharmacy and Biomedical Science, Liverpool John Moore's University, James Parsons Building, Byrom Street, Liverpool, UK, L3 3AF

[c]ProKyma Technologies Ltd,Liverpool Science Park, 131 Mount Pleasant, Liverpool, Merseyside, L3 5TF

[d]Clinical Engineering (UKCTE), Institute of Ageing and Chronic Disease, Duncan Building, Daulby Street, Liverpool, L69 3GA

Background: Analysis of circulating tumour cells (CTCs) offers the potential to identify sub-clinical recurrence after resection and to monitor evolution of cancer cells during treatment. Traditional CTC enrichment strategies based on epithelial cell isolation have a low yield in pancreaticobiliary type adenocarcinomas. This may be due to epithelial mesenchymal transition (EMT) associated with metastasis.To this end we investigated the combination of pre-filtration of blood using a size exclusion method in combination with genomic analyses to attempt to identify a molecular signature for CTCs in whole blood after primary tumour resection.**Methods:**7mls of blood was taken from a patient 14 days post Whipples resection for a poorly differentiated ampullary adenocarcinoma of pancreatobiliary type. The blood was enriched using a cell filter system with a 10µm pore size. DNA was isolated from the formalin fixed paraffin embedded tumour using the QIAamp DNA FFPE Tissue Kit. Limiting Dilution Next Generation deep sequencing of the TP53 gene was performed using a PGM machine (Ion torrent) on both fractions of the filter (<10µm and >10µm) and tumour. Following library preparation the sequencing of the enriched blood was repeated to confirm reproducibility of the PGM.**Results:**A missense p53 mutation (p.E294K) was detected in the <10µm fraction on both sequencing runs at a frequency of 2 out of 20 separate barcoded runs; 19.7% (372/1,891 sequences) and 14.1% (161/1,143) but not found in any of 20 runs in the >10µm fraction. This mutation was also present in the primary tumour at 1,983/472,767 (0.4%).**Conclusion:**CTCs were smaller than the typical epithelial cell at <10µm consistent with EMT. CTCs persisted after resection of the tumour and their molecular signature could be detected.

OP-56

The Role of Radiotherapy for Early Hepatocellular Carcinoma; Analysis of the National Cancer Database

A. Y. Hammad, J. T. Miura, K. K. Turaga, F. M. Johnston, T. Clark Gamblin

Division of Surgical Oncology, Department of Surgery, Medical College of Wisconsin, Milwaukee, WI, USA

Background: Radiation therapy (RT) has not been routinely used for the treatment of hepatocellular carcinoma (HCC) due to concern for radiation induced liver disease. Evolving techniques have enabled RT to be delivered with a more favorable safety profile. However, evidence demonstrating a benefit from RT for HCC remains limited. The present study sought to assess the efficacy of RT on overall survival for HCC. **Methods:** Patients with early stage (T1/T2), non-metastatic HCC that did not undergo transplantation, resection or ablation between 1998 and 2011 were identified from the National Cancer Database (NCDB) and subsequently stratified by receipt of RT. Survival outcomes were analyzed following propensity score modeling (PS). **Results:** A total of 22,203 patients were identified; 729 (3.3%) received RT. Unadjusted median overall survival (OS) for patients that received RT versus no RT was 13.54m vs. 8.94m respectively (p=0.01). However, receipt of RT was more frequently observed among patients with good performance status (Charlson Comorbidity Score [CCS] 0: 55.7% vs. 42.4%, p<0.01) and normal alpha-fetoprotein (AFP) level (21.1% vs. 16.7%, p<0.01) as compared to no RT. Following PS matching, receipt of RT was associated with an improved median OS, albeit was not statistically significant (13.5 vs 9.9 months, (p=0.06). In multivariate models, after controlling for age, AFP level, cirrhosis, CCS, and tumor size, RT was independently associated with improved OS (HR: 0.81, 95%CI 0.69-0.96, p=0.01). **Conclusion:** RT improves survival for early stage HCC. Patients who are not candidates for curative therapies should consider RT as an alternative HCC treatment.

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OP-57

Adhesion of human endothelial cells to polyester vascular grafts: pre-coating with adhesive protein assemblies and resistance to short-term shear stress

J. Chlupac[1,2], E. Filova[1], T. Riedel[3], M. Houska[3], E. Brynda[3], M. Remy-Zolghadri[4], R. Bareille[4], P. Fernandez[4], R. Daculsi[4], C. Bourget[4], L. Bordenave[4], L. Bacakova[1]

[1]*Department of Biomaterials and Tissue Engineering, Institute of Physiology Academy of Sciences of the Czech Republic, Prague, Czech Republic*
[2]*Department of Transplant Surgery, Institute for Clinical and Experimental Medicine, Prague, Czech Republic*
[3]*Institute of Macromolecular Chemistry, Academy of Sciences of the Czech Republic, Prague, Czech Republic*
[4]*Inserm U577, Université Victor Segalen, Bordeaux, France*

Background & aims: Cardiovascular implants do not spontaneously cover with endothelial cells in humans, and so they pose a thrombotic risk. Seeding with cells improves the performance of prosthetic bypass grafts, particularly in small-caliber applications. **Materials & methods:** Knitted tubular polyethyleneterephthalate (PET) vascular prostheses (6 mm) with commercial type I collagen impregnation (PET/Co) were modified in the lumen by the adsorption of laminin (LM), by coating with a fibrin network (Fb) or a combination of Fb and fibronectin (Fb/FN). Primary human saphenous vein endothelial cells were harvested from cardiac patients, seeded ($1.50 \times 10^5/cm^2$), cultured for 72 h and exposed to laminar shear stress 15 dyn/cm^2 for 40 and 120 min. The control static grafts were excluded from shearing. **Results:** The cell adherence after 4 h on PET/Co, PET/Co +LM, PET/Co +Fb and PET/Co +Fb/FN was 22 %, 30 %, 19 % and 27 % of seeding, respectively. Compared to the static grafts, the cell density on PET/Co and PET/Co +LM dropped to 61 % and 50 %, respectively, after 120 min of flow. The cells on PET/Co +Fb and PET/Co +Fb/FN did not show any detachment during 2 h of shear stress. **Conclusion:** Pre-coating the clinically-used PET/Co vascular prosthesis with LM or Fb/FN adhesive protein assemblies promotes the adherence of endothelium. Cell retention under flow is improved particularly on fibrin-containing (Fb and Fb/FN) surfaces.

OP-58

Mitroflow and Perimount Magna 10 yearsoutcomes. A direct propensity match analysisto assessre-intervention ratesandlong follow-up mortality.

C. Taddeo, T. Theologou, M. Field, M. Kuduvalli, A. Oo.

Cardiacand Aortic Surgery Department, Liverpool Heartand Chest Hospital, Liverpool Thomas Drive L14 3PE United Kingdom.

Background: Biological valves are the most commonly used prostheses for aortic valve replacementsurgery. The aim of this study was to compare performance of Perimount Magna bioprosthesisandMitroflow bioprosthesisimplanted in 10 years' time framewith respect to survival, and re-intervention rate in a single-centre experience. **Methods:** Between 1999 and 2014 three thousand patients were examined with retrospective collection of the data. Patients were divided into 2 groups; 352 patients that Mitroflow bioprosthesis was implanted and 2256 patients that received an aortic Perimount Magna bioprosthesis. A propensity match analysis was performed to analyze 10 years outcome. **Results**: A total of 2608 patients were included (2256 Perimount Magna; 352Mitroflow). The median follow-up was 10 years. After the 3: 1 Propensity match analysis in 10-years follow-up, the mortality rate in thePerimount Magna group was 15,4%and in the Mitroflow group was 36. 7% (P<0,001). The rate of aortic valve re-intervention rate was 0. 9% in the Perimount magna group and 4. 2% in the Mitroflow group (P<0,001). **Conclusions**: There were significant differences in survival and re-intervention-free survival rate between the two groups considered. The implant of Perimount Magna valve seems to have less re-intervention rates and better short-term and long–term outcomes than the implant of Mitroflow valve.

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OP-59

Environmental noise and its effect upon surgical stress during simulated laparoscopic surgery

P. Waterland[1], F. A. S. Khan[2], E. Ismaili[3], M Clarke[3], C Cheruvu[3]

[1]Department of Colorectal Surgery, Worcester Royal Hospital, Worcester;
[2]Department of Orthopaedic Surgery, Royal Stoke University Hospital, Stoke-on-Trent;
[3]Department of General Surgery, Royal Stoke University Hospital, Stoke-on-Trent

Background: This study aimed to determine what effect environmental noise has upon the psychological and physiological stress response of medical students during simulated laparoscopic surgery. **Methods:** In this experimental study, an anonymous cohort of medical students were randomized into two arms and performed a laparoscopic task on a simulator (iSim™). The 'control' group performed the task in silence, whilst the 'noise' group were exposed to an 80dB verbal recording. Operator stress response was measured using a validated acute stress questionnaire (State Trait Anxiety Inventory - STAI) and continuous heart rate (HR) monitoring (Polar™). Prior ethical approval was obtained. **Results:** A total of 70 medical students participated (35 noise, 35 control). Median age was 23 years old. The 'state' component of the STAI questionnaire increased significantly following the task in both groups (control means 26. 8 pre, 29. 2 post, p<0. 001; noise means 28. 46 pre, 31. 66 post, p<0. 001) with globally higher scores recorded in the noise group. The observed increase in 'state' scores was greater in the noise group though this did not reach significance (p=0. 144). There was no significant difference between 'trait' components of the STAI questionnaire between the groups (p=0. 217). Peak-resting HR values were significantly higher in the noise group (control means 16. 7, noise 23. 8, p=0. 04). Mean HR was non-significantly higher in the noise group (control 88. 2, noise 95. 7 p=0. 06), though the mean-resting HR was significantly higher in the noise group (p=0. 034). **Conclusion:** Environmental noise in a simulated theatre environment generates a measurable increase in operator stress response during laparoscopy.

OP-60

The role of prophylactic lymph node dissection in children with Multiple Endocrine Neoplasia 2 syndromes

Ezzat Abdel-Aziz T, Prete F, Brain C, Dattani M, Spoudeas H, Kurzawinski TR on behalf of UK MEN2 Group.

Centre for Endocrine Surgery, UCLHand Great Ormond Street Hospitals, London, UK

Background: Prophylactic thyroidectomy (PT) in children with MEN2 aims to prevent medullary thyroid cancer (MTC). Overt MTC has a poor prognosis and therefore timing and extent of surgery are of utmost importance**. Patients and methods:** An Audit of clinical outcomes in MEN2 children who had PT performed in 11 UK centres. **Results:** A total of 73 patients with positive genetics for MTC before 16y were identified. There were MEN2B=4, MEN2A=54, Familial MTC=15 cases; the most frequent codon was 634. More than half presented with raised preoperative calcitonin, with a proportion raising across higher risk classes (p<0. 05). When only genetic risk was considered, about half of the patients had age-appropriate surgery (p<0. 001). Of the 71 total thyroidectomies (TT), 21(29. 6%) were complemented with lymphadenectomy (LN), 17 of the Central Compartment alone and 14 involving also the lateral compartment. . While parathyroid glands were in general accurately visualized at surgery (mean 3. 14 parathyroids seen), LN cases were found to be more at risk of parathyroid excision than TT alone (80. 9% vs 35. 4 %, p<0. 001). Patients who developed postoperative hypocalcaemia and required Vitamin D supplementation were significantly more in the LN group, where also significantly more postoperative complications developed (p=0. 026). At pathology however, only one patient, MEN2B, was found to have positive lymph nodes (p=0. 001). **Conclusion**: PT for MEN2 in the UK is performed to high standard. On the basis of our results, we do not recommend systematic LN dissection for MEN2A/FMTC when patients are operated within the recommended age for their mutation.

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OP-61

Aging and senescence of endogenous cardiac stem cells determines their growth and differentiation potential

F. C. Lewis[1], T. S. Teoh[1], T. Theologou[2], M. Field[2], W. Awad[3], M. Yasin[2], D. Torella[4], B. Nadal-Ginard[1], G. M. Ellison[1]

[1]Centre of Humanand Aerospace Physiological Sciencesand Centre for Stem Cells and Regenerative Medicine, King's College London, London, UK;[2]Liverpool Heartand Chest Hospital, Institute for Cardiovascular Medicine and Science (ICMS), Liverpool, UK; [3]London Chest Hospital, London, UK;[4]Laboratory of Molecularand Cellular Cardiology, Department of Medical and Surgical Sciences, Magna Graecia University, Catanzaro, Italy

Background: Aging/senescence of endogenous cardiac stem cells (eCSCs) determines their function and regenerative capacity. Our aim is to determine the main factor(s) that determine the "aged" human eCSC phenotype and reverse their permanent withdrawal from the cell cycle. **Methods:** c-kit^{pos} CD45^{neg} eCSCs were isolated from young (4-wks) and old (22-months) mouse hearts, and young (<45 yrs) and old (>65 yrs) human right atria appendage (~200mg). eCSCs were characterised for co-expression of ageing/senescence markers (p16INK4a, hyperphos-RB, p53, p21, p27, senescence-associated β-galactosidase) with known stemness/multipotency (Oct-4, Nanog, Bmi-1, TERT, Sox-2) and proliferation (Ki67) markers. The growth (BrdU labelling), clonogenicity and differentiation potential of young and old eCSCs was also assessed. **Results:** The number of eCSCs isolated was similar regardless of age, gender and pathology (~45,000/gram of tissue). eCSCs isolated from young and old hearts showed age-correlated increased expression of ageing/senescence markers and decreased expression of stemness/multipotency and proliferation markers. Moreover, 'aged' eCSCs showed limited cloning and growth capacity and impaired cardiac differentiation capacity. When eCSCs isolated from old hearts were grown in Wnt3A or IGF-1 conditioned media, the 'aged/senescent' impairment in proliferation was corrected. Importantly, although the cloning efficiency was inversely age-related, single-cell derived eCSC clones obtained from young and old hearts were indistinguishable by their gene expression and differentiation potential, strongly suggesting that eCSC aging is a stochastic process. **Conclusion:** eCSCs stochastically develop a senescent phenotype with age impacting their growth and differentiation potential. Furthermore, these results provide evidence for a role of the Wnt/β-catenin and IGF-1 pathways on eCSC senescence.

OP-62

Effects of the different degrees of selective portal vein ligation on liver regeneration

D. Tihanyi[1], A. Budai[1], A. Fülöp[1], G. Lotz[2],D. Drozgyik[1], D. Lauber[1] L. Harsányi[1], A. Szijártó[1]

[1]Department of Surgery, Semmelweis University, Budapest, Hungary
[2]Department of Pathology, Semmelweis University, Budapest, Hungary

Background and Aims: Selective portal vein ligation causes atrophy of the ligated lobes and a compensatory hypertrophy of the perfused lobes. According to the „blood-flow hypothesis" the increased portal blood flow generates extensive shear stress, which triggers the liver regeneration. The aim of this study was to investigate the effect of different degree portal occlusion on portal pressure and liver regeneration. **Material and Methods**: Male Wistar rats (n=72; 220-250 g) randomized into three groups underwent 70% (III-V) or 80% (III-VII) or 90% (I-V) portal vein ligation. The portal pressure was measured after 0h, 24h, 48h, 72h, 120h and 168h regeneration time. The hepatic lobes were measured and the liver regeneration ratio was calculated. The mitotic index was counted on hematoxilin-eosin stained slides. **Results**: The mitotic index of the non-ligated lobes were significantly higher in the 90% group (90%: 96. 0±3. 5; 80%: 56. 3±1. 5; 70%: 64. 0±2 cells/HPF). The regeneration rate of the non-ligated lobes was significantly increased proportionally to the degree of ligation (168h: 70%vs. 80%: 1. 7±0. 1vs. 3. 5±0. 4; 80%vs. 90%: 3. 5±0. 4vs. 7. 0±1. 7; 70%vs. 90%: 1. 7±0. 1vs. 7. 0±1. 7). The growth of the portal pressure changed parallel with the regeneration rate (0h: 70%vs. 80%: 17. 1±2. 0vs. 19. 8±1. 1mmHg; 80%vs. 90%: 19. 8±1. 1vs. 28. 4±7. 7mmHg; 70%vs. 90%: 17. 1±2. 0vs. 28. 4±7. 7mmHg). The portal pressure was stabilized on significantly higher levels in 80% and 90% groups 168-hour after ligation (168h: 70%vs80%: 9. 8±0. 3vs. 13. 6±0. 7mmHg; 80%vs90%: 13. 5±0. 7vs. 17. 5±3. 7mmHg; 70%vs90%: 9. 8±0. 3vs. 17. 5±3. 7mmHg). **Conclusion**: Parallel with the degree of the portal vein occlusion, a greater regeneration could be observed in the non-ligated lobes, presumably triggered by the proportional portal pressure increment.

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OP-63

The Efficacy of the Cook-Swartz Implantable Doppler in the Detection of Free Flap compromise: A Systematic Review and Meta-Analysis

R. A. Agha[a], B. Gundogan[b], A. J. Fowler[c], T. WH Bragg[d], D. P. Orgill[e]

[a]Department of Plastic Surgery, The Mid Yorkshire Hospitals NHS Trust, Pinderfields Hospital, Wakefield, UK
[b]University College London Medical School, London, UK
[c]Barts and the London School of Medicine and Dentistry, QMUL, London, UK
[d]Department of Plastic Surgery, Stoke Mandeville Hospital, Mandeville Road, Ayelsbury, Bucks, HP21 8AL, UK
[e]Division of Plastic Surgery, Brigham and Women's Hospital, Boston, MA 02115, USA

Background: Reducing free flap failure rates is a key goal of any microsurgical unit. The Cook-Swartz implantable Doppler can be used to monitor flap vascularity. We conducted a systematic review and meta-analysis to compare the efficacy of the Cook-Swartz implantable Doppler with clinical monitoring to prevent flap failure. **Methods:** A comprehensive literature search was carried out using MEDLINE, EMBASE, PsycINFO, Ebsco, The Cochrane Library, CINAHL, SCOPUS, SciELO, NHS evidence and online clinical trial registers from 1966 until 11th September 2014. Studies comparing flap failure rates in Cook-Swartz implantable Doppler and clinically monitored groups were considered. Screening and data extraction was performed by two independent researchers. **Results:** Seven articles met the inclusion criteria, involving 3,280 patients and 3,304 flaps. The average failure rate in the clinical group was 3. 50% and in the Doppler group was 2. 0%. A fixed effects meta-analysis was performed and found a reduced failure rate with the use of the Doppler (OR 0. 37, [0. 21-0. 64], p=0. 0005). **Conclusions:** The Cook-Swartz Doppler has the potential to be a useful adjunct to clinical monitoring of free flaps. Further research is needed to confirm its benefits and refine its indications to optimise cost-effectiveness.

OP-64

An Experimental Study on the Comparison of the Effects of Triester Glycerol Oxide and Propolis on Wound Repair

[1]S. Sezgın,[2]M. Sencımen, [3]A. Gulses, [4]F. Erdemcı,[5]İ. K. Gıder,[6]O. Ongoru [6]T. Caycı, [7]V. O. Gul

[1]Aksaz Military Hospital,Dental Service, Mugla, Türkiye
[2] GMMA, Dept. OMFS, Ankara, Turkey
[3] Mevki Military Hospital, Dental Service, Ankara, Turkey
[4]Sivas Military Hospital, Dental Service, Sivas, Turkey
[5]Edremit Military Hospital, Dental Service, Balıkesir, Turkey
[6]GMMA Dept. Pathology, Ankara, Turkey
[7]Edremit Military Hospital, Genel Surgery Dept, Balıkesir, Turkey

Background: The aim of this experimental study is to assess the effects of triester glycerol oxide (TGO) and propolis on cutaneous wound healing process respectively. **Material and methods:** One hundred and twelve male Wistar ratswere divided into 3 groups of 27 rats each: control(C), propolis (PS) and TGO (PX). The groups have been divided into 3 sub-groups which included9 rats each regarding the wound excision on the 3rd, 7th and 10th days respectively. The specimens were evaluated according to histological properties and hydroxyproline levels. **Results**: 3rd day examination revealed that the histological score in the PX group was numerically increased,however, no statistically significant differences were found. 7th day examination showed that PX and control groups present the same score, whereas PS group showed lower scores which was statistically significant. On the 10th day examination, the scores were almost equal. No statistically significant differences were found among three groups. HP levels in the control groupwere significantly lower compared to both PS and PX groups on the 3rd day. In addition, PX group showed significantly higher values compared to the PS group on the 7th day. HP levels in the control groupwere significantly lower compared to both PS and PX groups and PX group presented significantly higher values compared to the PS groupon the 10th day. **Conclusion:** TGO have positive effects on wound healing process by increased collagen synthesis.

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OP-65

Free-tissue transfer for the reconstruction of war-related extremity injuries: A systematic review of current practice

E Theodorakopoulou[1]; K Mason[1]; A Ghanem[1]; G Pafitanis[2]; S Myers[2]; F Iwuagwu[1]

[1]St. Andrew's Centre for Plastic Surgery and Burns, Broomfield Hospital, Chelmsford, Essex-UK
[2]Blizard Institute, Barts and the London School of Medicine and Dentistry, Queen Mary University of London, London-UK

Background and Aims: Extremity injuries in combat zones have devastating sequelae. The increasing survival of warzone casualties, combined with rapid advances in microsurgery have meant there is a growing role for free-tissue reconstruction. We systematically reviewed current practices in the microsurgical reconstruction of combat-related extremity injuries, focusing on free-flap types, timing of surgery and outcomes. **Material and Methods:** We conducted a PubMed search of the terms 'War' and 'Reconstruction', identifying 21st century studies on sub-acute/delayed free-flap repair, to reflect the idiosyncrasies of modern warfare. Case reports and studies exclusively describing craniofacial and thoracoabdominal injuries were excluded. **Results:** Eleven studies fulfilled our inclusion criteria. In 9 studies patients were repatriated/transferred to specialist facilities abroad for treatment; in 2, reconstruction was performed within combat/austere environments. The number of free-flaps described per study ranged from 6-208 (Total=426). 110 upper limb and 428 lower limb flaps were described in total. Latissimus Dorsi flaps were most commonly used (44.4%). The average time to definitive reconstruction ranged from 9.6 days to 3 years, being delayed to address life-threatening and visceral injuries or due to lack of resources. In the interim wounds were optimised with serial debridement and Negative Pressure Wound Therapy. The average free-flap success rate was 95.3% (Range=88.9%-100%).**Conclusions:**Combat-associated extremity injuries are characterised by extensive tissue loss and gross contamination. Despite the severity and challenges associated with such injuries, microsurgical reconstruction results in minimal morbidity and good overall outcomes. Large, multi-centre studies are necessary to corroborate these findings, determine long-term outcomes and establish definitive management guidelines.

OP-66

Autologous Cell Transplantaion Improve Texture and Elasticity of Skin Grafts

*Chen Cheng, Lingling Sheng, Hua Li, Xiyuan Mao, Ming Zhu, Bowen Gao, Qingfeng Li**

Department of Plasticand Reconstructive Surgery, Shanghai Ninth People's Hospital, Shanghai Jiao Tong University School of Medicine, Shanghai, China

Background: Full-thickness skin grafts are wildly used in plastic and reconstructive surgery, but their poor textural durability and associated contracture are less satisfactory than skin flaps. Currently, Stromal Vascular Fraction(SVF) cells hold great promise for their angiogenic potential,which may resverse the hypoxia period after skin grafting. In our study, autologous transplantation of SVF cells was used in skin grafts for improving skin texture and contracture. **Methods:** SVF cells were isolated and injected under full-thickness skin grafts in 20 rats. Skin grafts were harvested and analysed on Day 14, Day 30 and Day 90. Bioluminescent imaging based on luciferase imaging techniques was performed for cell tracing. Contracture ratios, elasticity modulus and stiffiness of each graft were evaluated. Collagen's framework was assessed with Masson's trichrome stain and angiogenesis with vascular endothelial growth factor(VEGF) immunohistochemistry. In addition, blood flow signals of the skin graft were also assessed. **Results:** SVF cells markedly decrease the contracture, improved resilience and elasticity of skin grafts after one month. Histologically, SVF cells enhance skin thickness,improve the collagen arrangement and enhance skin vascularization. **Conclusion:** Autologous SVF cell transplantaion enhance angiogenesis after skin grafting and improve the texture and elasticity of skin grafts.

OP-67

Bioimaging study on bone marrow stem cell homing toward mechanical stretched skin and promoting stem cell niche regeneration

S. Zhou,J. Wang, C. Chiang, S. Zhou, Y. Xie, K. Liu, Q. Li,

Department of Plasticand Reconstructive Surgery, Shanghai Ninth People's Hospital, Shanghai Jiao Tong University School of Medicine, Shanghai, China

Background: Skin expansion is a procedure that stimulates effective but limited skin regeneration by *in vivo* mechanical stretch for reconstruction purposes. Recently, bone marrow mesenchymal stem cell (MSC) is found to be effective in

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promoting mechanical stretch induced skin regeneration. However, the underlying mechanism are still unclear. **Materials and Methods:** MSCs from luciferase-Tg Lewis rats were transplanted into a rat tissue expansion model and tracked *in vivo* continuously by luminescence imaging to observe MSCs migration during skin expansion. Chemotactic assays were conducted *in vitro* and *in vivo* to assess the impact of chemokine on MSC migration. The effect of migrated MSCs in enhancing skin regeneration was evaluated by in vivo blocking chemokine/chemokine receptor pathway. Immunohistochemical-staining was used to analyze the activation of epidermal stem cell niches. **Results:** MSC migration was observed in mechanically stretched skin during in vivo cell tracking. SDF-1α/CXCR4 pathway showed the most significant effect in mediating MSCs migration toward mechanically stretched medium *in vitro* chemotactic assay. Result from in vivo study verified the blocking effect of CXCR4 antagonist AMD3100 on MSCs migration toward mechanical stretch. Moreover, migrating MSCs contribute to skin regeneration through differentiation and epidermal stem cell niche activation. **Conclusion:** Mechanical stretching upregulates SDF-1α in skin and recruit circulating MSCs through the SDF-1α/CXCR4 pathway. Migrated MSCs can promote skin regeneration by differentiating into structural cells and activating epidermal stem cell niche.

OP-68

Delivering plastic surgery trauma care

C. Sethu, C. Brown, K. Y. Wong

Department of Plastic and Reconstructive Surgery, Queen Alexandra Hospital, Portsmouth, UK

Background: The provision of plastic surgery trauma care varies widely between hospitals in the United Kingdom. **Objectives:** We evaluate our plastic surgery trauma service. **Material/Patients and Methods**: All patients attending a plastic surgery trauma clinic at a single hospital over 3 consecutive months in 2014 were prospectively studied. Patient demographics, injury modality, diagnosis, timing of events, nil by mouth time, treatment delays, theatre efficiency, coding accuracy, costing, outcomes and complications were analysed. **Results:** A total of 229 patients with a mean age of 43 years (range 1-92) were evaluated. Lacerations accounted for 58% of injuries. The majority of patients (74%) were seen within 24 hours of referral and 41% were discharged on the first visit. Procedures were required for 82% of patients with 64% performed in the outpatient clinic and 34% in theatre. For the latter, 62% were operated within 24 hours and the average time was 51 hours (range 3-200). Of the theatre cases, 54% were placed on emergency lists and the remaining on elective lists. Over 75% of delays and cancellations were due to lack of capacity. **Conclusion:** Delays in trauma treatment remain common in part as they are not target-driven; resources for timely, effective and efficient treatment therefore remain inadequate. The significant morbidity that can be associated with even minor hand injuries is underappreciated. This affects the allocated time on emergency lists for hand trauma cases. Using quality improvement models such as lean thinking and rapid cycle change we implemented solutions resulting in improved care and outcomes.

OP-69

Pre-operative information for breast surgery patients - There's an app for that

M. Oyewole, A. Jethwa, J. Krupa

Department of Anaesthetics, Royal Free Hospital, London
Department of Surgery, University Hospitals Leicester

Background: Smartphone 'apps' are novel healthcare tool used to disseminate information. We designed an app to support the delivery of information to patients awaiting breast cancer surgery in our unit. **Objectives:** In this paper we review patient responses to our app. We hope it will help increase understanding and decrease anxiety for patients. **Materials/ Patientsand Methods:** We designed an app using the Keynote application © on an iPad tablet IOS 7. The app was a touchscreen, menu-driven interactive program. The information it provided included complications of surgery and a visual run-though of what to expect on the day of surgery. We invited patients undergoing pre-assessment to complete a short survey before and after use of the app. **Results:** 40 patients (aged 22-75) were questioned between November 2013 and July 2014. Fifty percent of patients reported that they read all of the information leaflets given to them. Only 57. 5% of patients had previously used an iPad, however, 97. 5% of patients reported that it was 'easy' or 'very easy' to use. 92. 5% of patients found the information included useful. 65 % of patients reported that it was 'better' or 'much better' to use. 92. 5% of patients would recommend it to others. **Conclusion:** We concluded that our app was a positive addition to the pre-operative care pathway in our patients. The use of photographs of the ward and theatre settings were consistently highlighted as extremely helpful. We feel that this application may have wider benefits in decreasing levels of pre-operative patient anxiety. We aim to demonstrate this in future work.

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OP-70

Subjective assessment of hand-eye coordination and manual dexterity does not accurately predict performance on a virtual reality shoulder arthroscopy simulator

M. J. Gandhi[1], M. J. Anderton[2], L. Funk[3]

[1] Orthopaedic Specialty Trainee, West Midlands Deanery (Stoke/Oswestry), Orthopaedic Institute, Robert Jones and Agnes Hunt Orthopaedic Hospital NHS Foundation Trust, Oswestry, Shropshire, SY10 7AG, England, UK.
[2] Orthopaedic Specialty Trainee, North West Deanery, England, UK
[3] Orthopaedic Consultant, Wrightington Hospital, Hall Lane, Appley Bridge, Wigan Lancashire, WN6 9EP, England, UK

Background: Surgical training programme selection processes involves the use of curriculum vitae (CV), standardised application forms and interview stations. The arthroscopic skill set is very different to open surgery. The goal of this study was to investigate whether simple subjective measures of hand-eye coordination and manual dexterity (which may be the basis of a selection process) correlate with performance on a validated virtual shoulder arthroscopy simulator (Insight Arthro VR). **Methods:** Sixty-five participants subjectively assessed their hand-eye coordination and manual dexterity using a numerical scale 1-5 (1 = below average, 3 = average, 5= above average). They performed four tasks ("*operating room*", "*visualize*", "*locate and palpate*", and "*pendulum*") on the VR simulator. Correlations were assessed between (1) hand-eye coordination scores, (2) manual dexterity scores, and 15 VR measures using Pearson's correlation coefficients. **Results:** The *operating room* time correlated with manual dexterity score (r=-. 454, p=0. 0001) and hand-eye coordination score (r=-0. 336, p=0. 006) suggesting an above average subjective score resulted in a shorter performance time in the *operating room* VR task. The remaining correlations between the subjective scores and VR performance did not reach significance. **Conclusions:** *Operating room* VR task is a single-handed orientation task, rather than procedural tasks encountered in shoulder arthroscopy. The lack of correlation between the subjective scores and common procedural tasks suggest methods of assessment of arthroscopic performance should not be subjective based. This includes the cautious use of candidates' hobbies or interests in the selection of orthopaedic surgical trainees.

OP-71

Is there a role for telemedicine in surgical practice? A systematic review

Drake TM[1], Kaur K[2], Prasad R[2], Ritchie JE[2]

[1]Academic Unit of Surgical Oncology, University of Sheffield, Sheffield, UK
[2]University of Leeds, Leeds, UK

Background: Traditional outpatient follow-up is associated with significant commitments in time and resources from both patients and healthcare providers. Telemedicine systems offer an alternative platform for clinical assessment and follow-up. **Objective:** This systematic review aims to evaluate the current evidence behind the use of telemedicine for clinical follow-up of surgical patients. **Methods:** Multiple databases including MEDLINE and EMBASE were systematically searched. The search strategy comprised of terms for video teleconferencing, clinical follow-up and common videoconference packages. Independent data extraction and quality assessment by two authors was performed. Evidence was summarised with relation to patient satisfaction, cost efficiency, time requirements and clinical feasibility. **Results:** Following screening, 11 articles were included in the final analysis. Quality of evidence was low and study methods were reported poorly. Overall, patients found telemedicine a convenient means of communication for follow-up with their clinician and patient satisfaction was comparable or higher than conventional follow-up. Telemedicine saved time for both clinician and patient, which was accompanied by cost-efficiencies as software became more readily available. However, teleconsultation may not be suitable for a subset of patients, namely those who are less familiar with technology. **Conclusion:** Follow-up of patients using telemedicine may be associated with significant cost reductions and time saving. Across all studies there was a high risk of bias and a low quality of reporting. Further research should aim to define appropriate outcome sets for reporting the efficacy of telemedicine studies. In addition, there is a requirement for further well-conducted randomised control trials.

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OP-72

Ergonomic assessment of mental and muscle workload during LESS surgery

F. J. Pérez-Duarte[1], J. A. Sánchez-Margallo[2],M. Lucas-Hernández[2], I. Díaz-Güemes Martín-Portugués[1], F. M. Sánchez-Margallo[3]

[1] Laparoscopy Unit. Jesús Usón Minimally Invasive Surgery Centre. Cáceres (Spain)
[2] Bioengineering and Health Technology Unit. Jesús Usón Minimally Invasive Surgery Centre. Cáceres (Spain)
[3] Scientific Direction. Jesús Usón Minimally Invasive Surgery Centre. Cáceres (Spain)

Background: Adding to the ergonomic inconveniences already presented by traditional laparoscopy, laparoendoscopic single-site (LESS) surgery implies other more specific problems as greater reduction in movement freedom, loss of triangulation and greater proximity of instruments. **Objective:** The objective of this study is to evaluate the surgeons' muscular activity and mental workload when handling instruments during LESS surgery, comparing it with conventional laparoscopy. **Material and Methods:** The study group was composed by 10 experienced laparoscopic surgeons, all right handed. Each one performed dissection tasks on a physical simulator (SIMULAP®) through conventional laparoscopic (LAP) and single site (LESS) approaches. For LAP straight laparoscopic scissors and dissector were used, whilst for LESS roticulated scissors and dissector were chosen. During both tasks, muscular activity of biceps brachii, triceps brachii, forearm flexors and extensors, and trapezius muscles were registered through surface electromyography. Mental workload was assessed with the validated National Aeronautics Space Administration -Task Load indeX (NASA-TLX). This is a tool that rates workload on six scales: mental, physical and temporal demand; effort; performance and frustration. **Results:** Muscular activity for trapezius (LAP 6,94±4,12 vs LESS 11,32±4,68; p≤0,05) and forearm extensor muscles (LAP 9,20±2,45 vs LESS 37,07≤16,05; p≤0,001) was significantly lower for conventional laparoscopy when compared to single site approach. No differences were found in other muscles. Mental workload, effort and frustration were significantly higher during LESS surgery (p≤0,05). **Conclusions:** LESS approach entails greater level of muscular activity in the trapezius and forearm extensor muscles. Moreover, mental workload and frustration are greater in LESS than in laparoscopy.

OP-73

Novel inorganic simulator model for laparoscopic urethrovesical anastomosis: face, and content validity

F. J. Pérez-Duarte[1], F. M. Sánchez-Margallo[2], I. Díaz-Güemes[1], M. Á. Sánchez-Hurtado[1], Á. Serrano[3], J. Usón[4]

[1]Laparoscopy Unit. Jesús Usón Minimally Invasive Surgery Centre. Cáceres (Spain)
[2]Scientific Direction. Jesús Usón Minimally Invasive Surgery Centre. Cáceres (Spain)
[3] Hospital Clínico San Carlos. Madrid (Spain)
[4] Director of the Foundation. Jesús Usón Minimally Invasive Surgery Centre. Cáceres (Spain

Background: The aim of this study is to present our bench model and to assess its face, content and construct validity for urethrovesical anastomosis on a validated physical simulator. **Methods:** The urethrovesical bench-model was created using a Silicone mixed with a predetermined quantity of a silicone additive, that alters the hardness and the fell of the cured silicone rubber, in order to obtain a substance with properties similar with human tissues. Morphology and measures of the organ were obtained through MRI TC studies. A total of 22 participants were included in this study, divided into 2 groups: experts (E) and novices (N). All subjects performed an urethrovesical anastomoses with the model. Participants were given a post task questionnaire to evaluate the model and demonstrate face and content validity. **Results:** Regarding face validity, novices had rated the realism of the morphology and anatomical aspects of the model with 3,9±0,48 and the texture and consistency of the materials with 3,7±0,84. Regarding content validity experts has rated the usefulness of the model for the training of the residents with a score of 5 and for the fellows with a score of 4,6±0,51. They also strongly believed that this model must be included in the training programs. Finally overall impression of the model obtained a score over ten of 8±0,91 for novices and 9,4±0,51 for experts. **Conclusion:** Our inorganic simulator model has demonstrated face, content and construct validity and seems to be a good training device to develop specific skills in urethrovesical anastomoses.

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OP-74

Ergonomic analysis of four different instrument setups in laparo-endoscopic single-site (LESS) surgery.

F. J. Pérez-Duarte[1], J. A. Sánchez-Margallo[2], A. Matos-Azevedo[1], M. Lucas-Hernández[2], I. Díaz-Güemes[1], F. M. Sánchez-Margallo[3]

[1] Laparoscopy Unit. Jesús Usón Minimally Invasive Surgery Centre. Cáceres (Spain)
[2] Bioengineering and Health Technology Unit. Jesús Usón Minimally Invasive Surgery Centre. Cáceres (Spain)
[3] Scientific Direction. Jesús Usón Minimally Invasive Surgery Centre. Cáceres (Spain)

Background: In this study, we aim to assess the surgeons ergonomy during LESS surgery, performed with the combination of dynamic articulating and pre-bent instruments, either combined with conventional laparoscopic tools or not, during the completion of basic tasks hands-on simulator. **Material and Methods:** A total of 24 surgeons were included and performed two basic simulator tasks-coordination and cutting-carried out using four different combinations of LESS-designed and straight conventional laparoscopy instruments. These combinations are: C1 (two dynamic articulating tip instruments), C2 (one dynamic articulating tip instrument and one straight conventional laparoscopy instrument), C3 (two pre-bent instruments) and C4 (one pre-bent instrument and one straight conventional laparoscopy instrument). During both tasks, muscular activity of biceps brachii, triceps brachii, forearm flexors and extensors, and trapezius muscles was registered through surface electromyography. **Result:** In the cut task, the degree of muscle activity was significantly higher with the use of two dynamic articulating tip instruments, but with significant differences only in the trapezius and forearm extensors muscles ($p \leq 0.05$). During the coordination exercise, this instrument setup also seem to entail greater muscle activity but without any significant statistical differences. **Conclusions:** We conclude that the combination of two dynamic articulating tip instruments has the worst ergonomics, as it entails the highest levels of muscular workload. Further data on more complex tasks must be obtained to confirm these findings.

OP-75

Robotic surgery for rectal cancer

H. Katsuno, K. Maeda, T. Hanai

Department of Surgery, Fujita Health University, School of Medicine, Aichi, Japan

Background and Aims: While laparoscopic technique has opened a new era for colorectal surgery, it has some limitations such as a two-dimensional view, limited dexterity of instruments in the narrow pelvic cavity. Robotic surgery has overcome these problems and several institutions reported favorable short-term outcomes recently. The aim of this study was to clarify the safety and clinical efficacy of robotic surgery for rectal cancer. **Patient and Methods:** 63 patients of rectal cancer underwent robotic surgery from September 2009 to December 2014. The patient was tilted right side down in a Trendelenburg position. Initially, 6 ports were placed and patient cart was docked from left caudal side. We performed a medial to lateral approach in dividing the inferior mesenteric vessels. Subsequently, tumor-specific or total mesorectal excision was carried out and distal side of the tumor was transected, LLND was performed, if necessary. Finally, circular stapler was provided to create an end-to-end anastomosis laparoscopically. **Results:** The mean operating time of whole cases and LLND cases was 396 and 694minutes respectively, including 285 and 546 minutes for surgeon console time. Estimated blood loss was 20 and 67ml. There has been neither mortality nor robot-associated morbidity, and the mean length of postoperative hospital stay was 9. 7 and 16 days. **Conclusion:** Robotic surgery for rectal cancer has been safe and feasible. Further operations are required to clarify the cost-effectiveness, such as conversion rate to open surgery or functional outcomes.

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OP-76

The procedure of laparoscopic D3 lymphadenectomy for advanced transverse colon cancer

H. Egi[1, 2], M. Okajima[3], H. Sawada[1], M. Hattori[2], H. Ohdan[1]

[1] Department of Gastroenterological Surgery, Hiroshima University, Hiroshima, Japan
[2] Advanced Medical Skills Training Center, Graduate School of Biomedical Sciences, Hiroshima University, Hiroshima, Japan
[3] Department of Surgery, Hiroshima City Hospital, Hiroshima, Japan

Background and Aims: Laparoscopicsurgery fortransverse coloncancer ispositionedto be a high degree of difficult surgery. Because, surgeons must take care not to injure pancreas, duodenum, Superior mesenteric artery (SMA), Superior mesenteric vein (SMV) and their branches. The aim of this report is to describe our technique of safe lymphadenectomy for advanced transverse colon cancer. **Patient and Methods:** We have proposed a method of appropriately interweaving the operations carried out while looking down from the ventral side by setting the transverse mesocolon on the caudal side along with the operations carried out by moving the transverse mesocolon to the cranial side while looking up from the dorsal side as the "Bidirectional approach of the transverse mesocolon movement method. "Since the body position needs to be changed many times and involves many surgical fields, the surgical procedure was organized by dividing the position of the surgeon into four stations. **Results:** With this new "Bidirectional approach of the transverse mesocolon", we are now able to safely perform laparoscopic surgery with D3 lymphadenectomy and have so far experienced no intraoperative complications. **Conclusions:** We will show a video revealing the usefulness of the "Bidirectional approach of the transverse mesocolon" which involves approaching from both the ventral and dorsal sides while appropriately moving the transverse mesocolon to the cranial side and caudal side.

OP-77

Distal intramural spread and lymph node metastases detected in the mesorectum distal to carcinoma of the rectum by the clearing method: optimal distal resection and dissection

J. Hida, T. Yoshifuji, K. Okuno, T. Tokoro, K. Ueda, J. Kawamura, K. Daito, F. Sugiura, Y. Yoshioka

Department of Surgery, Kindai University School of Medicine, Osaka, Japan

Background: Total mesorectal excision (TME) effectively reduces the local recurrence rate of carcinoma of the rectum. This study was undertaken to clarify the rationale for TME. **Methods:** We retrospectively reviewed the records of 198 patients who underwent resection of a carcinoma of the rectum. The presence of nodal metastases in the mesorectum distal to the primary tumor was examined by the clearing method. **Results:** The metastatic rate in the distal mesorectum was 20. 2%. The metastatic rates according to the extent and site of the tumor were as follows: pT1, 0%; pT2, 0%; pT3, 21. 9%; pT4, 50%; rectosigmoid, 10%; upper rectum, 26. 3%; and lower rectum, 19. 2%. The longest distal spread from the primary tumor to the metastatic node was 2 cm in carcinoma of the rectosigmoid, 4 cm in carcinoma of the upper rectum, and 3 cm in carcinoma of the lower rectum. Twenty-one patients (10. 6%) were positive with distal intramural spread. The maximum distal spread in carcinomas of the upper rectum was 2cm, and in carcinoma of the lower rectum the distal spread was 1cm. **Conclusion:** TME is required for patients with T3 and T4 tumors in the lower rectum, and excision of all mesorectal tissue down to at least 5 cm below the tumor is required for patients with T3 and T4 tumors in the upper rectum. Distal mural resection of at least 3cm is required for patients with carcinoma of the upper rectum, a 2cm distal mural resection is required for patients with carcinoma of the lower rectum.

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OP-78

Laparoscopic complete mesocolic excision for right-sided colon cancer: a possible operation?

M. F. Can

Gulhane School of Medicine, Department of Surgery, Ankara, Turkey

Background and Aims: Complete mesocolic excision for right sided colon cancer (CME) defined by Hohenberger in 2009 is a technique aiming to reproduce improved survival achieved via total mesorectal excision after the introduction of rectal cancer. Another cornerstone in the treatment of colon cancer in recent years has been routine use of laparoscopic resections. However, whether CME can be performed laparoscopically is controversial. This study aimed to investigate the applicability of CME through laparoscopic dissection techniques. **Patientsand Methods:** Patients' medical and surgical video records who underwent open or laparoscopic CME for right sided colon cancer were reviewed. Technical steps of the operations of open CME were documented. Surgical videos of laparoscopic CME dissection technique were checked for completeness of every single step during dissection phase of the procedure. **Results:** In total, five steps were determined: dissection of the right colon and mesocolon through embryologic planes to achieve an intact posterior surface, Kocherization of duodenum, dissection over the superior mesenteric vein to ligate ileocolic vessels at their roots, dissection of LNs around the gastroepiploic vein, ligation of the right branches of middle colic artery and vein to achieve a complete removal of LNs. Laparoscopic dissection was effective to complete every single step during dissection in non-obese patients at the expense of longer operation time. In obese individuals, some steps could not be properly achieved. **Conclusions:** Complete mesocolic excision for right sided colon cancer seems to be a doable operation in non-obese patients, though duration of the operation is longer than in the open procedure. We feel that obese patients should still be offered open procedure.

OP-79

Robotic oncologic complexity score (ROCS) may predict major complications in computer-enhanced oncologic surgery

O. Sgarbura,[1], V. Tomulescu,[2, 3], I. Popescu [2, 3]

[1] Institut Régional du Cancer, Montpellier, France
[2] Department of Surgery, Carol Davila University of Medicine and Pharmacy, Bucharest, Romania
[3] Department of General Surgery and Liver Transplantation, Fundeni Clinical Institute, Bucharest, Romania

Background: While there is little doubt that robotic interventions have already opened new horizons in surgery, due to its inherent complexity there is still an unmet need for tools allowing center-to-center performance comparisons. The aim of this study is to propose a complexity score that is a valuable instrument for further research. **Material and Methods:** The items of the Robotic Oncologic Complexity Score (ROCS) were based on risk factors identified in previous studies. We attempt to build the score and validate it on 400 consecutive cases of robotic oncologic surgery. The primary endpoint is to assess the value of ROCS in predicting major complications. **Results:** The patients in the group had a mean age of 57,04(+/-12,53) and a sex ratio male: female=1: 1,45. The mean ROCS was 3,3(+/-1,4). Different correlation coefficients were calculated: the score and the presence of complications (r=0,38), the presence of major complications (r=0,42), the Clavien grade (r=0,5), the operating time (r=0,35), and the length of stay (r=0,47). On the ROC-curve a score over 4 seems to have the best specificity and sensibility for predicting major complications (p<0,05). Also a score over 4 is an independent risk factor for complications and major complications. **Conclusions:** The robotic oncologic complexity score (ROCS) seems to have potential in predicting complications and hospital length of stay as well as it may have a role in the classification of oncologic robotic surgical interventions.

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OP-80

What is the solid evidence supporting the premise that laparoscopic colorectal surgery is less invasive? : A re-examination in terms of inflammatory response

K. Hiyama[1], H. Terashima[2], Y. Nakano[1], Y. Sumi[1], K. Furukawa[1], F. Imamura[1], K. Mase[1], T. Marumori[1], M. Kamiga[1]

[1]Department of Surgery, Hitachi Ltd. Hitachinaka General Hospital, Hitachinaka, Ibaraki, Japan
[2]Hitachinaka Medical Education and Research Center, University of Tsukuba Hospital, Hitachinaka, Ibaraki, Japan

Background and Aims: Although we recognize that laparoscopic surgery is less invasive than open surgery, the evidence still has been insufficient. We examined this issue in terms of inflammatory response. **Material and Methods:** Among patients who underwent colorectal cancer surgery within the last 16 months, we selected the 48 cases meeting the inclusion criteria (≦75-year-old, No surgical history except appendectomy, No postoperative complication except superficial incisional SSI), which were divided into two groups, i. e. , laparoscopic (L) group (n=19) and Open (O) group (n=29). After examining the patient characteristics, C-reactive protein (CRP) levels measured pre-operatively and on post-operative day (POD) 1, 3, 5, and 7 were compared between two groups. **Results:** There were no significant differences in the patient characteristics (age, sex, BMI, TNM classification, intraoperarive fluid management, operative procedure, surgical time, perioperative antibiotic prophylaxis) between L group and O group, excepting blood loss (20 ml vs 200 ml, respectively). In both groups, CRP levels reached the maximum value (4. 83 vs 7. 02 mg/dl) on POD 3, but L group had a significantly lower value (P = 0. 04). After that, L group tended to show lower levels of CRP than O group. There was no correlation between blood loss and CRP levels measured on POD 3 (r = 0. 19). **Conclusions:** Based on analysis of the background factors, this study demonstrated that laparoscopic surgery itself might be effective in attenuating inflammatory response, which offers one of the most compelling evidence in support of its less invasive approach.

OP-81

Morphofunctional condition of the leftover divisions of small intestine in rats after 50% distal resection of small bowel and after correction GLP-1 and GLP-2 peptides

Y. L. Popovych, V. F. Knygnytskyy, N. V. Sopchuk, I. V. Fedoriv

Course of Human Anatomy Topographic Anatomy and Operative Surgery
Ivano-Frankivsk national medical university

Background: The influence of GLP-1 and GLP-2 peptides in compensatory-renewalmechanisms of small bowel after it's 50% distal resection isn't full researched. **Objective:** The influences of GLP-1 and GLP-2 peptides, which are produced by L-cells have a trophic effect on leftover parts of small bowel and increase adaptive processes. **Methods:** 5 rats for each 7, 14, 30, 90 days after resection: without curation - intact 20 rats, Glp-1 same days 20 rats, Glp-2 also 20 rats, and we were researching 3 parts of leftover small bowel (jejunum, duodenum, illeum). All operations were done under thiopental anesthesia. **Results:** On the 7-th day afterresection using Glp-1 we see decrease of wall thickness in duodenum (586±24,89) μm from (742±11,74) μm - norm, jejunum without serious changes, approximately, as in norm - (573±13,86) μmand in ileum we signalizeincrease of wall thickness (612±21,12) μm from (403±10,54) μm – norm. After researching ofGlp-2 action on the 7-th day after 50% resection we can make conclusion, that the wall thickness increases in 1,3 times in duodenum and in 1,4 times in ileum, but in jejunum changes are miserable, as in comparing with norm results. **Conclusion:** compensatory-repairing reactions after distal resection of small bowel are better when use GLP-2, because of increasing of wall thickness in almost all parts of small intestine without abrupt falling of some exponents under using Glp-1(for example changes in duodenum at 7-th day). So, using Glp-drugs is acquitted, in postoperative period.

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OP-82

Hyperthermia hinders the proliferation of CC-531 cells "in vitro"

I. García-Alonso[1], D. Saenz de Urturi[1], J. J. Echevarría-Uraga[2], C. Acebal[1], A. Santamaría[1], B. Herrero de la Parte[1]

[1]Dpt. Of Surgery, University of The Basque Country, Leioa, Spain.
[2]Dpt. Of Radiology, Hospital Galdakao-Usansolo, Spain.

Background: Prior to induce hyperthermia on whole animals as a therapeutic approach against liver tumors, it is necessary to check their sensitivity to hyperthermia in vitro. **Methods**: CC-531 colorectal cancer cells were subjected to 47ºC for 30 min. , 45 min. or 60 min. The experiment was carried out both in normal cultures (RPMI + 10% FCS) and in cultures with All-trans Retinoic Acid (ATRA). Cell counts were estimated by MTT assay. **Results:** Exposure to 47ºC for 30 min. showed no effect. When prolonged to 45 min. , the number of cells in the culture 24 h later was slightly increased. However, following 60 min. of hyperthermia 22% of the cells died (0. 132 ± 0. 031 vs 0. 170 ± 0. 021; p<0. 05), and the effect was yet more evident after 24 h, with a 70% reduction of the absorbance in the culture (0. 066 ± 0. 037 vs 0. 216 ± 0. 074; p<0. 001). In accordance to prior studies, adding ATRAto the cultures slightly reduced cell proliferation, as shown by MTT(0. 148 ± 0. 02 vs 0. 170 ± 0. 021; p<0. 05). In ATRA treated cell cultures, exposure to hyperthermia showed similar effects to non-treated cultures; after 60 min. , 30% of the cells died (0. 148 ± 0. 02 vs 0. 098 ± 0. 03; p<0. 05), and a reduction of the cell count to 60% of was seen after 24 hours (0. 176 ± 0. 05 vs 0. 069 ± 0. 03; p<0. 05). **Conclusions:** Sixty minutes exposure of the cultures to 47ºC reduced by more than 50% the number of cells 24 hours later.

OP-83

Explicit role of a peroxisome proliferator-activated receptor gamma agonist against renal ischemic failure in isolated perfused kidney system in rats

I. Szelechman[1], E. Arato[2], P. Hardi[1], T. Nagy[1], I. Takacs[1], K. Sarvari[1], T. G. Veress[1], G. Setalo Jr. [3], M. Vecsernyes[3], G. Jancso[1]

[1]University of Pécs, Department of Surgical Research and Techniques, Pécs, Hungary
[2]University of Pécs, Department of Vascular Surgery,Pécs, Hungary
[3]University of Pécs, Department of Medical Biology, Pécs, Hungary

Background: Approximately 65-75% of all cases of acute renal failure caused by ischemic renal failure (IRF) still requiring symptomatic treatment. IRF as one of the most important risk factors of kidney transplantation also plays a determinative role in the manifestation of early and late graft failure in kidney transplantation. These processes can cause structural manifestations leading to functional failure of the kidney. **Objectives:** The aim of our study was to protect renal survival against IRF by ameliorating renal ischemic tolerance with peroxisome proliferator-activated receptor gamma agonist (PPAR-γ Ago) in isolated perfused rat kidney model. **Material/Patients and Methods:** Animal model was used (n=28). After the removal of kidneys from rats, kidneys were placed into a bottle filled with ice and water. After an hour perfusion with special solutions the animals were divided into four groups. Group 1 (control): no perfusion of the kidneys. Group 2: perfused solution was Krebs-Henseleit-solution (KH). Group 3: perfused solution contained KH and PPAR-γ Ago. Group 4: perfused solution consisted of KH, PPAR-γ Ago and PPAR-γ Ago inhibitor. The structure of kidneys and apoptotic/anti-apoptotic protein expression were analyzed in light microscope and Western-blot. **Results:** PPAR-γ Ago treatment reduced the ischemic failure in Group 3. In the control group the tubular lumen dilatation was remarkably larger and apoptotic protein overexpression was shown. There was no significant difference between the control and KH-perfused groups. **Conclusion:** The results confirm, that PPAR-γ Ago can protect against ischemic failure in kidney. Supported by OTKA 115806.

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OP-84

Methane production caused by chronic whisky consumption in rats and humans

E. Tuboly, T. Tőkés, R. Molnár, R. Turányi, I. Földesi, A. Siska, M. Boros

Institute of Surgical Research, University of Szeged, Hungary
Institute of Laboratory Medicine University of Szeged, Hungary

Background: Recent *in vitro* and *in vivo* studies have revealed the possibility of nonmicrobial methane formation in eukaryote cells under various stress conditions. Chronic alcohol consumption generates intracellular NADH/NAD^+ imbalance leading to oxido-reductive stress in target organs. **Objective:** Based on this background, the purpose was to investigate the effects of chronic ethanol ingestion on methane production *in vivo.* **Materials and Methods:** In study 1, rats were randomly allocated into control group and groups treated with whisky per os (6. 6 ml/kg/day for 10 days), or with whisky combined with antibiotics (p. o. rifaximin) (n=6, each). The whole-body emission of methane was detected with photoacoustic spectroscopy, the oxygen consumption of the liver mitochondria was measured using high resolution respirometry. In study 2, human non-methane-producer volunteers (n=7) consumed 200 ml whisky/day for 4 days. The exhaled CH_4 was recorded daily and plasma markers of liver function were analysed by routine diagnostic methods. **Results**: In the rat study, whisky consumption induced significant methane production on day 3 (p=0. 003 vs control) and on day 8 after antibiotic treatment (p=0. 002 vs control) with significant mitochondrial dysfunction (p<0. 05 vs control). In the human study, whisky consumption was accompanied by a significant methane emission on days 2, 3 and 4 (p<0. 05 vs day 1) and elevated liver-specific enzyme levels. **Conclusion:** The detection method is appropriate for experimental and human use. Methane production might be an immediate indicator of liver dysfunction in rats and humans: exhaled methane might be an indicator for redox pathologies in the hiperacute phase. **Support**: OTKA-K104656

OP-85

Non-invasive monitoring of the splanchnic microcirculation using exhaled methane detection

S. Szűcs, G. Varga, D. Érces, J. Fanczal, M. Ugocsai, R. Lashkarivand, N. Lajkó, J. Kaszaki, M. Boros

Institute of Surgical Research, University of Szeged Faculty of Medicine

Background and Aims: There are many tools to assess visceral perfusion, but real-time and non-invasive monitoring of the integrity of the splanchnic microcirculation is very difficult. Endogenous methane is distributed evenly across membranes, and enters the mucosa freely. Given this background, we have designed experiments to explore the possible association between methane excreted by the lungs and changes in regional intestinal perfusion. **Materials and Methods:** The concentration of exhaled methane was specifically and continuously measured with a purpose-built and calibrated photoacoustic spectroscopy device. In the first rat study (4 groups, n=6-6) methane output and red blood cell velocity (RBCV) changes in the ileal microcirculation were detected in relationship with intraluminally-administered methane doses. Next, anesthetized and ventilated minipigs were used with graded superior mesenteric artery (SMA) occlusion (n=7), the macrohemodynamics and breath methane levels were monitored continuously. Starting from the baseline, complete SMA occlusion was reached after 4 consecutive, 30 min flow reduction - 30 min reperfusion cycles. **Results:** Breath methane and SMA flow (r=0. 680) and serosal RBCV (r=0. 826) changes were correlated significantly in the rat. Exhaled methane was decreased during the SMA occlusions and increased under reperfusion (16±8 ppm *vs.* 64±14 ppm) in the pig, and a significant, positive correlation was found between the exhaled methane concentrations and SMA flow values (r=0. 829). **Conclusion:** These results demonstrate the diagnostic value of breath methane for circulatory analysis. Detection of exhaled methane could offer a plausible way for non-invasive monitoring of intestinal perfusion and microcirculatory dysfunctions in the splanchnic area. **Grant support**: OTKA-K75161

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OP-86

Protectiveeffect ofmelatonin against theinflammatoryresponsesecondary to ischemicbraininjury inaging rats

S. D. Paredes[1], L. Rancan[2], C. García[2], A. Carrasco[2], R. Kireev[3], E. Vara[2], J. A. F. Tresguerres[1]

[1] Department ofPhysiology, School of Medicine,ComplutenseUniversityof Madrid, Avda. Complutense, s/n, 28040 Madrid, Spain

[2] Department of Biochemistryand Molecular Biology III, School of Medicine, ComplutenseUniversityof Madrid, Avda. Complutense, s/n, 28040 Madrid, Spain

[3] Institute of BiomedicalResearch of Vigo, Biomedical Research Unit, Hospital Rebullón (CHUVI), Avda. Puxeiros, s/n, 36415 Vigo, Spain

Background: The possible protective effect of melatonin, a potent free radical scavenger and broad spectrum antioxidant,was evaluated on the inflammatory response secondary to ischemia induced by blockade of the right middle cerebralarteryin agingrats. **Material/Patients and Methods:** Male Wistar rats aged 2,6, and 14months (n=5 per experimental group) were maintained under standard conditions with a 12/12hlight/dark photoperiod. 14-month old animals were subjected to middle cerebral artery obstruction. After 24hour 7days of procedure,non-treated and treated animals with a daily dose of 10mg/kg melatonin were sacrificed and right and left hippocampus and cortex were collected. Non-treated rats aged 2 and 6 months respectively were subjected to the same brain injury protocol. mRNA expression of interleukin-1beta (IL-1β), tumor necrosis factor alpha (TNF-α), glial fibrillary acidic protein (GFAP), and sirtuin 1 was measured by RT-PCR. **Results:** Innon-treated animals, asignificant (p<0. 05) time and age dependent increase in IL-1β and TNF-α was observed in the ischemic area of both hippocampus and cortex, and to alesser extent in the contralateral hemisphere. Hippocampal GFAP was also significantly (p<0. 05) elevated while sirtuin 1 decreased significantly (p<0. 05) in response to ischemia. Aging aggravated these changes in a significant manner (p<0. 05). Melatonin administration was able to reverse significantly (p<0. 05) these alterations. **Conclusion:** Our results suggest that melatonin treatment may mediate neuroprotection against ischemic brain injury at least partly via inhibition of the consequential inflammatoryresponse, aidingto limit tissue destruction in the affected brain regions.

OP-87

Laboratory features of inflammation in renal transplant patients with acute abdomen are blunted

K. Agarwal[1], A. Kumar Sharma[2]

[1]School of Medicine, University of Liverpool. Liverpool, UK.
[2]Department of Renal Transplantation, The Sir Peter Medawar Transplant Unit, Royal Liverpool University Hospital. Liverpool, UK.

Background and Aims: Renal transplantation patients are prone to endure increased gastrointestinal complications, which could lead to graft failure or even death. The importance of recognising and treating such patients is highlighted in this study. **Patient and methods:** All the renal transplants undertaken at the Royal Liverpool University Hospital from 1967-2013 were retrospectively analysed. 2446 patients had a renal transplant within these 46 years, and those having an abdominal X-ray or CT scan performed post-transplant had their reports analysed. 672 (27. 5%) patients were found, of which 418 (17. 1%) were recognised to have presented with a gastrointestinal complication. **Results:** 32/83 patients with BMI ≥30kg/m^2 developed post-operative paralytic ileus, whereas only 54/731 with BMI <30kg/m^2 developed the same, p<0. 001. A high mortality rate was also associated in patients whose C-reactive protein (CRP) levels failed to halve within one week of presentation. 8/11 died with consistently high CRP levels, compared to 3 deaths in 329 patients whose CRP halved in one week, p<0. 001. CRP was also the superior marker of inflammation, being raised in 100% of patients with confirmed inflammation, compared to white cell count (WCC) being raised in just 30. 8% of all patients. **Conclusion:** Weight loss encouragement is crucial in patients pre-transplantation to avoid complications. Furthermore, CRP is of great prognostic value. Pulmonary consolidation is an important cause of upper abdominal pain or paralytic ileus in these patients; and finally, Imaging should be used judiciously – a lower threshold for ordering investigations is highly justified.

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OP-88

The effect of beta-blockade on objectively measured physical fitness in patients with abdominal aortic aneurysms – a blinded interventional study

MG Parry[1,2,3#] and MA West[1,2,3*#], R Asher[4], A Key[1,3], P Walker[1,2,3], L Loughney[5,6], S Pintus[1], N Duffy[1,3], S Jack[1-3,5,6#] and F. Torella[1,2,7#]*

[1]Perioperative CPET Research Group, 3rd Floor Clinical Sciences Building, Aintree University Hospitals NHS Foundation Trust, Lower Lane, Liverpool, United Kingdom, [2]Department of Musculoskeletal Biology, Faculty of Health and Life Sciences, University of Liverpool, Liverpool, United Kingdom [3]Respiratory Research Group, 3rd Floor Clinical Sciences Building, Aintree University Hospitals NHS Foundation Trust, Lower Lane, Liverpool, United Kingdom [4]Cancer Research UK Liverpool Cancer Trials Unit, Waterhouse Building, University of Liverpool, United Kingdom [5]Anaesthesia and Critical Care Research Unit, University Hospital Southampton NHS Foundation Trust, Southampton, United Kingdom [6]Integrative Physiology and Critical Illness Group, Clinical and Experimental Sciences, Faculty of Medicine, University of Southampton, University Road, Southampton, United Kingdom[7]Liverpool Vascular & Endovascular Service, Aintree University Hospitals NHS Foundation Trust, Lower Lane, Liverpool, United Kingdom

Background/Aims: Perioperative beta-blockade is widely used, especially prior to vascular surgery; however, in this group its impact on exercise performance assessed utilising cardiopulmonary exercise testing (CPET) is unknown. We hypothesized that beta-blocker therapy would significantly improve CPET derived physical fitness in this group. **Material/Methods:** We recruited patients with abdominal aortic aneurysm (AAA) of <5.5cm under surveillance. All patients underwent CPET on and off beta-blockers. Patient routinely prescribed beta-blockers underwent a first CPET on medication. Beta-blockers were stopped for one week before second CPET. Patients not routinely taking beta-blockers underwent the first CPET off treatment, then performed a second CPET after commencement of bisoprolol for at least 48 hours. Oxygen uptake ($\dot{V}o2$) at estimated lactate threshold ($\hat{\theta}L$) and $\dot{V}o2$ at peak were primary outcome variables. A linear mixed-effects model was fitted to investigate any difference in adjusted CPET variables on and off beta-blockers. **Results:** Forty-eight patients completed the study. No difference was observed in $\dot{V}o2$ at $\hat{\theta}L$ and $\dot{V}o2$ at peak; however, a significant decrease in $\dot{V}E/\dot{V}co2$ at $\hat{\theta}L$ and peak, an increase in workload at $\hat{\theta}L$, O2 pulse and heart rate both at $\hat{\theta}L$ and peak was found with beta-blockers. Patients taking beta-blockers routinely (chronic group) had worse exercise performance (lower $\dot{V}o2$, workload at $\hat{\theta}L$ and peak and lower absolute $\dot{V}o2$ at peak). **Conclusions:** Beta blockade significantly impacts CPET derived exercise performance, albeit without changing $\dot{V}o2$ at $\hat{\theta}L$ and $\dot{V}o2$ at peak. This supports performance of pre-operative CPET on or off beta-blockers depending on local perioperative practice.

OP-89

Venous Thromboembolism Associated With Thrombophilic Gene Polymorphisms

S. Destek[1], V. Onur Gul[2], S. Ahioglu[2], M. Tükenmez[3], N. Aksakal[3], M. Keskin[3], Y. Erbil[3], K. Rahmi Serin[4]

[1]General Surgery Department, Tuzla Hospital, İstanbul, Turkey;
[2]General Surgery Department, Edremit Military Hospital, Balikesir, Turkey;
[3]General Surgery Department, Istanbul University Medical School, İstanbul, Turkey;
[4]General Surgery Department Liv Hospital, İstanbul, Turkey.

Background and Objectives: The incidence of venous thromboembolism (VTE) in adults is between 2-5%. Patients with venous thromboembolism have genetic predisposition at least 30%. The risk of VTE in the presence of hereditary multiple risk factors are even greater. In this presentation emphasized the importance roleof genetic polymorphisms on thepatients with recurrent venous tromboembolism. **Material and Methods:** Patients who applied to our clinic with a diagnosis of venous thromboembolism associated with thrombophilic gene polymorphisms were analyzed retrospectively. Eight patients were included in the study. **Results:** Half of the patients were female, half male. The mean age of group was 55. 1 years. In 63% of patient on popliteal vein, 25% of patient in femoro-popliteal and 12% of pulmonary vein presented clinical symptoms of venous thromboembolism. Half of the patients had recurrent VTE. Two patients had antiphospholipid syndrome and one of patients had Klinifelter syndrome. Genetic analysis were performed shows pathologic polymorphisms with three genes on 63% of patients andin two genes on 25% of patients and in four genes on 12% of patients. Patients had factor V H1299, factor XIII V34L, factor V Leiden, methylenetetrahydrofolate reductase (MTHFR) 677, MTHFR 1298, beta-fibrinogen-455 G> A, plasminogen activator inhibitor-1 (PAI-1) 4G / 5G, angiotensin-converting enzyme (ACE) I / D was found genes defect. Oral anticoagulan therapy and follow process among lifetime were decided. **Conclusion:** If there are idiopathic thrombosis, thrombosis history at young age, recurrent thrombotic events and family history, inherited thrombophilia should be considered and

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genetic evaluation must be performed. These patients should be monitored lifelong.

OP-90

Supervised exercise programmes, angioplasty and combined treatment are equally effective long-term treatments for intermittent claudication

F. A. K. Mazari[1], J. A. Khan[1], N. Samuel[1], G. Smith[1], P. T. McCollum[1], I. C. Chetter[1]

[1]Academic Vascular Surgical Unit, University of Hull, Hull, United Kingdom.

Background: Comparison of long-term clinical and quality of life (QOL) outcomes of supervised exercise (SEP), angioplasty (PTA) and combined treatment (PTA+SEP) in patients with intermittent claudication (IC) due to femoro-popliteal disease. M**ethods:** Patients recruited to SEP, PTA and PTA+SEP arms of the previously completed RCT were invited for long-term follow-up from 2010 to 2011. Indicators of limb ischaemia were recorded (ABPI, treadmill walking distances - ICD, MWD, PRWD). Duplex ultrasound was also performed. Patients completed SF36 and Vascuqol questionnaires. **Results:** 178 patients were recruited in the trial. 139 were alive at the time of follow-up (PTA=46,SEP=47,PTA+SEP=46). Assessments were completed for 111 patients. Median time to follow up was 5. 2years (IQR 3. 8-7. 4years). Median age at follow up was 75 years. 62. 2%(N=69) of patients were symptomatic. 16. 2%(N= 8) had experienced major cardiovascular event since their last follow up visit. *Intra-group analysis:* Significant improvement was observed in ABPI and PRWD in all groups compared to baseline. PTA only group also demonstrated a significant improvement in ICD, MWD, physical domains of SF36 and Vascuqol. **Inter-group analysis:** PTA and PTA+SEP groups demonstrated a significantly higher ABPI as compared to SEP group. No significant difference was observed in walking distances, QOL outcomes, restenosis rates, and new ipsilateral and contralateral lesions on duplex scan. Patients required re-interventions in all group (PTA=14,SEP=10, PTA+SEP=5). Number of re-interventions was higher in PTA group(N=25) as compared to SEP(N=18) and PTA+SEP(N=7) but failed to reach statistical significance. **Conclusion:** SEP, PTA and combined treatment are equally effective long-term treatment options for patients with femoro-popliteal claudication.

OP-91

Tissue factor related microparticles can predict mortality in patients with intermittent claudication

F. A. K. Mazari[1], C. Ettelaie[2], P. T. McCollum[1], I. C. Chetter[1].

[1]Academic Vascular Surgical Unit, University of Hull, Hull, United Kingdom.
[2]School of Biological, Biomedical and Environmental Sciences, University of Hull, Hull, United Kingdom.

Background: To assess the role of tissue factor (TF), microparticles (MP) and tissue factor index (TFI = TF/MP X 100) in prediction of mortality in patients with intermittent claudication. **Methods:** Patients were recruited from ongoing randomized controlled trial of intermittent claudication treatment. Blood samples were obtained before and after treadmill exercise testing at baseline, one, three, six and twelve months post-treatment. Tissue factor and microparticle levels were estimated using ELISA testing. Tissue factor activity was assessed using chromogenic assay. Logistic regression analysis was performed using Stata 13. 0 SE. Outcome variable for analysis was “alive at follow up”. **Results:** 24 patients were included in the study. Median age was 68 years. 58%(n=14) were male. 21%(n=5) died during the follow up period (median 5. 4 years). Post-exercise TF (OR 0. 78, 95% CI 0. 65-0. 94), pre-exercise MP (OR 0. 99, 95%CI 0. 98-0. 99), post-exercise MP (OR 0. 99, 95%CI 0. 99-0. 99), pre-exercise TFI (OR 0. 94, 95%CI 0. 89-0. 99) and post-exercise TFI (OR 0. 90, 95%CI 0. 84-0. 96) were significant predictors of long-term mortality ($p<0.05$) after controlling for age, gender, severity of claudication and follow up visit. Pre-exercise TF levels, pre and post exercise TF activity were not significant predictors of mortality in this population. **Conclusion:** Tissue factor, microparticles and tissue factor containing microparticles, expressed as tissue factor index, are significant predictors of long-term mortality in patients with intermittent claudication.

OP-92

Treatment of patients with lesions of the brachiocephalic arteries bikarotidnym

A. Ayupov, E. Krivoshchekov,I. Dmitriev

GBUZ "Samara Regional Clinical Hospital. Seredavina "GOU VPO" Samara State Medical University ", Samara, Russia

Background: Surgical treatment of cerebral atherosclerosis primarily pursues preventive purpose and basic operation of a carotid endarterectomy. In the department of vascular

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performed 143 operations of 75 patients with bikarotidnym defeat. In all patients, the cause of the defeat of carotid atherosclerosis was (95. 1%) and kinking with hemodynamically significant circulatory disorders (4. 9%). According to the classification A. V. Pokrovsky, chronic cerebrovascular insufficiency versus-kala asymptomatic (I stage) in 22. 9% of patients. Transient ischemic attack - TIA - (II hundred-India) were observed in 27. 3%. Encephalopathy (III stage) was 5. 9%. Stroke (IV stage) transferred 43. 9% of patients. Classical endarterectomy was performed in 35. 4% of the eversion method 64. 6%. Temporary intraluminal shunt was used 7. 7% of the total number of operations, and when bikarotidnom lesion, had occlusion of the internal carotid artery when the one hand, the intra-luminal shunt used in 3. 1% of cases. All operations are performed under general anesthesia with intraoperative non-invasive control of regional cerebral oximetry apparatus INVOS Cerebral Oximeter (Somanetics Corp, Troy, MI). In the event of a decrease in oxygenation below 40-45% for cross-clamping of the carotid arteries - you complement-endarterectomy continues using a temporary intraluminal shunt. Perioperative mortality was not, in the perioperative period in 2 patients suffered stroke in the pool operated ICA. In the early postoperative period in 5 patients developed neurological complications-lis; in 2 - TIA in the operated pool at 3- ischemic stroke in the pool reconstructed ICA. In the group of patients with sequelae of stroke patients died 4.

OP-93

Blood supply of the distal part of the pancreas – A new classification system

E. Gáti[1, 2], A. Szuák[1], Z. Onódi[1], C. Korom[3], K. Németh[1], L. Nehéz[2], K. Törő[4], Á. Nemeskéri[1], L. Harsányi[2]

[1]Department of Human Morphology and Developmental Biology,
[2]1st Department of Surgery,
[3]Department of Diagnostic Radiology and Oncotherapy,
[4]Department of Forensic and Insurance Medicine, Semmelweis University, Budapest, Hungary

Background and Aims: The sophisticated surgical approaches and diagnostic methods need detailed knowledge of the arterial variations. Data on the upper abdominal arterial variations from different countries display highly variable nomenclatures and statistics. Thus we aimed to perform a detailed analysis of the blood supply of the distal part of the pancreas. **Materials and methods:** We examined 59 corrosion casts of human abdominal organ complexes. Resin mixture was injected through the abdominal aorta, than the parenchyma was corroded. Digital photographs, CT images were taken followed by 3D reconstruction. **Results:** The dorsal pancreatic a. (DPa.) arose from the splenic a. in 36 cases, from the right gastric a. (RGaA.) in 3 cases, from the right hepatic a. (RHa.) in 1 case, from the coeliac trunk in 2 casts, from the common hepatic a. in 5 cases. The transverse pancreatic a. (TPa.) arose from the DPa. in 31 cases, from the RGaA. in 9 casts, from the superior mesenteric a. in 8 casts, from the RHa. in 1 case. The prepancreatic arcade (PPA) was analyzed in respect of the connecting vessels. A new classification system was worked out and the supplying arterial patterns were classified into 9 categories based on the variations of DPa. TPa. and PPA. **Conclusions:** A detailed description was made on the pancreatic blood supply distal from the neck. A new, more clear-cut classification system was set up that may eliminate the confusing mismatching nomenclatures and therefore it may come in useful for the surgeons, radiologists and pathologists.

OP-94

Anatomic Variation of Cystic Duct Insertion into Common hepatic duct determined by ERCP

B. Bicaj, S. Qamirani, A. Hamza, F. Sada, V. Zejnullahu, A. Krasniqi

Department of Endoscopy, Clinic of Surgery, University Clinical Centre of Kosova (UCCK), Prishtina, Kosovo
Faculty of Medicine, University of Prishtina, Prishtina, Kosovo
Faculty of Medicine, University of Tirana, Tirana, Albania
Department of Anesthesiology and Reanimation, University Clinical Centre of Kosova (UCCK), Prishtina, Kosovo.

Background: Anatomical variations of the cystic duct (CD) insertion into common hepatic duct (CHD) are common. **Objectives:** The aim of this study was to determine the frequency of various anatomical variations of the CD insertion into CHD determined by ERCP. **Methods:** This study was conducted at department of Endoscopy, Clinic of Surgery, UCCK. A prospective study of all patients who underwent ERCP for different reasons between June 2010 and December 2012 (a total of 243 patients) at our department wasundertaken. Data was analyzed including patients demographics and ERCP images analyzing type of CD insertion into CHD. **Results:** Out of 243 patients, 129 were female (53. 1%) and 114 were male (46. 9%). The mean age was 56. 3 years old (range 20 - 90). Most patients who underwent ERCP were between 60-69 years (27. 2%). Regarding CD insertion into CHD, upper right insertion (URI)was the highest number of patients 108 (44. 4%), whereas the upper left insertion (ULI) was the lowest number of patients 5 (2. 1%). Others were medial right insertion (MRI) 65 patients (26. 7%), medial left insertion (MLI) 21 patients (8. 6%), lower right insertion (LRI) 12 patients (4. 9%), lower left insertion (LLI) 32 patients (13.

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2%). **Conclusion:** Anatomic variations of CD insertion into CHD are not uncommon in our setup. Contrary to others who reported lower percentage of lower CD insertion, we observed 13. 2 % of LLI. Thus knowing biliary anatomy and anatomical variations is essential for every Surgeon.

OP-95

Todani type II Congenital Bile Duct Cyst: European multicenter study of the French Surgical Association and literature review

Ouaïssi Mehdi[1], Kianmanesh Reza[2], Belghiti Jacques[3], Ragot Emilia[3], Mentha Gilles[4], Adham Mustapha[5], Troisi Roberto[6], Pruvot François-René[7], Duguet Laurent[8], Paye François[9], Ayav Ahmet[10], NuzzoGennaro[11], Falconi Massimo[12], Demartines Nicolas[13], Mabrut Jean-Yves[14], Gigot Jean-François[15]

(1) Department of General and Digestive Surgery, TimoneHospital, Marseille, France.(2) Department of Digestive and Endocrine Surgery, Robert DebréHospital, Reims. France.(3) Department of HBP Surgery, BeaujonHospital, Clichy, France. (4)Department of Digestive Surgery, University Hospital of Geneva, Switzerland. (5) Department of HBP Surgery, Edouard HerriotHospital, Lyon, France.(6) Department of Digestive Surgery, Ghent University Hospital, Ghent, Belgium. (7) Department of HBP Surgery, Claude HuriezHospital, Lille, France.(8) Department of Digestive Surgery, Saint Camille Hospital, Bry-sur-Marne, France.(9) Department of General and Digestive Surgery, Saint-AntoineHospital, Paris, France.(10) Department of General and Digestive Surgery, University Hospital of Nancy, Nancy, France.(11) Department of HBP Surgery, Gemelli University Hospital, Roma, Italy.(12) Department of HBP Surgery, Negrar University Hospital, Vérona,Italy.(13) Department of Digestive Surgery, Centre HospitalierUniversitaireVaudois, Lausanne, Switzerland.(14) Department of Digestive Surgery and Liver Transplantation, La Croix-RousseHospital, Lyon. France.(15) Department of Abdominal Surgery and Transplantation, CliniquesUniversitaires Saint-Luc, Brussels, Belgium

Background: The purpose of the study was to analyze clinical presentation, surgical management and long-term outcome of patients suffering from biliary diverticulum, namely Todanitype II congenital bile duct cyst (BDC). Summary background data: The disease incidence ranges between 0. 8% and 5% of all reported BDC cases with a lack of information about clinical presentation, management and outcome. **Methods:** A multicenter European retrospective study was conducted by theFrench Surgical Association. The patients' medical records were included in a web database. Diagnostic imaging studies, operative and pathology reports underwent central revision. **Results:** Among350 patients with congenital BDC, 19 type II were identified (5. 4%), 17 in adults (89. 5%). The biliary diverticulum was located at the upper, middle and lowerpart of the extra hepatic biliary tree in 11, 4 and 4 patients (58%, 21% and 21%) respectively. Complicated presentation occurred in 6 patients (31. 6%), including one case of synchronous carcinoma. Surgical techniques included diverticulum excision in all patients. Associated resection of the extra hepatic biliary tree was required in 11 cases (58%) and could be predicted by the presence of complicated clinical presentation. There was no mortality. **Conclusions**: According to the present largest Western series of Todani type II BDC, the type of clinical presentation, rather than BDC location,was able to guide the extent of biliary resection. Excellent long-term outcome can be achieved in expert centers.

OP-96

Parameters and risk factors for appropriate drain management after distal pancreastectomy

T.Shimizu, M.Ito, A.Horiguchi

Department of pancreatic Surgery, Fujita Health University, Toyoake Aichi Japan

Objective: Distal pancreatectomy is fairly well tolerated with an over all mortality rate of about 3% or less. However, pancreatic fistulates after distal pancreatectomy still remain high and range between 2 and 33%. We examined the risk factors and parameters of pancreatic fistula to remove drain on appropriate time after distal pancreatectomy. **Methods:** The object is 65cases that underwent distal pancreatectomy from 2007 to 2013.(Disease; pancreatic cancer 35, P-NET 6, Cystic tumor 14, Metastatic tumor 7, SPT 2) Pancreatic fistulates were classified into two groups based on ISGPF grading criteria(no fistula=Grade A fistula=Grade B and C).We examined about the pancreatic fistula-related risk factors (age, sex, BMI, diabetes, smoking, alcohol, disease, surgical form, stump, amount of bleeding, operation time) .Furthermore we checked drainage fluid amylase level and serum CRP level everyday(from POD1 to POD6) and compared them between two groups.**Results:**As for the pancreatic fistula-related risk factors, pancreatic fistula significantly developed to male (p-value=0.013).On the other hand the fistula group showed high level significantly about drainage fluid amylase level on the POD3(p-value=0.001 cut-off-value 1757 sensitivity 0.857 specificity 0.773) and showed high level significantly about serum CRP level on the POD6(p-value=0.003 cut-off-value 4.75 sensitivity 0.889 specificity 0.833).**Conclusion:** Our study shows that the drainage fluid amylase level(POD3) and serum CRP

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level(POD6) must be useful parameters in management after distal pancreatectomy.

OP-97

Comets, Twinkles, And a Pearl-Necklace; A Systematic Review Of Radiological Findings To Guide The Diagnosis Of Gallbladder Adenomyomatosis

A. Y. Hammad, MD[1], J. T. Miura MD[1], K. K. Turaga, MD, MPH[1], F. M. Johnston, MD, MHS[1], M. D. Hohenwalter, MD[2], T. C. Gamblin MD, MS[1].

[1]Division of Surgical Oncology, Department of Surgery, Medical College of Wisconsin, Milwaukee, WI, USA
[2]Section of Abdominal imaging, Division of Diagnostic Radiology, Department of Radiology, Medical College of Wisconsin, Milwaukee, WI, USA

Background: Gallbladder adenomyomatosis (GA) is a common benign gallbladder entity that is typically discovered as an asymptomatic gallbladder mass. Gallbladder cancer is commonly in the differential diagnosisof gallbladder masses. The ability to distinguish benign disease and avoid a more extensive oncologic resection is extremely valuable. This study sought to review and describe imaging modalities used to diagnose GA. **Methods**: A systematic search of PubMed and Scopus was performed. Full text articles, published between January 2000 and December 2014 in English were selected in accordance to inclusion/ exclusion criteria. A PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) flow diagram was constructed to illustrate the selection logic. **Results**: A total of 20 articles were included in our analysis. GA imaging originated with oral cholecystography, but currently uses transabdominal ultrasound and possible computed tomography (CT) or magnetic resonance imaging (MRI). The detection of Rokitansky-Aschoff sinuses (RAS) is a pathognomonic sign for GA. These sinuses are visualized as small cystic spaces on ultrasound with associated "comet-tail" or "twinkling" artifact. A "Pearl-Necklace" sign of small sinuses on MRI or "Rosary" sign on CT are also helpful to guide the diagnosis. Little evidence exists to support EUS or MRCP for routine GA imaging. **Conclusion**: Ultrasound is the most commonly used tool for the diagnosis of GA. Characteristic signs of the comet's tail or twinkling caused by RAS are pathognomonic for GA. If ultrasound is not diagnostic, CT or MRI are valuable to further assess the benign vs. malignant nature of a cholecystic mass.

OP-98

Bile Duct perforation by Biliary Stents post-ERCP: Case-reports and literature review of management

N Samuel, A Wheeler, MH Shiwani, A Masri

Department of General Surgery, Barnsley Hospital NHSFT, South Yorkshire, UK

Background: Common bile duct (CBD) stones are usually treated with endoscopic retrograde cholangiopancreatography (ERCP) with or without stent insertion, followed by laparoscopic cholecystectomy(LC) for gallstones. Iatrogenic CBD injury is a recognised complication associated with high morbidity. **Patient& Methods:** We report on two patients (A and B) who both had ERCPs for CBD stones and a 7fr. polyethylene pigtail biliary stent inserted prior to elective LC. Intraoperatively, stent was seen perforating the CBD proximally in patient A, and distally in patient B with the intraperitoneal tip fistulating into the duodenum. Patient A was managed with laparoscopic closure of duct perforation site, distal choledochotomy for T-tube insertion and a tube drain placed in the subhepatic space. In Patient B the laparoscopic procedure had to be converted to open and T-tube inserted via the perforation site. In both cases the T-tube was clamped on day 5 followed by cholangiogram to confirm no bile leakage prior to taking out the drains. **Results:** Post-ERCP, CBD perforations are relatively rare with the incidence ranging from 0. 3-2. 1%. The majority are caused during the procedure due to guide-wire insertion. A small number are caused at the time of stent placement or its subsequent migration. CBD perforation by stents could be speculated to be caused by the nature and type of stent or the duration between ERCP and LC when left in-situ. **Conclusion:** Despite little evidence on the management of perforations, T-tube insertion seems a sensible option for allowing perforations to heal and for further assessment of on-going leaks through cholangiography.

OP-99

Predictive factors in the appearance of residual tumor in patients reoperated after conservative surgery for Breast Cancer

A. Tejera, F. Alcala, V. Vega, I. Gutierrez,C. Trujillo,M. Jimenez,P. Perez,JR. Hernandez.

Department of General and Digestive Surgery, University Insular Hospital of Gran Canaria, Spain.

Background: Evaluate the effect of positive margins in patients reoperated after breast cancer-conserving surgery. Study the pathology results after reoperation, the frequency

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when they are positive and try to identify those factors that influence the occurrence of residual tumor. **Patient and Methods:** 301 patients underwent surgery for breast cancer between 2012 and 2013. 58 reoperations were studied for positive margins and 16 variables were studied related with the presence of residual tumor. **Results:** Of all patients who underwent surgery for breast cancer, 19% were reoperated because positive margins. In these patients 67% was performed re-excision lumpectomy (REL), while in 33% of the remaining cases we chose the mastectomy. When REL was performed in only 15% residual tumor was observed in the new pathology of resection, in 79% of cases when mastectomy was performed, different carcinoma involvement of the resection margins was observed. The variables of size, axillary status, histology, immunohistochemical profile and type of margin involvement, directly influenced the development of residual tumor in the surgical specimen of these patients. **Conclusions:** There are factors that influenced the occurrence of residual tumor, the reoperation only aimed to residual tumor in 36%, the rest of the patientsdid not received any benefit, assuming without question a deterioration in the quality of life and increased health care costs. We must identify those that are predictors of residual tumor and resort to other treatments,to get the same results as local control without affecting the quality of life of patients while avoiding unnecessary reoperation.

OP-100

Patient selection for axillary surgery: do we have strong predictors of nodal metastases in breast cancer?

T. Parekh, M. Absar, S. Cotterill

Department of Breast Surgery, North Manchester General Hospital, UK
Medical statistics Department, Hope Hospital, Salford, UK

Background: Due to its prognostic and therapeutic implications, axillary lymph node dissection (ALND) remains the standard procedure for patients with positive sentinel lymph node biopsy (SLNB). In recent years, there is an ongoing debate of whether there is a role for minimal axillary surgery with lymphovascular invasion (LVI) and tumour size identified as strong predictors of nodal metastases. **Objectives:** The aim of our study was to determine key predictors of axillary lymph node metastases and whether this can help determine if there is a group of patients in whom ALND is indicated. **Material/Patient and Methods:** Data was collected prospectively on 155 patients with positive SLNB between December 2008 and January 2013, and analysed retrospectively. Histopathology reports were reviewed to record tumour characteristics and lymph node status. Data was analysed by logistic regression using SPSS 22. 0. **Results:** Of the 155 patients, 57. 4% had further nodal metastases following a positive SLNB. Patients with a tumour size >30mm, 60% had further nodal metastases, compared to 40% who did not. Similarly, 65% of patients with LVI presence had further nodal involvement compared to 35% of patients where LVI was unreported. However, on univariate and multivariate analysis, there were no independent predictors of further auxiliary node metastases identified based upon logistic regression. **Conclusions:** On the contrary to existing studies, our study demonstrates that LVI and tumour size are not strong predictors of nodal metastases. Given this, further research is required to determine key factors that can aid patient selection for auxiliary node surgery.

OP-101

Are there any risk factors for reexcision for positive margine?

E. Ozturk, M. Urkan, R. Yıldız, M. O. Mentes, I. H. Ozerhan

Department of General Surgery, Gulhane Military Medical Academy, Turkey;

Background: Partial mastectomy is the most commonly performed procedure for invasive breast cancer and often some clinical factors did influence reexcision rates. Obtaining tumour free resection margins is important to prevent reexcision and local recurrence. **Methods**: Data were obtained from our clinical data which has during the 2012-2014and. surgical, pathology, radiology, and demographic records, including detailed surgical margin status were analyzed retrospectively. **Results:** A total of 633 women with 464 invasive breast cancers underwent partial mastectomy and in this population; 222 patients (47,8 %) underwent reexcision (154 patients [33,1%; 95% CI] had 1 reexcision, 68 [14,7%; 95% CI] had 2and more reexcisions. Among all patients undergoing initial partial mastectomy, total mastectomy was performed in 68 patients (14,7%; 95% CI). Reexcision rates for margin status following initial surgery were 29,7% (95% CI) for initial positive margins, 70,3% (95% CI) for less than 1. 0 mm margins. Other factors associated with a higher reexcision rate of positive margins included lobular breast cancer/DCIS and the presence of lymphovascular invasion. And also our analysis showed that women younger than 35 were more likely to have reexcisions. **Conclusion:** In the literature, the main risk factors for positive margins are: a palpable tumor, the presence of comedonecrosis, tumor greater than 10mm, the absence of a preoperative biopsy, and low-grade lesions. Our study confirmed the influence of pathological type, lymphovascular invasion and older age than 35 as a risk factor for positive margins.

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OP-102

Role of molecular subtype in breast cancer

M. Urkan, E. Ozturk, R. Yıldız, M. O. Mentes, M. F. CAN

Depeartment of General Surgery, Gulhane Military Medical Academy, Turkey;

Background: Breast cancers' molecular subtypes are the major determinant of the type of systemic treatment after surgical interference. Less attention, however, has been paid to the impact of subtype on local therapy outcomes. Presenting features of breast cancer vary with hormone receptor status. **Methods**: In a our retrospective cohort analyses of 464 patients who had undergone breast cancer surgery in Gulhane Military Medical Academy during the 2012-2014. Estrogen receptor(ES), progesterone receptor(PR), and C-erb2 were routinely obtained and analyzed retrospectively. **Results:** Significant variation in presenting tumor features was observed with these markers. Patients with estrogen receptor positive cancers were older and significantly less likely to have grade III tumors. Patients whose cancers overexpressed C-erb2 were significantly more likely to have multicentric/multifocal cancers ($p < 0.001$). And also, cancers with evinced C-erb2 has an extensive intraductal component ($p < 0.003$**).** Their poor prognosis, however, triple negative (ES, PR, and C-erb2 negative) cancers have been confirmed a lower incidence of nodal involment, than ER positive, HER2 negative cancers after adjusting for age, grade, and size ($p < 0.004$). On the other hand, C-erb2 positive, ER negative cancers were significantly more likely to have involvement of 4 or more nodes. **Conclusion:** Molecular subtype in breast cancer could be a contributory factor to assess the poorer prognosis of breast cancer. And also, this information may be useful in selectingthe type of therapy.

OP-103

Vismodegib for periocular and orbital basal cell carcinoma

K. Y. Wong[1], K. Fife[2], J. Lear[3], F. Ali[3], R. Price[1], A. Durrani[1]

[1]Department of Plastic and Reconstructive Surgery, Cambridge University Hospitals NHS Foundation Trust, UK
[2]Oncology Centre, Cambridge University Hospitals NHS Foundation Trust, UK
[3]Dermatology Centre, University of Manchester, Manchester Academic Health Science Centre, Manchester, UK; Salford Royal NHS Foundation Trust, and Manchester Royal Infirmary, Manchester, UK

Background: Basal cell carcinoma (BCC) is the most common periocular skin cancer and can lead to significant morbidity. **Objectives:** We assess the effectiveness of vismodegib, a first-in-class Hedgehog signalling pathway inhibitor, for periocular and orbital BCCs based on clinical response and tolerability. **Material/Patients and Methods:** All patients with periocular or orbital BCCs who met criteria for vismodegib treatment were recruited prospectively between May 2012 and 2013 from two hospitals. Eleven patients received oral vismodegib (150 mg daily) until disease progression, unacceptable toxicity or withdrawal. All patients were followed up monthly. Patient demographics, tumour size, comorbidities, treatment duration including dosing regime, adverse events, response rate, duration of response, progression-free survival and disease-free survival were retrospectively analysed. **Results:** All eleven patients had biopsy proven BCCs with no metastatic disease at presentation. Mean age was 74 years (range 45-90 years) and six patients (55%) had orbital involvement. Mean lesion longest dimension was 47 mm (range 10-115 mm) and five cases (45%) represented recurrence following previous surgery and/or radiotherapy. As of 1 October 2014, mean treatment duration was 13 months (range 2-21 months) and mean follow up duration 21 months. Seven patients (64%) had a complete response and three (27%) had a partial response. There was also a case of disease progression despite an initial partial response of 83%. The partial response of 55% in one patient allowed subsequent surgical clearance. **Conclusion:** Vismodegib appears to be effective for treating periocular and orbital BCCs with orbital salvage of patients who otherwise would have required exenteration.

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OP-104

Surgical Treatment of Tongue Cancer

V. Pismenny, I. Pismenny

Samara Regional Clinical Oncology CenterSamara State Medical UniversitySamara, Russia

Background: The tongue malignant tumor treatment is a combined one, the surgical stage playing significant role. The goal of elective surgery is to provide the oncological reliability of the operation and maximal restoration of the lost forms and volume of the organ. **Materials and methods**. We treated 97 patients at the age of 40-76 years. Tumor location – 34 patients had the mouth cavity fundus tumorwith the spreading to the mandible alveolar processas well as limited lesion; 63 patients underwent the surgery including the resection and the tongue extirpation. Tracheostomy is preferable to prevent bronchopulmonary complications as well as a high-quality oral cavity hygiene for the period of 12-14 days. To prevent thromboembolic complications in case of extensive combined oropharyngeal operations we used Vessel Due F (Sulodexide) in 91 patients (93. 8%). Postoperative period demonstrated the better results of the skingrafts on the anterior neck muscles. Thoracic and shawl muscles graft was too massive and presented difficulties while adjusting it in the oral cavity because of the boundary created by mandible arch. The graft restoring the oral cavity and tongue defects was rotated up to the 90 and 180^0 but in different surfaces. **Conclusion**. The application of arteriolized musculocutaneous grafts on the anterior neck muscles during the complex tongue defects restoration leads to good functional results without neck and facial deformities, to quick restoration of the process of feeding, of vocal and respiratory functions.

OP-105

Impact of previous cyst-enterostomy on patients' outcome following resection of Bile Duct Cysts: Results of the European multicenter study of the *French Surgical Association*

*Ouaissi M.[1], Kianmanesh R.[2], Ragot E.[3],Belghiti J.[3],Majno P.[4],Nuzzo G.[5], Dubois R.[6], Revillon Y.[7], Cherqui D.[8], Azoulay D.[8], Letoublon C.[9], Pruvot F-R[10], Paye F.[11], Rat P.[12], Boudjema K.[13], Roux A.[14], Mabrut J-Y[15], Gigot J-F[16], and the working group of the French Surgical Association.**

[1]Department of General and Digestive Surgery.La Timone Hospital, Marseille, France. [2]Department of Digestive and Endocrine Surgery.Robert Debré Hospital, Reims, France.[3]Department of HPB Surgery.Beaujon Hospital, Clichy, France.[4]Department of Digestive Surgery.Geneva University Hospital, Geneva, *Switzerland*.[5]Department of HPB Surgery.Gemelli University Hospital, Roma, Italy.[6]Department of Pediatric Surgery.Mother and Children Hospital, Lyon, France.[7]Department of Pediatric Digestive Surgery.Necker Hospital, Paris, France.[8]Department of Digestive and HPB Surgery.Henri Mondor Hospital, Creteil, France.[9]Department of Digestive Surgery.Michallon Hospital, Grenoble, France.[10]Department of Digestive surgery and Transplantation.Claude Huriez Hospital, Lille, France. [11]Department of Digestive Surgery.Saint Antoine Hospital, Paris, France.[12]Department of Digestive Surgery.Dijon University Hospital, Dijon, France.[13]Department of HPB Surgery.Rennes University Hospital, Rennes, France.[14]Pôle Information Médicale Evaluation Recherche, Unité de Recherche Clinique, Lyon, France. [15]Department of Digestive Surgery and Hepatic Transplantation, La Croix-Rousse Hospital, Lyon, France.[16]Department of Abdominal Surgery and Transplantation, Cliniques Universitaires Saint-Luc, Université Catholique de Louvain, Brussels, Belgium.

Background: The present study aimed to analyze the impact of previous cyst-enterostomy (CE) on clinical presentation, surgical management and long-term outcome of patients operated from congenital bile duct cysts (BDC).**Summary background data:**How previous CE affects patients' outcome following secondary surgical resection of BDC is rarely reported in large cohorts of patients.**Methods:**A multicenter European retrospective study was conducted by the *French Surgical Association*. Diagnostic imaging studies, operative

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and pathology reports underwent central revision. Patients with and without previous history of CE were compared.**Results:**Among 243 patients with Todani types I-IVb BDC, 16 had undergone previous CE (6.5%). The latter suffered from preoperative significantly more cholangitis (75% vs. 22.9%; p<0.0001), complicated presentation (75% vs. 40.5%; p=0.0071) and synchronous biliary cancer (31.3% vs. 6.2%; p=0.0043) than patients without previous CE. Overall morbidity (75% vs. 33.5%; p<0.0008), severe complications (43.8% vs. 11.9%; p=0.0026) and reoperation rates (37.5% vs. 8.8%; p=0.0032) were also significantly greater in patients with previous CE, and their Mayo Risk Score, during a median follow-up of 37.5 months (range: 4-372 months) indicated significantly more patients with fair and poor results (46.1% vs. 15.6%; p=0.0136).**Conclusions:** This current largest Western series shows that previous cyst-enterostomy is associated to a more severe clinical presentation, including higher incidence of synchronous cancer, and to poorer short- and long-term results in patients operated for Todani types I-IVb congenital bile duct cysts.

OP-106
Tissue Proteinase Levels, Tumour Pathology and 10 Year Survival Analysis in Colorectal Cancer

E. A Baker[1], N. Robinson[1], M. A Tabaqchali[1]and D. J Leaper[2]

[1] Professorial Unit of Surgery, University Hospital of North Tees, Stockton-on-Tees, UK
[2] Institute of Skin Integrity and Infection Prevention, University of Huddersfield, UK

Background: Proteinases and their inhibitors are involved in tumour invasion and metastasis. Levels of matrix metalloproteinase (MMP) and plasminogen activator (PA) system components were determined in colorectal cancer and correlated with tumour pathology and ten year survival status. **Materials and Methods:** Paired tumour and normal mucosal tissue from 101 colorectal cancer patients were analysed by ELISAs for MMP and PAS expression; MMPs (-1, 2, -3, -9), tissue inhibitors (TIMP-1, TIMP-2), urokinase and tissue-type PA (uPA, tPA), PA inhibitors (PAI-1, PAI-2) and the uPA-receptor (uPAR). Tissue levels were correlated with tumour pathology (P<0. 05, Spearman's correlation) and ten year survival analysis was performed (p<0. 05 Kaplan Meier). The study had ethics approval. **Results:** Levels of MMPs, uPA, uPAR, TIMP-1 and PAIs were significantly greater in colorectal tumours than normal mucosa (P<0. 05 Mann Whitney) e. g. PAI-1: tumour, median 14. 9(range, 0. 2-80. 2)ng/mg total protein; normal, 2. 1(0. 1-65. 0). However tPA levels were significantly greater in normal mucosa. Tumour levels of MMPs, uPA, uPAR and PAI-1 significantly correlated with Dukes' stage e. g. MMP-1: Adenoma, 0. 9(0. 2-6. 8); Dukes A, 4. 7(0. 1-23. 0); Dukes B, 11. 9(0. 6-86. 9); Dukes D, 16. 3(0. 3-30. 8). PAI-1 and uPA tumour levels significantly correlated with lymphatic invasion, TIMP-1 and PAI-1 with tumour depth and PAI-2 with vascular invasion. The proportion of active MMP-2 and MMP-9 in tumour tissue significantly correlated with disease free and overall survival, with higher levels associated with poorer survival. **Conclusions:** MMP and PA proteinase system components correlated with tumour pathology. However, only active MMP-2 and MMP-9 levels correlated with disease-free and overall ten year survival.

OP-107
Matching patient ABO blood group and AH tissular phenotype of the bioprosthesis may improve its longevity

O. Schussler[1], N. Lila[2], T. V. Perneger[1], P. Mootoosamy[1], M. Ruel[3], M. Cikirikcioglu[1], A. Kalangos[1], A. F. Carpentier[2]

[1]Department of Cardiac Surgery, Cardiovascular Research Laboratory, Statistics, University Hospital of Geneva HUG/CMU, Geneva, Switzerland
[2]Department of Cardiovascular Surgery, Laboratory of Biosurgical Research, Pompidou Hospital, University Paris Descartes, Paris, France
[3]Department of Cardiac Surgery, University of Ottawa Heart Institute, Ottawa, Ontario, Canada

Background: Pigs share with humans some of the antigens present on cardiac valves. Two such antigens are the major xenogenic Ag, "α–Gal" which mimics the human B antigen of ABO blood group system and the minor Ag, pig A antigen of AH blood group which is similar to that of human AH antigen. Despite chemical reticulation, the α-Gal is still expressed on the bioprosthesis and elicits an immunological response upon implantation. The role of AH on porcine heart valves is unknown. We hypothesize that these antigens may modify the immunogenicity of the bioprosthesis and also its longevity. ABO distribution may vary between patients with low (<6 years) and high (≥15 years) bioprosthetic longevity. **Methods**: Single-centre registry study (Paris, France) including all porcine bioprostheses (mostly Carpentier-Edwards 2nd/3rd generation heart valves) replaced between 1987-1998; and for the period 1998-2014 all bioprostheses with longevity ≥13 years (follow-up ≤27 yrs). Predictive factors for bioprosthesis longevity, i. e. number, site of implantation and age were collected. Blood group and other variables were entered into an ordinal logistic regression analysis model predicting valve longevity, categorized as low (<6 yrs), medium (6-14. 9 yrs), and high (≥15 yrs). **Results:** Longevity and ABO blood group were obtained for 548 explanted bioprostheses. Mean longevity was 10. 2 yrs±3. 9 [0-28]. It was low in 11. 3% patients, medium in 77. 6%, and high in 11. 1%. Mean longevity of group A recipients was significantly higher than for other blood groups (p=0. 009). Using multivariate analysis, group A predicted a higher

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longevity category (OR 2. 24, p=0. 001) as did the number of valves replaced, single vs multiple (OR 2. 36, p=0. 001); aortic position vs other (OR 1. 21, p=0. 40); and age <60 years vs older (OR 3. 33, p<0. 001). **Conclusion:** Patients of group A but not B have a higher longevity of their bioprostheses. Since only a fraction of pigs expresses the A antigen, its effect is probably underestimated due to the low probability of group A recipient to have randomly received a valve of the corresponding phenotype. Future graft-host phenotyping and matching may give rise to a new generation of long-lasting bioprosthesis for implantation in humans, especially for the younger population.

OP-108

Do Statins Modify Peri-operative Neutrophil Function in Colorectal Cancer Patients?

J. Richardson[1,2], C. Hendrickse[1], F. Gao-Smith[2], D. Thickett[2]

[1]Department of General Surgery, Heart of England NHS Foundation Trust, Birmingham, United Kingdom
[2]Centre of Experimental Medicine, University of Birmingham, Birmingham, United Kingdom

Background: Statins were developed as lipid-lowering agents. In addition, they modulate the immune system and have anti-inflammatory effects. Their use in the peri-operative period may reduce surgical complications by modulating the post-operative pro-inflammatory response. **Objectives:** This study aims to evaluate the effect of statins on neutrophil function *in-vivo* and *in-vitro*. **Patients and Methods:** Systemic neutrophils were isolated from consecutive consenting patients undergoing elective Colorectal Cancer Resection on Day-0 (pre-op) and Day-1 (post-op). Neutrophil Extracellular Traps (NETs) were measured by fluorescence video-microscopy and Neutrophil Apoptosis was measured by fluorescence activated cell sorting. Systemic neutrophils were exposed to high dose statins *in-vitro* (Simvastatin-80mg) and the experiments repeated. **Results:** 41 patients were evaluated *in-vivo*. 18/41 patients (43. 90%) were in the Statin-group (taking statins at the time of resection) and they were comparable to the Non-statin group (Age, BMI, Predicted Mortality, Tumour Stage). No significant differences in NET formation or Neutrophil Apoptosis were observed between the groups on Day-0 and Day-1. 11 patients were evaluated *in-vitro*. A significant reduction in NET formation was observed in patients treated with statin on Day-0 in response to: No-stimulant (12,430AFU vs. 13,970AFU, p=0. 0137), PMA(38,060AFU vs. 46,020AFU, p=0. 0068), f-MLP (12,910AFU vs. 15,230AFU, p=0. 0049) and on Day-1 in response to: PMA (41,990AFU vs. 50,390AFU, p=0. 0273), LPS (9,126AFU vs. 12,460AFU, p=0. 0488). A significant difference favouring cell survival was demonstrated in patients treated with statin on Day-0 at 24-hours incubation: Early Apoptosis (12. 90% vs. 13. 99%, p=0. 0142). **Conclusions:** Therapeutic intervention in the peri-operative period may suppress systemic inflammation and improve patient outcomes.

OP-109

Lympho-vascular invasion (LVI) is a powerful predictor for nodal metastasis and should be considered in the decision-making for further axillary surgery.

T. Parekh[1], K. McNamara[1], M. Absar[1]

[1]Department of General Surgery, North Manchester General Hospital, UK.

Background & Aims: Sentinel lymph node biopsy (SLNB) is standard practice for axillary staging with 25-30% having positivity. The appropriateness of SLNB is determined by tumour size. However, there is an ongoing debate of identifying predictive value of factors such as LVI in lymph node metastases. The aim of this study is to identify key predictors of nodal metastases. **Patient & Methods:**A prospective study of 503 patients undergoing SLNB was undertaken between January 2008 and December 2013. Histopathology reports were reviewed to record lymphovascular invasion (LVI), tumour size, grade, Ki67, hormone receptor status and HER2 status. Peripheral absolute lymphocyte and monocytes were obtained to calculate lymphocyte:monocyte ratio (LMR).**Results:** Thirty per cent of patients with invasive breast cancer had positive SLNB. Univariate analysis revealed that tumour size and LVI demonstrated positive SLNB (p=0.008 and p=<0.05, respectively). Multivariate analysis revealed that LVI was significantly correlated with SLNB positivity. Ki67, HER2, hormone receptor status and LMR did not demonstrate predictive value.

Multivariate Variable	P value	Confidence Intervals
Grade	0.415	-0.037-0.090
Size	0.783	-0.053-0.070
Lymphovascular Invasion	**<0.05**	**0.196-0.371**
Oestrogen receptor	0.271	-0.59-0.209
Progesterone receptor	0.862	-0.095-0.113
Human EGF receptor 2	0.577	-0.079-0.044
Lymphocyte:Monocyte ratio	0.600	-0.054-0.093
Ki67	0.180	-0.076-0.014

Conclusions: LVI is a strong independent predictor of nodal metastases in comparison to other clinic-histopathologic factors. Knowledge of lymph node status combined with the presence or absence of LVI can predict which subset of patients will have better outcomes and can aid in the decision-making for further axillary surgery.

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OP-110

Coagulation and Fibrinolysis After Laparoscopic and Open Surgery. A Prospective Randomized Study

Tsiminikakis N[1], Katsanevakis E[1], Argiriou EO[2], Kontezakis P[1], Kriaras A[1], Mayrigiannaki E[1], Daskalaki S[1], Bountoutsidis A[1], Ioannou K[1], Psomiadou V[3], Bongiorni C[4], Antoniou C[1], Oikonomou K[1]

[1] 2nd Surgical Department, General Hospital of Chania, Crete, Greece
[2]1st Department of Surgical Oncology, Metaxa Cancer Hospital, Piraeus, Greece
[3] Surgical Department, Pammakaristos General Hospital of Athens, Greece
[4] Vamos Healthcare Centre, Crete, Greece

Background: Laparoscopic surgery seems to be associated with a lower risk for thromboembolism than open surgery. Objectives: This prospective randomized study was conducted in order to detect potentially existing differences in activation of coagulation and fibrinolytic pathways between open and laparoscopic surgery. **Materials/Patients and Methods:** 40 patients were randomly assigned to undergo laparoscopic (n=20) or open cholecystectomy (n=20). Blood samples were taken preoperatively, at the end of the procedure, 24 hrs and 72hrs postoperatively. The following parameters were measured: platelets, soluble fibrin monomer complexes (F. S. test), fibrin degradation products (FDP), D-Dimmers (D-D), fibrinogen (FIB), activated partial thromboplastine time (APTT), prothrombin time (PT). Thrombin-antithrombin III complexes (TAT) were measured at 24 hrs and 72 hrs postoperatively. **Results:** Preoperatively, values of all haemostatic parameters were within normal limits. Immediately postoperatively, values of TAT were significantly increased in the open surgery group (p<0,05). Values of D-Dimmers were also increased in the open surgery group (p<0, 01), immediately postoperatively. Values of FIB decreased slightly in both groups at 24 hrs postoperatively but there was an increase in the open surgery group (p<0,01). The F. S. test became positive twice in the open surgery group starting immediately postoperatively and only once at 72hrs postoperatively in the laparoscopy group. Concentration of FDP increased more in the open surgery group, becoming significantly important at 72 hrs (p<0,05). **Conclusion:** Subclinical fibrinolysis is more profound at the open surgery group. Although at a lower degree, hypercoagulability is still observed in patients undergoing laparoscopic surgery and therefore routine thromboembolic prophylaxis should be considered.

OP-111

Design of a Study Protocol to Investigate *KCNJ2* Over-Expression in Atrial Fibrillation Patients with Different BMI

S. Shah[1], G. K Davis[1,2], C. Bing[1]

[1]Faculty of Health and Life Sciences, University of Liverpool, Liverpool, UK
[2]Cardiology Department, Aintree University Hospitals Trust, Liverpool, UK

Background and Aims: Several associations between obesity and cardiovascular disease exist. However, there has been minimal study evaluating a link between obesity and arrhythmogenesis. Kir2. 1 is an inward-rectifier potassium ion channel encoded by the *KCNJ2* gene which controls cardiac excitability. Evidence suggests over-expression of this gene leads to an increased rate of arrhythmogenesis. We aimed to establish a protocol for investigating *KCNJ2* over-expression in patients with AF. **Material and Methods:** This study compared two groups in order to design and validate a protocol. Patients with AF and normal BMI were compared to those with AF and obese BMI. Ficoll density gradient centrifugation was used to isolate and extract peripheral blood mononuclear cells (PBMCs) from blood. Real-time polymerase chain reaction (qPCR) was used to quantify *KCNJ2* expression following RNA extraction by TRIzol and cDNA synthesis. Results were normalised against *β-actin*. **Results:** We successfully identified a study protocol for the analysis of *KCNJ2* expression in leucocytes of patients with AF. There was a significant difference in BMI between the two study groups (*p=0. 03*). Expression of *KCNJ2* was 35. 2% higher in obese individuals with AF. **Conclusion:** The protocol designed in this study can successfully identify differences in *KCNJ2* expression between patients with varying BMI. This is a newly emerging area of interest and further study is warranted to determine the association, if any, of Kir2. 1 up-regulation in obesity-related AF. Future studies can use this study protocol to conduct larger scale studies on *KCNJ2* expression.

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OP-112

Preoperative neutrophil-lymphocyte ratio in coronary artery bypass grafting patients and its relation to postoperative in-hospital mortality and complications

M. S. Thet[1], B. Karahacıoğlu[1], M. Taş[2], A. Yener[3]

[1]English School of Medicine, Faculty of Medicine, Gazi University, Ankara, Turkey.
[2]Turkish School of Medicine, Faculty of Medicine, Gazi University, Ankara, Turkey.
[3]Department of Cardiovascular Surgery, Faculty of Medicine, Gazi University, Ankara, Turkey.

Background and Aims: Preoperative neutrophil-lymphocyte ratio is a relatively new inflammatory marker reported to be associated with postoperative outcome and survival in patients undergoing coronary artery bypass grafting. In this study, its relation to postoperative in-hospital mortality and complication is investigated. **Patientsand Methods:** A total of 448 patients who underwent coronary artery bypass grafting between January 2009 and December 2014 were retrospectively analyzed. Neutrophil-lymphocyte ratio was calculated from results of preoperative assessment complete blood count test. Patients were divided into two groups using a cutoff value from the Receiver Operating Characteristic (ROC) curve. Postoperative in-hospital mortality and complication rates of these groups were compared. **Results:** The ROC curve reveals a cutoff value of 3. 18 for neutrophil-lymphocyte ratio (AUC=0. 71, sensitivity: 70%, specificity: 65%). Patients in the group with neutrophil-lymphocyte ratio less than 3. 18 has statistically significantly lower in-hospital mortality rate (P<0. 001), and complication rate (P=0. 008) than those in the group with the ratio higher than 3. 18. **Conclusion:** High preoperative neutrophil-lymphocyte ratio is associated with increased postoperative in-hospital mortality and complication rates in patients undergoing coronary artery bypass grafting.

OP-113

Preoperative glycosylated hemoglobin levels and postoperative in-hospital complication rates of type 2 diabetic patients after coronary artery bypass surgery

M. S. Thet[1], B. Karahacıoğlu[1], A. Yener[2]

[1]English School of Medicine, Faculty of Medicine, Gazi University, Ankara, Turkey.
[2]Department of Cardiovascular Surgery, Faculty of Medicine, Gazi University, Ankara, Turkey.

Background and Aims: The effects of preoperative glycosylated hemoglobin levels have been reported to be associated with adverse outcomes of patients with type 2 diabetes undergoing coronary artery bypass surgery, especially in the long-term survival rate. The study aims to identify whether high preoperative glycosylated hemoglobin level accompanies worse in-hospital mortality and complication rates after coronary bypass surgery. **Patientsand Methods:** Preoperative glycosylated hemoglobin levels of 102 type 2 diabetes patients who underwent coronary artery bypass surgery between January 2009 and December 2014 were analyzed retrospectively. Patients were assigned into two groups: Group A (n=45, HbA1c < 7. 0%) and Group B (n=57, HbA1c ≥ 7. 0%). Postoperative in-hospital mortality and complication rates of both groups were compared. **Results:** Postoperative in-hospital mortality rates of Group A is 4. 4%, and of Group B is 12. 3%, whereas complications rates of Group A and Group B are 15. 6% and 29. 8% respectively. However, there is no statistically significant difference (P>0. 05) between the mortality and complication rates of Group A and Group B. **Conclusion:** Preoperative glycosylated hemoglobin levels are less likely to be associated with in-hospital mortality and complication rates in type 2 diabetes patients undergoing coronary artery bypass surgery.

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OP-114

The early results of minimally invasive open heart surgeries with the use of thoracoscopic equipment

E. Kuatbayev[1], D. Suigenbayev[1], M. Murzagaliyev[1], A. Kurmalaev[1], L. Abikeyeva[1],G. Turganbaeva[2], Z. Ashirov[2],
S. , M. Makhmutov[3], S. Tulegenov[3], Y. Pya[4]

[1]Department of Cardiac Surgery, JSC «National Research Centre for Cardiac Surgery», Astana, Kazakhstan;
[2]Department of Surgery, JSC «National Research Centre for Cardiac Surgery», Astana, Kazakhstan;
[3]Department of Anaesthesiology and Reanimation, JSC «National Research Centre for Cardiac Surgery», Astana, Kazakhstan;
[4]CEO, JSC «National Research Centre for Cardiac Surgery», Astana, Kazakhstan

Background: To evaluate the effectiveness and safety of the minimally invasive open heart surgery with the use of thoracoscopic equipment. **Methods:** 113 operations via a minithoracotomic access (81 male, 32 female, mean age 42±9years) were performed from January 2013 to January 2015. In 38 (33,6%) patient satrial septal defect repair was performed, in 30(26,5%) patients - mitral valve (MV) replacement, in 29(25,7%) patients- MV repair, 3(2,7%) patients – aclosure of ventricular septal defect, in 8(7%) patients tricuspid valve (TV) replacement, TV repair was performed in 1(0,9%) patient, 2 (1,8%) patients underwent aortic valve replacement, *pericardial fenestration*in 2 (1,8%) patients. Cardiopulmonary by pass with peripheral cannulation was used in all cases. **Results:** There was no hospital mortality. *Conversion to sternotomywas performed in 1 case.* The length of stay after surgery *was*3-4 days. 22(19%) patients had blood transfusion in the early post-operative period. At discharge,11 (8%) patientscomplained ofmoderatepost-operative painatthe suture site. **Conclusion:** Mini-thoracoscopicaccessexcludes *sternotomy* related complications*is less traumatic*,patients have a rapid recovery resulting in shorthospital lengthofstay, post-operative pain syndrome,and no need post-operative rehabilitation.

OP-115

Effects of central sympathetic activation on the dispersion of repolarization during myocardial ischaemia

E. O. Argiriou,[a,c]N. Psychalakis,[b]A. Fambri,[a]M. Kontonika,[a] A. Papalois,[a,b] Z. S. Kyriakides,[a] V. La Rocca,[a]T. M. Kolettis[a]

[a]Cardiovascular Research Institute, Ioannina and Athens, Greece
[b]Experimental Research Center ELPEN, Pikermi, Athens, Greece
[c]1st Department of Surgical Oncology, Metaxa Cancer Hospital, Piraeus, Greece

Background: Sympathetic activation during myocardial ischaemia alters ventricular electrophysiology, but the relative role of central sympathetic inputs is unclear. **Objectives:** We examined the effects of clonidine, a centrally-acting sympatholytic agent, on repolarization-dispersion in rats. **Material/Patients and Methods:** Clonidine was administered (intraperitoneally, 0. 5 mg/kg, 1hour prior to coronaryartery ligation) in 6 rats, whereas 6 rats served as controls. Unipolar ventricular electrograms were recorded from a 32-electrodearray on the left or right ventricular epicardium, and were analyzed with a custom-made software. Heart rate (HR), activation-recovery interval (ARI,from the onset of depolarization to the end of repolarization), LV intra- (μ_{LV}) and inter-ventricular ($\mu_{LV/RV}$) repolarization-dispersionwere recorded at baseline, 5min and 30min post-ligation. Between-groups comparison was performed with Newman-Keuls multi-stage test, following ANOVA for repeated measures. **Results:** Compared to controls, HR was lower and ARI was longer in clonidine-treated rats during ischaemia. Despite marked variability in individual responses, no differences were found in either μ_{LV}or $\mu_{LV/RV}$ at baseline or during ischaemia. **Conclusion:** Clonidine prolongs ARI, without affecting μ_{LV}or $\mu_{LV/RV}$, although variability exists. Thus, central sympathetic activation does not exert significant arrhythmogenic actions early post-ischaemia. Its effects during subsequent phases needs further study.

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OP-116

MicroRNAs as biomarkers in lung transplantation

L. Rancan[1], S. D. Paredes[2], C. García[1], C. Tello[1], P. Guillen[1], I. Garutti[3], C. Simón[4], E. Vara[1]

[1]Department of Biochemistry and Molecular Biology III, School of Medicine, Complutense University of Madrid, Avda. Complutense, s/n, 28040 Madrid, Spain
[2]Department of Physiology, School of Medicine, Complutense University of Madrid, Avda. Complutense, s/n, 28040 Madrid, Spain
[3]Service of Anesthesiology and Intensive Care, Hospital General Universitario Gregorio Marañón, C/ Doctor Esquerdo, 46, 28007 Madrid, Spain
[4]Service of Thoracic Surgery, Hospital General Universitario Gregorio Marañón, C/ Doctor Esquerdo, 46, 28007 Madrid, Spain

Background: Lungs are characterized by the highest rates of rejection among the transplanted solid organs. Thus, there is a critical need for biomarkers that serve to establish donor organ quality, early diagnosis of graft injury and treatment response. MicroRNAs (miRNAs) have emerged as promising disease biomarkers. The aim of this study was to examine the possibility that changes in miRNA expression may be used as biomarkers for ischemia-reperfusion injury (IRI) in a model of lung autotransplantation. A possible correlation with changes in glycocalyx and the effect of lidocaine were also investigated. **Methods:** Three groups (sham-operated, control and lidocaine) of 6 large-white pigs each were submitted to a left cranial lobe-lung autotransplantation. Lung tissue samples were taken at: 1) 5 min before pulmonary artery clamp (PPn), 2) 5 min before reperfusion (PRp), 3) 30 min post-reperfusion (Rp-30) and 4) 60 min post-reperfusion (Rp-60) and analyzed for miRNA patterns. **Results:** miR-145, miR-146a, miR-182, miR-10, miR-192, miR-21, miR-126, miR142-5p, miR152, miR155, miR-223 and let7 were differentially expressed in the control group compared to the expression observed in the sham group (p<0. 05). Interestingly, we identified glycocalyx markers syndecan-1 and heparan sulfate as miRNA target candidates for miR126 and miR142-5p. IR also increased syndecan-1 and heparan sulfate concentrations in plasma (p<0. 05) and decreased syndecan-1 levels in lung (p<0. 05). These effects were partially prevented by lidocaine. **Conclusion:** IRI produced changes in miRNA expression. Moreover, we found a distinctive miRNA expression pattern in lung tissue in response to lidocaine. Supported by FIS/RETIC: PI13/00700 and PI13/0002.

OP-117

Effect of sevoflurane on pulmonary glycocalyx alteration in response to one-lung ventilation

D. Rincón[1], L. Rancan[2], G. Sánchez-Pedrosa[3], F. J. González-Moraga[3], P. Manu[2], I. Garutti[3], C. Simón[1], E. Vara[2]

[1]Service of Thoracic Surgery, Hospital General Universitario Gregorio Marañón, Madrid, Spain
[2]Department of Biochemistry and Molecular Biology III, School of Medicine, Complutense University of Madrid, Avda. Complutense, s/n, 28040 Madrid, Spain
[3]Service of Anesthesiology and Intensive Care, Hospital General Universitario Gregorio Marañón, C/ Doctor Esquerdo, 46, 28007 Madrid, Spain

Background: One-lung ventilation (OLV) during lung resection surgery (LRS) may induce an inflammatory response that can contribute to postoperative respiratory distress. Alterations in the glycocalyx may play a role in the damage secondary to LRS and/or OLV. The aim of this study was to investigate the effect of OLV on lung glycocalyx injury secondary to LRS. A possible protective effect of sevoflurane was also investigated. **Methods:** Forty-eight pigs undergoing thoracic surgery with OLV were randomly assigned to receive anesthesia with intravenously applied propofol (CONTROL) or the volatile anesthetic sevoflurane (SEVO). Two additional procedures without lobectomy or OLV (Sham-A), and without lobectomy but with OLV (Sham-B) were performed. Lung tissue from both collapsed and ventilated lungs and blood samples were taken before and after OLV. Levels of glycocalyx markers (syndecan-1, heparan sulfate, cathepsin B) and inflammatory mediators (TNFα, IL-1) were determined. **Results:** Plasma levels of syndecan-1 and heparan sulfate were markedly higher in Sham-B group (p<0. 05) compared to Sham-A. This increase was even higher in the CONTROL group (p<0. 05). On the contrary, lung levels of syndecan-1 were significantly lower in the CONTROL group, compared with those observed in Sham-A and Sham-B groups. TNFα and IL-1 were significantly (p<0. 05) elevated in the CONTROL group in both plasma and lung tissue samples. Sevoflurane was able to reverse significantly (p<0. 05) these effects. **Conclusion:** Our results suggest that sevoflurane treatment may prevent lung injury secondary to LRS via inhibition of the consequential inflammatory response, aiding to limit glycocalyx alterations. Supported by FIS/RETIC: PI13/00700 and PI13/0002.

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OP-118

Can the statins Rosuvastatin and Simvastatin prevent the development of intra-abdominal adhesions? An experimental study

M. Cainzos[1], J. L. Rodríguez-Couso[1], M. J. Ladra[1], M. Loreto[1], S. González-Vinagre[1], D. Martínez[1], L. Dos Santos[2]

[1]Department of Surgery, Clinical University Hospital, Medical School, University of Santiago de Compostela, Santiago de Compostela, Spain.
[2]Department of Anesthesia, Clinical University Hospital, Santiago de Compostela, Spain.

Background: To assess the efficacy of the association of the statins Rosuvastatin and Simvastatin associated with Sodium Picosultafe in the reduction of the formation of intra-abdominal adhesions during a thirty day period subsequent to a laparotomic cholecystectomy in pigs. **Material and Methods:** 45 male pigs (weighting from 22 to 27 kg) divided in three groups of 15 pigs each: Group I (Control group). Under general anaesthesia and skin disinfection, a cholecystectomy was carried out through a 10 cm right subcostal laparotomy. After 30 days, a median laparotomy was carried to assess intra-abdominal adhesions. Group II. 10 mg of Rosuvastatin were administered orally 7 hours before the operation. The same dose of Rosuvastatin and four oral drops of Sodium Picosultate were administered daily the first five post-operative days. Group III. 10 mg of Simvastatin were administered 7 hours before the operation. The same dose of Simvastatin and four oral drops of Sodium Picosulfate were administered daily the five post-operative days. The statistical analysis was made using the $\chi 2$ test. **Results:** Forty-four pigs were valid for the study: 15 in Group I, 14 in Group II and 15 in Group III. Thirteen animals in the Group I (86. 7%) developed intra-abdominal adhesions, 12 (85. 7%) in Group II and 100% in Group III (p = N. S.). **Conclusions:** The association of Rosuvastatin and Simvastatin with Sodium Picosulfate administered orally before the operation and five days after the cholecystectomy, is not able to reduce significantly the development of intra-abdominal adhesions in an experimental model in pigs.

OP-119

Mitochondrial (dys)function in small intestinal samples – how can we assess it?

A. T. Meszaros[1], G. Strifler[1], T. Komlodi[2], A. Nagy[2], C. Cao[1], J. Kaszaki[1], L. Tretter[2], M. Boros[1]

[1]Institute of Surgical Research, University of Szeged, Szeged, Hungary
[2]Department of Medical Biochemistry, Semmelweis University, Budapest, Hungary

Background: The integrity of small intestinal mucosa is potentially threatened in various local and systemic pathologies, such as ischemia or sepsis, where mitochondrial dysfunction is critically involved in the pathomechanism. Our goal was to provide firm background data for rodent mitochondrial investigations by validating the traditional methods of isolation of small intestinal mitochondria using up to date functional tests. **Methods:** Whole thickness small intestinal mucosal samples of rats and guinea pigs (n=6 each) were used. Mitochondria were isolated according to published protocols using chelating agents and differential centrifugation, then the assessment of the functional state was performed by means of high resolution respirometry (Oxygraph-2k, Oroboros Instruments, Austria). The integrity of outer membrane was tested with cytochrome c addition and photometric assay for mitochondrial swelling. **Results:** Low respiration control ratios (2. 11±0. 66; with glutamate and malate as substrates) and extremely high cytochrome c responses (832±185%) were found in rat mitochondria, while swelling indicated serious damage of the outer membrane. In contrast, guinea pig mitochondria were presented with good respiration control (6. 57±0. 57; glutamate+malate), low cytochrome c response (20. 7±14. 8%) and baseline swelling parameters. **Conclusion:** The high resolution respirometry data demonstrate that only functionally impaired mitochondria can be isolated from the rat with the currently accessible methodologies. However, high quantities of intact and well coupled mitochondria can be gained from the guinea pig, these mitochondria are suitable for further focused studies. Methodological investigations, possible modifications or even new protocols are needed in order to clarify the cause of this significant interspecies difference. Supported by the grants *OTKA K104656, TAMOP-4. 2. 2A-11/1-KONV-2012-0035, TAMOP-4. 2. 2A-11/1/KONV-2012-0073, TAMOP-4. 2. 4. A/2-11/1-2012-0001 'National Excellence Program'*

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OP-120

Renal effects of intraabdominal hypertension in an experimental model of ascite

L. Correa-Martín[1], F. M Sánchez-Margallo[1], I. Díaz-Güemes[1],G. Castellanos[2]

[1]MinimallyInvasiveSurgery Centre Jesús Usón. Cáceres, Spain.
[2]University HospitalVirgen de la Arrixaca. Murcia, Spain.

Background: The aim of this study was toassessthe alteration of renal functionality in a porcine model of ascites. **Methods:** The study was performed in 10 Large White female pigs, which were divided into 2 groups: control and hypertension (PIA) groups. In the latter, a 20 mmHg intra-abdominal pressure (IAP) was maintained by instillation of saline into the abdominal cavity. The abdominal perfusion pressure and Glomerular Filtration Gradient (GFG) were indirectly obtained by means of IAP and mean arterial pressure (MAP) . We also registered the diuresis, and obtained venous blood samples to determine renal creatininein order to assess renal functionality. The monitored variables were registered in nine times points during the 3 hours that lasted the study. **Results:** In the control group, the PAM and GFG were maintained within reference ranges. In PIA group,a progressive reduction in both parameters was observed. In particular, the significant reduction of GFG occurred earlier than that of PAM. In hypertension group, creatinine increased but remained within the normal limits. **Conclusions:** The experimental model described in this study allows for the simulation of the pathophysiological changes occurring in humans in response to an increase intraabdominal pressure. The first clinical manifestation was a lower production of urine due to a lower GFG and MAP. Nevertheless, further studies with longer recording periods are required to obtain more conclusive results.

OP-121

Sodium dependent glucose intestinal absorption plays a crucial role in postprandial glucose homeostasis after Roux-en-Y Gastric Bypass in the minipig.

G. Baud[1,2], M. Daoudi[1], T. Hubert[1], E. Hervieux[1,2], M. Devienne[1,2], R. Verhaeghe[1,2],M. Ghunaim[1,2],A. Quenon[1], V. Raverdy[1,2], P. Pigny[3], A. Klein[4], V. Gmyr[1], R. Caiazzo[1,2], F. Pattou[1,2]

[1]Lille 2 University, University of Lille Nord de France, European Genomic Institute for Diabetes, EGID FR 3508, UMR 1190, Biotherapies for Diabetes, Lille, France.
[2]Department of Endocrine Surgery, Lille University Hospital, Lille, France
[3]Nuclear Medicine, Biology Pathology Center Lille, Lille University Hospital, Lille, France.
[4]Carbohydrate Metabolism Diseases, Biology Pathology Center Lille, Lille University Hospital, Lille, France.

Background: Anatomical changes of the intestinal limbs, induced after Roux-en-Y Gastric bypass (RYGB), play a key role in glucose disposal, thereby improving glycemic control. But little is known about the respective roles of the alimentary (AL), the common (CL) and the biliary (BL) intestinal limbs of RYGB on glucose uptake, insulin, and GLP-1 secretion. **Methods:** RYGB was performed on adult Göttingen minipigs (30 kg, > 2 years). To study the specific role of both AL and CL on intestinal glucose uptake and insulin and GLP-1 secretion, we performed intestinal clamp tests during the progression of the mixed meal. To investigate the effect of the bile and sodium on glucose uptake in the AL, glucose and D-xylose were injected in the AL without or with Sodium-Glucose Linked Transporter-1 (SGLT1) inhibitor phlorizin, before and after administration of fresh bile or NaCl in the AL. **Results:** Intestinal absorption of ingested carbohydrate after RYGB is abolished in the AL, which occurs only in CL. Interestingly, sodium depletion due to bile exclusion, is responsible for the decrease of carbohydrates SGLT1 intestinal uptake in the AL. Thus, increasing of the AL longer in RYGB decrease intestinal carbohydrate absorption associated with less postprandial glycaemia and plasma insulin production. **Conclusion:** The present study uncovered a previously unsuspected effect of gastrointestinal exclusion on sodium dependent glucose intestinal transport, and its pivotal role in the changes of postprandial glucose homeostasis after RYGB.

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OP-122

Establishment and analysis of a murine model of diversion colitis

A. Kleinwort[1], P. Döring[2], C. Hackbarth[1], C. Heidecke[1], T. Schulze[1]

[1] Division of General Surgery, Visceral, Thoracic and Vascular Surgery, Department of Surgery, University Medicine Greifswald, Greifswald, Germany
[2]Institute of Pathology, University Medicine Greifswald, Greifswald, Germany

Background: Diversion colitis is an inflammation of colonic segments excluded from the faecal stream after surgery. Its exact aetiology and its impact on systemic immune homeostasis is largely unknown. The aim of this study was the development of a murine model of diversion colitis in order to investigate mechanisms of disrupted self-tolerance in the pathogenesis of diversion colitis. **Methods:** A diverting colostomy was created 0,6 cm after the ileocecal valve inC57BL/6-mice. In the Sham-group, colostomy in the colon ascendens was performed and closed immediately. The mice were euthanatized 60 days after operation. The colon was stained with HE and the secondary lymphatic organs were analysed by flow cytometry. **Results:** After an initially high weight loss colostomy mice began to recover one week postoperatively. After 60 days, HE-staining showed lymphoid follicular hyperplasia, degenerated crypts and increased apoptosis in the colostomy group. In the colostomy group, the percentage of T_H2, and T_H17 T cells were significantly increased in the mesenteric lymph node. There was no change in the T_H1 population. Numbers of dendritic cells and macrophages were decreased in the colostomy group. **Conclusion:** The established murine colostomy operation is a good model for human diversion colitis providing a very useful tool for the analysis of the impact of faecal stream diversion on mucosal immunity and systemic immune homeostasis. First results indicate that exclusion of colonic segments from the faecal stream favours the development of T_H2 and T_H17 T helper cells. Further detailed immunological analysis is required.

OP-123

Prevention of intra-abdominal adhesions by using the association of acetylsalicylic acid and erythromycin. An experimental study in pigs

M. Cainzos[1], J. L. Rodríguez-Couso[1], M. J. Ladra[1], M. Loreto[1], S. González-Vinagre[1], D. Martínez[1], L. Dos Santos[2]

[1]Department of Surgery, Clinical University Hospital, Medical School, University of Santiago de Compostela, Santiago de Compostela, Spain.
[2]Department of Anesthesia, Clinical University Hospital, Santiago de Compostela, Spain.

Background: To assess the efficacy of the association of acetylsalicylic acid (ASA) and erythromycin in the prevention of the formation of intra-abdominal adhesions during a thirty day period subsequent to a laparotomic cholecystectomy in an experimental model in pigs. **Material and Methods:** 63 female pigs (in two groups) weighting from 23 to 27 Kg were used. Group I (Control group, 27 animals): Under general anaesthesia and skin disinfection, a right subcostal laparotomy 10 cm-length was performed to carry out a cholecystectomy. After 30 days, a laparotomy was carried out to asses the development of intra-abdominal adhesions. Group II (36 pigs): The same technical procedure was followed. A dose of 150 mgs of ASA was administered orally 7 hours before the operation and 500 mgs of oral erythromycin 12 hours after the operation. ASA and erythromycin at the same dose were administered daily during the first days of the post-operative period in Group II. The abdominal cavity was inspected 30 days after the operation through a median laparotomy. Statistical analysis was made using $\chi 2$ test. **Results:** Sixty pigs were valid for the study: 25 in Group I and 35 in Group II. Three pigs died during the first 24 hours after the operation. 23 animals in the Group I developed intra-abdominal adhesions (92%), and 23 in Group II (65. 7%) ($p<0.028$). **Conclusion:** The association of ASA and erythromycin administered orally before the operation and five days after the cholecystectomy reduce significantly the development of intra-abdominal adhesions in an experimental model in pigs.

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OP-124

Non-operative management of abdominal gunshot injuries: Is this safe?

N. Iflazoglu[1], O. Ureyen[2], O. Z. Oner[3], U. M. Meral[4], M. Yuluklu[5]

[1] Department of General Surgery, Kilis State Hospital, Kilis/Turkey
[2] Department of General Surgery, Bozyaka Training and Research Hospital. Izmir/Turkey
[3] Department of General Surgery, Antalya Training and Research Hospital, Antalya/Turkey
[4] Department of General Surgery, Izmir Military Hospital. Izmir/Turkey
[5] Department of General Surgery, Afyon State Hospital, Afyon/Turkey

Background and Aim: In line with advances in diagnostic methods and expectation of a decrease in the number of negative-laparotomies, selective non-operative management (SNOM) of gunshot wounds has been increasingly used in last 2 to 3 decades. The aim of this study is to present our experience in non-operative treatment of cases with abdominal gunshot injuries in our second-level hospital at Turkish-Syrian border. **Material and Methods:** A total of 158 cases admitted with abdominal gunshot wounds in the period between February 2012 and June 2014. 18 of these patients who were hemodynamically stable and did not have symptoms of peritonitis at the time of presentation, were included in the study. The data were analyzed for age, gender, type of weapon, length of hospitalization, need for transfusion and extraabdominal organ injuries, retrospectively. **Results:** All the injuries were caused by high-energy weapons. During follow-up, acute abdomen occured in 4(22,2%) patients and laparotomy was performed. In laparotomies of unsuccessful SNOM group, only bowel injuries were observed and treated. Five(35,7%) of patients had abdominal solid organ injuries and no surgical procedure was performed to them during follow-up. 44,4% of patients needed blood transfusion. The average length of hospitalization of patients was 96 and 127 hours, who had successfulSNOM (n=14) and unsuccessful SNOM (n=4), respectively. No mortality was observed in both groups. **Conclusion:** SNOM is an applicable procedure for treatment of abdominal gunshot wounds. The most sensitive point of this method is the selection of appropriate patients with careful clinical examination and sequent radiological studies.

OP-125

Will Cryopreserved Platelets Substitute For Standard Liquid Stored Platelets*for Battlefield Use?*

M. Urkan, M. Ozkara, A. Unlu

Depeartment of General Surgery, Gulhane Military Medical Academy, Turkey;

Background: Exsanguinating combat casuaties are often platelet deficient. However, PLTs are difficult to supply to the battlefield. Cryopreserved PLTs can extend the shelf life from 5 days to 2 years. We aimed to demonstrate the hemostatic effect of cryopreserved PLTs. **Material and Methods:** Seven units of platelet were obtained by apheresis. Each apheresis platelet concentrate (APC) was divided into two equal volumes and frozen with 6% dimethylsulfoxide (DMSO). The 14 units of frozen APCs were kept at−80°C for one day. APCs were thawed at 37°C and diluted either with autologous plasma or 0. 9% NaCl. The volume, residual number of leukocytes, and platelets were tested inprefreezing and post-thawing periods. Aggregation, thrombin generation (TG) and flow cytometric tests were used to analyze platelet hemostatic functions and their viability. **Results:** The residual numbers of leukocytes in both dilution groups were <1×106. The mean platelets count in the plasma and 0. 9% NaCl-diluted groups were 123. 6±13. 7×1011 and 84. 6±7. 6×1011, respectively. The plasma group platelet recovery ratio was higher than the 0. 9% NaCl group (88. 1%±9. 5 versus 63%±10). The plasma group TG potential of post-thaw APCs was higher (2411 nmol/L×min) than the 0. 9% NaCl group (1913 nmol/L×min) and pre-freezing period (1681 nmol/L×min). The viability of platelets were 94. 9% and 96. 6% in the plasma and 0. 9% NaCl groups, respectively. **Conclusions:** The cryopreserved PLTs and plasma-reconstituted cryopreserved PLTs are more procoagulant than clasical liquid-stored PLTs. These results show the beneficial effects of cryopreserved PLTs for the treatment of combat injuries in Role 2 facilities.

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OP-126

Laparoscopic ventral/incisional hernia repair service in a district general hospital: Predicting factors likely to cause recurrence.

N Samuel, FAK Mazari, MH Shiwani

Department of General Surgery, Barnsley Hospital NHSFT, South Yorkshire, UK

Aim: To assess our experience in laparoscopic repair of ventral and incisional hernias (LRVIH) and predict factors likely to cause recurrence over early follow-up period. **Methods:** Prospective single centre study of consecutive LRVIH performed by one Consultant Surgeon over last 4 years. Patient demographics, periprocedural details, recurrence at follow-up were recorded. Hernias were classified according to EHS classification. Univariate and Multivariate analysis were performed to associate risk factors with recurrence. **Results:** 90 patients M:F 42:48; mean(SD) age 56.5(13.9)years; BMI of 32(6.1)kg/m^2; Smokers 22(24.4%); ASA: 2(60%), 3(13.3%), 4(1.1%) underwent repairs for 19(21.1%) primary ventral hernias, 61(67.8%) incisional hernias and 10(11.1%) recurrent-incisional hernias. The median(i.q.r.) defect size was 25(12-108)cm^2; with EHS width: W1=26.7%, W2=45.%, W3=24.4%; 16 patients had complications: 8(8.8%) seromas, 1(1.1%) haematoma, 4(4.4%) respiratory complications; 3(3.3%) conversions to open and 1(1.1%) re-operation for small bowel obstruction. There were 5(5.5%) recurrences over 1-year follow-up period. There were no significant predictors of recurrence on univariate logistic regression for risk factors of Gender, Age, BMI, Smoking status, ASA, Type of hernia, Width and type of Mesh. However controlling for the above factors, multivariate regression demonstrated the width of the defect as a significant predictor for recurrence OR(95%CI) 6.20(1.12-34.33) P=0.037. **Conclusions:** LRVIH is safe and effective with low early recurrence rates. It can be offered to the elderly, obese patients, and those with significant comorbidities without increased risk of early recurrence. Wider defects carry a higher risk of recurrence with LRVIH, however the risk is comparable to recurrence with open repairs and carries the advantage of low morbidity and early recovery.

OP-127

Predictive Factors for failure of initial hemostasis in Non-variceal Upper Gastro-intestinal tract bleedingand the relevance of Forrest Classification

D. Yeo, A. Poh, T. K. Yang

Department of General Surgery, Khoo Teck Phuat Hospital, Singapore.

Background: Non-variceal Upper Gastro-intestinal tract bleeding (UBGIT) is a common medical emergency, with greater morbidity and mortality associated with re-bleeding and surgical intervention. This retrospective study aims to identify factors that increase the incidence of primary re-bleeding as well as the need for surgical intervention in patients with UBGIT. A secondary aim of this study was to assess the relevance of Forrest Classification in the prediction of outcomes in patients with UBGIT secondary to peptic ulcers. **Methods:** Data from 190 patients who had non-variceal UBGIT in Khoo Teck Phuat Hospital in Singapore from 2009 to 2012 were prospectively collected and retrospectively analyzed using SPSS. **Results:** The re-bleeding rate in our series was 21. 1% and the surgical intervention rate for bleeding no controlled by endoscopic means is 7. 4%. Aspirin is not a risk factor for primary re-bleeding. In fact, patients on aspirin had a significantly lower odds of primary re-bleed. Patients on anti-coagulation, those with diabetes, chronic renal failure and Forrest IA ulcers exhibited a non-significant trend towards a primary re-bleed. Forrest IA ulcers and Diuelafoy lesions had a significantly higher odds for eventual surgical intervention in patients with re-bleeding. However Forrest IB – 3 ulcers exhibited similar odds ratios for re-bleeding and surgical intervention. **Conclusion:** Identifying patients at higher risk of re-bleeding and intractability to endoscopic hemostasis will allow us to monitor this subset of patients more closely. It could be postulated that the paradoxical finding of a decreased odds of re-bleeding in patients on aspirin might be due to the endoscopist being more diligent in securing hemostasis in patients already on aspirin. The predictive value of the Forrest classification for re-bleeding and need for surgical intervention in peptic ulcers should be questioned.

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OP-128

Clostridium difficile colitis post ileostomy closure requiring a subtotal colectomy, what is the threshold for surgical management?

L. K. Cheung, S. S. Poon

Faculty of Medicine, University of Liverpool, UK

Background: Clostridium difficile is a pathogen assoicated with high mortality in surgical patients. It is also a well-recognised infection associated with antibiotic use. A case of pseudomembranous colitis after the restoration of intestinal continuity is presented; this is an unsual complication of the procedure, which is underreported in medical literature. **Method:** A case of pseudomembranous colitis is reported in an elderly male following reversal of his loop ileostomy. He has a background of rectal adenocarcinoma, which is managed with TEMS and a loop ileostomy. **Results:** Postoperatively, the patient complained of diarrhea and reduced urine output. He continued to deteriorate and developed AKI. Faecal CD EIA and GDH was tested postitive, and CT scanning as well as colonoscopy was used to evaluate the severity of the disease. On day 8 after the reversal ileostomy,a decision was made to have a subtotal colectomy. He spent 9 days in ICU and was then discharged with an uneventful recovery. **Conclusion:** Clostridium difficile colitis is a rare, but threatening complication after restoration of gastrointestinal contiunity. The medical team should be aware of this complication post-operatively, as delayed treatment causes significant mortality and morbidity.

OP-129

Sphincter modeling methods of forming a single-barrel colostomy in patients with colorectal cancer

E. Krivoshchekov, A. Meshkov

Samara State Medical UniversitySamara Regional Clinical Oncologycal Center

Background: The search for the optimal method of forming a single-barrel colostomy with reconstruction of the holding function. **Material and Methods:** The experience of application of different methods of forming a single-barrel colostomy in 92 patients after obstructive colon resection with distal colorectal cancer is studied. The ways of removing single-barrel colostomy are divided into 3 groups. Group 1: with suspending the peritoneum to the edges of the skin and fixins to the intestinal wale used in 42(46,6%) patients. Group 2: Single-barrel colostomy when the intestine is carried out through the anterior abdominal wall with fixation of the colon wall to the skin used in 26(28,2%). Group 3: retroperitoneal single-barrel colostomy with modeling of neosphincter using the suggested method in 24(26,2%) patients. **Results of the study:** The frequency, duration of emptying of the stoma, feeling the urge to empty, the need for laxatives and cleansing enemas. Were studied the scale SF-36, FIQL were used. In the period from 1 to 12 months the improvement of quality of life for all the investigated indices was observed. The stable prior urge to empty a colostomy appeared in 81.25% patients. **Conclusion:** The proposed method of forming of a single-barrel colostomy with a sphincter modeling principles helps to minimize the amount of postoperation complications and improve the quality of life.

OP-130

The Role of Duodenogastric Reflux in Development of Gastric Cancer. An Experimental Research of the Preventive Effects of Cyclooxygenase-2 İnhibitors and Honey

S. Destek[1], M. Keskin[1], E. Balık[1], S. Yamaner[1], D. Bugra[1], A. Akyüz[1], V. Onur Gül[2], S. Ahioglu[2]

[1]General Surgery Department, Istanbul University Medical School, İstanbul, Turkey
[2]Edremit Military Hospital,General Surgery Department, Balikesir,Turkey

Background and Objectives: The aim of this experimental study was to evaluate the preventive effects of cyclooxgenase-2 (COX-2) inhibitors and polifloral honey on the gastric carcinogenesis in a duodenogastric reflux model. **Material and Methods:** Thirty-six rats were enrolled in the study and simple gastrojejunostomy was performed in all the animals. The rats were separated in three equal groups with 12 animals each. In the first group (control) only standard rat food and tap water were given. Additionnally, 5mg/kg/day meloxicam and 5 ml/kg/day polifloral honey were given in the second (COX-2) and third (honey) groups respectively. Forty after the operation, all rats were sacrified with high dose diethyl ether inhalation. The mucosa of the anastomotic region and stomach was evaluated in light microscope with hematoxylene-eosin, and also immunohistochemistry was done with p53 and COX-2 antibody. **Results:** In control and COX-2 groups gastric adenocarcinoma was found in 3 (% 30) and 2 (% 22) animals respectively. In the polifloral honey group no adenocarcinoma was revealed. Despite these findings, a statistically significant difference was not found between the groups due to a small sample size. **Conclusıons:**The exocrine pancreatic secretion and bile induces a carcinogenic effect on the gastric mucosa in an experimental duodenogastric reflux model. In the present study we can conclude that the protective effect of polifloral honey is much more pronounced than the effect of COX-2 inhibitors.

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OP-131

Primary and Secondary Malignant Tumors of the Cervical Area of Esophagus

V. Pismenny, E. Krivoschekov, I. Pismenny

Samara Regional Clinical Oncology Center Samara State Medical University Samara, Russia

Background: Cancer of the cervical area of the esophagus is rarely met as an isolated condition,being due to the extensive involvement into thecancerous process of such organs as larynx, thyroid gland and pharynx. **Materials and Methods**. 43 patients have been treated. 6 patients were diagnosed the primary esophagus cancer at the age of 42-69 years. 32 patients were treated for the secondary cervical esophagus lesions having the primary laryngeal, pharyngeal and thyroid gland cancer. **Results and Discussion**. All patients with the esophageal lesion underwent cervical area resection. 4 patients were performed the primary plastic defect restoration. Others were done esophagostomy and pharyngostomy formation. 11 patients were performed cervical esophagus area reconstruction with the application of local tissues during the period of 12 -–24 months. The esophagus reconstruction was performed in 2 and 3 stages. The employed plasty with local neck and chest tissues proved to be the most applicable and least traumatic, meeting the demands of cervical esophagus area reconstruction. **Conclusion.** Complex surgical approaches in the treatment of patients with primary and secondary malignant tumors involving the cervical area of the esophagus may result in the relapse-free period up to 3 years in more than 50% patients and at the same time lead to 9 % alimentary tract reconstruction in one patient in three with the further application of local tissues.

OP-132

Invasion into Adjacent Structures and the Speed of Growth of Recurrent Tumors are Useful Prognostic Markers for the Post-recurrence Survival of Esophageal Squamous Cell Carcinoma: A Retrospective Analysis of 114 Patients

Y. Nakajima, K. Kawada, Y. Tokairin, Y. Miyawaki, T. Okada, T. Kawano

Department of Esophageal Surgery, Tokyo Medical and Dental University, Tokyo, Japan

Background and Aim: We investigated factors affecting the post-recurrence prognosis in order to develop adequate therapeutic guidelines for determining the indication for treatment of recurrent esophageal squamous cell carcinoma (ESCC), particularly focusing on invasion into the adjacent structures and the speed of growth of recurrent ESCC. **Patientand Methods:** One hundred and fourteen thoracic ESCC patients who developed postoperative recurrence after undergoing R0 esophagectomy at our institute were enrolled in this study. The site, number of lesions and longest diameter of the largest tumor were examined. Moreover, the presence of invasion of the recurrent tumor into adjacent structures and the speed of growth were analyzed. The speed of growth of the recurrent tumor(s) was calculated as follows: speed of growth = sum of all the longest diameters of the recurrent tumors (mm) / time to recurrence (days). **Results:** A univariate analysis showed that the number of recurrent tumors, longest diameter of the largest recurrent tumor, distant organ recurrence, invasion into adjacent structures, speed of growth of the tumor and treatment for recurrence were significantly associated with the post-recurrence prognosis. In addition, a multivariate analysis showed that distant organ recurrence, longest diameter of the largest recurrent tumor, invasion into adjacent structures, speed of growth of the tumor and treatment for recurrence were significantly associated with the prognosis. **Conclusions:** Evaluating these factors including invasion into adjacent structures and the speed of growth of recurrent ESCC may potentially be used to determine the indication for treatment for recurrence.

OP-133

Long Term results of islet cell transplantation after Pancreatectomy for chronic pancreatitis (CP)

M. Urkan[1], U. M. Meral[2], U. Alakuş[3], A. UNLU[1]

[1]Depeartment of General Surgery, Gulhane Military Medical Academy, Turkey;
[2]Department of General Surgery, Izmir Military Hospital, Izmir/Turkey
[3]Department of General Surgery, Elazıg Military Hospital, Elazıg/Turkey

Background: Total pancreatectomy and islet cell autotransplantation (TPIAT). has been considered a nontraditional option for the management of CP, whereas In the modern era, this therapy is part of the radical and ideal treatment for the properly selected patient. **Methods:** Web of Science, MEDLINE were searched until 31 November 2014. Eligible studies identified with metabolic function (insulin independency), narcotics independence (NI), quality of life (QOL) and the morbidity and mortality associated with the surgery. **Results:** Fifteen studies were eligible. Most of the patients underwent successful TPIAT with properly islet equivalents per body weight. Insulin independency of patients nearby 40% at 1 year, while the rate declined to 27% at 5-year follow-up. However, daily insulin requirements remained stable over this time period. Islet cell function has been assessed with serum C-peptide levels

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(60–151 months). Initially it was noted to be decreased after surgery, however, stay permanent over the follow-up period. Also HgA_{1C} levels were in range same period. NI and QOL after surgery are the main indications for TPIAT, but a little published study can be find in literatüre. Patients' NI have reduced after TPIAT with 55%. Moreover, rate of NI increase to 79% at long follow up period. Patients' QOL has been assessed with SF-36 form. And all of them have demonstrated persistent improvements in all subscales. **Conclusion:** Our findings are consistent with the improvement of NI, durability in the QOL parameters and minimal long-term complications associated with diabetes. However, decrease of isletcell function in time.

OP-134

Ischemic preconditioning may reduce oxidative stress following laparoscopic cholecystectomies – Clinical trial

T. Gy. Veres[1], K. Sárvári[1], L. Petrovics[1], I. Takács[1], T. Nagy[1], P. Hardi[1], A. Kondor[2], J. Baracs[2],Gy. Wéber[3],G. Jancsó[1], A. Vereczkei[2]

[1]Department of Surgical Research and Techniques, Medical School, University of Pécs, Hungary
[2]Surgical Clinic, Clinical Centre, University of Pécs, Hungary, [3]Department of Surgical Research and Techniques,Semmelweis University, Faculty of Medicine, Hungary

Background: Laparoscopy is morebeneficial technique than conventional open technique, but the used pneumoperitoneum has a lot ischemic side effect. **Objective:** Aim of our investigation was to evaluate the potential protective effects of preconditioning during laparoscopic cholecystectomies (LC). Based on our rat experiments preconditioning has a beneficial effect**. Methods:** 30 patients undergoing laparoscopic cholecystectomy were randomized to 2 groups: I. PREC (preconditioning: 5 min. insuflation, 5 min. desuflation, followed by conventional LC), II: LC (conventional LC). Blood samples were taken before surgery (C=control), before surgery, but after anaesthesia (B. S.), after surgery (A. S.) and 24 hours after the procedure (24h). Measured parameters: malondialdehyde (MDA), reduced glutathione (GSH), sulfhydril groups (-SH), superoxide-dismutase (SOD), catalase (CAT), myeloperoxidase (MPO), AST, ALT, GGT, length of hospitalization and pain (VAS=visual analogue scale). **Results:** The change of SOD's activity and MDA levels there were not remarkable compared with the B. S. results. GSH concentrations were near significantly increased in the PREC group after operation. SH-, MPO, CAT and liver function enzymes were not significantly different. Hospitalization was shorter in PREC group. Based on the VAS patients had less pain in the PREC group. **Conclusion:** Significant differences concerning PREC objects were only found in the case of GSH. It is remarkable that in PRECgrouppain was decreased with 2-2,5 scale units following the procedure and 24 hours after surgery. In our previous experiences in rats the potential protective effect of preconditioning seemed to be proven, but in humans the already analysed data have not shown remarkable differences.

OP-135

In-utero surgery indications in congenital diaphragmatic hernia : when MRI ans ultra-sounds do not concur

M. Sarah, C. Capucine, V. Pauline, R. Thameur, S. laurent, D. Véronique

Departmentof gynecology-Obstetrics, Pôle Femme-Mère-Nouveau-Né, Hôpital Jeanne de Flandre, Centre Hospitalier Régional Universitaire de Lille, Lille, France.

Background: In the Congenital diaphragmatic hernia (CDH), abdominal bowels are found in the thorax causing lung compression and hypoplasia with a severe pulmonary hypertension after birth. The follow-up is mainly about ultra-sounds that define the LHR (Lung to Head Ratio) around 26 weeks and 32 weeks. If the LHR is <1, the survival rate is around 11%. It is well established that MRI is a good indicator of the lung hypoplasia (a lung surface <25% of the remaining lung is considered as bad prognosis) and in-utero surgery is possible in those cases. **Objective:**At the Lille's hospital in France, we wanted to evaluate the outcome of all the CDH that were diagnosted from January 2012 to june 2014. Comparing the ultra-sound and MRI results with the neonatal clinical state and discuss the possible indication of in-utero surgery for MRI results that predict poor outcome whereas the ultra-sound follow up is less pessismist. **Material and method:**All the cases of CDH from 2012 to june 2014 have been examined. We evaluated the neonatal outcome, the caracteristics of the hernia and the maternal caracteristics. **Results:**21 cases were studied. 10 had a LHR and MRI that were unconform: in 1 case the LHR was predictive (10%) in 4 the MRI was predictive (40%) and in 5, there was no concordance ante/post natal outcome (50%). **Conclusion:**In-utero surgery may find an indication in the cases when ultra-sounds and MRI do not concur and MRI predicts poor outcome.

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OP-136

Novel Use of *LigaSure Impact*™ Electrothermal Bipolar Diathermy Vessel Sealing System in Skin-Sparing Mastectomy

S H Rossi[1], K Miyagi[2], C M Malata[1,2,3], P Forouhi[1]

[1]Cambridge Breast Unit, Addenbrooke's Hospital, Cambridge University Hospitals NHS Foundation Trust, Cambridge, CB2 0QQ.
[2]Department of Plastic and Reconstructive Surgery, Addenbrooke's Hospital, Cambridge University Hospitals NHS Foundation Trust, Cambridge, CB2 0QQ.
[3]Postgraduate Medical Institute at Anglia Ruskin University, Cambridgeand Chelmsford, UK.

Background: The *LigaSure Impact™* (Covidien, Dublin, Ireland) is an electrosurgical bipolar vessel sealing system which fuses and divides tissue by applying a combination of pressure and energy. It reduces surgical blood loss and operative time compared to conventional dissection techniques in urological, gynaecological and colorectal procedures. We modified the traditional method of skin-sparing mastectomy (SSM) by incorporating the *LigaSure Impact™* for dissection of the mastectomy plane, and report patient outcomes following the introduction of this novel technique. **Methods:** We identified 125 patients undergoing SSM and immediate breast reconstruction for invasive cancer, ductal carcinoma in situ or risk reduction, performed by a single surgeon. Post-operative outcomes were identified from electronic patient records and these were compared in 65 consecutive cases performed via the conventional SSM technique, against 60 consecutive cases performed following the introduction of the *LigaSure Impact™.* **Results:** There was no difference in patient age (47. 9 (45. 5-50. 4) vs 46. 8 (44. 5-49. 1) years; p=0. 514) and active smoking status between the two groups (10. 3% vs 9. 7%; p=0. 515). Introduction of *LigaSure Impact™* was associated with significant reductions in the frequencies of post-operative flap necrosis requiring full thickness skin graft (RR=0. 91, 95% CI=0. 84-0. 98; p=0. 028,), seroma formation (RR=0. 89, 95% CI=0. 82-0. 97; p=0. 014) and post-operative cellulitis (RR=0. 88, 95% CI=0. 79-0. 97; p=0. 018) compared to the standard technique. Use of the *LigaSure Impact™* was not associated with an increase in other complications. **Conclusion:** These findings support the novel application of *LigaSure Impact™* as a means of improving outcomes of the SSM procedure and thus have implications for post-mastectomy immediate breast reconstruction.

OP-137

Optimal timing for venous systemic oxygen persufflation supplemented with Nitric oxide gas on cold stored, warm ischemia damaged experimental liver grafts

A. Gerhartz[1], P. Kadaba Srinivasan[1], J. Iwasaki[1, 2], R. Tolba[1]

[1]Institute for Laboratory animal science and Experimental surgery, University Hospital, RWTH Aachen, Pauwelsstr 30, 52074 Aachen, Germany.
[2]Division of Hepatobiliary Pancreatic and Transplant Surgery, Department of Surgery, Graduate School of Medicine, Kyoto University, Kyoto, Japan

Background: Worldwide shortage of donor organs increased the use of donation after cardiac death. Aim of the study was analysing venous systemic oxygen persufflation supplemented with Nitric oxide gas during the 1sthour and 24thhour of cold storage in warm ischemia damaged experimental liver grafts. **Materials and Methods:** Liver grafts (n=5) were retrieved after 30min warm ischemia (WI) induced by cardiac arrest and cold stored in HTK solution at 4°C. 1sthour group was immediately persufflated with O_2+NO mixture for 1h followed by 23h of cold static storage (CS). 24thhour group was CS for 23h followed by 1h O_2+NO persufflation. CS livers without WI served as controls. Viability of the liver grafts was assessed by normothermic isolated reperfusion for 45min with oxygenated KHB. **Results:** (mean±SEM; Control vs. WI vs. 1sthour O_2+NO vs. 24thhour O_2+NO), after 45min of reperfusion, the 1sthour O_2+NO group showed significantly lower AST levels (13. 4±5. 3, 63. 2±17. 3, 25. 6±3. 9, 58. 7±16. 9IU/L). MDA levels were significantly abrogated (1. 0±0. 3, 2. 7±1, 1. 0±0, 3. 9±1. 2nmol/mL). Significantly lower levels of ALT were seen in 1sthour O_2+NO group (13. 4±1. 8, 97. 4±36. 3, 47±7. 5, 172. 2±43. 8IU/L). LDH levels were significantly lower in 1sthour O_2+NO group (289. 4±41. 2, 2139. 4±542. 7, 577. 2±117. 2, 2429±221. 6IU/L). Significantly higher levels of portal venous pressure was recorded in the 24thhour O_2+NO group (14. 6±1. 7, 19. 9±2. 7, 19. 5±2. 3, 24. 9±3. 7mmHg). Oxygen consumption was significantly lower in Control (1. 0±0. 3, 2. 0±0. 2, 1. 7±0. 1, 1. 8±0. 2 µmol/g liver/minute). **Conclusion:** Our results show the beneficial effects of Nitric oxide combined with venous systemic oxygen persufflation during the 1sthour of cold storage of warm ischemia damaged experimental liver grafts.

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OP-138

Safety and efficacy of a novel, fully synthetic, and bioresorbable medical adhesive for intra-abdominal use

P. Kadaba Srinivasan, K. Pawlowsky, B. Kögel, R. Tolba

Institute for Laboratory Animal Science and Experimental Surgery, University Hospital, RWTH Aachen University, Pauwelsstr 30, 52074 Aachen, Germany.

Background: Surgical resection of solid organs can lead to excessive bleeding and life threatening complications. Aim of this study was to test a new medical adhesive MAR-2, which is polyurethane based adhesive. We analysed the bleeding time and amount by applying to a liver resection site as well as post operative adhesions. **Materials and Methods:** Male Wistar rats (n=30) were anaesthetized using isoflurane. Standardized liver resection (about 1 cm^2) of the left lateral lobe was performed. MAR-2, Tissucol Duo S or NaCl 0. 9% were immediately applied to the wound. Microcirculation was monitored after resection as well as clinical chemistry parameters. At days 14, 21 and 90, adhesion scoring was performed and animals were sacrificed. Samples were taken for the histopathological examination. **Results:** (mean±SD, NaCl 0. 9% vs. MAR-2 vs. Tissucol Duo S), post resection bleeding time was significantly lower in the MAR-2 group (224±23. 2, 85±7. 3, 94±17. 9 seconds). Blood loss was significantly less in the MAR-2 and Tissucol Duo S group compared to NaCl 0. 9% (5. 9±0. 5, 4. 5±0. 3, 4±0. 4 g). AST levels of MAR-2 were similar to NaCl 0. 9% (46±6. 6, 45±6. 1, 58±14. 1 IU/L). The levels of LDH were significantly reduced in MAR-2 group compared to NaCl 0. 9% group (1146±611. 9, 750±257. 6, 633±277. 4 IU/L). The extent of adhesions of the sealed resection in all groups was mild (1. 8±0. 4, 2. 1±0. 2, 2. 0±0. 0 semi quantitative score). **Conclusion:** The efficacy, safety of MAR-2, and the non-inferiority to the gold standard fibrin adhesive has been shown under pre-clinical conditions.

OP-139

Oxaliplatinetissularpenetration during HIPEC may impact survival

O. Sgarbura, J. Bianga**, A. Bouslimani[§], N. Bec[§], M. Larroque[§], C. Larroque[§],F. Quénet**

*Institut régional du Cancer Montpellier(ICM)
**LCABIE, UMR 5254, Hélioparc, Pau
[§] Institut de recherche en cancérologie Montpellier (IRCM)

Background: Heated Intraoperative Chemotherapy (HIPEC) is used as a complement to complete cytoreductive surgery in several conditions associated with peritoneal carcinosis(PC). Oxaliplatine is used as the main molecule in HIPEC for PC of gastrointestinal origin. The aim of the study is to evaluate whether cell penetration of oxaliplatine measured by matrix-assisted laser desorption ionization (MALDI) and laser ablation ICP mass spectrometry is linked to survival. **Methods:** For eight patients with PC of colorectal and gastric origin, tumoral specimens were collected at the end of HIPEC and sent for preparation as tissues frozen in liquid nitrogen at -80°C. 10µm-slices were mounted in indium-tin oxide and analyzed wit MALDI and LA-ICP MS. The tissular penetration of the drug was measured as the percentage of the section area presenting Pt-metabolites. Clinical, operative and survival data were collected. Statistical analysis was performed using correlation and non-parametric tests. **Results:** The eight patients had a M: F ratio=2: 6 and an average age of 58,25(+/-12,15) years. There was one case of gastric adenocarcinoma and seven of colorectal adenocarcinoma with an average PCI of 11,88+/-5,59. Median overall survival was 70,75months. Whilst correlation between PCI and survival was mild(r=0,362), correlation between Pt-penetrated tissue and overall survival(OS)/progression-free survival(PFS) was strong (r=0,689; r=0,753). P-value was non-significant due to sample size. **Conclusions:** This pilot study suggests that there is a link between oxaliplatine tissue penetration during HIPEC for gastrointestinal cancer PC and both OS and PFS but more samples are needed in order to potentially attain statistical significance.

OP-140

The Effect of Triclosan Coated Suture Material on Surgical Site Infection of Abdominal Facial Closure

T. Olmez, T. Colak

Department of General Surgery, University Hospital of Mersin, Turkey

Background: This study aimed to compare closure of fasia

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with standard PDS or triclosan coated PDS for surgical site infection (SSI) in patients who underwent abdominal surgery. **Methods:** In this prospective study the patients who planned laparotomy for any reasons of GIS was allocated between 01/06/2013 and 01/06/2014. Totaly 900 consecutive patients were included. Ten patients were excluded from the study for some reasons, and totaly 890 patients were evaluated. Gender, age, operation, comorbidities, ASA score, hospital stay, BMI, SSI and incisional hernia were noted. **Results:** Surgical site infection were occured in 200 of patients (% 22. 4). 85 (19. 1%) of 445 patients in triclosan group (TG) and, 115 (25. 8%) of 445 patients in control group (CG)were detected by surgical site infection and this difference was statistically significant (p = 0. 016). Triclosan coated PDS was to be reduced the surgical site infection in clean (% 0 TG vs. % 27. 2 CG, p=0. 009), clean-contaminated (% 13. 6 TG vs. % 24. 3 CG, p=0. 001) and contaminated (%16. 6 TG vs. % 27. 8 KG, p<0. 0001) wounds. **Conclusion:** After surgery closure of the fascia with triclosan-coated PDS reduced surgical site infection with an 24%. Therefore, triclosan-coated PDS may be recommended in fascial closure.

OP-141

A single-surgeon randomized trial comparing conventional technique, Ligasure Vessel Sealing System and Harmonic Scalpel during total thyroidectomy for substernal goiter

M. Testini, A. Gurrado, G. Lissidini, G. Di Meo, V. Ferraro, A. Pasculli, R. M. Isernia, G. Piccinni

Department of Biomedical Sciences and Human Oncology. University of Bari. Bari, Italy.

Background: When total thyroidectomy(TT) is performed for substernal goiter (SG), a potentially higher risk of morbidity is reported. Advanced vessel sealing devices (AVSD) provide an alternative to conventional technique (CT) for TT. **Objectives**: Aim of this prospective study was to compare the outcome of patients underwent TT for SG using Ligasure Vessel Sealing System (LVSS), Harmonic Scalpel (HS),or CT. **Patients and Methods:** Between 2011-2014, 75 patients (49 females, 26 males, mean age: 57. 9 years; range: 28-83 years)underwent TT for SG by the same surgeon, from a population of 393 operated for thyroid disease. Patients were randomized into three groups: group A (n=26) in which TTwas performed using CT; group B (n=22), and group C (n=27) in which TT was performed using LVSS and HS, respectively. Patients with a split-sternal approach were excluded from the study. Operative time, postoperative drainage stay, hospitalization and morbidity (hypoparathyroidism, vocal cord palsy, hemorrhage, seroma, other) were analyzed. **Results**: Mean duration of surgery was 136. 5±26. 7 minutes in group A vs. 110. 5±24. 8 in B, and 101. 6±25. 4 in C, respectively, with significant statistical differences between A vs B (p<. 005)and C (p<. 0001). Mortality was none. The overall morbidity was 29. 3%. Drainage stay, postoperative hospitalization, and morbidity showed no significant differences among the three groups. **Conclusion**: This is the first study analyzing AVSD in TT for SG in literature. The use of AVSD significatively reduces operative time of TT performed for SG, but it does not seem to affect the other evaluated outcomes.

OP-142

Investigation of ALPPS induced morphological and microcirculatory changes using rat model

A. Budai[1], A. Fülöp[1], D. Tihanyi[1], G. Lotz[2], L. Harsányi[1], A. Szijártó[1]

[1]: 1st Department of Surgery, Semmelweis University, Budapest, Hungary
[2]: 2nd Department of Pathology, Semmelweis University, Budapest, Hungary

Background and Aims: Associating Liver Partition and Portal vein Ligation for Staged hepatectomy (ALPPS) is a novel method to induce extensive liver regeneration, however its underlying mechanisms are still unknown. The aim of the present study was to establish a suitable rat model for ALPPS which is able to mimic the alterations observed during human interventions. **Materialsand methods:** Male wistar rats (n=60, 160-200g) randomized into two groups underwent portal vein ligation (PVL) or ALPPS. Under the operative process the lobular microcirculation was assessed using laser doppler flowmeter. After 0, 1, 2, 3 and 7 days of regeneration the animals were sacrificed, tissue samples from the liver and blood samples were taken. The portal pressure and regeneration rate was measured. To qualify mitotic activity Ki-67 immunostaining was performed, and the extent of necrosis was assessed on hematoxilin-eosine stained slides. Serum levels of AST and ALT were also determined. **Results:** Liver regeneration rate after ALPPS was significantly higher compared to the PVL group(347±12,2% vs. 287±17. 4%). The mitotic activity shown to be significantly higher in the ALPPS group 2 days after the operation (185±33 vs. 102±47 cells/HPF). The portal pressure (21,3±3,3 vs. 18,6±1,9 Hgmm) increased in a higher extent after ALPPS compared to the PVL group. The microcirculatory flow significantly elevated after ALPPS (310±23,3 vs. 235±33. 1 AU). Serum level of AST and ALT were significantly elevated 1 day after ALPPS. **Conclusion:** According to our data, the established ALPPS model is able to reproduce the accelerated liver regeneration observed under human interventions.

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OP-143

The influence of perfluorocarbon emulsions (PFE) on the state of vascular microcirculation of pancreas in experimental acute necrotizing pancreatitis (ANP)

Rasputin P. G[1], Abiola S. O[1], Andreeva S. A[2].

[1]General Surgery Department, Kirov State Medical Academy, Russia
[2]Department of Pathology, Kirov State Agricultural Academy, Russia

Background: In pancreanecrosis, microcirculation naturally suffers. There is information that PFE having oxygen transporting and antiischemic properties can deliver oxygen to damaged tissues. **Objectives:** The aim of this study is to investigate the effects of Perftoran – the Russian preparation of the group of PFE on the ultrastructure of microcirculatory bed of pancreas in Experimental ANP. **Materials and methods:** Rats were divided into 3 groups, the first group includes intact rats, the second group includes animals with surgically induced ANP, the third group includes rats with perftoran administered intraperitoneally at the rate of 0. 5ml per 100g for a period of 5 days after surgically induced ANP. The duration of the experiment was 14 days. Results:Second group, on the 1st day of the experiment, parenchymal cells undergo degenerative changes. On the 3rd day, there were decreased edema, tissue granulation and diffuse infiltration of erythrocytesand neutrophils, on the7th day no significant morphological changes . By the 14th day around the necrotic foci the loose connective tissues turned to dense connective tissues with improperly arranged bundles of collagen fibers. Third group on the first day there were degenerative changes. However, on the 3rd day hemodynamic instability were not as pronounced as in the 2nd group, by the 7th day no thrombosed vessels were found in the microcirculatory bed . On the 14th day, there were sites of organ regeneration aided by the proliferation of the pancreatocytes and acinocyte. **Conclusions:** The use of perftoran improves microcirculation in pancreas of experimental animals.

OP-144

The effect of Sildenafil and Terlipressin afterfocal hepatic venous outflow obstruction in an extended liver resection rat model

J. Arlt[1], W. Wei[1],C. Xie[1], U. Dahmen[1], O. Dirsch[2]

[1]University Hospital Jena, Jena, Germany
[2]Hospital Chemnitz, Chemnitz, Germany

Background: Focal hepatic venous outflow obstruction occurs frequently after extended liver resection and compromises outcome. In a previous study, we investigated the spontaneous recovery process in our animal model of right median hepatic vein ligation+70%partial-hepatectomy (rMHV-Ligation+70%PH). We hypothesized that modulation of vasoactive pathways could improve the spontaneous recovery process after rMHV-Ligation+70%PH. Objectives: In this study, we investigated two pathways based on the administration of two different drugs. Sildenafil inhibits cGMP-specific phosphodiesterase type and leads to vasodilatation of blood vessels. Terlipressin leads to decrease the blood flow of portal vein**. Material and Methods:** Lewis rats were subjected to rMHV-Ligation+70%PH (n=4-6/group). The animals were treated with saline (control group), sildenafil (20µg/kg,i. p) or terlipressin (0,05mg/kg,i. v.). Hepatic hemodynamic, liver damage, regeneration and sinusoidal vascularization were evaluated at POD1. **Results**: RMHV-Ligation+70%PH caused a significant elevation of portal venous pressure from 9,6±1,3 to 11,4±1,2mmHg and large pericentral necrosis representing about one third of the obstructed liver tissue measured as area of necrosis per whole liver section. In contrast to our expectation, neither treatment with sildenafil or nor terlipressin did reduce portal hypertension, decrease the size of confluent necrosis or vascularized sinusoidal canals stained by laminin. **Conclusion:** Neither treatment with sildenafil nor terlipressin did show the expected effect, which might be attributed to the highly variable data. Based on the clinical relevance of this study we want to investigate further vasoactive drugs to improve the spontaneous recovery process after extended liver resection. We will investigate the administration of a non-selective β-blocker as carvedilol, a NO donors as isosorbide-5-mononitrate and a somatostatin analogue as octreotide.

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Glucose metabolism during intrahepatic size regulation after simultaneous portal vein ligation and liver resection

W. Wei[1], A. Szijártó[2], K. Szigeti[3], I. Horváth[3], A. Fülöp[2], D. Máthé[4], U. Dahmen[1,]*

[1] Jena University Hospital, Department of General, Visceral and Vascular Surgery, Jena, Germany
[2] András Fülöp - 1st Department of Surgery, Semmelweis University, Budapest, Hungary
[3] Department of Biophysics and Radiation Biology; Semmelweis University; Budapest; Hungary
[4] CROmed Translational Research Centers, Budapest, Hungary

Background: Our previous study in rats revealed that ligation of the right portal vein plus 70% liver resection (rPVL+70%PH) leading to a small increase in right lobe and markedly increases in caudate lobe. The aim of this study is to evaluate intrahepatic spatially resolved glucose metabolism. **Materials and Methods:** Four male Wistar rats were subjected to rPVL+70%PH. Animals underwent Fluordesoxyglucose (FDG) PET/MRI imaging to assess liver volume and glucose uptake before and 1, 2, 3 and 7 days after operation**.** The standardized uptake value (SUV) was calculated by dividing the mean radioactivity concentration in liver lobes by injected dose per body weight. **Results:** The ligated right lobe did almost maintain its size after 7 days (93%), whereas the non-ligated caudate lobe increased to 590%. However, the liver weight recovery of all lobes was lower compared with liver volume recovery. The SUV of ligated and non-ligated liver lobes showed substantial differences. SUV in the ligated lobe increased from 1. 00 to a maximum of 1. 13 on 2nd operative day without significance. SUV in the non-ligated regenerating caudate lobe increased significantly from 0. 86 to 0. 98 and remained on this level until the end of the observation period. **Conclusion:** Intrahepatic size regulation after rPVL+70%PH followed a certain pattern, although liver weight recovery was not that pronounced. The FDG uptake of both ligated and non-ligated lobes increased only slightly, and the total glucose uptake decreased significantly. Severe surgical stress and the large loss of parenchyma due to a major liver resection probably caused to disturbed glucose homeostasis.

OP-146

Establishment of portal vein ligation + In situ splitting model on rat

W. Wei[1], T. Zhang[1], S. Zafarnia[2], M. Schwier[3], C. Xie1, C. Kan[1], O. Dirsch[4], U. Settmacher[1], U. Dahmen[1]

[1] Jena University Hospital, Department of General, Visceral and Vascular Surgery, Jena, Germany
[2] Department of Experimental Molecular Imaging, Medical Faculty, RWTH Aachen University,Germany
[3]Fraunhofer Institute for Medical Image Computing MEVIS, Bremen, Germany
[4] Jena University Hospital, Institute of Pathology, Jena, Germany

Background: Associating Liver Partition with Portal Vein Ligation for Staged Hepatectomy (ALPPS) is an emerging surgical strategy. It induces accelerated liver regeneration of liver remnant lobe comparing with portal vein ligation, which can reduce interval of two staged operation and post-hepatectomy liver failure. However, the underlying mechanism is uncertain. To study the underlying mechanisms of liver regeneration and alteration of biochemistry, it is important to establish a reliable ALPPS model on rats. **Methods:** Portal vein ligation was achieved by occlusion of portal branches feeding left liver lobe and right lobe (approximate 70%PVL). In situ splitting was performed according to the portal fissure. A sterile plastic film was placed on the transection surface of right median lobe. The caudate lobes were resected (10%PHx), simulating the clinical situation of atypical resection during first stage. The liver regeneration of right median lobe was evaluated. The model was tested by CT scan and 3D reconstruction. **Results:** Rats can survive 100% after performing the procedure correctly. The future remnant liver (right median lobe) grew significantly to 200% of initial size. 3D reconstruction showed the right median portal vein was well reserved. All hepatic veins were well reserved. No obvious revascularization was found between left and right median lobe. **Conclusions:** The ALPPS model is well-tolerated and reproductive based on the anatomic knowledge of spatial vascular distribution. The whole procedures included the ligation of left portal vein, transection of median lobe along the portal fissure and resection of caudate lobe.

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Improving research practice in rat orthotopic and partial orthotopic liver transplantation

Z. Czigány [1,2], J. Iwasaki [1], A. Szijártó [2], R. H Tolba [1]

[1] Institute for Laboratory Animal Science, RWTH Aachen University, Aachen, Germany
[2] 1st Department of Surgery, Budapest, Hungary

Background and Aims: Orthotopic liver transplantation (OLT) and partial-OLT (P-OLT) in small animals are widely used. No generally accepted standards are available in this field, guiding the researchers from the experimental phase until the publication. Our aim was to prepare a comprehensive review and provide an overview and recommendation for the implementation and publishing of experimental transplantation studies. **Materials and Methods:** PubMed-MEDLINE database screening was conducted using relevant keywords. Overall 123 articles published between 1993-2014, fulfilling the inclusion criteria were identified. Articles retrieved were analyzed from the methodical point of view. Data collection was performed using a checklist sheet, containing 11 main points. **Results:** Most striking observation of our review is that less than 21% of the studies analyzed, are clearly elaborated concerning the methodical issues. Considerable numbers of articles are unclear about essential information, such as numbers of animals used, graft preservation issues, vessel clamping times, and survival. Despite repeatedly proven favorable effects of graft re-arterialization, in 80% of the studies authors are omitting arterial anastomosis. Reporting analgetic treatment for the animals is extremely low (8%; 10/123 studies). Besides the above detailed findings a comprehensive publication guide prepared by our team will be demonstrated. **Conclusion:** Experimental studies in the topic of P-OLT are frequently lacking of important details and standards, which complicates reproducibility and exerting a negative effect on future research. A recommendation would be necessary for authors and editors to serve as a guide for the implementation of studies, as well as for reporting in experimental liver transplantation.

OP-148

Feasibility study of safety and cost effectiveness of using Johan forceps as endoloop pushers for laparoscopic appendicectomy

K Siddique, K Khan**, N Samuel**, MH Shiwani **, P Sedman***, A Fawole **

* Mid Yorkshire Hospitals NHS Foundation Trust.
** Barnsley District General Hospital NHS Foundation Trust
*** Hulland East Yorkshire Hospitals NHS Trust

Background: The base of appendix can be secured using endoloops or endoscopic stapler**.** The authors have reported the use of Johan forceps as endoloop pushers for laparoscopic appendicectomy. **Aims:** To evaluate the safety and cost effectiveness of this technique. **Patients and Methods:** A prospectively collected data of all patients who underwent laparoscopic appendicectomy by this technique between 2012 till 2014 was reviewed. Base of the appendix was secured using three standard extra-corporeal endoloops deployed with Johan's forceps utilising one vicryl tie. Demographics, operative findings, post-operative complications and readmissions were recordedand analysed. **Results:** Total number of patients was120**.** There were 72 (60%) males while rest were female with an age of *24 (14-77). Grossly inflamed appendix (including perforation, localised abscess) was noted in 76% of cases. No peri-operative complications were reported. The post-op stay was *2(1-5) days. Complications include 7 (5. 8%) wound infections which were managed conservatively. 9 patients were re-admitted due to reasons unrelated to the surgical technique. The cost of one vicryl tie was £0. 5 Vs £49. 80 (for 3 standard endoloops available in the market). The cost analysis showed johan assisted appendicectomy to be 99 times cheaper than the standard marketed endoloops. **Conclusion:** Our series involving various surgeons employing the standard technique of using the Johan forceps as endoloop knot pushers shows that it is a feasible and safe technique with promising results. The technique has been practised in various hospitals and provides a cheap and safe alternative to the standard endoloops available in the market. *median

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OP-149

Is there a shift to conservative management in cases of uncomplicated acute appendicitis: An National Audit in Ireland

M. E. Kelly, A. Khan, W. Khan, R. Waldron, I. Z. Khan, K. M. Barry

Department of Surgery, Mayo General Hospital, Castlebar, Mayo, Ireland

Background: Acute appendicitis is the most common acute surgical operation. In recent years, this management strategy has been challenged. Several randomized controlled trials have demonstrated that antibiotics/conservative management is as efficacious as surgery, with lower complication rates. M**aterial/Patients and Methods**: A national cross-sectional study of all consultant general surgeons evaluating their current management practices was performed. Those that managed patients conservatively were asked why they have modified their practice, which antibiotics regimens are used and what follow-up investigations/if any they utilized. Additionally, the role of interval appendicectomy and conservative management in the paediatric population was also assessed. **Results**: There was a 74. 7% (n=74/99) response rate. Of those, only 22. 9%(n=17) routinely treat acute appendicitis conservatively. However, another 14. 8%(n=11) stated they would consider this approach in selected cases. Main reasons for changed practices included; presence of inflammatory phlegmon(75%), delayed presentation (64%), and recent changes in evidence-based medicine (46%). The most popular antibiotic used was co-amoxiclav/clavulanic acid(53%). Alternatively, combination of antibiotics was also popular. Only 31. 9% of participants felt interval appendicectomy was warranted and 20. 6% supported a conservative management approach in a paediatric population. The overwhelming majority (>95%) advocate follow-up colonoscopy+/- computed tomography in any patient aged >40years managed conservatively. **Conclusion**: Though there is growing evidence to suggest that the non-operative management approach is safe in uncomplicated cases of acute appendicitis, there is still considerable variation in practice in the Irish context. Reasons for adopting a conservative management practice have been identified in this study and reflect the expanding literature on this subject.

OP-150

Does neutrophil-to-lymphocyte ratio accurately predict severity of acute appendicitis?

M. E. Kelly, A. Khan, M. Riaz, W. Khan, R. Waldron, I. Z. Khan, K. M. Barry

Department of Surgery, Mayo General Hospital, Castlebar, Mayo, Ireland

Background: The accurate diagnosis and prediction of acute appendicitis and its severity can be difficult. Numerous screening tools have been reported to help diagnose appendicitis, but there remain poor predicting tools for severity, post-operative complications or total length of hospital stay (LOS). Reported studies have highlighted the benefit that neutrophil-to-lymphocyte (NLR) ratio has on projecting medical and surgical outcomes. **Objective:** A retrospective study evaluated the ability of NLR to predict severity, 30-day readmission rates and total LOS of patients operated on for acute appendicitis. **Material/Patients and Methods:** We evaluated all adult patients that had a laparoscopic appendicectomy for acute appendicitis over a three-year period (2012-2014) in a district general hospital. Age, gender, blood results, severity of appendicitis (histological findings), 30-day readmission rates and total LOS were recorded. **Results:** 301 patients were included in the study. 60. 7% (n=183) were female; mean patient age was 24. 9 +/-15. 210 appendix specimens (69. 7%) were observed to have simple inflammation on histological evaluation. A NLR of >9. 1 was associated with complicated cases of acute appendicitis, and superior to C-reactive protein in predicting severity (*p<0. 05). However, NLR had no statistical value for estimating LOS or 30-day readmission rates. **Conclusion:** In the era of conservative (antibiotics) management of simple uncomplicated acute appendicitis, we advocate that NLR is a useful aid to help predict severity of inflammation. This would aid in better delineating those more suitable to traditional management (surgery) approaches, and highlight patients that require surgery without substantial delays.

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OP-151

Impact of parathyroidectomy for primary hyperparathyroidism on quality of life; a case-control study

R. R. Dulfer[1], W. Geilvoet[1], A. N. Morks[2], E. M. M. van Lieshout[1], P. C. Smit[3], E. J. M. Nieveen van Dijkum[4], K. in 't Hof[6], F van Dam[5], C. H. J. van Eijck[1], P. W. de Graaf[3], T. M. van Ginhoven[3]

[1]Department of Surgery, Erasmus MC, Rotterdam, the Netherlands
[2]Department of Surgery, Groene Hart Ziekenhuis, Gouda, the Netherlands
[3]Department of Surgery, RdGG, Delft, the Netherlands
[4]Department of Surgery, AMC, Amsterdam, the Netherlands
[5]Dutch Cancer Institute, Amsterdam, the Netherlands (retired)
[6]Department of Surgery, Flevoziekenhuis, Almere, the Netherlands

Background: Physical and mental complaints are common in patients with primary hyperparathyroidism (PHPT) and these have a negative impact on quality of life. Nowadays these subjective symptoms are not considered an indication for surgery in the current treatment guidelines. The aim of this study was to assess the effect of parathyroidectomy on several domains related to quality of life (QoL) in a Dutch population. **Methods:** This multicentre case-control study investigates preoperative and postoperative (three months and one year) QoL scores in patients operated for PHPT. The results are compared with a control group which consists of patients scheduled for a hemithyroidectomy for benign euthyroid disease. The SF-36 questionnaire is used to measure QoL. **Results:** Fifty-two patients with PHPT and 49 controls were included. Patients with PHPT had significantly lower QoL scores preoperatively in comparison to the control group and improve significantly after successful surgical treatment. Postoperatively, no differences were observed between the two groups. **Conclusion:** QoL is significantly lower in patients with untreated PHPT. Surgical treatment increases QoL significantly. Decreased QoL should also be considered as an indicator for surgical treatment in patients with PHPT.

OP-152

Comparing parathyroid fine-needle aspiration with parathormone assay and 99m Tc sestamibi scintigraphy on a preoperative location of hyperfunctioning parathyroid glands. Our four-year experience

F. J. A. Serrano[1], I. G. Giner[1], E. G. Rodríguez[2], A. A. T. Hernández[1], F. R. Rodríguez[1], Y. L. Plasencia[2], J. R. S. Santana[1], P. P. Correa[1], V. V. Benítez[1],J. R. H. Hernández[1]

[1]Department of General and Gastrointestinal Surgery, Hospital Universitario Insular de GranCanaria. Spain.
[2]Department of Endocrinology. Hospital Universitario Insular de Gran Canaria. Spain.

Background: There has been increasing interest in a minimally invasive surgical approach for primary hyperparathyroidism when a single adenoma is identified and confirmed by imaging studies. **Objective:** The aim of the study was to evaluate the efficacy of ultrasound-guided parathyroid fine-needle aspiration and parathormone assay (PTH-FNA) in comparison with Tc-99m-Sestamibi SPECT-TAC for preoperative location of hyperfunctioning parathyroid glands. **Patients and methods**: Between June 2010 and December 2014, we conducted a retrospective study of 43 patients who had undergone surgery at our institution due to primary hyperparathyroidism. Both localizing studies were performed and PTH-FNA was measured before surgery in each patient. **Results**: Forty patients had a solitary parathyroid adenoma found discovered during surgery and histologically confirmed, in two cases the pathological samples were identified as normal thyroid tissue and one as glandular hyperplasia. Ultrasound and PTH-FNA predicted the surgical and histological findings in 40 of 43 cases (93%). SPECT-TAC was concordant in 39 of 43 cases (79,1%). **Conclusions:** Based on our experience, ultrasound in combination with a positive PTH-FNA is more accurate than Tc-99m Sestamibi for the preoperative localization of parathyroid adenomas and could be used as a single technique.

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OP-153

Effect of intraoperative neuromonitoring on recurrent laryngeal nerve exploration after thyroid surgery

B. Kavlakoglu[1]

[1]Department of General Surgery, Kudret International Hospital Ankara, Turkey

Background and Aims: : Recurrent laryngeal nerve(RLN) injury is a serious complication after thyroid surgery leading to voice disorders, respiratory distress and aspiration. Intraoperative nerve monitoring(IONM) is an effective tool in thyroid and neck surgeries in cases of intraoperative injury to the RLN on the side of initial dissection. The aim of this study was to compare the effects of direct vision and Intra-Operative Nerve Monitoring(IONM) on RLN exploration after the thyroid surgery. P**atientand Methods:** Fourty-eight patients were admitted to our clinic between January 2013 and December 2014 for total thyroidectomy. The patient's age, preoperative and postoperative histopathologic findings, duration ofsurgery and hospital stay and outcome were analyzed. The patients were divided into two groups. The first 36 patients (Group I) were treated with total thyroidectomies&RLN exploration under direct vision(TT-dv; N=36). The other 12 patients (Group II) were treated withtotal thyroidectomies&RLN exploration with IONM(TT-nm; N=12). IONM was used on 12 patients including thyroid carcinoma and completion surgeries for verification of RLN's integrity. Voice quality, phonation, dysphagia and aspiration were evaluated after the thyroid surgery. Differences between groups were calculated using the Mann- Whitney U test. **Results:** The voice quality and phonation were perfect in all cases. There was no difference in terms of voice quality, phonation, dysphagia and aspiration between the groups. **Conclusions:** Exploration under direct vision is an effective technique for avoiding RLN injury in staging thyroid surgery. Although there was no difference between the groups, IONM is suggested to junior surgeons and residents during thyroid surgery.

OP-154

Prognostic Importance of Fascin-1 and Claudin-4 Expressions in Bladder Cancer

Z. Demirer[1]*, E. Aydur* [2]*, A. F. Ciçek* [3]*, O. Ongörü* [3]*, A. E. Coğuplugil*[4]*,I. Yıldırım*[2]*, M. L. Tahmaz*[5]*, S. Göktaş*[6]

[1] Eskisehir Military Hospital, Department of Urology, Eskişehir, Turkey
[2] Gülhane Military Medical Academy, Department of Urology, Ankara, Turkey
[3] Gülhane Military Medical Academy, Department of Pathology, Ankara, Turkey
[4] Tatvan Military Hospital, Department of Urology, Bitlis, Turkey
[5] Fatih University Medical Faculty, Department of Urology, Istanbul, Turkey
[6] Selcuk University Medical Faculty, Department of Urology, Konya, Turkey

Background and Objectives: Most of bladder tumors are not invasive at the time of diagnosis, but shows averyhigh rateof recurrenceandprogression. Recently, degrees of Claudin and fascin expression was reported to be associated with tumor differentiation, aggressiveness and metastatic potential. In this study, we investigated the prognostic role of expression levels of fascin-1 and claudin-4 in the pathologic specimens obtained from primary bladder tumor patients. **Material/Patients and Methods:** In this study, we evaluated transurethral resection materials of consecutive primary bladder tumor patients between 1995-2010. Medical characteristics of patients (age, gender, time of diagnosis, tumor location, tumor number, tumor size, tumor grade, tumor stage, recurrence properties, progression characteristics, treatment characteristics and follow-up period) were recorded. The patients who has any other tumor diagnosis in other areas of the body before diagnosis of bladder tumor, has a history ofpelvic RT and/ or systemic chemotherapy prior to the diagnosis of bladder tumor, has missing data on the treatment applied and/ or standard follow up and has pathological specimen without muscle tissue in the primary tumor resection were excluded. Preparationsforthepatientsincluded ina block which containsthe mostintensearea oftumor contains the expression of Fascin-1 and Claudin-4 parameters (density, prevalence, and immunohistochemical score)were assessed and the findingswere compared withthe prognosticperspective. **Results:** Pathologic preparations available for 102 patients with primary tumor resections were stained imunohistochemically. 11 (%10. 8) patients were female and 91 (89,2) patients were male. The mean age was 61. 23 ± 13. 02 (23-94), median follow-up period of patients with was 37 (12-160) months. Numbers of patients according to tumor grade and stage was as follows respectively; papilloma (13), neoplasm of low malignant potential (12), low-grade papillary urothelial carcinoma (36), high-grade papillary urothelial carcinoma (41), Ta (51),

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T1 (30) and T2 (21). There wasastatistically significantrelationship between Fascin-1 expression parameters; density categories, the average density values, immunohistochemistry score, the average score of immunohistochemistry and immunohistochemistry score categories and phase of the tumor, the tumor grade. In addition, the average penetration value of Fascin-1 in tumor stage had a statistically significant relationship. Claudin-4 expressionparameters; densitycategories, the averagevalues ofdensityhada statistically significantrelationship with phase ofthe tumorand thetumor grade. In addition, there was was statistically significant association between tumor stage categories and Claudin-4 immunohistochemistry score. Progression, recurrence, multifocality and tumor size in terms of expression of Fascin-1 and Claudin-4 did not show any relationship between the parameters independent of tumor grade and stage, as both look the same degree or in the same phase in patients. There has been demonstrated a negative correlation between Fascin-1 immunohistochemistry scores and Claudin-4 immunohistochemistry scores, between Fascin-1 immunohistochemistry scores categories and Claudin-4 immunohistochemistry scores categories both tumor grades (low-grade papillary urothelial carcinoma, and high-grade papillary urothelial carcinoma) and the tumor stages (T1 and T2). **Conclusions**: Fascin-1 and Claudin-4 expression parameters are associated bothtumor grade and tumor stage.

OP-155

Partial Nephrectomy of Renal Allograft: a Report of 5 Clinical Cases

J. Chlupac, L. Janousek, J. Fronek

Department of Transplant Surgery, Institute for Clinical and Experimental Medicine, Prague, Czech Republic

Background: There is an increased incidence of urologic tumors in renal transplant recipients. In case of a renal allograft neoplasm, the graft nephrectomy and hemodialysis reduces the quality of life. Nephron sparing surgery has been proposed to be a choice to preserve renal function. **Objectives:** Here we report our experience with 5 patients. **Patientsand methods:** Five patients with mean age 63±17 years (37-69 years) and mean time after kidney transplantation 10±7 years (2. 5 months-17 years) were diagnosed with allograft neoplasm by routine screening. They were treated with partial nephrectomy. **Results:** Mean creatinin level before resection was 138±27 μmol/l. Mean creatinin level at discharge was non-significantly elevated at 159±26 μmol/l (p=0. 11). However, all 5 patients suffered from transitory significant impairment of renal function (creatinin 204±34 μmol/l, increase of 50±28%, p=0. 005) on postoperative day 2 to day 3. Mean follow-up was 200±123 days (89-368 days) and mean creatinin was 155±45 μmol/l (p=0. 25, n. s.). Two patients received temporary nephrostomy peri-operatively. One patient suffered from repeated urinary tract infection and transitory urinary leak which was treated by redo nephrostomy. Otherwise the recovery of all 5 patients was uneventful. Histology showed renal cell carcinoma 2×, urothelial carcinoma 2× and collecting duct carcinoma 1×. No adjuvant oncologic therapy was needed. Transitory change of immunosuppression occurred in 1 patient. **Conclusion:** Partial nephrectomy of renal allografts is a feasible approach for tumor removal with full preservation of graft function. It should be offered to all patients in whom it is clinically relevant.

OP-156

Mini-PCNL with High Power Laser

K. Agarwal[1], M. S. Agrawal[2], M. Mistry[1], S. Shah[1], R. Nelapatla[1]

[1]School of Medicine, University of Liverpool. Liverpool, UK.
[2]Department of Urology. Global Rainbow Hospital. Agra, India

Background: To investigate the safety and efficacy of the high-power holmium laser in mini-percutaneous nephrolithotripsy (PCNL) and compare it with pneumatic lithotripsy. **Methods:** A prospective randomized study was performed on 80 patients undergoing PCNL over 6 months. Patients with a single renal stone ≤2. 5cm, were randomized to two groups. Group A underwent PCNL using holmium laser lithotripsy -holmium: YAG laser using a 550-micron end-firing optical fiber, using laser power up to 70 W (3. 5 J/pulse, 20 pulses/sec); and group B underwent PCNL with pneumatic lithotripter. **Results:** All patients underwent PCNL successfully. The mean operative time was 35. 7 ± 11. 1 minutes in group A, and 48. 5 ± 18. 7 minutes in group B (P<0. 01). The average lithotripsy time in group A was 24 ± 4. 5 minutes vs 33 ± 4. 8 minutes in group B (P<0. 05). There were no complications, and complete stone clearance was achieved in all cases. Postoperative hospital stay was non-significant amongst groups (P>0. 05). The initial cost of the laser was equivalent of 100,000 USD, and 40,000 USD for pneumatic lithoclast. However, there was no significant difference in costs per procedure between the two, as the laser fiber and lithoclast probe were mostly reusable. **Conclusion:** Holmium-YAG laser and pneumatic lithoclast are both effective and safe lithotripters for mini-PCNL. Laser provides a shorter operating time, partly due to minimal stone migration. The high initial cost of laser which is offset by its multi-purpose usability. With increasing experience with laser, more promising results can be expected with this new technology.

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OP-157

Role of imaging in management of postoperative complications following cystectomy

Nadeem M, Khan MS, Thurairaja R, O' Brien T, Thomas K, Dasgupta P

Department of Urology, Guy's and St Thomas' Hospital NHS Foundation Trust. London

Background and Aim: Radical Cystectomy is a very complex urological surgery associated with high morbidityand mortality rates ranging from 19% to 64% and 0. 8% to 8. 3%, respectively. Management of the complications is by enlarge combination of clinical judgment and various investigations particularly imaging. We examine the impact of different imaging modalities on management of postoperative complication following radical cystectomy. **Methods:** All postoperative morbidities were identified from a single high volume institution using prospectively maintained cystectomy database. Patient's demographic and clinical parameters including length of stay, readmission rate, morbidity rate and need of intervention on the basis of imaging were reviewed. Statistical analysis was done using SPSS® version 19. **Results:** From January 2009 to June 2014,303 patients underwent cystectomy for bladder carcinoma. Median age of the patient was 69 years (range 38 to 83). On an average, each patient had 8 imaging postoperatively. Most common modalities used in descending order are contrast enhanced computed tomography, chest X-ray, lopogram, cystogram, abdominal X-ray and ultrasound abdomen. Seventy nine patients required intervention on the basis of imaging (Radiological= 52, Exploration= 24 and endoscopic=3). Most common radiological intervention was drain placement(60%) while most common indication for surgical exploration was anastamotic leak (35%) followed by drainage of collection (30%) refractory to radiological intervention. we found significant association of number of imaging with length of stay (p=0. 01), readmission(p=0. 008), rate and urinary diversion type(p<0. 001). **Conclusion:** Imaging has significant role in management of post operative morbidities particularly with application of careful clinical judgment to balance risks versus benefits.

OP-158

Ureteral Obstruction Swine Model through minilaparoscopy and laparoscopy for Training on Laparoscopic Pyeloplasty

Fernández-Tomé B, Hermoso J,Díaz-Güemes I, Sánchez-Margallo FM

Laparoscopy Unit, Jesus Usón Minimally Invasive Surgery Centre (JUMISC), Cáceres, Spain.

Background: This study aims to assess the most adequate surgical approach for the creation of an ureteropelvic juntion obstruction (UPJO) animal model for secondary pyeloplasty repairs. **Material and Methods:**Twelve large White pigs were used. The left ureteropelvic junction was occluded by means of a silk ligature. According to the surgical approach for model creation, pigs were randomly distributed into: laparoscopic conventional surgery (LAP) or minilaparoscopy (MIN). Time needed for access, surgical field preparation, wound closure, and total surgical times were registered. Also, the Social behavior, tenderness to the touch and wound inflammations were evaluated in the early postoperative period: second and seventh day. After 15 days, all animals underwent a laparoscopy Anderson-Hynes pyeloplasty carried out by 6 urologists. **Results:**There was no significant difference between the two techniques with respect to operative time. In assessing the animals to the second and seventh day are significant differences in the degree of inflammation, with better results in the minilaparoscopy group: second day (p<0,001) and seventh day (p<0,027). **Conclusion:**The model created by minilaparoscopy approach presented the best option of the pig's welfare.

OP-159

Validation of a laparoscopic hybrid simulator for training and assessment of basic endosurgical skills in urology

MA. Sanchez-Hurtado,FM. Sanchez-Margallo,I. Diaz-Güemes Martin-Portugues, JL. Moyano-Cuevas, S. Enciso-Sanz, LF. Sanchez-Peralta, J. Uson-Gargallo

Department of Laparoscopy,"Jesús Uson" Minimally Invasive Surgery Centre, Caceres, Spain.

Background: to report, in urology, subjective (face and content) and objective (construct) validity for LapPlate®, a laser/light based laparoscopic hybrid simulator for the practice of basic tasks. **Methods:** 19 urologists participated: 8 residents (Basic Group, G1) and 11 consultants (Expert Group, G2). Tasks: (T1, Triangulation): 30 consecutive trials and (T2, pick and place): 3 consecutive trials for each kind of object (rough, irregular and smooth). Metrics: (T1): % of correct hits and (T2): time to complete the task (seconds).

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On a questionnaire, attendants evaluated LapPlate® tasks (1-10 points) as well as 17 items regarding LapPlate® features (1-5 Likert scale). Statistics: median ± S. D. (Mann-Whitney test) ($p \leq 0.05$). **Results**: Subjective validity (Face validity (G1), Content validity (G2)): Evaluation of 17 items of LapPlate® features demonstrated high/very high rating (≥3 points) from both G1 and G2. T1 and T2 tasks were highly/very highly rated: (T1): (G1) vs (G2) = 7 ± 1. 4 vs 8 ± 1. 4 and (T2): (G1) vs (G2) = 8 ± 1. 1 vs 9 ± 1. 4. Objective (Construct validity): advanced G2 scored better than G1 in all tasks: (T1): (G1) vs (G2) = 70 ± 21. 9 vs 80 ± 16. 2 (NS) and (T2, Rough): (G1) vs (G2) = 55 ± 18. 9 vs 26. 5 ± 8. 4 (Significant differences), (T2, Irregular): (G1) vs (G2) = 38. 5 ± 16. 2 vs 27 ± 10 (NS), (T2, Smooth): (G1) vs (G2) = 38 ± 15. 1 vs 24 ± 5. 6 (Significant differences). **Conclusion**: these data suggest subjective and objective validity for LapPlate® for urologists.

OP-160

Melatonintreatment counteracts ischemia-induced apoptosis in the brainofaging rats

P. Louzao[1], S. D. Paredes[2], L. Rancan[1], C. García[1], R. Kireev[3], E. Vara[1], J. A. F. Tresguerres[2]

[1] Department of Biochemistryand Molecular Biology III, School of Medicine, ComplutenseUniversityof Madrid, Avda. Complutense, s/n, 28040 Madrid, Spain
[2] Department ofPhysiology, School of Medicine,ComplutenseUniversityof Madrid, Avda. Complutense, s/n, 28040 Madrid, Spain
[3] Institute of BiomedicalResearch of Vigo, Biomedical Research Unit, Hospital Rebullón (CHUVI), Avda. Puxeiros, s/n, 36415 Vigo, Spain

Background: To investigate the possible protective effect of melatonin, a seemingly neuro protective drug with anti apoptotic properties, on the apoptotic response secondary to brain ischemia in the hippocampus and cortex of aging male Wistar rats. **Material/Patients and Methods:** Animals aged 2, 6, and 14 months (n=5 per experimental group) were subjected to a model of ischemic brain injury consisting of the blockade of the right middle cerebral artery. 14-month old animals were treated with melatonin (10mg/kg) 24h before the surgical procedure and during 24 hour 7 days of post-treatment period until sacrifice and right and left hippocampus and cortex were collected. Drinking water with 0.1% ethanol only was available for rats aged 2 and 6 months, as well as for the non- treated 14 month old group. mRNA expression of Bcl-2-associated death promoter (BAD), Bcl-2-associated X protein(BAX), and B-cell lymphoma2(Bcl-2),was measured by means of RT-PCR. **Results:** Ischemia augmented significantly ($p<0.05$) the right and left hippocampal and cortical levels of pro-apoptotic factors BAD and BAX. This effect was more deleterious and aggravated with increasing age, i.e. , 6 and 14 month old groups exhibited significantly ($p<0.05$) higher levels as compared to those reached in the 2-month old animals. The levels of anti-apoptotic protein Bcl-2 experienced a significant decrease ($p<0.05$) in the 14-month old animals after 7days of the procedure in both right and left hippocampus. Theafore-mentioned alterations were not seen in melatonin-treated animals. **Conclusion:** Melatonin may aid in reducing neural damage inischemia-induced injury by limiting apoptosis.

OP-161

Effects of Hypothermia on Skeletal Ischemia Reperfusion Injury in Rats

Ş. Ekinci [1], Ü. Kaldırım [2], F. Akyıldız [3], S. Bilgiç [4], K. Koca [5], Y. Poyrazoğlu [6], Ö. S. Uysal [7], H. Turgut [8], S. Türkkan [1], Ö. Erşen [9], T. Topal [10], H. Özkan[1]

[1] Department of Orthopedic Surgery, Ağrı Military Hospital, Ağrı;
[2]Department Of Emergency Medicine, Gulhane Military Medicine Academy, Ankara;
[3] Department of Orthopedic Surgery, Malatya Military Hospital, Malatya;
[4] Department of Orthopedic Surgery, GATA Haydarpaşa Educational Hospital;
[5] Department of Orthopedic Surgery, Gulhane Military Medicine Academy, Ankara;
[6]Department of General Surgery, Mevki Military Hospital, Ankara;
[7] Department of Orthopedic Surgery, 100. Yıl Hospital, Ankara;
[8] Department of Orthopedic Surgery, Bursa Military Hospital, Bursa;
[9] Department of Orthopedic Surgery, Erzurum Military Hospital, Erzurum;
[10]Department of physiology, Gulhane Military Medicine Academy, Ankara;

Background: The aim of this study is to investigate the effect of hypothermia(H) on skeletal ischemia-reperfusion(IR) injury in rats. **Methods:** Eighteen Wistar Albino rats were divided into three groups randomly (sham, IR, hypothermia)(n=6). Sham group had all procedure without IR period. The lower right extremity of rats in IR and hypothermia groups was subjected to 2 hours of ischemia and 22 hours of reperfusion, applying clamp on common iliac artery and rubber-band at the level of the lesser trochanter. Rats in the hypothermia group underwent 4

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hours of hypothermia during the first four hours of reperfusion in addition to 2 hour ischemia and 22 hours of reperfusion period. All rats were sacrificed at end of the IR period. The tibialis anterior muscle and blood were reserved. Immunohistochemical iNOS staining was performed and MDA, SOD, GSH-Px, NO, IL-1β were measured in muscle. **Results:** level of MDA, NO and IL-1β in muscle were increased in IR group compared to sham group, but these parameters were decreased in hypothermia group compared to IR group. Activities of SOD and GSH-Px in muscle were decreased in IR group; however, these parameters were increased in hypothermia group. Score and intensity of iNOS staining of skeletal muscle was decreased in IR, hypothermia and sham respectively. **Conclusion:** The present study has shown that hypothermia reduced IR injury in the muscle-skeletal system by decreasing level of MDA, NO and IL-1β and increasing activities of SOD and GSH-Px. In addition, hypothermia attenuated the score and intensity of iNOS staining.

OP-162

Altered mitochondrial respiration in synoviocytes in experimental collagen-induced arthritis

P. Hartmann, G. Strifler, A. Mácsai, S. Szűcs, G. Varga, D. Érces, M. Boros

Institute of Surgical Research, University of Szeged, Hungary
Department of Traumatology, University of Szeged, Szeged, Hungary

Background: Therole of mitochondrial dysfunction has been implicated in the pathogenesis of joint inflammation in rheumatoid arthritis (RA). Therefore our aim was to compare the mitochondrial respiratory activity of the normal and inflamed synovium in collagen-induced rat model of RA. **Material and Methods:** Arthritis was induced in male Sprage-Dawley rats by subcutaneous injection of collagen-II and complete Freund adjuvant (Day 0.), followed by a booster injection (Day 7.). Synovial samples were taken from inflamed ankle joints (Day 28.) and subjected to high-resolution respirometry (OROBOROS). Data were compared with synovial samples of control animals from age-matching group. Baseline respiration (State II) and oxidative phosphorilation capacity (State III) of mitochondria was determined by adding specific substrates and inhibitors of the respiratory complexes (C) I-IV. After validation with Antimycin-A, Cytochrome-C release was also measured. **Results:** CI and CII State II showed an approx. 3-fold increase in the RA group as compared to the control group. However, CI-II State III oxygen consumption was equally elevated in both groups. Administration of CI inhibitor leaded to an approx. ~10% increase referring the predominant role of CII. Cytochrome-C release in the RA-group was significantly increased in comparison with the control values. **Conclusions:** RA was accompanied by the dysfunction of mitochondrial electron transport chain as evidenced by electron leakage from CI-II. Moreover, increased cytochrome-c release refers to the direct damage of the inner mitochondrial membrane in RA. Thus it is proposed that mitochondria are major targets of inflammation-associated injury in the synovial membrane in arthritis. **Support**: OTKA-K104656

OP-163

Organ fabrication: From basic research to translation into clinical practice

Kobayashi E

Department of Organ Fabrication, Keio University School of Medicine

Background: In line with the development of surgical researches, it has led us to the certainty that we can save patients as far as we have transplantable organs handy. Nevertheless, the shortage of donor organs has been in distress situation. I'd like to set forth the research on global scale for creating organs without relying on cadavers nor live donors under the name of "Organ Fabrication". This time through the introduction of the outcomes generated from basic researches using rat models, I refer to my most recent results from pre-clinical pig models currently in progress. **Methods:** My proposals for organ fabrication have been categorized into three; 1) Fabricating human organs in pigs, which is called "In vivo bioreactor" (*Hata T, et al. Ann Surg 2013*). 2) Creating organ buds *in vitro* and growing them in patient body through transplantation (*Matsumoto K, et al. Stem Cells 2012*). 3) Fabricating organs on vascular plexus (*Sekine H, et al. Nature Com 2013*). The proofs of concept for these researches have been made by optimizing experimental microsurgery on rat models and currently pre-clinical researches have been ongoing with pig models (*Iwasaki J, et al. Organogenesis 2013*). **Results and Conclusion:** Human organs fabricated in genetically modified animals end up with chimera with xenogeneic cells, on the other hand it leads to immunological predominance. However, there emerges an ethical issue of creating human-pig chimera. Fabricating organ buds has become viable, while it leaves us another challenge how to create routes for organs with secreting functions. It has already been proven that we are able to fabricate organs with small animals like rats through the processes of xenogeneic organs' decellularization and refilling them with another cells. In case of fabricating organs through the same processes with pig organs resembling to human organs in size, it has become indispensable to develop organ culturing apparatus in complete function (*Ishikawa J, et al. Scientific Reports 2015*).

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OP-164

Tissue engineered Poly (vinyl alcohol) mesh in rat model

D. Fehér [1], Gy. Szabó [1], D. Csukás [1], K. Molnár [2], K. Juhos[1],A. Jedlovszky-Hajdú[2], L. Fónyad[3], A. Ferencz [1],M. Zrínyi[2], Gy. Wéber [1]

[1]Semmelweis University, Department of Surgical Research and Techniques,
Budapest, Nagyvarad ter 4. , H-1089 Hungary
[2] Semmelweis University, Department of Biophysics and Radiation Biology, Nanochemistry Research Group, Budapest, Nagyvarad ter 4. , H-1089 Hungary
[3] Semmelweis University, 1st Department of Pathology and Experimental Cancer Research Budapest, Üllöi ut 26. H-1085 Hungary

Background: Intraperitoneal positioning of the surgical mesh may cause adhesion formation. Our aim was to evaluate the biomedical behaviour of the Poly (vinyl alcohol) (PVA) hernia mesh after the implantation. **Material/Methods:** For the animal experiments Wistar rats (n=27, 200-250-g) were used. After the paramedian incision of the skin, abdominal wall defect (φ=2cm) was perform on the right side of the abdomen. The defect was covered on-lay with the PVA mesh (D=2,5cm), each mesh was fixed by simple running suture using adhesive polypropylene thread (4/0). The animals were terminated and analyzed every day in the first week, then on the 14 th. ,28 th. and 90 th. postoperative days. After the midline opening, adhesion formations were documented and were measured by Diamond scale (0, 0%; 1, 1-25%; 2, 26-50%; and 3, > 50% adhesions of implanted surface). Macroscopic and histological responses were performed from the samples which were fixed in formalin. **Results:** According to the histological observation we found that all of the scaffolds were integrated to the host tissue and kept their structures until the end of the long experiments. Significantly more adhesion formations were attached to the suture line (n=19) than we could find on the surface of the mesh (n=5). **Conclusion:** In this review we demonstrated that the PVA nanofiber mesh is biocompatible and suitable for further examination with a new suture methodology.

OP-165

Properties of a novel, fully synthetic, polyurethane based, two-component adhesive after topical administration in pigs

K. Pawlowsky[1], P. Kadaba Srinivasan[1], B. Kögel[1], R. Tolba[1]

1. Institute for Laboratory Animal Science and Experimental Surgery, University Hospital, RWTH Aachen University, Pauwelsstr 30, 52074 Aachen, Germany.

Background: Tissue adhesives offer a good alternative to surgical suture procedures because they provide a convenient, less traumatic and less painful wound closure. Also, tissue adhesives offer the advantage of improved wound healing. The aim of the study was to test, the efficacy and safety of a fully synthetic, polyurethane based adhesive (MAR-1) in a clinical relevant large animal model. **Materialsand Methods:** 6 anaesthetized pigs underwent standardized dorsal skin incisions. Every pig received a total of 12 incisions, 6 on each side of the back. The wounds on the left side were treated with MAR-1. Three of the wounds on the other side were treated with Dermabond and three wounds remained untreated. The wound healing process and the adhesive properties, over 28 days, were assessed. Additionally, histopathological examination was performed at the end of the study period. **Results:** Wound healing was rated as very good. The pigs showed no pain due to palpation, no swelling, and no redness of the wound area. At day 25, 43% for MAR-1 and 61% for Dermabond glue was still present at the wound site. The histopathology showed no significant differences in comparison of the two glues. The cosmetic result of the MAR-1 glued wounds was superior in contrast to Dermabond. **Conclusion:** Assuming that the complete wound healing in humans and pigs takes about 10 days, a mechanical adhesion of wound edges is required only in the first 7 days. The completion of the granulation phase of the skin takes about 6 days. Therefore, MAR-1 is safe and highly suitable.

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Haptic force augmentation on a 3D printed surgical training phantom

Y. Kurita[1], Y. Otsuru[1], M. Kiyooka[1], T. Tsuji[1], K. Nagata[2], K. Kawaguchi[3], M. Hattori[4], H. Egi[4], H. Ohdan[4]

[1]Institute of Engineering, Hiroshima University, 1-4-1 Kagamiyama, Higashi-Hiroshima, Hiroshima, 739-8527 Japan;
[2]National Institute of Advanced Industrial Science and Technology, Japan;
[3]Chuden Hospital, Japan;
[4]Institute of Biomedical Sciences, Hiroshima University, Japan.

Background: Haptic force augmentation method is proposed as a method to generate realistic reaction force on a 3D printed surgical training phantom for a minimally invasive surgery by using a haptic device. **Methods:** This study focuses on the surface properties of the surgical phantom fabricated by a 3D printer with the aim of adding the force feedback generated by a haptic device to the reaction force of the surgical phantom. To reduce the calculation cost, this study involved the use of two steps for force feedback calculation: (1) intrusion distance calculation and (2) physical deformation calculation. The developed system comprised a haptic display device, a surgical phantom, and a monitor. To evaluate the performance, the rendered force by the proposed method was measured by a force sensor, and the performance was investigated. **Results:** By generating force from the haptic device, a larger reaction force was measured than with the original phantom. The difference between normal and abnormal tissue was produced by changing the control parameters of the haptic device. When the tip reaches the area of the abnormal tissue, a larger force was rendered. To display a smooth traction force during palpation, liquid gel is coated on the surface of the surgical phantom. The stick-slip phenomenon was successfully removed by liquid-coating. **Conclusion:** The rendering performance was significantly affected by the surface properties of the surgical phantom. Changing the surface properties of the base object is an effective way of enhancing haptic sensation.

OP-167

The PELVINOV project: development of a new polypropylene mesh based on biomechanical experiments: study design and preliminary results

Doucède G. [1], Morch A. [2], Pouseele B. [1], Brieu M. [2], Lecomte-Grosbras P. [2], Cosson M. [1], Rubod C[1].

[1] Department of Obstetrics and Gynecology, Hôpital Jeanne de Flandre - CHRU Lille, France
[2] LML, CNRS UMR 8107, École Centrale de Lille, University Nord de France, Lille, France

Background: The mesh currently used in prolapse surgery derived from visceral surgery (hernia). It has been shown that the biomechanical characteristics of the fascia were different from those of the vagina. Our goal is to develop a protocol for the study PELVINOV project and to create a new mesh for the transvaginal repair of anterior vaginal prolapse adapted to the biomechanical characteristics to the vagina. **Methods:** We implanted a standard polypropylene mesh on the abdomens wall of rats. Mechanical tests were performed on the explants for evaluate the mechanical properties of the implanted mesh after 4,6, 8 and 12 weeks of implantation. **Results:** 26/30 rats were implanted and 4 rats were used as controls. Mesh exposition was seen in 4 (15. 4%) cases. An important folding of the mesh was diagnosed in 7 (26,9%) cases. Clinically, there was no difference in speed of scar tissue formation between the group with fascia defect and the rats we had no defect. There was an important retraction of the mesh. Healing was clinically sufficient after two months, however, the biomechanical characteristics were found to be more stable on the explants of 12 weeks. **Conclusion:** The rat model seems to be a good model for biomechanical study of the in vivo behavior meshes. A weight at implantation of minimally 450g seems mandatory to avoid folding of the mesh at the time of implantation. Differently knitted meshes will be implanted in the following series of the rat implantations.

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OP-168

Autologous Platelet-Rich Plasma in Resistant Corneal Ulcers

A. Ilhan[1], U. Yolcu[2], U. Erdem[3]

[1]Erzurum Military Hospital, Ophthalmology Department. , Erzurum, Turkey
[2]Sarikamis Military Hospital, Ophthalmology Department, Kars, Turkey
[3]Gulhane Military Medical School, Ophthalmology Department. , Ankara, Turkey

Background and Aims: As showing no severe adverse effect, making better improvements in tears film stability and providing more significant increase in ocular surface vital dye and pain scores than the artificial tears; autologous serum therapy has been used in specific patients suffering from ocular surface diseases for many years. But cases of resistant corneal ulcers are still challenging It has been proved that platelet rich serum therapy backs up the tissue regeneration due to its contents like growth factors, vasoactive substances and cytokines. Because of these effects, it has been used in many diseases. But it hasn't been used widely in routine ophthalmology practice. We aim to assess the results and the application procedures of the platelet rich plasma therapy which is a novel option in resistant corneal ulcers. **Patient and Methods:** We performed limited debridement after harvesting adequate samples from the margin of the lesions for culture and HSV PCR in nine eyes of the eight corneal ulcer sterile patients who had a history of resistant corneal ulcer one or more year inconclusive trials of various therapies. After the debridement all eyes administered autologous platelet rich plasma (8 drops/day). **Results:** Corneal ulcers of all cases were healed in about 4,3(±2,3) weeks. Visual acuity improvement was 4,1(±2,4) lines. In one case, epithelial defect relapsed after six months but, healed in 3 weeks again using the same protocol. we also applied wet PTK in 4 eyes after the treatment period. **Conclusion:** We found that autologous platelet rich plasma therapy is effective in resistant corneal ulcers as an adjunctive therapy. Further investigations should be performed in wider and different case series to prove its benefits in resistant corneal ulcers and also in different clinical applications.

OP-169

A new customized surgical treatment method of keratoconus and corneal ectasia with customized corneal collogen crosslinking and customized mini excimer laser treatment

S. Altun[1], A. Ilhan[2], U. Yolcu[3], U. Erdem[1]

[1]Gulhane Military Medical School, Ophthalmology Department. , Ankara, Turkey
[2]Erzurum Military Hospital, Ophthalmology Department. , Erzurum, Turkey
[3]Sarikamis Military Hospital, Ophthalmology Department, Kars, Turkey

Background and Aim: To explain a new customized surgical treatment of keratoconus (KC) or ectasia with customized-corneal-collagen-cross-linking (CCXL) and customized-mini excimer-laser-treatment (CMELT), and to review the first 6 months outcomes. We developed an analytic surgical method to get more efficient results for the treatment of ectatic disorders with limited corneal ablation. Since the visual outcomes of regular CXL treatment weren't satisfactory, topography-guided treatments were developed. However; topographic methods was not flexible and mostly limited to certain amount of ablation. **Patient and Method:** Outcomes of 48 eyes (45 KC and 3 ectasia) including wound healing, maximum keratometry (KMax, DK), uncorrected visual acuity (UCVA), best-corrected visual acuity (BCVA), topography indices, higher-order aberrations over 6 months were analyzed. In addition, other customizable parameters including laser treatment parameters were discussed. **Results:** At 6 months, an average of 4. 3 diopter (D) flattening in KMax was found with 32 µ avarege planned ablation. Mean BCVA improved more than 3 lines. Improvements are even seen at 1 months and stable between 3 and 6 months. The steeper KMax more likely to gain more KMax flattening at 6 months after L, and the eyes with preoperative of 20/40 or worse BCVA were more likely to gain more Snellen lines at 6 year after CCXL, and CMELT if the corneal thickness is over 400µ. No serious intraoperative or postoperative complications encountered. **Conclusions:** Customized treatment of keratoconus with CCXL and CMELT seems to be safe and effective in decreasing progression of KC, with improvements in optical measures and visual acuity.

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OP-170

The usefulness of 3-dimensional head-mounted display system in endoscopic surgery

M. Hattori, H. Egi, H. Sawada, S. Mukai, T. Suzuki, H. Ohdan

Institute of Biomedicaland Health Sciences, Hiroshima University, Japan

Background and Aims: Endoscopic surgery is different from conventional open surgery, with disadvantages such as with regard to depth perception, lack in depth perception due to 2-dimensional video imaging. In order to solve this disadvantage, attempts have been made to improve depth perception using 3-dimensional endoscope systems. However, objective evaluation on the usefulness of 3-dimensional video image systems is insufficient. The aim of this study was to evaluate the usefulness of 3-dimensional HMD systems using the HUESAD (the Hiroshima University Endoscopic Surgical Assessment Device). **Material and Methods:** The participants were 28 student volunteers enrolled in Hiroshima University (17 men: 11 women, age: median: 22. 5, range: 20-25), with no one having experienced endoscopic surgery training. Two-dimensional video imaging and 3-dimensional video imaging (Sony Inc, HMZ-T2) was carried out using the endoscopic surgery technology evaluating apparatus, HUESAD. **Results:** Regarding smoothness, no difference was observed between 2-dimensional video imaging and 3-dimensional video imaging (p = 0. 867). Deviation (space perception ability) and approaching time (accuracy) were significantly lower with 3-dimensional video imaging compared to 2-dimensional video imaging. **Conclusions:** The results from endoscopic surgery techniques significantly improved in 3-dimensional video imaging compared to 2-dimensional video imaging.

OP-171

Levator Ani Muscle Innervation and Vaginal Delivery

K. Nyangoh Timoh[1,2,3], T. Bessede[1,2], Martinovic Jelena[4], D. Diallo[1,2], C. Lebacle[1,2], M. Zaitouna[1,2], G. Benoit[1,2], D. Moszkowicz[1,2]

[1] INSERM-UMR 1195 Hôpital de Bicêtre, Bâtiment Grégory Pincus, 80 rue du Général Leclerc, 94276 Le Kremlin-Bicêtre Cedex
[2] Laboratoire de chirurgie expérimentale, Faculté de médecine de l'Université Paris Sud-11, 63 rue Gabriel Péri, 94270, Le Kremlin Bicêtre, France
[3] EA4465 URDIA, University Paris Descartes, 45 rue des Saints Pères ; 75270 Paris cedex 06.
[4]Department of Fetal Pathology, AP-HP, Antoine Béclère Hospital, Univ Paris-Sud Clamart, F-92140, France.

Background and aims: Vaginal delivery is the major risk factor for pelvic floor disorders through levator ani muscle trauma or nerve damage. Few data are available about detailed levator ani muscle innervation. **Objective:** Our aim was to provide an immunohistochemistry based 3D-study of the female levator ani bundles innervation using computer assisted anatomic dissection technique and to confront it with fresh adult macroscopic dissections, to describe pelvic nerve position through levator ani bundles, to realize a neurotransmettor map implied in somatic, autonomic and sexual functions. **Material and Methods:** Serial transverse sections of the pelvic portion of human female foetus were studied histologically and immunohistochemically, digitized and 3D- reconstructed. Female adult cadavers were macroscopically dissected to individualize levator ani innervation. Histo-topographical and immunohistochemical data were obtained as well. **Results:** The origin, pathways, distribution and function of the levator ani nerve, pudendal nerve and autonomic nervous system participating to the levator ani muscle neural supply were described. **Conclusion:** These data allowed identifying nerve fibbers at greater risk during labour, better understanding pelvic floor clinical consequences, finding new avenues of research for the pelvic floor disorders treatment and prevention and better informing patients.

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Serious game - Evaluation of the needs and its possible role in the laparoscopic teaching

K. Juhos[1], J. Sándor[1], F. M. Sánchez-Margallo[2], L. F. Sánchez-Peralta[2], J. B. Pagador[2], W. Korb[3], E. Fenyöházi[3], N. Skarmeas[4], I. Oropesa[5,6], E. J. Gómez [5,6], T. Calin[7], G. Wéber[1]

[1]Semmelweis University, Department of Surgical Research and Techniques, H-1089 Nagyvárad square 4. Budapest, Hungary
[2]Centro de Cirugía de Mínima Invasión Jesús Usón, Carretera N-521, km. 41,8. 10071 Cáceres, Spain
[3]Leipzig University of Applied Sciences, Innovative Surgical Training Technologies (ISTT), Eilenburger Str. 13, 04317 Leipzig, Germany
[4]Avaca Technologies, 31. Athinas, Athens, 10554, Greece
[5]Universidad Politécnica de Madrid, Grupo de Bioingeniería y Telemedicina, Av. Complutense Nº 30 Ciudad Universitaria 28040 Madrid, Spain
[6]Biomedical Research Networking center in Bioengineering, Biomaterials and Nanomedicine, Madrid, Spain
[7]MEDIS Foundation, Campina, Cod Postal: 105600, Romania,

Background: Laparoscopy rapidly gained popularity in the surgical practice, but as a matter of fact, the educational possibilities of laparoscopy are still not effective. Before developing the Kheiron Training System – a serious game for the development of laparoscopic psychomotor skills supported by the Lifelong Learning Programme of the European Commission – it is important to determine the requirements of a well-designed serious game. **Methods:** Altogether 35 medical students and 23 residents(n=58) from 4 countries (Spain, Germany, Romania, Hungary) were recruited between April and May 2014. Questionnaires were used to obtain information about their gaming preferences and accordingly, the characteristics that a serious game for laparoscopy should incorporate. It was followed by co-creation workshops where the participants could discuss about the users' needs. **Results:** A total of 69% reported that they played video games regularly, only 6 out of 58 played video games every day, most of them(52/58) played once a week or less. The most popular games were the strategy-(32%), fighting-(18%) and simulation(14%) games. All of the respondents liked multiplayer,49 of them prefered positive scoring system with unlocking new levels or challenges and 54 of 58 participants liked receiving awards or acquiring privileges during the game. Nearly the half of the responders (24/58, 42%) liked having a limited number of lives, interestingly the residents prefered it(12/23). **Conclusion:** According to the study results, it is determined that users like playing and the serious game can be an interesting opportunity in the future surgical training to improve the basic skills. (543202-LLP-1-2013-1-ES-KA3-KA3MP).

OP-173

Educationand Research in Disaster Medicine– Focusing on NBC or BCRNE Disaster

Y. Haraguchi, H. Nishi, Y. Tomoyasu, T. Tsubata, M. Hoshino, E. Hoshino, M. Sakai, T. Ishihara

Disaster Medicine Compendium Team, Japan and Keiyo Hospital, Tokyo, Japan

Background: Mega-disasters, or catastrophes, are a serious global threat. Based on our experience, we discuss the future direction of education and research in disaster medicine/nursing – mainly focusing on NBC (Nuclear, Biological and Chemical Hazards) or BCRNE (Biological, Chemical, Radiological, Nuclear and Explosive Hazards), from the viewpoint of general surgery. **Materialsand Methods:** Maga-disasters, which we actually operated or inspected are searched; i. e. , 911, Indian Ocean Tsunami, Hurricane Katrina, Japan Tsunami with Nuclear Plant Eruptions, Biohazard(s), Tokyo Sarin Attack, the Chernobyl, etc. Importance/problems of medical education/literacy/DMAT Japan were also studied. **Results :** Most surgeons, including trauma surgeons were apparently laypersons before education and after education, reported they learned many items related to disasters, including disaster drill/courses. The drills are especially important, and multiple drills with different types should be combined. Few teams had experience with special themes; i. e. , helicopter transportation, nuclear crisis, decontamination, etc. There are several severest problems for education to be pointed out. There is a great difference in the level among different facilities. To educate, many different specialties are need at the same time. **Conclusions:** It is also important to popularize or enlighten among citizens about the significance of disaster medicine/nursing as well as medical team staff.

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OP-174

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OP-175

Assessing teaching practices and developing the High Intensity Training for Surgeons (HITS) programme for foundation doctors at a teaching hospital

C. Murkin, J. Reynolds-Wright, F. Lewis,Mr G. Khera

Royal Sussex County Hospital, Brighton and Sussex University Hospitals NHS Trust.

Background: To evaluate the quantity and quality of teaching received by junior doctors within surgical department at the Royal Sussex County Hospital (RSCH), in line with GMC recommendations. **Method:** A questionnaire was sent to all Foundation Doctors in General Surgical, Urology and Vascular firms with a 100% response rate (total 21). A focus group with six foundation doctors was held to gather qualitative information regarding desired teaching topics and factors for creating an engaging teaching programme. **Results:** The questionnaire results demonstrate a lack of formal teaching in all departments except vascular. On a scale of 1 (very poor) to 6 (excellent), all teaching given (formal and bedside) is currently rated poorly for both quantity (mean 1. 6) and quality (mean 2). On a scale of 1 (very unconfident) to 6 (very confident), all foundation doctors reported feeling unconfident in managing the acutely unwell surgical patient (mean 2. 52). Furthermore, all individuals reported that they would be in favour of a formal teaching programme and would find this beneficial for their development. From the focus group, themes were selected for formal teaching, including medical issues, post-operative complications and an explanation of key operations. **Conclusion:** The questionnaire highlighted a distinct lack and need for surgical teaching for foundation year trainees at RSCH. In response, we have developed the HITS course, a 15-week programme designed to repeat for each rotation. We have secured financial backing from the Digestive Diseases department and have foundation doctors, nurses and medical students attending the sessions with extremely positive feedback.

OP-176

Subjective assessment of the laparoscopic training elements in urology

S. Enciso, I. Díaz-Güemes Martín-Portugués, F. J. Pérez-Duarte, J. Usón, F. M. Sánchez-Margallo

Minimally Invasive Surgery Centre Jesús Usón, Cáceres, Spain

Background: Our objective was to obtain an evaluation of the didactic elements included in the laparoscopic training courses for urologists designed by our centre. **Material and Methods:** Thirteen novice urologists enrolled this study. They attended an intensive course including a short theoretical session (1 hour) and a 20-hour hands-on session. This part consisted of progressive basic skills training on a physical simulator (7 hours) and animal training (13 hours), where multiple total nephrectomies were practised by each surgeon. After the course, participants evaluated the training program and the usefulness of its components by completing a questionnaire scored on a 5-point Likert scale. **Results:** Course length was considered as very adequate, with an average score of 4. 38 ± 0. 77. Usefulness of hands-on simulator for skills acquisition was rated on 4. 62 ± 0. 63, whilst usefulness of animal training obtained a higher score (4. 92 ± 0. 28) by all participants. Similarly, the animal model obtained better scores than the physical simulator for learning new techniques, as well as for skills maintenance. Regarding skills assessment, expert evaluation was considered more useful than virtual reality simulators assessment (4. 31 ± 0. 85 vs. 3. 23 ± 0. 93). **Conclusion:**

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Urologists' training preferences includes the animal model, as the more useful component for skills acquisition and maintenance in comparison with a simulator, and to be assessed by an expert surgeon, considering it more useful than the evaluation of a virtual reality simulator.

OP-177

Ergonomic training program for laparoscopic surgery: subjective and objective validation

F. J. Pérez-Duarte[1], J. Usón[2], S. Enciso[1], A. Matos-Azevedo[1], I. Díaz-Güemes[1], F. M. Sánchez-Margallo[3]

[1] Laparoscopy Unit. Jesús Usón Minimally Invasive Surgery Centre. Cáceres (Spain)
[2] Director of the Foundation. Jesús Usón Minimally Invasive Surgery Centre. Cáceres (Spain
[3] Scientific Direction. Jesús Usón Minimally Invasive Surgery Centre. Cáceres (Spain)

Background: We expose the subjective evaluation of course' attendants to an ergonomic training program for laparoscopic surgery. We also aim to demonstrate the objective validity of the model, ascertaining the decrease in muscle tension experienced by operating surgeons. **Methods:** All trials were carried out during different three-day laparoscopic activities in which our ergonomic training program was imparted. The study sample was composed by 50 laparoscopic surgeons attending the courses. At the beginning and at the end of these training activities, each subject carried out suturing and dissection tasks, during which muscular activity was registered through surface electromyography. Subjects were divided in 5 study groups according to previous reported experience and assessment day. At the end of the training activities, an anonymous questionnaire was handed out to obtain a subjective assessment of the ergonomic training model. **Results:** The level of muscular activity decreased significantly along the training activity. The EMG obtained values were the highest for the novice's group during the first day of the course. The opposite was noted for the experts', which exhibited the lowest muscle activity. Attendants' subjective global assessment showed a very positive evaluation of the ergonomic training program, with obtained scores of higher than 4 over 5. **Conclusions:** After the completion of a training course in laparoscopy with imparted specific ergonomic guidelines, we observed a significant decrease in muscular activity of attendants. Subjective assessment of the ergonomic training model was highly positive, with an increased satisfaction degree related to surgeons' previous experience level.

OP-178

Course of Sepsis in Rats Which Have Thyroid Dysfunction

M. Erikoğlu, H. İ. Taşcı*,H. Toy**, A. Karaibrahim****
*Deparment of General Surgery, Necmettin Erbakan University Graduate School of Medicine, Konya, Turkey
** Deparment of Pathology, Necmettin Erbakan University Graduate School of Medicine, Konya, Turkey
*** Deparment of Biostatistics, Necmettin Erbakan University Graduate School of Medicine, Konya, Turkey

Background: Our aim in this study was to investigate the effects of sepsis on thyroid hormones and the effects of prophylactic thyroid hormone replacement on sepsis. **Material and Methods:** 4 groups, each having 7 rats, were formed within the framework of the study in the following way: Group 1: Sham, Group 2: Control–Sepsis, Group 3: Hyperthyroiditis-Sepsis, Group 4: Hypothyroiditis-Sepsis. Group 1 only received laparotomy. Only sepsis was induced in Group 2. Sepsis was induced after hyperthyroiditis was initiated in Group 3, while it was induced following hypothyroiditis was initiated in Group 4. Tissue and blood samples were drawn following relaparotomy after 24 hours. **Results:** As a result of the evaluation, we saw both fT3 and fT4 were found to be important parameters in assessing the severity of disease in sepsis. The activity of TSH was not pronounced as the fT3and fT4. Liver, lung and kidney function impairment which seen in sepsis and other signs of sepsis were milder in group of hyperthyroidism than both groups of hypothyroidism and control sepsis. The results of the hypothyroid group was worse than both hyperthyroidism and control group. **Conclusion:** It was seen that thyroid hormones proved to be an efficient parameter in the diagnosis and evaluation of the progression of sepsis. The results of this study suggested that in patients prone to sepsis "hypothyroiditis should immediately be treated when such a condition exists, while prophylactic thyroid hormone replacement in patients with hypothyroiditis and euthyroiditis" could be the appropriate approach.

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OP-179
Correlation between hyperglycemia, inflammatory response and advanced glycation end-products under sepsis

S. Yoneyama[1], H. Terashima[2], R. Yamaguchi[2], S. Tadano[2], N. Ohkohchi[2]

[1]Department ofSurgery, National Hospital Organization Mito Medical Center, Ibaraki, Japan
[2]Department of Surgery, University of Tsukuba, Tsukuba, Japan

Background: Previously, we demonstrated deleterious effect of acute hyperglycemia on systemic inflammatory response, and inhibitory effect of insulin therapy under septic condition. Hyperglycemia during septic condition may enhance advanced glycation end-products (AGEs) formation to amplify systematic inflammatory response via receptor for AGEs (RAGE). **Methods:** SD rats underwent cecal ligation and puncture method or a sham operation. Pre-established continuous intravenous glucose infusion was initiated immediately after surgery. Rats with sepsis were divided into four groups on the basis of the target blood glucose: HG (> 300 mg/dL), MG (200 to 300 mg/dL), and NG (100 to 150 mg/dL) groups. HI group received the same glucose infusion as HG group with insulin infusion of 6 U/kg/h, to maintain blood glucose for 200 to 300 mg/dL. Sham group underwent a sham operation and received the same glucose infusion as HG. All rats were sacrificed 9 hours after surgery to measure plasma interleukin-6 (IL-6), AGEs, plasma and hepatic RAGE levels. **Results:** Nine hours after CLP, plasma IL-6 levels of HG were three times higher than the other septic groups. There was no significant difference between MG, NG and HI. Plasma AGEs levels were significantly higher in HG than HI. Among septic groups, plasma AGEs levels showed moderate correlation with blood glucose levels (r = 0. 57). There was no significant difference in plasma and hepatic RAGE levels. **Conclusion:** We demonstrated the deleterious effect of acute severe hyperglycemia on inflammatory response. The underlying mechanism might be associated with AGEs.

OP-180
Critical on MELD-score exception rules for hepatocellular carcinoma patients

A. Soares Lima, N. N. Godinho Lopes, L. R. Navarro Amado, L. Costa Faria

Division of Liver Transplantation, University Hospital, UFMG, Brazil.
Faculty of Medicine, UFMG, Brazil

Background: MELD allocates organs aiming to reduce mortality on the transplant waiting list. In such system, however, patients with cancer and some other diseases are assigned a special score. **Objetives**: The goal of this study was to assess the fairness of organ distribution by the MELD system among different groups of diseases. **Patients and Methods**: Retrospective study with patients over 12 years of age, between January 2009 and September 2013. Demographics, indication for transplantation and MELD scores were compared with the incidence of transplant or death, patient origin and disease groups. Differences were significant when p <0. 05. **Results:** 260 selected patients were transplanted or died before transplantation as the ultimate event. Median age was 54. 9 years (12. 1 -73. 9 years); 70. 4% were men; 63. 3% had chronic liver cell diseases, especially alcoholic (33. 1%) and C-virus cirrhosis (24. 2%). Initial MELD sodium median scores of patients who died before the transplant were higher than their transplanted counterparts (21 vs. 16; p=0. 001); although they had waited less time until enrollment (123 days vs. 202 days). Patients under special score represented 26. 5% of the total sample and 30. 1% of transplanted patients. They had lower pre-transplant mortality than the other patients (p <0. 001), about 11. 9 times less risk of dying. There was no difference in access to transplant as far as age, gender or recipient origin were concerned. **Conclusion:** The score assigned to those recipients in special situations should be changed as to refrain from harming patients concerning access to transplant according to the calculated MELD score.

OP-181
miR-99a influence on mTOR signaling regulation in colorectal cancer cell lines

J. Rice[1], S. Gardner[1], M. McClain[1], M. R. Eichenberger[1], S. Galandiuk[1]

[1]Hiram C. Polk Jr. MD Department of Surgery, University of Louisville School of Medicine, Price Institute of Surgical Research and the Section of Colorectal Surgery, Louisville, KY

Background: The mammalian target of rapamycin (mTOR) pathway is implicated in the pathogenesis of multiple cancers and has been studied for possible therapeutic intervention. Colorectal cancer (CRC) has been shown to be influenced by this pathway. Much is known about this pathway, but regulatory elements have yet to be elucidated. miRNAs have been shown to influence some aspects of the mTOR pathway in other cancers, however their role in the mTOR pathway has yet to be fully explored. Recently the miR-99 family of miRNAs have been implicated in regulation of mTOR signaling in other diseases. **Methods:** We transfected Dukes ABCD CRC cell lines with miR-99a. Transfection was verified via real time(RT)- PCR. mTOR protein and substrates of complex 1 (mTORC1) and complex 2 (mTORC2) were analyzed by western blot. Regulatory-associated protein of mTOR (RAPTOR) and rapamycin-

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insensitive companion of mTOR (RICTOR) define mTORC1 and mTORC2, respectively, which were probed for analysis. **Results:** All cell lines were successfully transfected. Western blot analysis of RICTOR protein after miR-99a mimic transfection in the HCT 116 (Dukes D) cell line showed a relative density of 0. 21, compared to the negative control 0. 54 and the antagomir expression of 0. 56. RAPTOR exhibited a relative density of 0. 19 in the mimic, 0. 48 in the negative control and 0. 76 for the antagomir. **Conclusion:** These data suggest that miR-99a has a regulatory effect upon the mTOR pathway in CRC. When miR-99a is upregulated it decreases the active moieties of mTORC1 and mTORC2, whereas downregulation of miR-99a results in increased active mTORC1 and mTORC2.

OP-182

Loss of PTEN is a predictive biomarker of trastuzumab resistance in HER2 overexpressed oesophago-gastric adenocarcinoma

Y. Deguchi[1], H. Okabe[1,2], N. Oshima[1], S. Hisamori[1], S. Tsunoda[1],Y. Sakai[1]

[1]Department of Gastrointestinal Surgery, Graduate School of Medicine, Kyoto University, Kyoto, Japan; [2]Department of Surgery, Otsu Municipal Hospital, Shiga, Japan

Background and Aims: Although ToGA (Trastuzumab for Gastric Cancer) trial showed significant effect of trastuzumab for human epidermal growth factor receptor (HER) 2 overexpressed advanced oesophago-gastric adenocarcinoma, the response rate was less than 50%. This study aimed to identify a predictive biomarker of trastuzumab resistance. **Material and Methods:** HER2 expression and phosphatase and tensin homolog (PTEN) expression were analyzed using immunohistochemistry in the advanced oesophago-gastric cancer patients who were histologically diagnosed with adenocarcinoma and underwent surgical resection or endoscopic biopsy at Kyoto University hospital. The status of HER2 expression was checked by Western blotting, and the sensitivity for trastuzumab was evaluated by the proliferation assay in several oesophago-gastric cancer cell lines. Cell cycle was analyzed using flow-cytometry. PTEN was transiently knocked-down to investigate the relationship between PTEN loss and trastuzumab resistance. **Results:** PTEN loss was identified in 9 of 28 (32. 1%) HER2 overexpressed advanced gastric cancer patients, whereas 53 of 236 (22. 5%) HER2 negative group (p=0. 247). In trastuzumab sensitive oesophago-gastric cancer cell lines, cell proliferation was inhibited and cell cycle arrest was observed. Cell viability against trastuzumab was significantly restored by PTEN knock-down. Among the 25 patients who received trastuzumab-based chemotherapy, PTEN expression was lost in five patients who had only limited response by trastuzumab-based chemotherapy. **Conclusions:** PTEN loss is relatively frequent in HER2 overexpressed gastric cancer patients. PTEN loss might be a potential biomarker to select the HER2 overexpressed oesophago-gastric cancer patients who are less sensitive to the trastuzumab-based chemotherapy.

OP-183

Three newly established pancreato-biliary carcinoma cell lines

Y. Shimada[1], T. Okumura[2], T. Nagata[2], K. Matsui[2], S. Sawada[2], S. Sekine[2], M. Moriyama[2], K. Hirano[2], H. Arai[3], Y. Takei[1], K. Watanabe[1], K. Tsukada[2], K. Shimizu[1]

[1]Department of Nanobio Drug Discovery, Kyoto University, Kyoto Japan
[2]Department of Surgeryand Science, University of Toyama, Toyama, Japan
[3]Department of surgery, Keinan Hospital, Niigata, Japan

Background: In spite of recent advances in therapeutic agents, the prognoses of bile duct carcinoma and pancreatic cancer have remained unchanged. Thus, a new in vitro model is still needed for these aggressive tumors. We previously established the gallbladder carcinoma cell line TYGBK-1 (Anticancer Res 2012). **Objectives:** We herein described the establishment and characterization of three new human pancreato-biliary carcinoma cell lines. **Material/Patients and Methods:** After obtaining written informed consent, we obtained tumors from patients with gall bladder carcinoma, bile duct carcinoma, and pancreatic carcinoma. The tumors were minced with sharp scissors in the absence of enzymes and then cultured in Ham F12/DMDM supplemented with 5% of FCS. **Results:** Cells grew for several months after the primary inoculation. We named the bile duct carcinoma cell line as TYBDC-1, pancreatic carcinoma cell line as TYPK-1, and gall bladder carcinoma cell line as TYGBK-8. These cells could be transplanted into nude mice. TYBDC-1 and TYPK-1 cells did not have the K-Ras or p53 mutation, but expressed dCK, Hur, and hENT, and were sensitive to treatments with gemcitabine. On the other hand, TYGBK-8 cells had the p53 mutation and were not sensitive to gemcitabine. **Conclusions:** We herein established TYBDC-1, TYPK-1, and TYGBK-8 cells, which may be useful for understanding the characteristics of pancreato-biliary carcinoma in more detail.

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OP-184

What is the mortality and morbidity cost of total arch replacement in acute type A dissection? A systematic review

S. Sum Poon[1], T. Theologou[1], D. Harrington[1], M. Field[1], M. Kuduvalli[1], A. Oo[1]

Department of Cardiothoracic surgery, Liverpool Heart and Chest Hospital[1]

Background: A frequently asked question in aortic arch surgery has been: should the aortic arch be replaced completely in acute type A dissection? The present systematic review aimed to assess the mortality cost of total arch replacement in acute type A dissection. **Method**: After applying inclusion and exclusion criteria, 45 relevant articles from 38 centres with a total number of 4978 patients were included for appraisal and data extraction. The outcomes between the total arch group (TA) and hemi arch/open distal anastomosis (HA) were compared. **Results**: The current evidence is limited to observational studies apart from 1 prospective study. The in-hospital mortality and overall mortality in the total arch replacement group ranged from 3. 7-33. 3% and 4. 2-36% vs 3. 3-21. 6% and 4. 7-20% in the hemi arch group. The total circulatory bypass time is significantly longer in the total arch group, with a range of 160-315mins vs 71. 8-233. 4mins. Neurological accidents range from 5-14. 3% in group TA compared to 4. 4-10. 8% in group HA. In 9 articles which compared the two types of replacement directly, the mean in-hospital and overall mortality were 14. 2% and 24. 0% in group TA and 8. 5% and 18. 6% in group HA. **Conclusion**: These results suggest that extended repair may be performed based on circumstances but at a cost of higher mortality. Long term follow-up and prospective studies are needed to justify this approach.

OP-185

Peer-assisted teaching for enhancing undergraduate basic surgical skills

R. Preece, E. C. Dickinson, M. A. Sherif, Y. Ibrahim, A S. Ninan, L. Aildasani, S. Ahmed, P. Smith

Cardiff University School of Medicine, UHW Main Building, Heath Park, Cardiff CF14 4XN

Background and Aims: The provision of basic surgical skills teaching to medical students is often jeopardized by the significant time commitments required from busy surgical faculty. Therefore, we aim to determine how a peer-assisted suturing workshop might improve basic surgical skills among medical studentsand inspire them towards a surgical career. **Material and Methods:** Senior medical student tutors delivered two suturing workshops to 2nd and 3rd year students. Suturing performance was assessed before and after teaching in a 10-minute suturing exercise (variables measured included; number of sutures completed, suture tension and inter-suture distance). Post-teaching, students completed a questionnaire assessing the impact of the workshop on their suturing technique and desire to pursue a surgical career. **Results:** 35 students attended. 81% felt they had received insufficient basic surgical skills training at medical school. All rated the teaching quality to be good or very good. Additionally, 100% believed the workshop helped to improve their basic surgical technique and confidence. There was a significant increase in the mean number of sutures tied following teaching (p<0. 001). Furthermore, standard deviation for the mean inter-suture distance approximately halved from ±4. 7 mm pre-teaching to ±2. 6 mm post-teaching. 89% reported that the peer-taught workshop increased their interest in undertaking a surgical career. **Conclusions**: Peer-assisted learning suturing workshops are an effective method to increase medical students' competence with surgical skills and inspire them towards a career in surgery. Furthermore, its student-led nature means it is a cheap and sustainable initiative to ensure medical student exposure to surgical skills.

OP-186

The role of anti-stromal polypharmacy in increasing survival after pancreaticoduodenectomy for pancreatic ductal adenocarcinoma

S. Tingle, J. Moir, S. White

Hepato Pancreato Biliary Surgery, Freeman Hospital Newcastle, United Kingdom

Background: Stromal interactions play a large part in the dismal prognosis associated with pancreatic cancer. Recent studies have examined the potential use of common pharmaceuticals in targeting stromal interactions and improving prognosis. **Methods:**Data was collected retrospectively for 164 patients who underwent a pancreaticoduodenectomy for ductal adenocarcinoma. Survival analysis was performed on patients receiving the following medications; ACE inhibitors/Angiotensin II Receptor Blockers, Calcium Channel Blockers, aspirin, and statins. Medications showing a significant survival benefit were investigated in combination with other medications to evaluate synergistic effects. **Results**:No survival benefit was observed with respect to ACEI/ARB (n=41), aspirin or statins (n=39). However, the entire CCB group (n=26) showed a significant survival benefit on multivariate cox regression; hazard ratio of 0. 475 (CI=0. 250-0. 902, P=0. 023). Further analysis revealed that this was influenced by a group of patients who were taking aspirin in combination with CCB. Median survival was significantly higher in the CCB+Aspirin group (n=15) compared with the group taking neither drug (n=98); 1414 vs 601 days (P=0. 029, log-rank

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test). Multivariate cox regression revealed neither aspirin nor CCB had a statistically significant impact on survival when given alone, however in combination the survival benefit was significant; HR 0. 332 (CI=0. 126-0. 870, P=0. 025). **Conclusion:**Aspirin and CCB given in combination appears to increase survival in patients with PDAC following pancreaticoduodenectomy, highlighting the potential clinical use of combination therapy to target stromal interactions in pancreatic cancer. This represents an exciting new range of potential therapeutics, especially given the cheap, accessible and safe nature of these drugs.

OP-187

Interactive anatomy dissection session using two-dimensional virtual dissection software

M. S. Thet[1], B. Karahacıoğlu[1], M. Bahçelioğlu[2]

[1]English School of Medicine, Faculty of Medicine, Gazi University, Ankara, Turkey.
[2]Department of Anatomy, Faculty of Medicine, Gazi University, Ankara, Turkey.

Background and Aims: Traditional usage of cadavers in medical education has many ethical concerns, and limitations. While commercial anatomy models have been gradually replacing cadavers, as an alternative, we aim to investigate the effectiveness of using virtual dissection software in the medical education. **Material and Methods:** A. D. A. M. Interactive Anatomy 3. 0 was used as two-dimensional virtual dissection software. A total of 106 second-year medical students were assigned into three groups, however, 15 (5 from Group A, and 10 from Group B) failed to attend the session. Group A (n=30) used only anatomy models, Group B (n=25) used both anatomy models and virtual dissection software, whereas Group C (n=36) used only software during the practical session (nose, larynx and surrounding structures). All participants took 12-question anatomy quiz at the end of the session. Post-session feedback questionnaire was also obtained. Performances of these groups in the anatomy quiz were compared using one-way analysis of variance (ANOVA). **Results:** ANOVA analysis showed there is no significant difference (P = 0. 085) between the groups: Group A (mean 5. 87±2. 49), Group B (mean 5. 28±2. 26), and Group C (mean 4. 58±2. 35). Out of 91, 88 participants answered feedback questionnaire. 20 (22. 72%) advised usage of better software, 8 (9. 09%) mentioned the time given was not enough, 4 (4. 55%) demanded more detailed introduction of the software, and 3 (3. 41%) remarked the session as too crowded. **Conclusion:** Usage of two-dimensional virtual anatomy dissection software, whether alone or together with anatomy models, is not superior to using anatomy models alone, and vice versa.

OP-188

Electronic safety checks promote safe nasogastric feeding tube placement

S. Mehmood, S. Weerakoon, A. Al-Amin, E. Jehangir

North Cumbria University Hospitals NHS Trust, Cumberland Infirmary, Carlisle, UK

Background: Nasogastric feeding provides a vital route in maintaining enteral nutrition in hospitalised patients. This audit aimed to evaluate the practice of feeding tubes placement safety checks in surgical patients. **Methods:** A retrospective review examined paper-based (ward) and electronic (ICU) feeding tubes safety checks over a five-month period. The recorded information was analysed for tube insertion details, primary check (aspirate pH), and secondary check of confirmation with chest X-ray (tube bisects carina, crosses diaphragm in midline, tip seen in stomach). **Results:** A comparative analysis of available dataset (n=9) from ward based patients was undertaken against group matched (n=9) ICU patients. Poor nutrition was the commonest indication for nasogastric feeding. Feeding tube size and mark at nose were documented in 22% and 88%, respectively, in ward compared with 100% in ICU group. Primary check was undertaken in 63% in ward compared with 100% in ICU group (p=0. 08) though with greater successful aspirate yield in former (80% versus 22%, p=0. 09). Where indicated, a significantly reduced secondary check completion rate was demonstrated in ward patients (50% versus 100%, p=0. 02). Of those, only half (50%) had three X-ray criteria recorded, compared with all in ICU group (p=0. 07). No complications were recorded in either group. **Conclusion:** Compliance to feeding tubes safety checks was less than desired in the ward and excellent in the ICU setting highlighting the need for change to electronic safety checks on the ward. Staff education programme in tandem with mandatory training of medical staff would ensure better compliance to the protocol.

OP-189

Major postpartum haemorrhage secondary to acute complete uterine inversion, a case report

S Shaman[1], P. Liao[1], C S Chean[1], S S Poon[1], A Soltan[2]

[1]Faculty of medicine, University of Liverpool,
[2]Liverpool Women's Hospital

Background: Obstetric haemorrhage is one of the leading causes of maternal death in developed and developing countries. Acute uterine inversion is a rare obstetric emergency, estimated to occur in 1 of 3500 to 5000 deliveries. **Patient/Method:** A 35-year-old lady (G2P2) was

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admitted for induction of labour at 41+3 weeks as per local protocol for the management of postdates pregnancies. She gave a history of previous postpartum haemorrhage (PPH) following her first pregnancy elsewhere. The plan was active management of third stage with routine precautions (e. g. IV access, blood sample for group and save etc.) to be taken in case recurrent PPH. In theatre, the uterine inversion was corrected manually with no difficulty immediately as the patient was anaesthetised. However, she continued to suffer major (atonic) PPH and the urine started to become blood stained raising concerns about DIC. **Result:** The switching off of volatile anaesthetics and insertion of Bakri Balloon was successful in controlling this patient's majorPPH. On day 2 post-operatively, she seemed to have recovered relatively quickly and the Bakri Balloon was removed. The uterus was well contracted with minimal lochia and the patient was discharged home on day 3 postnatal with a healthy baby. **Conclusion:** Acute uterine inversion is a rare but severe condition and all staff should be aware of PROMPT (Practical Obstetric Multi-Professional Training)and the management of PPH as described in the RCOG green-top guideline No. 52 as delay in treatment is associated with high mortality and morbidity.

OP-190

Prophylactic treatment of Atrial Fibrillation Post Coronary Artery Bypass Grafting. A Randomised Controlled Trial of Sotalol and Magnesium versus Placebo

C. Rees, Z. Sultani, T. Theologou, S. Poon, LM. Field, M. Kuduvalli, AY. Oo, BM. Fabri

Department of Cardiothoracic Surgery, Liverpool Heart and Chest Hospital, Liverpool, United Kingdom

Background: Atrial fibrillation is a well known complication following coronary surgery, carrying significant impact on patient morbidity and duration of hospital stay. **Objectives:** In this study, we investigated the efficacy of Sotalol and Magnesium used in combination for preventing post-operative atrial fibrillation, and compared its effect on reducing hospital morbidity and duration of hospital stay when compared to a placebo group. **Method**: 158 patients treated with CABG were randomised in a double blind randomiszed controlled trial into an intervention group (Group A) or placebo group (Group B). Group A recieved 4g Magnesium IV daily, together with Sotalol 80mg orally twice daily for 5 days and continued with a reducing scheme of the Sotalol to 50mg twice daily for the next 6 weeks. Group B received matching Sodium Chloride 0. 9% IV and placebo tablets given in the same dosing regime as the intervention group. All patients were continuously monitored in ITU, had daily ECG'S and monitoring of their potassium and magnesium levels during hospital stay. **Results:** Incidence of AF has been significantly reduced from 55. 76 % seen in the placebo group (group B), to 20. 83% seen in those treated with Sotalol and Magnesium sulphate p < 0. 001 (Group A). Length of hospital stay was reduced in Group A in comparison of Group B by one and a half days. Hospital morbidity was not significant between both groups. **Conclusion:** Combination of Sotalol and Magnesium in the early post-operative period is effective in reducing AF after coronary surgery in selected population of patients.

OP-191

Patients' perceptions of receiving a diagnosis of a haematological malignancy, following the SPIKES protocol

L. Dixon[1], D. Galvani[2]

[1]Liverpool Medical School;
[2]Department of Haematology, Wirral University Teaching Hospital NHS Foundation Trust

Background: Sharing devastating news with patients is often considered the most difficult task of doctors. This study aimed to explore patients' perceptions of receiving bad news including which features improve the experience and which areas need refining. **Methods:** A questionnaire was written based on the steps of the SPIKES model for breaking bad new. 20 patients receiving treatment for a haematological malignancy completed the questionnaire. **Results:** Overall, the results are promising as most patients praised their consultation. 'Poor' was more commonly rated by women and participants aged 45-64. The main differences between the 'excellent' and 'poor' consultations include the doctor's sensitivity and checking the patients' understanding. Only 35% of patients were asked their existing knowledge and 85% of consultations failed to discuss the impact of the diagnosis on daily life. **Conclusion:** This study agreed with the consensus of existing literature. The commended aspects include consultation set-up and information given. Areas patients felt needed improvement include doctors determining the patient's existing knowledge and exploring how the diagnosis will affect the patient's life. With a poorer prognosis, doctors should work on conveying appropriate hope. The study was limited by a small sample size and potential recall bias.

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OP-192

Simple Technique Using Methylene Blue To Avoid Twisting OfThe Radial Artery During Coronary Artery Bypass Grafting

Y. Narang [1], S S Poon[1], B. Patel[1], S. Naik[3], T. Theologou[2,3]

[1]University of Liverpool Medical School
[21]Department of Cardiac surgery Liverpool Heartand Chest Hospital Thomas Drive Liverpool UK
[3]Department of Cardiac Surgery, Trent Cardiac Centre, Nottingham University Hospital, Nottingham UK.

Background: The radial artery graft (RAG) has been used widely as a promising conduit in both on-pump and off-pump bypass surgery. Using the latter technique the RAG plays a significant role in the Y-graft anastomosis. To avoid twisting of the radial artery, use of methylene blue (MB) that can be applied at the posterior wall of the graft during harvesting has been reported. However, this technique has never been described in detail. **Objectives:** To report a technique, where the use of MB to the posterior wall of the radial artery during harvesting, can facilitate the anastomosis and potentially eliminate the risk of twisting of the radial graft during coronary artery bypass grafting (CABG). **Methods:** We report this technique, which has been used in more than 3000 patients by the same surgeons in detailed steps and we discuss the benefit of using it in CABG. We used the harmonic scalpel 5-mm curved shears routinely to harvest the radial artery with its pedicle and dissection with electro cautery to harvest the LIMA. **Results**: Postoperatively all patients received calcium antagonists for 3 months to avoid radial spasm. No patient had graft failure during follow-up, and no patient had early or late complications at the harvested non-dominant forearm. Doppler examination of the ulnar artery showed no postoperative problems of the blood supply to the hand. No neurological damage was reported. **Conclusions**: The use of the harmonic scalpel with the use MB can give an optimal harvesting result. With attention to these details, the surgeon eliminates unnecessary movements during positioning and grafting, with 100% security of the correct orientation of the conduit.

OP-193

Laparoscopic management of an accessory liver attached to the gallbladder: Case report and literature review

H. Shiwani, S. Nehemiah, M. H. Shiwani

Department of General Surgery, Barnsley General Hospital NHS Foundation Trust, Barnsley, UK

Background: Accessory and ectopic livers are typically found incidentally in laparoscopic and open abdominal procedures. Although usually asymptomatic, the risk of torsion, bleeding and bile leakage is present. We report a case of an accessory liver attached to the wall of the gallbladder alongside a literature review. **Methods:** A previous review conducted by (Griniatsos, Riaz et al. 2002) described 35 cases of accessory/ectopic liver attached to the gall-bladder. A literature search was therefore conducted on MEDLINE from January 2002 to February 2015 using the search terms: ectopic liver, heterotopic liver, accessory liver and gallbladder. The results were limited to articles that were written inEnglish. Only reports that fit within Collan's criteria and described tissue attached to the gallbladder were used. **Results:** 53 articles were found from which 12 new cases have been identified since the previous review (which identified 35 cases). Together with the case report described in this paper, a total of 48 cases in the literature have thus far identified an accessoryor ectopic liver arising on the gall-bladder. **Discussion:** We recommend the use of Collan's criteria to clearly define a case of ectopic or accessory liver tissue as the terms have been used interchangeably. The different classifications have implications in the risks associated with the tissue and for its management. In this case of an accessory liver attached to the gallbladder, we recommend surgical ligation, dividing the bridging pedicle and removing the tissue en bloc with the gallbladder to prevent unnecessary bleeding or bile leakage.

OP-194

Review of the modern management of liver trauma

C. Evans[1], Mr N. Misra[2]

[1]University of Liverpool Medical School, [2]Aintree University Hospital Department of General Surgery

Background: Trauma is quickly becoming one of the leading causes of mortality worldwide and has recently been cited as accounting for "16% of global burden". The World Health Organisation predicts that in the next two decades "trauma will be the first or second leading cause of *years of productive life lost* for the entire world population". The liver is the second most frequently traumatically injured intra-

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abdominal organ and due to its complex and unique anatomy and blood supply, it has been cited as one of the most difficult organs to manage following traumatic injury. **Aim:** Devise an effective protocol for the management of liver trauma with regards to operative vs non-operative intervention. **Methods:** Online literature search using PubMed, OvidSP and Google Scholar. **Results:** Non-operative management provides extremely high success rates including up to 100% success in patients suffering grades I-III liver injury, 94. 4% in grade IV and 83. 3% in grade V liver injury, this is reflected in 86. 3% of liver trauma cases now receiving conservative management. Data also suggests an increased survival rate in patients who are haemodynamically stable. **Conclusion:** Haemodynamic stability was the main factor that decided patient management; this was largely based on patients' ability to adequately maintain their systolic blood pressure above 90mmHg. Physiological stress of surgery has also proven to be an extremely important element in determining likely prognosis (morbidity and mortality), making non-operative management a preferred option in the majority of cases. However, operative management still remains the only option in patients who have suffered severe hepatic trauma (including avulsion).

OP-195

Transcatheter Aortic Valve Implantation (TAVI) *versus* Surgical Aortic Valve Replacement (SAVR) for the Treatment of Aortic Valve Stenosis

S. Jain

Faculty of Medicine, University of Liverpool, Liverpool, United Kingdom

Background: Aortic valve stenosis (AS) can lead to a poor quality of life and is associated with high rates of mortality if left untreated. Surgical aortic valve replacement (SAVR) has long been the established treatment in managing AS in operable patients. Transcatheter aortic valve implantation (TAVI) is typically implemented in inoperable patients but the scope for TAVI to treat all patients with AS is unknown. **Objectives:** This study aimed to compare outcomes of SAVR *versus* TAVI in order to decipher which treatment is superior. **Material/Patients and Methods:** Literature discussing TAVI *versus* SAVR was accessed from Pubmed, Medline and Google Scholar. A critical review of outcomes comparing both treatments was conducted. **Results:** Long-term outcomes of SAVR *versus* TAVI are limited. The literature currently available primarily focuses on 1-year mortality rates and the PARTNER trial showed that at 12 months TAVI had lower rates of death than SAVR (24. 2% *versus* 26. 8%). Mortality at 2-year was also lower following TAVI (33. 9% *versus* 35. 0%, p=0. 78) Rates of major haemorrhage were greater following SAVR, however, major vascular complications were more common following TAVI than SAVR (11% *versus* 3. 2%). **Conclusion:** Periprocedural outcomes and follow-up mortality rates appear to be similar between both procedures but TAVI is considered to be a more challenging procedure. TAVI is less invasive that does not put the patient under as much surgical stress. Inadequate data on long-term outcomes of TAVI has restricted its implementation in operable patients and further data is required to make an improved assessment.

SP-1

Long term Results of Endoscopic vs Conventional (Open) Components Separation Technique in the Treatment of Loss of Domain Ventral Hernias

M. Urkan, Y. S. Peker, E. Lapsekili, M. F. Can

Department of General Surgery, Gulhane Military Medical Academy, Ankara, Turkey

Background: The aim of this study is to find out whether endoscopic or conventional technique of the infrequently applied however very feasible components separation (CS) method for loss of domain ventral hernias is superior to other concerning long term results. **Methods:** The terms of 'components separation', 'endoscopic components separation' laparoscopic components separation', 'loss of domain ventral hernia' were searched on the pubmed and scopus search engines. Studies only comparing endoscopic vs conventional CS technique were included to the study. Total of 34 studies including 1808(1287-conventional/521-endoscopic) patients were evaluated. **Results:** The main aim of the studies for comparing endoscopic vs conventional CS is to evaluate the statistical differences between surgery site complications (infection, seroma, hematoma, fistula, dehiscence), hospital stay and recurrence. Cost, operation duration, blood loss, post-operative pain and newly occurring lateral hernias were also evaluated but in fewer studies. Most of the studies agree on, no significant difference between recurrence and very little significant difference for surgery site complications and hospital stay. Cost and longer operation durations because of prolonged learning curve are main problems. New lateral hernias occurring after endoscopic technique is debated at one study. **Conclusion:** Endoscopic CS technique seems to be a controversial new approach for ventral loss of domain hernias because of it's cost, prolonged learning curve and not being significantly superior to conventional technique in the terms of surgery site complications and recurrence. However because it is an new technique no longer than 2 years follow-up results can be evaluated which may failure the controversy.

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SP-2

Quality of life after ligation of intersphincteric fistula tract for fistula-in-ano

U. Alakus[1],U. M. Meral[2], M. Urkan[3]

[1] Department of General Surgery, Elazig Military Hospital. Elazig/Turkey
[2] Department of General Surgery, Izmir Military Hospital. Izmir/Turkey
[3] Department of General Surgery, Gulhane Military Medical Academy. Ankara/Turkey

Background and Aim: Fistula-in-ano remains a surgical problem for both the patients and physicians. The ideal surgical treatment aims to treat the fistul tract with low recurrence rates in addition to preserve the sphincter functions. Ligation of intersphincteric fistula tract (LIFT) is a sphincter preserving procedure that was described by Rojanasakul et al, treat fistula-in-ano. Nowadays, it has beenalso performed with increasing rates. **Objectives:** The aim of this review is to have a look the outcomes of quality of life results of LIFT technique. **Material and Methods:** PubMed®/MEDLINE® resources search was undertaken using terms "intersphincteric fistula" ''ligation intersphincteric fistula tract'' "quality of life". Totally 54 articles were identified, although 29 of them under dissected that met our inclusion criteria included. **Results:** 10 studies were retrospective observational and 15 studies were prospective observational studies. There were two fecal and one gas incontinences reported in these series. Among them, Just 4 prospective randomized studieswere compared the LIFT with other techniques superiority. One of them suggested higher healing rates in modified LİFT group than LIFT group, whereas the others observed no statistically significant difference. In one study; LIFT group showed lower pain scores than mucosal advancement flap group. In another prospective randomized study; the operation time was longer and one minor incontinence was reported in anorectal advancement flap management group. **Conclusion:** LIFT is a feasible sphincter preserving surgical treatment with high healing rates and acceptible effects on life quality for patients suffering from fistula-in-ano.

SP-3

Adenoma detection rate during surveillance colonoscopy after colorectal resections

M. Urkan[1], U. M. Meral[2], U. Alakus[3], M. F. Can[1]

[1]Department of General Surgery, Gulhane Military Medical Academy, Turkey;
[2]Department of General Surgery, Izmir Military Hospital, Izmir/Turkey
[3]Department of General Surgery, Elazıg Military Hospital, Elazıg/Turkey

Background: Colonoscopy is an important diagnostic, therapeutic and useful surveillance tool of patients after curative colorectal cancer resection (CCR). Colonoscopic surveillance utilization in relation to adenoma detection rate(ADR) has been controversialy. **Objectives:** To investigate the ADR in the follow-up patients who have been cured with colorectal resection for carcinoma. **Materials and Methods:** Medline®/PubMed® resourcessearch was undertaken using terms "colorectal resection", "colonoscopy", "surveillance/follow up" and "Adenoma" to identify relevant articles. We included the studies wich has complete colonoscopy and investigate the ADR on index. Totally, 19 articles related directly with the topic of interest were reviewed in detail. **Results:** In 16 articles, 4176 patiens with colonoscopic follow up for CCR were assessed. Of these, male female ratio of 1. 4: 1. 0 with a mean age of 65±10 years. Of these, follow-up procedures were performed within optimal utilization follow-up times. The mean duration of follow-up period was 35. 7±20.9 months. We observed such a high prevalence of adenomas at 12-24 months (25. 1 % of patients). On the other hand, Among of these surveillance colonoscopy, there were 57 metachronous cancers in the first year after resection of CCR, with an incidence rate of 0. 7%. **Conclusion:** Most of these studies advocated colonoscopy within two years of surgery. The aim of surveillance colonoscopy after CCR is detection of metachronous neoplasms. The incidence of cancer or polyp (adenoma) detection rate is unclear at CCR patiens. And the ADR is high enough. Therefore, we recommended More intensive follow-up should be reserved for patients with additional risk of developing further cancers.

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SP-4

The optimal timing of unpacking procedure after damage control surgery of the liver

M. Urkan[1], U. Alakus[2], U. M. Meral[3], A. Unlu[1]

[1]Department of General Surgery, Gulhane Military Medical Academy, Ankara/Turkey
[2]Department of General Surgery, Elazig Military Hospital, Elazig/Turkey
[3]Department of General Surgery, Izmir Military Hospital, Izmir/Turkey

Background: Complex liver trauma often presents with major diagnostic and management problems. In patients withmajor liver injury, damage control surgery(DCS), avoids extensive procedures for unstable patients. Also stabilizes fatal problems in initial operation and applies staged surgery after successful initial resuscitation. However, optimal unpacking time is not clearly definedfor patients with major liver injury. **Objectives:** The aim of this study is to examine the optimal timing for unpacking in damage control surgery. **Materials and Methods:** Medline and Pubmed search was undertaken using terms "DCS" "liver injury", "packing", "unpacking"This search identified 120 articles. 25 studies were analyzed. We did not restrict the searches by date. The search was through January 2015. **Results:** The majority of the articles were about the application of DCS. However, there was nostudy about the optimal unpacking time. We could find a little information about unpacking time (12-72 h) that they applied to their cases. But none of them advised optimal time. Moreover, some studies suggested that: trauma scores, coagulation disorders, haemodynamic instability, blood pH etc are important prognostic factors for unpacking time in major liver injury. **Conclusion:** The damage control concepts especialy packing and unpacking, are appropriate for the treatment of major liver injuries and is associated with significant survival advantages compared with other surgical techniques. However, optimal unpacking benefits cannot be established as there are no published randomised controlled trials. Good quality randomised controlled trials are needed to produce reliable recommendations.

SP-5

Day hospital as an organizational form of treatment for wounds and trophic ulcers angiologic GENESIS

E. Krivoshchekov, I. Dmitrieva

Medical University "Samara State Medical University" MoH Samara, Russia

Background: Arteriosclerosis obliterans of lower limb arteries - a major cause of disability and death worldwide. **Objective:** to show the possibility of the treatment of patients with wounds and sores angiologic genesis in a day angiologic hospital clinic. **Materials and Methods:** The study included 78 patients. In group 1 41 (55%) patients who underwent conventional treatment. In the 2nd group consisted of 37 (45%) patients, which in terms of day angiologic hospital clinic under the supervision of Angiology, therapist and psychologist Appointed introduction angioaktivnogo drug VAP 20 to 40 mg / drip number 10, sulodexide LE 600 and a 20% solution in Actovegin / drip number 10, clopidogrel 75 mg 1 time a day, magnet. **Results:** Following the treatment for 10 days, improvement was observed in the health status of patients in both groups. After 2 and 6 months after therapy: pain in the calf muscles at rest resumed 12 (30%) patients of group 1 and 1 (9%) in group 2 human. Decrease in pain-free walking distance was observed in 25 (61. 7%) patients of group 1 and in 12 (34. 8%) patients in group 2. Purulent complications not stoped in 12 (30%) patients of group 1 and 1 (9%) patients in the second. Conservative therapy in a day hospital angiologic of multilateral positive clinical effect in patients with wounds and trophic ulcers develop on the background of atherosclerosis obliterans of lower limb arteries.

SP-6

Injection of PPAR-gamma agonist may reduce ischemia-reperfusion injuries caused by pneumoperitoneum in rats

K. Sárvári[1], L. Petrovics[1], Á. Nagy[1], I. Takács[1], T. Nagy[1], P. Hardi[1], A. Vereczkei[2], G. Jancsó[1], T. Gy. Veres[1]

[1]Department of Surgical Research and Techniques, Medical School, University of Pécs, Hungary
[2]Surgical Clinic, Clinical Centre, University of Pécs, Hungary

Background and Aims: Pneumoperitoneum, widely used in laparoscopic surgery, leads to postoperative ischemia-reperfusion injury. The aim of our experiment was to demonstrate the protective effect of injecting PPAR-gamma agonist (PPARγA), known as a vegetable hormone.

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Material and Methods: The investigations were conducted on 60 Wistar rats. Pneumoperitoneum was created with Veres-needle at 10 mmHg pressure for 60 minutes. Rats were divided into 6 groups (n=10/group, each): PPARγA (100 μMol) was given to the animals 45, 30 or 5 minutes before insufflation (Groups II-IV.), as well as 20 or 5 minutes prior to desufflation (Groups V-VI.), sham animals were not treated (Group I.). Oxidative stress parameters: malondialdehyde (MDA), reduced glutathione (GSH), sulfhydril group (-SH) concentrations, superoxide-dismutase enzyme (SOD) activity and inflammatory cytokines: TNF-α and IL-6 levels were measured. **Results:** MDA concentrations were significantly increased in the treated IV-VI. groups compared to sham group. The level of GSH decreased significantly in every injected groups compared to the control group. In -SH levels there were no differences between groups. SOD's activity was significantly higher in rats treated with PPARγA 30 minutes prior to insufflation and 20 minutes prior to desufflation. In general, inflammatory cytokines elevated significantly after PPARγA injection, moreover, IL-6 concentration increased significantly in animals injected 20 minutes before desufflation compared with other drug administration times. **Conclusions:** Elevated intraabdominal pressure due to pneumoperitoneum triggers oxidative stress. Administration of PPARγA may reduce the harmful effect. Further experiments required to find the optimal timing of the injection.

SP-7

The role of preoperative ultrasonographic elastography in predicting posthepatectomy liver failure in cirrhotic patients with HCC: What Does Cumulative Evidence Say?

Oztas M[1], Urkan M[2]

[1]Sirnak Military Hospital, Department of General Surgery, Turkey
[2]Gulhane School of Medicine, Department of General
Surgery, Turkey

Background and aims: Preoperative ultrasonographic elastography is a novel non-invasive imaging method for the assesment of liver fibrosis by measuring liver stiffness. In this paper, our aim was to review the current knowledge on the role of preoperative ultrasonographic elastography in predicting posthepatectomy liver failure in cirrhotic patients with hepatocellular carcinoma (HCC). **Material and Methods:** A search of Medline database and Web of Science was performed to identify articles related with the topic published until January 2015. The search was limited to papers written in English. Studies investigating nonsurgical approaches such as radiofrequency ablation were excluded. **Results:** The initial search retrieved 52 articles. Nineteen of them (36. 7%) were not relevant to the topic of interest or dublicated articles and therefore excluded. Eventually,33 studies were included to final analysis. As the results of our investigation, studies showed that liver stiffness is useful to predict the development of post-operative hepatic insufficiency in patients with HCC undergoing curative liver resection surgery. Therefore, to measure the liver stiffness preoperatively by elastography for assessingliver fibrosis is a promising technique for predicting post-operative liver failure. One of the most important advantages ofultrasonographic elastography are its non-invasive nature and feasiblity. **Conclusion:** Our analysis suggested that liver stiffnes measurement to asses liver fibrosis using by elastography is safe and feasible for predicting posthepatectomy liver failure. Furthermore, it may be useful to predict long term outcomes such as recurrence after hepatectomy. However, current trials are not sufficient to reach strong conclusions.

SP-8

Pancreaticogastrostomy – an alternate for dealing with pancreatic remnant after pancreaticoduodenectomy –experience from a tertiary care hospital

Effendi MS, Memon AA, Bari H, Chawla T

Department of Surgery, The Aga Khan Universityand Hospital Karachi, Pakistan.

Background and Aim: Whipple's pancreaticoduodenectomy (PD) has been refined over the years to be a safe operation with a reported mortality rate of 0. 6% in most of the recent series though morbidity rate still remains high (30-50%). The pancreatic fistula is the single most important cause of mortality following PD. To manage the pancreatic remnant and prevent these complications, surgeons have used two main anastomotic techniques: pancreaticojejunostomy (PJ) and pancreaticogastrostomy (PG). Results of recent studies have shown significant differences in the incidence of pancreatic fistulas between these two methods, it has been found that PG is associated with fewer overall complications than PJ. Presented here is, background concept, technique and our experience of PG in Whipple's procedure done at our centre. **Material and Methods:** Retrospective review of charts was done for the patients who underwent Whipple's pancreaticoduodenectomy at Aga Khan University Hospital and had pancreaticogastrostomy as a preferred anastomosis for pancreatic stump. **Results:** Thirty five patients underwent pancreaticoduodenectomy who had pancreaticogastrostomy as a preferred anastomosis for the pancreatic stump. 21 patients were male. None of our patients had the complication of post-operative pancreatic fistula. 10 (28 %) of our patients had morbidities including delayed gastric emptying (4 patients), wound infection (3 patients), haemorrhage from pancreatic stump (2 patients) and Choledocho-jejunostomy leak (1 patient). Mortality is

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reported to be 8 % (3 patients) in this case series. **Conclusion:** Pancreaticogastrostomy seems to be a safe alternative and easier anastomosis to perform with lesser post-operative morbidity and mortality.

SP-9

Prophylactic antibiotic use in elective inguinal hernia repairs

A. Falzon, L. Conway, R. Mitchell, B. H. Babu

Department of General Surgery, Southport and Formby District General Hospital, Southport, Merseyside, United Kingdom

Background and Aims: Literature and guidelines do not recommend the use of prophylactic antibiotics in hernia repairs of any type (open or laparoscopic/with or without mesh) unless a risk factor for developing a surgical site infection is identified. Our clinical observations suggest the hypothesis that there is inappropriate antibiotic use within this patient cohort. **Patients and Methods:** A retrospective audit. Fifty-one patients were randomly selected from all elective inguinal hernia repairs performed at Southport District General Hospital between 2013 and 2014. Patient data was collected from case notes, operation notes, and prescription charts. Particular attention was made on the indications for prophylactic antibiotic use outlined by current guidelines and whether or not antibiotics have been administered. Risk factors indicating antibiotic use include old age (≥70), diabetes, immunosuppression and obesity. **Results:** Fifty-one patients underwent an elective inguinal hernia repair (47 males, 4 females). Fifty involved a mesh repair and one was a suture repair. Forty-eight (94%) patients received antibiotics on induction, and three (6%) did not receive antibiotics. The most common risk factors identified are old age (mean age 67, SD 15. 4) (24/51) and diabetes mellitus (6/51). Twenty-nine (57%) patients had more than one risk factor. Twenty-three Forty-five (45%) patients received inappropriate management. Twenty-one patients had been administered antibiotics with no identified indication, and two patients had not been administered prophylactic antibiotics despite identified risk factors. **Conclusion:** There is a significant misuse of prophylactic antibiotic use in patients undergoing elective inguinal hernia repair which may lead to microbial resistance. This warrants further investigation on a larger scale.

SP-10

The comparison of effects in different dosages of spray lidocaine applied before endotracheal intubation on hemodynamic parameters and postoperative sore throat in patients who underwent thyroidectomy

Z. Guclu[1], M. E. Ince[1], S. Tekindur[1], M. E. Orhan[1], M. Urkan[2]

[1]Department of Anaesthesiologyand Reanimation, Gulhane Military Medical Academy Ankara, Turkey; [2]Department of General Surgery, Gulhane Military Medical Academy Ankara, Turkey

Background: Endotracheal intubation causes sore throat and reflex hemodynamic response. In our study we aim that the comparison of effects in different dosages of topical lidocaine which prevents postoperaive sore throat and hemodynamic response because of endotracheal intubation. **Methods:** The clinical study was planned on 60 ASA I-II volunteer patients who were scheduled thyroidectomy in general anesthesia under elective circumstances. Patients were randomly divided into 3 groups as a control group,2 puff and 4 puff sprayed lidokain. Lidocaine 10% was sprayed to the groups of lidocaine 5 minutes before induction of anesthesia. For the induction of anesthesia 1µg/kg fentanyl,2-2. 5mg/kg propofol and 0. 1mg/kg vecuronium was applied accompained by neuromuscular monitorization. Anesthesia was maintained with 1-3% sevoflurane and 0. 1µg/kg/min remifentanyl was used. The pressure of tube cuff was stabilized. Hemodynamic datas were recorded. The patients were assessed in point of sore throat by the scoring sistem designed by Harding et al postoperatively. **Results:** According to the hemodynamic parameters no differences were determined between the groups. The VAS scores postoperatively 1. hour and petidin consumption at PACU at lidocaine groups were found lower than the control groups. We determined lower values ofsore throat at postoperative 1. hour especially in 40 mg lidocaine applied group, however it's not istatistically meaningful. We found no significance on side effects such as nausea and vomiting, cough, hoarseness, laryngospazm and bronchospazm. **Conclusion:** It is came to the conclusion that the using of lidocaine doesn't affect hemodynamic response that relates the intubation but it reduces the frequency of postoperative 1. hour sore throat dependent on the dosage, however it reduces the consumption of analgesic.

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SP-11

Is hepatectomy plus pancreaticoduodenectomy justified for locally advanced gallbladder cancer? Review of literature

I. H. Ozerhan[1], U. M. Meral[2], M. Urkan[1], U. Alakus[3]
[1] Department of General Surgery,Gulhane Military Medical Academy. Ankara/Turkey
[2] Department of General Surgery,Izmir Military Hospital. Izmir/Turkey
[3] Department of General Surgery, Elazig Military Hospital. Elazig/Turkey

Background: Concurrent hepatopancreatoduodenectomy (HPD) is essential to succeed curative resectionin the advanced phase of hepatobiliary malignancies; however, this carries high rates of morbidity and mortality. **Objectives:** The aim of review is to determine the role of integrated major hepatectomy and pancreaticoduodenectomy in the surgical management of carcinoma of the gallbladder. **Material and Methods:** Medline and Pubmed search was undertaken using terms “gallbladder cancer” and “pancreaticoduodenectomy”. This search identified 77 articles. Thirty-seven studies were analyzed. **Results:** In-hospital deaths and morbidities, overall survivals, lymphatic invasionand survival unification and effects of bile duct invasion on survival, had been analyzed in studies**.** Except nine studies, HPD was significantly related with increased postoperative morbidity. In three of nine studies; HPD was more effective in bile duct cancers compared to gallbladder cancers, in terms of offering reasonable overall survival. It has been recommended that, radical surgery (HPD) is the adequate approach for patients with local advanced gallbladder carcinoma when no high-grade infiltration of the hepatoduodenal ligament exists. In a retrospective study, comparisons of short-term results after HPD for gallbladder cancer were made between the 1980s, 1990s, and 2000 to 2004. Morbidity and complications had decreased significantly in parallel with the increase in surgical experience, development in surgical techniques and post-surgical care units. **Conclusion:** Patients with advanced gallbladder cancer should be managed at high-volume and experienced centers, selecting operative indications carefully because of high morbidity and mortality rates. Combined major hepatectomy and pancreaticoduodenectomy is justified only if potentially curative (R0) resection is clearly possible.

SP-12

Facilitating early discharge with post-operative pudendal nerve block analgesia following ano-rectal procedures

K Siddique, K Khan**, A Payne**, T Offori***

* Mid Yorkshire Hospitals NHS Foundation Trust.
** Barnsley District General Hospital NHS Foundation Trust

Background: Effective postoperative pain control following benign ano-rectal procedures is an essential component of good clinical practice and early discharge. Aim of our study was to assess if early facilitated discharge can be achieved by this technique following ano-rectal procedures. **Patients and Methods:** A prospective study was conducted at Barnsley Hospital from Jan 14 - Aug 14. All patients who underwent post-operative standard pudendal nerve block were included. Post-op stay was divided into three groups; group 1= <4 hours, group 2= 4-6 hours and group 3= more than 6 hours. Demographics, procedure performed, post-operative pain score, complications and readmissions were recordedand analysed. **Results:** Total number of patients was36. There were 19 (54%) males while rest were female with an age of *36 (22-76). Procedures performed included laying open of fistula(12), complex fistula (2), Open haemorrhoidectomy(3), insertion of seton(1), excision of skin tags(2), fistulectomy(1) and lateral internal sphincterotomy(1) etc. There were no peri-operative complications. Pain scores reported as mild(27), moderate(7) and severe(2). The number of patients in group1, 2 and 3 were 14(39%), 16(44%) and 4(11%) respectively. Two patients stayed overnight due to social reasons. 32(90%) patients agreed that pain relief worked and only 12(33%) required additional pain relief. Two patients were re-admitted and 33(92%) patients were very satisfied with this technique. **Discussionand Conclusions:** Pudendal nerve block is a simple and useful method; without any significant complications, which can provide effective post-operative analgesia following ano-rectal procedures. It is associated with a high patient satisfaction and helped early facilitated discharges. Larger studies can help to look into efficacy and cost effectiveness. *median

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SP-13

Living donor liver transplantation in a patient with congenital portocaval shunt and hepatic adenoma

V. Brasoveanu, N. Cojocari, M. Ionescu, I. Popescu

Department of General Surgery, "Fundeni" Clinical Institute, Bucharest, Romania

Background: Congenital portal vein agenesis is a very rare condition, described mostly in children. We report a case ofAbernethy type 1B malformation in a female adult associated with hepatic adenoma and asymptomatic Arnold-Chiari syndrome for which successful living donor liver transplantation (LDLT) was performed. **Patientand Methods:** A 21 year femalewith mild cognitive impairment presented at Surgical Department for pain in the right upper quadrant and asthenia. The contrast enhanced abdominal and cerebral computer tomography revealed two large hepatic lesions exerting mass effect on vena cava, the portocaval shunt and the downward displacement of the cerebellar tonsils through the foramen magnum. The patient underwent hepatectomy with "piggyback" technique, sparing the native cava. Left hepatic lobe of the donor was implanted. Routine histological staining was used to analyse the resected liver tissue. **Results:** At the 3 month follow-upthe patient was alive with no significant echographic and blood analysis changes. The particularity of the case is that few adult patients (>18) with congenital portocaval shunt have been described in the literature, from which four underwent orthotopic liver transplantation for miscellaneous reasons (hepatic encephalopathy, gastrointestinal bleeding, liver dysfunction, liver tumor). To our knowledge this is the first report of LDLT transplantation in an adult patient with congenital portocaval shunt and hepatic adenoma. **Conclusion**: Liver transplant for congenital extrahepatic porto-systemic shunt appears to have an excellent outcome in patients with unresectable liver tumors.

SP-14

Laparoscopic treatment of cystic echinococcosis of the liver

K. Kjossev[1], E. Belokonski[1], K. Vassilev[2], S. Nikolov[3], P. Dimov[1]

[1]Department of Emergency Medicineand Abdominal Surgery, Military Medical Academy, Sofia, Bulgaria
[2]Clinic of Endoscopicand Abdominal Surgery, Military Medical Academy, Sofia, Bulgaria
[3]Department of Experimental Surgery, Military Medical Academy, Sofia, Bulgaria

Background: There are several documented series of successful laparoscopic (LS) treatment of liver echinococcal cysts (EC). Controversies about the role of LS in their management include selection of patients and surgical technique. The aim of this study is to report and discuss the results of this method in respect of the cyst's severity and stage of the disease. **Methods:** A retrospective review of the medical records obtained from 22 patients diagnosed with liver EC during the period 2008-2014 and treated with an LS approach was conducted. Grade of the disease and cyst's severity were defined using TN(R)C classification. Perioperative morbidity and clinical outcome were assigned as the main criteria for correct selection of patients and technique. **Results:** Patients indicated to LS were in Grade 1 (n=4) and Grade 2 (n=18) of the disease -(total of 28 cysts). The most common type of LS treatment were conservative procedures -cystectomy (n=12) and partial pericystectomy (n=4). Radical cystectomy underwent 4 patients. Conversion was necessary in 2 cases (9%). Postoperative bile leak was noted in 2 cases. Rate of complications were similar in conservative and radical group. Clear correlation was noted between the grade of cyst and rate of postoperative morbidity. **Conclusion:** We suggest that the LS approach could be safe and feasible in the treatment of patients with liver EC. Correct assessment of cyst's severity and grade of the disease can significant reduce morbidity rates. Radical cystectomy appears to be an effective method with specific recommendations for its indication andtechnical aspects.

SP-15

Vessel sealing device in thyroid surgery - sharing experience

P. Dimov, K. Kjossev

Clinic of Abdominal Surgery, Military Medical Academy of Sofia, Bulgaria

Background: New surgical technologies have been introduced in thyroid surgery, to achieve vessel sealing and

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hemostasis. The aim of the study was to examine the outcome of total thyroidectomy with the vessel sealing device (LigaSure Precise™, Covidien AG), the effectiveness and safety of the method and the benefits to the patients. **Methods:** A retrospective study of all total thyroidectomies between January 2009 and December 2014 was conducted. Patients (n=126) underwent total thyroidectomy using two different methods; the LigaSure Precise™ (Group A, n=63) and the conventional clamp-and-tie method (Group B, n=63). Only patients from Group A were examined. Comparative study between the two groups needs further investigations. Operative time, blood loss, postoperative complications, duration of hospital stay and final outcome were investigated. **Results:** No recurrent nerve palsy was observed and no postoperative bleeding. One patient demonstrated mild hypoparathyroidism postoperatively, with full recovery on the third month. One patient had wound infection, recovered fully in two weeks time without surgery. Postoperative time was 61. 9 minutes (range 45 - 72 min.). Average intraoperative blood loss was less than 30 ml. Duration of hospital stay was 3. 7 days (including day of admission). **Conclusion:** LigaSure Precise™ is a safe and efficient device in thyroid surgery. Its use can secure low rate of major complications, shorter operative time and lower blood loss. For more accurate and precise analysis larger series should be investigated and compared.

SP-16

Validation study of the American Society of Anesthesiologists Physical Status rating in emergency gastrointestinal surgery

Y. Haga[1], T. Shichino[2], M. Hirao[3]
[1]Institute for Clinical Research, National Hospital Organization Kumamoto Medical Center, Japan; [2]Department of Anesthesia, National Hospital Organization Kyoto Medical Center, Japan; [3]Department of Surgery, National Hospital Organization Osaka National Hospital, Japan

Background: TheAmerican Society of Anesthesiologists Physical Status (ASA-PS) is used worldwide to assess patients and is also used in various prediction rules. Nevertheless, previous studies on ASA-PS raised concerns regarding inter-rater agreement. We herein investigated the inter-rater reliability of ASA-PS in multiple hospitals. **Methods:** We constructed 3 sets of scenarios for each ASA-PS class (IIE, IIIE, and IVE) in emergency gastrointestinal surgery, totaling 9 scenarios. Each scenario described the preoperative profile of a patient. Two or 3 anesthesiologists from 18 referral hospitals scored the ASA-PS for each scenario. Validation between anesthesiologists was analyzed by the intraclass correlation coefficient (ICC) for two way mixed model with measures of absolute agreement. Inter-rater variability within the hospital for each scenario was assessed using within-group Inter-rater reliability (r_{wg}). The ICC and r_{wg}ranged between 0 and 1. 0; a higher value indicates a higher consistency. Values greater than 0. 70 in both coefficients are typically acceptable for consistency estimates. **Results:** Fifty anesthesiologists scored the ASA-PS ratings in total. 66% to 90% of the anesthesiologists scored the same rating as the original one in each scenario. The ICC between the whole anesthesiologists was 0. 79 ($p < 0. 001$, n=50). The r_{wg} in each hospital for each scenario ranged between 0. 75 and 1. 0. **Conclusion:** Our results revealed the high consistency of ASA-PS ratings between anesthesiologists in emergency gastrointestinal surgery. ASA-PS may serve as a reliable variable in prediction rules in this field.

SP-17

Does diabetes really affect arteriovenous fistula outcomes? A retrospective study

K Quinn[1], V Wong[1], E Aitken[2], D Kingsmore [2]

[1]University of Glasgow, [2]Glasgow Western Infirmary

Background: Autologous arteriovenous fistulae (AVF) are the gold standard vascular access; however, failure of maturation remains a major shortcoming. Many factors, including sex, age and diabetes, are believed to influence early AVF patency. This retrospective cohort study explores the effect of diabetes mellitus (DM) on AVF maturation. **Methods:** The outcome (death, patency and steal syndrome) of 1000 consecutive AVF created over a 4 year period(01/01/10 - 31/12/13) were analysed by AVF factors, patient factors, (age, gender, diabetic status), and diabetic factors (type, complications, glycaemic control, HbA1c) using standard statistical tests. The primary outcome measure was AVF patency at 6 weeks. **Results:** Complete datasets were available for 915 patients. Primary patency rate at 6 weeks was 74. 97% (n=686). DM did not influence AVF failure rate (26. 73% vs. 24. 12%; p = 0. 431). Oral glycaemics increased the failure rate (36. 67% vs. 22. 81%; p = 0. 0175). Patients with diabetes had significantly poorer survival post-AVF creation (p<0. 0001; log rank method) and were more likely to have steal syndrome (3. 46% vs. 0. 67%; p = 0. 0038). **Conclusions:** The 'diabetic population' are a heterogeneous group, but are older than non-diabetics. DM was not independently associated with AVF failure. AVF failure was more likely in females and in those prescribed a gliclazide. The survival of patients with DM was significantly shorter and steal was more likely after AVF creation. Diabetes is an important factor to consider when planning vascular access, not due to the impact on patency, but due to the significantly shorter survival post-creation and increased risk of steal syndrome.

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SP-18

Total parenteral nutrition: Developing standards of patient care

R. E. Clifford[1], N. Appleton[1], C. McFaul[1]

[1]The Countess of Chester Hospital NHS Trust, Chester, United Kingdom

Background and Aims: Total parenteral nutrition (TPN) is an invasive feeding method, with stringent indications due to higher associated cost and morbidity. The National Confidentiality Enquiry into Patient Outcome and Death (NCEPOD) review ('A Mixed Bag') identified good clinical practice in only 19% of patients receiving TPN in 2010. **Patient and Methods:** Retrospective data collection was undertaken for all patients receiving TPN over a 13month period from 1st December 2013 from clinical records at The Countess of Chester NHS Trust. Results were compared to NCEPOD recommended standards, and previous data at the Trust from 2011. **Results:** 64 patients met the study criteria; median age 68yrs, male: female ratio 1. 5: 1. Range of TPN use 1-144 days (12 patients <5 days). TPN commenced in level 1 care 59. 4%, level 2/3 40. 6%. 36 patients received TPN via a PICC, 28 central line. 100% of cases had an appropriate indication, with consideration of other feeding routes and nutritional team support. 97% of cases had baseline nutritional assessment, 100% biochemical assessment and 90% refeeding risk identified. 13% experienced a delay in commencing TPN once clinical decision made; 4% due to inadequate access. 78% received adequate daily biochemical monitoring; 73% of those at high risk of refeeding syndrome. **Conclusions:** Nutritional team assessment, daily monitoring and documentation is at a high standard. Delay of commencing TPN and documented indications is often let down by communication between clinical and nutritional teams. A multi-disciplinary electronic referral and assessment proforma is being developed to enable NCEPOD targetsto be met.

SP-19

Damage control surgery for gastrointestinal surgery

K. Okumura, T. Kubota, A. Kishida

Department of Surgery, Tokyobay Urayasu-Ichikawa Medical Center, Chiba, Japan

Backgrounds and Aims: Damage control surgery is a management sequence initiated to reduce the risk of death in severely injured trauma patients presenting with physiological derangement. Damage control principles have emerged as an approach in non-trauma abdominal emergencies in order to reduce mortality compared with primary definitive surgery. We present our experiences of damage control surgery and our method of temporary abdominal closure. **Materials and Methods:** We retrospectively review 17 patients from January 2013 to December 2014 who had damage control surgery for abdominal surgical emergencies. **Results:** The average age of patients was 64. 6 years old. The average APACHE-Ⅱ score was 29 (range: 8-47) and the mortality was 35%. After ICU management, we could perform abdominal closure and intestinal anastomosis for 4 patients. We also closed the abdomen with Vicryl mesh for 3 patients. **Conclusion:** Damage control surgery can improve the outcome in critically ill patients. We should consider damage control surgery for unstable patients instead of one staged definitive surgery. We would present our method of temporary abdominal closure.

SP-20

Surgical intervention in ischemia reperfusion injury resulting in better survival

D. S. Chandra, R. Dadhich, N. Ramesh

Department of surgery, Arogya Hospital,10-1-12 Asilmetta junction,Visakhapatnam, India – 530003

Background: The role of surgical intervention in ischemia reperfusion injury leading to abdominal compartment syndrome was studied for better outcomes and survival rate. **Method:** From January 2011 to November 2014, 20 patients were referred to our surgical unit with abdominal compartment syndrome. Twelvehad sustained polytrauma not involving the abdomen, one spine trauma, fivewith burns, one blunt injury abdomen, one post CABG superior mesenteric artery embolism. The management included hypertonic saline. Criteria to do damage control laparotomy, rising intra abdominal and PA wedge pressure, decreasing urine output. **Results:** All were offered damage control laparotomy. Two died before surgery, two refused surgery. Sixteen underwent surgery. Of these two died during hospital stay. The other 14 patients had full recovery. **Conclusion:** Ischemia reperfusion syndrome should be suspected in patients with polytrauma and other conditions with monitoring of intra abdominal pressure. Timely decision to do damage control laparotomy significantly increases the survival of patients.

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SP-21

Fractures of The Pelvis and Acetabulum

K. Koca, S. Akpancar, N. Can, S. Tunay

Department of Orthopedic Surgery, Gulhane Military Medicine Academy, Ankara, Turkey

Background: The aim of this study is to bring out the frequency, sex discrimination and the results of a survey of pelvis and acetabulum fractures that referred to orthopedics and emergency department for two years. **Methods:** Patients who referred to orthopedics and traumatology clinic due to pelvis and acetabulum fractures were included study between January 2012 and January 2014. All demographics data included age, sex and history was collected. Diagnosis and clinic approach were investigated. **Results:** Between January 2012 and January 2014, 51 patients were admitted to orthopedics and emergency department for pelvis and acetabulum fractures. The average age of the patients was 39,9 years and gender ratio(man/women) was 73: 27. The distributions of fractures were pelvic ring(31%), acetabulum(27%), ilium(%14), sacrum(14%), sacroiliac separation(6%) and combined sacrum and pelvic ring(8%). The average of hospitalization 12,2 days, blood transfusion rate % 37, concomitant other system injuries%45. Most fractures were occurred from falling from height(%45) and traffic accidents(% 35). 4 patients have died due to hemodynamic instability or concomitant serious complications. External fixator or hammocks were applied to 10 patients and 27 patients were treated with open reduction and screw-plate fixation. **Conclusion:** Pelvic and acetabular fractures occur in adult men associated high-energy trauma like traffic accident and falling from height. Hemodynamic instability and additional traumas of pelvic and abdomen were may be together with pelvic and acetabular fractures. Hemodynamic stabilization and damage control surgery were necessary. After stabilization of general condition, definitive surgery like open reduction and plate fixation must be performed.

SP-23

Evaluation of the unified approach to radial tunnel syndrome and tennis elbow syndrome

M. Elniel, E. Harrison, K. Iyengar, W. Loh

Department of Trauma and Orthopaedics, Southport and Ormskirk District General Hospital, Town Lane, Southport, PR8 6PN

Background and Aims: We hypothesise that resistant tennis elbow syndrome is probably undiagnosed radial tunnel syndrome. Therefore patients presenting with symptoms of tennis elbow syndrome may be surgically managed with release of traction on extensor carpi radialis brevis and by releasing posterior interosseous nerve via a single incision. Addressing the underlying pathologies of both tennis elbow syndrome and radial tunnel syndrome. We have devised a new clinical test; the rule of nine test (RO9) based on a cadaveric study to improve diagnostic accuracy in radial tunnel syndrome. We aim to apply this clinically. **Patients and Methods:** A retrospective case note review was undertaken of patients who had undergone a "unified approach to radial tunnel syndrome and tennis elbow syndrome" between 2008 and 2013. Pre-operative demographics, symptomatology and clinical findings were recorded and correlated with intra-operative findings, post-operative evaluation of symptoms and quality of life. **Results:** 19 case notes were reviewed. 15 patients had occupations involving manual labour, the remaining had desk jobs. At 6 month follow up 18 patients had reported complete resolution in pain and return to normal level of function. RO9 test was found to be positive in 16 patients, when correlated with intra-operative findings of radial tunnel syndrome, we found this test to have a sensitivity of 92. 3% and a positive predictive value of 92. 3%. **Conclusion:** Our unique approach to managing patients with tennis elbow syndrome and/or radial tunnel syndrome yielded good post-operative results with high patient satisfaction. Our study was limited by a small group size.

SP-24

Outcomes of Copeland shoulder resurfacing arthroplasty

E.White[1], N. Baraza[2]

[1]Trauma & Orthopaedic Surgery, St Thomas' Hospital, London
[2]Trauma & Orthopaedic Surgery, University Hospitals Coventry, Coventry

Background & Aims: Copeland shoulder resurfacing arthroplasty is a well recognised treatment of end stage shoulder arthritis. The procedure carries a number ofadvantages over conventional shoulder arthroplasty including anatomical alignment, minimal bone removal, shorter operating times and uncomplicated revisions. It is however not without risks. We looked at the reoperation rates and complications of this procedure at our unit.**Patient & Methods:** This retrospective study evaluated the outcomes of 145 Copeland shoulder resurfacings at The Alexandra Hospital, Redditch over a period of 9 years, with an average follow up of 6 years (range 1.5 – 11.3years). Data was collected from the trusts' clinical database (Bluespier™) and radiographs.**Results**: The most commonly encountered complications were continued pain and subjective stiffness. The re-operation rate was 15.7% and over half of the re-operations were arthroscopic procedures. Of these, 60% were for capsular release and 30% were for subacromial decompression. The remaining other re-operations were reverse polarity arthroplasties, a shoulder arthrodesis and a

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stemmed hemi-arthroplasty. Of the radiographs analysed, 4.5% had obvious radiological signs of glenoid erosion and none showed significant loosening of the prosthesis.**Conclusion**: The majority of patients who underwent this procedure benefited from it, however it is not without its complications. Further prospective studies of proximal humeral resurfacing would be invaluable in enabling an appreciation of the long term sequelae of this procedure.

SP-25

Comparison of two treatment modalities ofacute ankle sprain

S. Bilgic[1], M. Durusu[2], B. Aliyev[2], S. Akpancar[2], O. Ersen[3], S. M. Yasar[2], S. Ardıc[2]

[1]Gulhane Military Medical Academy, Istanbul Turkey
[2]Gulhane Military Medical Academy, Ankara Turkey
[3]Maresal Cakmak Military Hospital, Erzurum, Turkey

Background: Acute ankle injuries are one of the most common injuries that occupy emergency departments. İmmobilizing the ankle is a basic treatment modality but immobilizign method is still unclear in the literature. In this study we compare two treatment modalities; splint and elastic bandage in the treatment of acute ankle sprain. **Methods**: A prospective randomized study was conducted in emergency department and 51 consecutive patients admitted to emergency depatment with the complaint of ankle spain inculuded in this study. The Institutional Review Board of the Gulhane Military Medical Academy approved this study. Written informed consent was obtained from each patient. After bone injury ruled out by x-ray in first view, treatment choice left to the physicians on the shift. before treatment edema and pain was evaluated. Edema was calculated with a small scaled container filled warm water. Volume difference was calculated by immersing extremities to the container at the same level. Pain was evaluated with VAS score. After treatment all patients were advised standartly (Rest, ice and elevation) and parasetamol treatment begun. Patients who treated with elastic bandage or splint were revisited 7 days later and edema and VAS score measured. **Results**: There were 25 patients (14 male, 11 female) in bandage group and 26 patients (15 male, 11 female) in splint group. Average age was 26. 24±8. 41 and 32. 15±12. 74 respectively. VAS scores of the groups before and after the treatment were similar. Although edema size before and after the treatment were similar between the groups, the reduction of edeme size was significantly beter in elastic bandage group (p=0,025). **Conclusions:** This study shows that treatment of acute ankle sprain with a elastic bandage reduce edema more than splint. No difference found in functional outcome and pain. Therefore using a elastic bandage could be considered for treatment of acute ankle sprains instead of splint.

SP-26

Management of patients for fractured neck of femur surgery: post-operative complications and mortality in relation to surgical delays

A. Ahad[1], O. Diamond[1], D. Kealey[1]

[1]Level 1 Trauma and Orthopedics Surgery, Royal Victoria Hospital, Belfast, Northern Ireland, United Kingdom

Background: Reports from the National Hip Fracture Database suggest that surgical delay for hip fracture patients is associated with prolonged hospital stay, increased morbidity and mortality. The aim of this study was to investigate the relationship between surgical delays and postoperative complications and mortality in our hospital. **Patient and Methods:** The Fracture Outcome Research Database (FORD) from a unit that treats over 900 hip-fractures per-year was used to identify all patients admitted in the month of August-2013. These patients were chosen as a cohort of consecutive patients that had full one-year follow-up available. Both FORD-Data and Clinical-notes were used to identify complications and outcome for patients. **Results:** There were 96 patients involved in the study with the average age of patients 78. 2 (range 42-94 years). The proportion of female patients was 79. 2%. The median time from hospital admission to surgery was 69. 05h and the median length of stay in hospital was 9. 58 days. The mortality rate was 4. 4% in the group of patients who operated >48h and 8. 3% in 24-48h. Chi-square test showed surgical delays >24h was statistically significant association with post-operative complications (p=0. 047). The most common complications encountered in the groups of patient operated >24h were lower respiratory tract infections/Hospital acquired pneumonia followed by acute kidney injury. No complication noticed in any patient operated on within 24h of admission. **Conclusion:** We concluded that there is indirect correlation between surgical delays and postoperative complications and mortality. While the age, sex and ASA grade did not have significant impact on the risk of postoperative-complications and mortality.

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SP-27

Age, Gender and Seasonal Distribution of Patients with Extremity and Spine Complaints in Emergency Department

S. Akpancar [1], H. Y. Tüzün [1], H. Turgut [2],N. Can [1], L. Gürer [1], K. Koca [1], M. Durusu [3], İ. Arzıman [3]

[1] Department of Orthopedic Surgery, Gulhane Military Medicine Academy, Ankara, Turkey
[2]Department of Orthopedic Surgery, Bursa Military Hospital, Bursa;
[3]Department of Emergency Medicine, Gulhane Military Medicine Academy, Ankara

Background: The aim of this study is to bring out frequency, sex discrimination and seasonal distribution of fractures in emergency departments. **Methods:** Patients who referred to emergency department due to extremity and spine problem were included study. Patients registration about physical examination, radiographs, ultrasonography, computed tomography and magnetic resonance imaging were investigated. In addition, all demographics data included age, sex, season, history was collected. Diagnosis and treatment types (conservative or surgery) were investigated. **Results:** Between January 2012 and January 2014, 190986 patients (95920 male, 95367 female) were admitted to emergency service for any complaints. 4301 fractures in 4036 patients were determined after assessment of 32300 patients who had pain on extremity or spine. The average age of the patients who had symptom on extremity of spine was 36. 2 years and gender ratio(man/women) was 60: 40. Most common fractures were at radius (%15. 6) and least common fractures were at sesamoid bones (%0. 04). Patients with fracture of metacarp, phalanx, ulna and clavicula were under the age of 30 years. Patients with fracture of radius, humerus, femur and tibia were over the age of 40 years. Fractures were most occurred in summer and were least occurred in autumn. Fractures in women were 2. 43 times more common than fractures in man in spring; however, fractures rates were similar between women and men in autumn. **Conclusion:** This study showed that extremity or spine complaints rate was %17, fracture rate was % 2. 2. These epidemiologic data might be important for physicians who work in department of emergency.

SP-28

Peripheral pulses examination in acute medical admissions: implications for detecting peripheral arterial occlusive disease and assessment for venous thromboembolism risk: a spot audit

M. A. Ali, S. Mattick, E. Wilton and A. Handa

Department of Vascular Surgery, John Radcliffe Hospital, Oxford, UK

Background: Patients with cardiovascular disease are high risk for concomitant peripheral arterial occlusive disease (PAOD). Examining their peripheral pulses is important for identifying PAOD and should be routinely performed for venous thromboembolism (VTE) risk assessment. The aim of this spot audit was to assess whether peripheral pulses are examined in patients with known or suspected cardiovascular pathology admitted under acute medicine in a teaching hospital. Furthermore, to see whether patients with anti-embolic stockings are assessed for PAOD, a contra-indication to mechanical VTE prophylaxis. **Methods:** An assessment proforma was designed containing patient demographics, presenting complaint, past medical history, and working diagnosis. Documentation of peripheral pulses and prescription of anti-embolic stockings was also assessed. All acute medicine inpatients at the John Radcliffe Hospital, Oxford on the day of the audit were included. The initial admission clerking and drug chart were inspected to collate outcome measures. **Results:** 149 patients, 61 males and 88 females, were assessed. Age ranged between 33 and 99 (79±11. 9) years. 118 (79. 2%) had known or suspected cardiovascular pathology. Of these, 3 (2. 5%) had peripheral pulses examined. 8 patients (5. 4%) had anti-embolic stockings prescribed: 1 of these had no known or suspected cardiovascular disease. Of the remaining 7, only 1 had a documented peripheral pulses examination. **Conclusions:** There is significant failure in this trust to perform and document peripheral pulses examination for acute medical admissions presenting with known or suspected cardiovascular pathology. Prescription rates for anti-embolic stockings are similarly poor, and where prescribed, assessment of PAOD as a contra-indication is rarely performed.

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SP-29

A complication of sciatic artery aneurysm

V. Proctor, P. Chan

Sheffield Vascular Institute, Northern General Hospital, Sheffield, United Kingdom

Background: We report a case of obturator bypass revascularisation for acute ischaemia secondary to recurrent common femoral artery thrombus in the presence of a thrombosed sciatic artery aneurysm. **Case Study:** A 69-year-old woman complained of severe left buttock and leg pain, lack of sensation and paralysis to the left foot and ankle. Three years previously an MRA for left intermittent claudication showed thrombus within an aneurismal left persistent sciatic artery and a hypoplastic ilio-femoral system. She was managed conservatively with Warfarin. Two months prior to this presentation she underwent three left femoral embolectomies and evacuation of infected groin haematoma after stopping Warfarin for elective surgery. On this occasion MRA again showed common femoral thrombus, necessitating left external iliac to below knee popliteal PTFE bypass via the obturator canal, to avoid the recently infected groin. **Discussion:** Persistent sciatic artery aneurysm is a rare embryological anomaly with an incidence of 0. 01–0. 05%. Management strategies vary, but revascularisation is usually achieved with femoral-popliteal bypass and ligation of patent aneurysms. Obturator foramen bypass is an uncommon technique usually employed for infected or scarred groins that prevent traditional femoral-distal bypass, or where a hypoplastic femoral artery would give poor graft inflow. In this case a combination of two approaches to revascularisation was required to avoid graft infection and provide adequate graft inflow. **Conclusion:** Bypass surgery is indicated in acute ischemia, as most of the arterial tree can be considered normal. Innovative bypasses based on anatomical knowledge can be used in cases with special difficulties.

SP-30

Outcomes of regional transfers of ruptured abdominal aortic aneurysm

V. Proctor, M. Lee, A. Nassef

Sheffield Vascular Institute, Northern General Hospital, Sheffield, United Kingdom

Background: Vascular services are provided on a centralised basis. The VSQIP programme has improved mortality after AAA repairbut local experience suggests those transferred with a ruptured AAA have increased morbidity. **Method:** We compared morbidity and 30-day mortality for operated ruptured AAAs at our unit over a two year period. Occurrence of transfer and distance (as a proxy for time) to definitive care were recorded. Distance to definitive care was calculated from home postcode to local hospital and then to vascular centre. **Results:** Transfer did not statistically increase mortality (p=0. 59), but was associated with increased morbidity (p=0. 06). ROC curve analysis suggested that the highest rate of complications was seen in those who travelled more than 8. 9 miles. Distance to care of more than 13. 9 miles was associated with serious complications such as ischaemic colitis and those affecting extremities. **Conclusions:** Our results suggest no difference in mortality related to transfer, but distance to definitive care is associated with increased risk of complications. We did not consider management during transfer or pre-operatively, both of which impact on outcome. We plan further work to look at pre-transfer management and the development of post-operative monitoring strategies for those at greatest risk of complications.

SP-31

Pre-operative carotid artery screening for patients undergoing coronary artery bypass grafting

A. C. Pinho-Gomes, R. Sayeed

Department of Cardiac Surgery, John Radcliffe Hospital, Oxford, UK

Background: Stroke remains the major non-cardiac complication of coronary artery bypass surgery (CABG). Severe carotid artery disease (CAD) is associated with a fourfold increase in the risk of post-operative stroke and this is the rationale for offering pre-operative carotid artery screening to these patients. **Objectives**: We aimed to assess the compliance with ESC/EACTS guidelines for Myocardial Revascularisation (2014) for pre-operative carotid artery screening and estimate the clinical impact of restricting screening to class-I evidence-based recommendations. **Patients and Methods:** The medical records of all the patients who underwent CABG between 1st November and 31st December 2014 were retrospectively reviewed. **Results:** A total of 75 patients underwent CABG during the study period. 37 carotid artery Doppler ultrasound scans were performed. 2 patients had significant bilateral CAD and 1 patient underwent pre-operative carotid revascularisation. Carotid artery screening was performed in all but one of the patients with history of stroke/transient ischaemic attack or carotid bruit, which are the class-I recommendations. 33 of the 67 patients who met with class-IIa recommendations for screening (age over 70 years and/or peripheral artery disease and/or multi-vessel coronary artery disease) underwent Doppler ultrasound scanning. None of them had significant CAD requiring vascular surgery. Restricting carotid artery screening to class-I evidence-based recommendations criteria would have decrease the number of Doppler ultrasound scans from 37 to 8, without missing patients with CAD who actually required pre-operative

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vascular surgery review for consideration of revascularisation. **Conclusion:** Adherence to class-I evidence-based recommendations for carotid artery screening would generate major efficiency savings and streamline pre-operative assessment of patients undergoing CABG.

SP-32

Surgical weekend handover- Are stickers the answer?

V. Proctor, A. Wheeler, N. Samuel, M. Shiwani

Barnsley Hospital, Barnsley, United Kingdom

Background: Concern regarding patient safety has created a focus on handover procedures since introduction of the European Working Time Directive led to the current shift-working system for inpatient care. The Royal College of Surgeons (RCS) of England has produced guidance with standards for effective handover. **Method:** We randomly selected 20 patients admitted to our unit before introduction of the handover sticker and compared the written weekend handover summary in their notes to standards based on the RCS guideline. Two weeks after introduction of our weekend handover sticker we repeated the initial audit with a further 20 randomly selected patients. Adherence to our standards pre and post-sticker were then compared. **Results:** Introduction of the stickers improved creation of a written handover from 70% to 90% (p=0. 24). Where stickers were used, date of admission (21% to 94%, p<0. 0001) and past medical history (50% to 100%, p=0. 001) showed the most improvement. Problem list completion (79% to 100%, p=0. 07) and tasks for the weekend team (86% to 100%, p=0. 18) improved, but not to statistically significant levels. **Conclusions:** Our results suggest the introduction of a sticker template for weekend handover improved the quality of written handovers, particularly with regard to patient background. Given current practices of shift working, handover stickers may improve patient safety by allowing the on-call team easier access to vital information about unfamiliar patients, allowing better informed decisions to be made. Further work must be done to ensure that all patients have a fully-completed and documented handover.

SP-33

Video analysis of trainees' surgical performance: A new strategy to identify training needs

Schindler C[1], Koch I[2], Settmacher U[1], and Dahmen U[1]

[1]Department of General, Visceral and Vascular Surgery, University Hospital Jena, Friedrich Schiller University Jena, Germany;
[2]Department of Gynaecology and Obstetrics, University Hospital Jena, Friedrich Schiller University Jena, Germany

Background: Training needs of students in respect to stepwise acquisition of basic surgical skills are rarely explored. Training curricula are not created to prevent typical psychomotoric errors encountered by most of students. The aim of this study was to identify typical errors as prerequisite for development of error-preventing exercises. **Methods:** Students performed an interrupted suture on a foam-pad during a facultative OSCE. The procedure was video-taped and analyzed according to pre-defined criteria of all procedural steps: handling of instruments and sutures, knotting, and cutting suture lines. Analysis of frequency and "mechanism" of errors were used as basis to design error-preventing exercises. **Results:** Errors did occur during all steps of procedure. The detailed analysis of video-material revealed 4 main errors: (1) Geometry of needle holder in hand of trainee was inappropriate leading to non-physiological movements when placing a stitch. (2) Handling of suture line was not adjusted to surgical field leading to extremely wide movements. (3) Knotting procedure was performed with inadequate length of suture ends leading to difficulties performing the knot. (4) Instruments were displaced for cutting suture line leading to additional steps to reposition the instruments. Performing newly developed instrument handling and knotting exercises prior to performing the whole complex procedure already proved to be helpful as tested in a small pilot study. **Conclusion:** This observational study represents a new approach in video-based teaching. Videos are not only used to enhance performance of students but to improve training procedure by analyzing errors in terms of their "mechanism" and frequency.

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SP-34

Eyelid tumors; results of a histopathological review

F. C. Gundogan[1], U. Yolcu[2], A. Tas[3], O. F. Sahin[3], H. Cermik[4], S. Altun[1], U. Erdem[1], A. Ilhan[5], M. Ozturk[6]

[1]Department of Ophthalmology, Gulhane Military Medical School, Ankara, Turkey
[2] Department of Ophthalmology, Sarıkamıs Military Hospital, Kars, Turkey
[3] Department of Ophthalmology, Odak Eye Center, Ankara, Turkey
[4] Department of Pathology Etimesgut Military Hospital, Ankara, Turkey
[5] Department of Ophthalmology, Erzurum Military Hospital, Erzurum, Turkey
[6] Department of Medical Oncology, Gulhane Military Medical School, Ankara, Turkey

Background and Aims: Eyelid tumors are commonly seen lesions in routine ophthalmology practice. Some malignant tumors may mimic benign tumors and therefore histopatological examination is crucial for definitive diagnosis. We aimed **t**o explore the distribution of eyelid tumors in Ankara, the capital city of Turkey, from a histopathological point of view. **Material and Methods:** Medical records of 1502 patients who had eyelid surgery because of tumoral lesions were retrospectively reviewed after obtaining institutional review board approval. A total of 1541 lesions with histopathologic diagnosis were included. Inflammatory tumoral lesions were excluded. The lesions were categorized into three groups according to the origin of the lesion: epidermal tumors, adnexal tumors and 'other' tumors including melanocytic tumors, neural tumors, vascular tumors, etc. **Results:** Of 1541 lesions, 908 lesions were epidermal in origin. Only 23 tumors (1. 5%) were malignant, and 6. 0% was premalignant lesions such as actinic keratosis and Bowen disease. Twenty-one of 22 malignant lesions were basal cell carcinoma. There was only one patient with squamous cell carcinoma and no sebaceous cell carcinoma. Among the benign tumors (92. 5%), squamous papilloma was the most frequent lesion (21. 8% of all lesions). The other frequent lesions were nevus (17. 6%), seborrheic keratosis (17. 3%), hydrocystoma (10. 6%), xanthelasma (7. 6%) and epidermal cyst (7. 2%). **Conclusions:** The results of this study are in accordance with published literature. The absence of sebaceous cell carcinoma needs to be stressed.

SP-35

CONGENITAL POUCH COLON: A NOVEL FINDING IN THE SIGNALING PATHWAYS

Maudar K K, Gandhi P, Mishra P, Rajender G, Budhwani S K

Bhopal Memorial Hospital and Research Centre, Bhopal, India

Background: Congenial Pouch Colon (CPC) is an abnormality in which the colon ends in a pouch like dilation. From Jan 2000 to Oct 2014, 110 cases of Type I to Type IV CPC were surgically treated. Germ line mutations/ deletions of genes encoding the proteins of the signaling pathways for normal colon formation are believed to be implicated in CPC.**Objective:**To delineate the molecular mechanism underlying the expression of Hedgehog and Notch pathways through Wnt, with special reference to CPC and to investigate the role of HMGA1 in proliferation of pouch colon cells in a different dimension.**Methods:**Surgically resected tissues from type I to type IV CPC were studied by staining with H&E and Masson's trichrome. They were also treated with the panel of primary and secondary antibodies of Beta catenin, Ihh, Notch1, HMGA1 for observing immunofluorescence. Isolation and purification of total proteins from tissue was done and desired proteins resolved through SDS-PAGE and then blotted to check for expression validation.**Results:** Histopathological changes included lymphoid aggregates and chronic non– inflammatory and inflammatory cell infiltrate, additional muscle layer in between the submucosa and inner circular muscle layer. Beta catenin showed a 3-fold increase, Notch 1: showed a 1-fold increase, Ihh showed 2 fold increase and HMGA1 showed a 3 fold increase. Western blot revealed high express of Beta catenin(92 kDa). **Conclusion(s):**Molecules from all the three embryonic signaling pathways Wnt, Notch and Hedgehog are being expressed in CPC. Expression of HMGA1 points to a stemness factor mostly correlated with cancer stem cells. In utero stem cell therapy may provide a breakthrough for prevention of Congenital Pouch Colon.

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SP-36

Development and Evaluation of a Bead Based Cell Capture System with a Potential Role in Circulating Tumour Cell Detection

N. Bryan[a, c], C. Smith[b], D. Bond[c], C. Stanley[c] and J. A. Hunt[b, c]

[a]Pharmacy and Biomedical Science, Liverpool John Moore's University, James Parsons Building, Byrom Street, Liverpool, UK, L3 3AF
[b]Clinical Engineering (UKCTE), Institute of Ageing and Chronic Disease, Duncan Building, Daulby Street, Liverpool, L69 3GA
[c]CellCap Technologies Ltd. The Greens Farm, Todmorden Road, Bacup, Lancashire, OL13 9HJ

Background: Circulating tumour cells play a fundamental role in distant tumour metastasis. Despite their acknowledged existence, their diagnostic and prognostic potential is under developed due to technical difficulties surrounding in identification and numeration. Although a small number of breakthrough technologies exist for CTC isolation and extraction, they are subject to scrutiny largely due to the lack of a universal marker with which to identify CTCs, particularly considering the complex cellular process of epithelial-mesenchymal transition (EMT) which these cells undergo. To this end we are evaluating approaches which do not rely on a single CTC antigen to confirm their presence in blood. In this study we investigated a negative selection approach to ablate non-CTC cells from blood to yield an enriched CTC population for genomic characterisation. **Methods:** We evaluated a variety of bead based strategies using large magnetic particles coated with antibodies against antigens present on CTC competitor cells (CD45), which varied in their antibody/bead association chemistry. Reaction kinetics, bead/cell interaction in addition to antibody/bead dissociation were investigated using a model system which combined leukocytes with L929 fibroblasts as a CTC model. **Results:** CD45 antibodies depleted white blood cells whist co-enriching a CTC mimetic cell by 67% ($P<0.01$) at room temperature. This is comparable to at 37°C with 57% enrichment ($P<0.01$), 21% enrichment of L929 cells at 4°C ($P<0.05$). A CD45 antibody purified by our lab group from a hybridoma was shown to be more effective at binding cells to beads with around 4000 more cells per equivalent volume of beads being isolated ($p<0.001$). Further adaptation of the system using 2 antibodies in a 'zipper' technique, decorated onto both the Ab binding surface of the bead and the antigen binding site of the cell, isolated 3.5 times the amount bound by a single antibody approach. **Conclusion:** We found CD45 an ideal antigen candidate to target white blood cells in a negative selection approach, further quantification of the antibody/bead's optimal depletion characteristics demonstrated that it was also possible to synthesise antibody in house using hybridoma cells that was as effective as a proprietary equivalent thus suggesting this depletion system model an interesting technique worthy of further investigation and optimisation.

SP-37

Agenesis of Penis (Aphallia) with Left Renal Agenesis

B. F. Alp [1], Z. Demirer [2], S. Uğuz [1], A. Gürağaç [1], H. C. Irkılata [1]

[1] Gülhane Military Medical Academy, Department of Urology, Ankara, Turkey
[2] Eskisehir Military Hospital, Department of Urology, Eskişehir, Turkey

Background and Objectives: The penis is a componentofexternal genitalia and it takespart infertility, urinary and psychosexual structure of person with it's complex character. The penis agenesis is an extremely rare genitourinary anomally and it's incidence about one in 30 million births and it is believed that the result of absence or failure to development of genital tubercule. More than half of these patients have associated anomalies including genitourinary (%54) and gastrointestinal tract anomaliesand developmental defects of caudal axis. We reporta case ofpenile and prostate agenesis with associated left renal and superior segment of left ureteral agenesis, left ureterocele, right vesicoureteral refluxand highurethrorectal communication above the rectal sphincter. **Material/Patients and Methods:** A 22 year- old man referred to us due to absence of penis, urination and defacation through rectum and his history was including recurrent suprapubic and right flank pain and persistanturinary tract infection. Physical examination revealed agenesis of penis, normal scrotum, bilateral normal testis and vas deferens position, well male secondarysexual characteristics, normally located and at tone anus and anal sphincter. Prostate gland was not palpable at his digital rectal examination. Ultrasonography showed the absence of left kidney,superior segment of ureter and prostate gland. Also left ureterocele, increased bladder wall thickness because of persistant urinary tract infection and dilated right ureter were showned. Buccal smear was consistent with male genotype, and chromosomal studies revealed a normal karyotype 46XY. All serum hormone level were normal for adult male. Cystouretrogram performed through rectosigmoidoscopy showed normal appering bladder, vesicorectal fistula opening anterior wall of the rectum, left ureteroceleandright vesicoureteral refluxwith grade 2. 99mTc-Dimercaptosuccinylacid (DMSA) renal scyntigraphy, computerized tomography (CT)urography andmagnetic resonance imaging (MRI) performedfor planning the surgical intervention. These imaging procedures were also promoted ultrasonographic and cystouretrographic findings. Although the patient and his parents wereinstructed for masculinizing operations by our department, they refused any surgical interventionsbecause of their religious belief. We acquaint the patient and his familyabout possible health problems

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andhe invited to reguler controls by us. **Results:** The patient refusedany surgical intervention because of his religious belief. **Conclusions:** Treatment of penile agenesis presents many challenges and it involves multidisciplinary team. The team should beinclude urologist,pediatrician, endocrinologist geneticist, and mental health experts. Some patients and parents can refusedany surgical interventiontheymust be aware of the devastating outcomes about this anomally and must be invited reguler controls by urologist.

SP-38

Effect of diclofenac suppository during flexible cystoscopy on pain control: a randomized control trail

M. Nadeem, M H Ather

Department of Surgery, Section of Urology, The Aga Khan University Hospital Karachi, Pakistan.

Background: To compare mean VAS (Visual analogue scale) for pain during flexible cystoscopy between patients undergoing the procedure with plain gel only and with diclofenac suppository besides plain gel. **Methods:** It is a prospective, randomized, controlled study. A total of 60 male patients with an indication of flexible cystoscopy were enrolled and randomized in two equal groups. In group "A", patients received diclofenac suppository one hour prior to the procedure while group "B" did not receive diclofenac suppository. Both groups received 10 mls of intra-urethral plain gel for lubrication during flexible cystoscopy. Pain score was recorded immediately after the procedure using visual analogue scale. Statistical analyses were performed using chi-Square test and student t-test. Regression analysis was performed to address the confounding variables. **Results:** Mean age of the patients was 46. 75 years with SD of +/- 16. 12 years. Most common indication for flexible cystoscopy was removal of double J stent. Variables including age, duration of procedure, indication of procedure, level of operating surgeon were comparable. Mean Pain score in group A and group B was 3. 16+/-1. 53 and 4. 10+/-1. 24 respectively. This difference was found to be statistically significant (p= 0. 012). Regression analysis showed that none of the confounding variable was significantly affecting the pain perception. **Conclusion:** Intra Rectal diclofenac Suppository is simple and effective pre emptive analgesia. We recommend its routine use during flexible cystoscopy for better pain control.

SP-39

Role of Experimental Microsurgery in the training of the young surgical residents

Di Cataldo A.

University of Catania, Surgery Department, Catania, Italy

In Italy many changes occurred in the teaching of Surgery. In the past the young surgeons attended the whole day the departments of surgery, taking part in the numerous activities of their mentors: clinical, didactic and research. Experimental Surgery had an important role in the training of surgical residents in order to acquire surgical experience. It was a fundamental step to learn the principles of anesthesia, to know surgical instruments and suture materials and to start execution of pathophysiological studies. The opposition of the public opinion has remarkably curtailed this activity, while in our opinion experimental surgery is very useful to form and strenghthen the character of a surgeon and allow him/her to acquire a good skill by repeating many times the same surgical procedure and so be able to manage the future clinical activity with greater safety. End-to-end, end-to-side and side-to-side microvascular anastomoses and more complex surgical operations could represent a very good program to gain a good skill. In our opinion the Schools of Specialization should supply a complete medical preparation, so that the young surgeons will be able to perform surgical activity and also will know the pathophysiology of the surgical diseases.

SP-40

Surgical Outcomes of soft tissue reattachment surgery - Is tantalum an appropriate biomaterial?

E. Gee[1], J A. Hunt[2], A. Saithna[3]

[1]Royal Preston Hospital, Sharoe Green Lane North, Preston, Lancashire PR2 9HT, U.K.
[2]Clinical Engineering (UKCTE), Institute of Ageing and Chronic Disease, Duncan Building, Daulby Street, Liverpool, L69 3GA, U.K.
[3]Southport and Ormskirk NHS Hospital Trust, U.K.

Background: Porous tantalum is used in orthopaedic surgery because it is considered to readily osseointegrate with host bone and also to provide a scaffold for fibrous ingrowth and soft tissue attachment. Currently the most popular applications are in revision arthroplasty and tumour surgery where tantalum is most commonly used to augment bone loss and to facilitate re-attachment of tendons giving the potential to restore function. However, the role of tantalum for soft tissue attachment is not clearly understood. Much of the published literature has focused on laboratory and

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animal studies and has given promising results. In humans, however, results are variable depending on the indication for its use. Certain uses of this biomaterial have given dismal results. This study reviews the literature and examines the outcomes of soft tissue reattachment surgery using porous tantalum. We discuss the current controversies surrounding its use and anticipate future uses for this using this increasingly popular biomaterial. **Methods:** A thorough literature search of over 2100 abstracts was performed and the literature was systematically reviewed and critically appraised. Fifteen human studies using tantalum for soft tissue attachment were included. **Results:** Tantalum has previously been considered biologically inert but recent evidence suggests that it may have an inhibitory effect on fibroblasts which could prevent soft tissue ingrowth. Despite animal studies demonstrating promising results these have not been borne out in human studies. There are multiple reasons for this including the higher loads exerted, poor vascular supply in revision procedures, and lack of bone stock providing initial stability for soft tissue in-growth. **Conclusion:** The effectiveness of tantalum as a platform for soft tissue reattachment is not fully understood but it appears that the presence of bone stock is one of the most important factors for long term success.

PP-1

Multivariate prediction model of increased cardiac surgery in-hospital length of stay: a retrospective cohort study in Greece

K. Giakoumidakis[1], V. Patris[2], A. Patelarou[3], E. Androulakis[4], K. Dimitrakopoulou[1], N. V. Fotos[5], R. Eltheni[1], M. Argiriou[6]

[1] Cardiac Surgery ICU, "Evangelismos" General Hospital of Athens, Athens, Greece
[2] Department of Cardiac Surgery, Heart and Chest Hospital, Liverpool, UK
[3]Department of Anaesthesiology, University Hospital of Heraklion, Crete, Greece
[4]Department of Mathematics, National Technical University of Athens, Athens, Greece
[5]Faculty of Nursing, Nationaland Kapodistrian University of Athens, Athens, Greece
[6]Department of Cardiac Surgery, "Evangelismos" General Hospital of Athens, Athens, Greece

Background: Postoperative in-hospital length of stay (LOS) is a main indicator of cardiac surgery morbidity and affects the total procedure and healthcare cost. The prediction of in-hospital LOS contributes to more efficient resources allocation and better planning of patient care. The aim of the present study was both to investigate the risk factors and to establish a prediction model for increased in-hospital cardiac surgery LOS. **Material and Methods:** A retrospective cohort study of 595 consecutive patients who were admitted to the cardiac surgery intensive care unit of a tertiary hospital of Athens – Greece during a 1-year period was conducted. Data collection was carried out, retrospectively, by the use of a short questionnaire and based on the review of medical and nursing patient records. **Results:** The mean (±standard deviation) in-hospital LOS was 12. 2 (±17. 4) days. Multivariate analysis revealed that female gender [for males odds ratio (OR) 0. 57, 95% confidence interval (CI) 0. 37-0. 90], high logistic EuroSCORE (OR 2. 52, 95% CI 1. 58-4. 02), prolonged duration of surgery (OR 1. 84, 95% CI 1. 19-2. 85) and emergency status (OR 2. 40, 95% CI 1. 18-4. 91) were the independent risk factors for prolonged in-hospital LOS. The multivariate logistic regression model of in-hospital LOS had an area under the receiving operating characteristic curve of 0. 68 (p<0. 001). **Conclusions:** Despite the moderate performance and predictive value of our model, the early identification of patient at high risk for prolonged stay could assist clinicians to perform preventive measures for complications associated with long hospitalization and encourage the more effective patient care planning.

PP-2

Fungal Sepsis-associated Disseminated intravascular coagulation (DIC) syndrome after open heart surgery

K. Saziye,K. Afksendyios

Service of Cardiovascular Surgery, University Hospital of Geneva, Switzerland.

Background: Disseminated intravascular coagulation (DIC), also known as disseminated intravascular coagulopathy, is characterized by the widespread activation of the clotting cascade with the consequent of blood clots in the small blood vessels throughout the body. DIC can occur in case of severe infection of any kind bacterial (Gram-negative and Gram-positive sepsis), viral, fungal, or protozoan infections. We report here a case of aggressivefungalsepsis-associated disseminatedintravascularcoagulation post open heart surgery. **Case report:** A 68-year-old male patient underwent a pacemaker implantation a cause of a BAV III degree. Eight days after pacemaker implantation the patient underwent a surgery on the ascending aorta (polytetrafluoroethylene interposition tube graft) for an aneurysm due median sternotomy and under Cardiopulmonary bypass, without any complication. On POD3 the patient showed fever (39°C) with shivering, tachycardia with hypotension and respiratory distress. **Results:** The chest radiography showed enlarged mediastinal shadowing and right- and left-sided pleural effusions with associated pneumonia both sides. Aerobic and anaerobic blood cultures yielded negative results, but the patient presented skin necrosis on the arms, legs and face. Un CT-scanner confirmed multiple splenic, renal and intestinal infarctions. Bacteriological exams of the bronchoalveolar lavage, wound smear, wound hematoma of the pacemaker and cutaneous biopsy showed *Candida*

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albican was grown. The removed the pacemaker with its electrodes presented *Candida albicans*. An additional therapy against fungal infection was started. The histological result of the cutaneousbiopsy showed micro-thrombosis of superficialdermal vessels, andepidermalnecrosis. The patient showed disseminated intravascular coagulation (DIC) and the necroses continued progressively and the patient died of multi-organ failure.

PP-3

Which conduit is the best? Internal juguler vein, left renal vein or synthetic grafts after portal vein/SMV resection during pancreaticoduodenectomy

U. M. Meral[1], M. Urkan[2], U. Alakus[3]

[1] Department of General Surgery,Izmir Military Hospital. Izmir/Turkey
[2]Department of General Surgery,Gulhane Military Medical Academy. Ankara/Turkey
[3]Department of General Surgery, Elazig Military Hospital. Elazig/Turkey

Background : Pancreatic adenocarcinoma has a high mortality percentage with limited treatment alternatives. Unified portal vein and/or superior mesenteric vein(PV/SMV) resection with pancreatic resection leads extended survival for pancreatic cancer patients occasionally. **Objectives:** The aim of this review is to have a look at the studies about reconstruction of SMV/PV during pancreaticoduodenectomy(PD). **Material and Methods:** Medline and Pubmed search was undertaken using term "pancreaticoduodenectomy" which was combinedwith "renal vein, jugular vein and prosthetic". This search identified 19,11 and 13 articles,respectively. Once duplicates (n = 3) were removed, remaining 40 articles were screened. **Results:** 5 case report was presented about left renal vein(LRV) greft,7 for internal juguler vein(IJV) and 2 for polytetraflouorethylene(PTFE) grafts. 9 high-quality studies were about comparison of different reconstruction materials. In one of these prospective studies; which compares external iliac vein(EIV) and IJV for reconstruction of resected SMV, because of tumor invasion during PD; it was seen that postoperative morbidity (leg edema) %30 EIV used patient. In most studies comparing autologous venous reconstruction; IJV is standing out for SMV/PV replacement because its adequate length and no morbidity after unilateral resection. In a few studies investigating PTFE grafts, curative postoperative anticoagulation does not prevent adequately the onset of thrombosis. **Conclusion:** Complete pancreatic cancer resection with grossly tumor-free borders ensures the only chance for long-term cure. Surgical resection extended to the vessels is still exceptional, even in centers mostly experienced in surgery of the pancreas. Because of this; prospective comparative studies about primary anastomosis, autologous vein or prosthetic graft reconstruction are necessary.

PP-4

The undergraduate surgical conference - an educationaland career tool for medical students

M. Alam[1]and T. E. Pidgeon[2]

[1] College of Medical and Dental Sciences, University of Birmingham, Edgbaston, Birmingham, UK
[2] University Hospital Coventry, University Hospitals Coventry and Warwickshire NHS Trusts, Coventry, UK

Background: Interest in a surgical career amongst medical students is declining, with a lack of early exposure being an important factor. Student led undergraduate conferences are an avenue which may increase exposure and interest in surgery. We aimed to evaluate our national undergraduate surgical conference as a career promoting and educational tool. **Methods:** All conference delegates were asked to complete a questionnaire style survey following the conference. Prior career interests and the usefulness of this conference as an educational tool were amongst the factors assessed. **Results:** Of the 110 delegates attending the conference, 59 (53. 6%) completed and returned the questionnaire. 39 (66. 1%) students identified themselves as having an prior interest in a surgical career. 47 (79. 7%) delegates were more likely to consider a surgical career following the conference. There were no significant differences in the proportion of delegates more likely toconsider a surgical career between those with, and those without a prior interest in surgery (84. 6% vs 70% respectively; p=0. 187). 52 (88. 1%) delegates found the conference educationally useful. There were no significant differences in the proportion of students who found the conference educationally beneficial between those with, and those without a prior interest in a surgery (89. 7% vs 85% respectively; p=0. 511**). Conclusion:** Undergraduate surgical conferences can provide educational benefits and stimulate interest in a surgery for a range of medical students. As such, the future consideration and employment of such events as adjuncts to the undergraduate surgical experience is strongly encouraged.

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PP-5

Development of an epoch-making method for objective laparoscopic surgical skill evaluation

Y. Nishihara[1], Y. Isobe[1], H. Kikuchi[1], Y. Kawaguchi[1], J. Tokuyama[1], K. Osumi[1], H. Urakami[1], K. Omoto[2], S. Seki[1], A. Shimada[1], T. Oishi[1] and S. Matsumoto[1]

[1]Department of Surgery, [2]Critical Care Center, National Hospital Organization Tokyo Medical Center, Tokyo, Japan

Background: From a clinical point of view, the objective assessment of laparoscopic skills in the intraperitoneal cavity is very important. However, it is difficult to measure exact forceps movement in the intraperitoneal cavity, and an objective assessment tool to evaluate laparoscopic skill quantitatively has not yet been developed. The aim of this study was to develop an epoch-making method to measure exact forceps movement in the intraperitoneal cavity and to evaluate surgical skill in the intraperitoneal cavity using an optical motion tracking system. **Material and Methods:**A total of five right-handed participants were enrolled in this study. All participants waved a forceps at random at 80 bpm to measure the error during the forceps tip movement between the coordinate of the forceps tip estimated by a three point marker on the hand and the actual measured coordinates of the forceps tip. We used a VENUS 3D motion tracking system (Nobby Tech. Ltd. Tokyo, Japan) to measure the coordinate error. **Results:** The coordinate error (mm, mean ± SD) of each participant was 0. 627 ± 0. 2140, 0. 878 ± 0. 167, 0. 642 ± 0. 245, 0. 696 ± 0. 190, and 0. 656 ± 0. 234, and these errors were not statistically significant. **Conclusion:** The movement of the forceps tip that was estimated from a three point marker on the hand reproduces the actual forceps tip movementin the intraperitoneal cavity accurately, and the method that we developed will lead to an innovative and useful method for the evaluation of laparoscopic skill.

PP-6

The status of bedside teaching for medical students in the United Kingdom

P Jones[1], J Guerin[1], BP Rai[2]

[1]Department of General Surgery; Ninewells Hospital, Dundee, UK
[2]Department of Urology; Leipzig University, Germany

Background: Bedside teaching holds a strong tradition as a key-learning platform for clinical examination in the basic medical clerkship. A growing body of literature expresses concern for its decline. However, the views of students towards this cornerstone in medical education remain under reported. The purpose of this study was to explore the student perspective on bedside teaching. **Method**: A Delphi method was employed to formulate the survey. Target population was medical undergraduates in the United Kingdom and participants were recruited via social media. Outcomes assessed included exposure to bedside teaching, perceived benefits of clinical simulation and junior doctors as clinical teachers. **Results:** 368 completed surveys were received (completion rate 98. 9%). Final years were significantly more likely to report insufficient bedside teaching (p<0. 01). 78% agreed that clinical simulation is a good learning tool. 70% felt junior doctors were as able as senior doctors at teaching. Lack of confidence was identified as the commonest barrier to overcome when examining patients and two thirds felt they burdened patients during bedside teaching. **Conclusion:** This prospective study confirms the exposure deficit, which medical students experience in bedside teaching. The junior doctor represents a dynamic clinical teacher in the face of working time directives.

PP-7

Methods of Improving Medical Student Attendance: A Prospective Audit of Third Year Undergraduate Medical Education and Exploration of Reasons for Absence

P. Moori[1], L. Alexander[1], B. Richards[1], R. Blessed[1], V. Bleasdale[1], E. J. Nevins[2]

[1]4th Year Medical Student, University of Liverpool Medical School, Liverpool, Merseyside, United Kingdom
[2]Foundation Doctor, University Hospital Aintree, Liverpool, Merseyside, United Kingdom

Background and Aims: Attendance at UK medical school teaching sessions is in decline. We aim to explore the reasons for this reduction. **Materialsand methods:** Attendance was assessed at lectures, ward teaching and problem based learning (PBL) at 3rd year student teaching sessions at the University of Liverpool. Reasons for absence were explored using a qualitative questionnaire. **Results:** Compulsory lectures attained greater attendance than non-compulsory lectures (90% vs 79% p=0. 0005). Access to PowerPoint presentations prior to lectures and long timetable gaps correlated with a decline in attendance (74% vs 89%, p=0. 0012). Lectures held on- campus were poorly attended compared to those held at hospital sites where students undertook compulsory clinical placements (91% vs 79%, p=0. 0066). Unsupervised PBL sessions with sign in sheets, achieved excellent attendance, however, turnout was poor when no monitoring was present (100% vs 0%, p<0. 00001). Similar trends were observed for lecture attendance, indicating that students may be motivated to attend by fear

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of reprimand. 75 students responded to an online questionnaire exploring reasons for attendance and they largely agreed with our findings, however one discrepancy was highlighted. Students reported that access to lecture slides before the teaching session would not affect their attendance, although our evidence showed that when slides were available attendance declined. **Conclusion:**Attendance could be improved if lectures and tutorials coincided with hospital placements. Sign-in sheets, fewer gaps between sessions and multiple lectures on one day would see a marked increase in attendees. In future, medical schools should consider these factors to enhance student motivation to attend teaching sessions.

PP-8

How confident are junior doctors in assessing and managing vascular patients?

J. Karim, C. Davies, C. Ferguson

Department of Vascular Surgery, Morriston Hospital, Swansea, Wales.

Background: The majority of patients admitted to hospital acutely are seen and assessed by a junior doctor. Vascular surgical teaching and exposure to vascular surgery is limited during time in medical school. As a result, junior doctors have limited experience and confidence in assessing and treating patients with vascular disease. **Objective:** To evaluate junior doctors' knowledge of vascular surgical presentations and their confidence in assessing and managing vascular patients. **Methods:**A survey comprised of multiple choice questions was completed by final year medical students and Foundation year doctors in order to evaluate their knowledge of vascular conditions and assess their confidence in managing patients with vascular disease presenting acutely. **Results:**The survey demonstrated that both current and future junior doctors generally do not feel confident when assessing this patient group. There is also little exposure to vascular surgery during medical school. 25% of individuals surveyed claimed not to have received any teaching on vascular conditions in medical school. The majority of respondents agreed that there is a need for more teaching on vascular surgery. **Conclusion:**Junior doctors are not confident in the diagnosis and management of commonly presenting vascular surgical problems. Basic examinations and interpretations of tests, such as ABPI measurement, are not widely understood. Further vascular surgical training and teaching is needed throughout medical school and during junior doctors' induction in order for them to become familiar with vascular surgical presentations.

PP-9

Surgical training of final year medical student to prepare for Foundation Years

C. E. Ng, T. Fasih

General Surgery department, Queen Elizabeth Hospital, Gateshead, UK

Background: Surgery has always been challenging to deliver to undergraduate. However simulation facilities can help to engage the students and bring surgical training into the modern century. **Material and Methods:** Simulated theatre session and clinical skills session for final year students is incorporated in their Hospital Based Practice (HBP) at Queen Elizabeth Hospital, Gateshead. This is in addition to consultant lead lectures and a rota which gives them ward experience and speciality exposure through clinics and theatres. **Results:**During 2013/2014 HBP session, students completed a questionnaire at the end of their placement. 100% found the practical theatre session enjoyable and informative while 85% found the clinical skills useful but 15% would have prefer less supervision and shorter sessions. 100% wanted more of these sessions. To improve on this, foundation doctors now lead small group tutorial during the 2014/2015 HBP. These focus on prescribing skills and prioritising relevant to their experience. They do this by working through short vignette with the students on a weekly basis. **Conclusions:**With increasing number of medical students and European Working Time Directive's impact on trainees' availability to teach, many feel in recent years surgery is less represented in the ever expanding undergraduate curriculum. We hope to overcome this through structured simulated activities and make their experience about acquiring generic skills in accordance with the GMC proposition in "Tomorrow's Doctors".

PP-10

Small groups in medical education: Medical students as PBL tutors

O. El Bakabchi

University of Liverpool, Medical School, Liverpool, UK

Background: In the UK, the first PBL medical curriculum was introduced by the Medical School of Manchester University in 1994, followed by Liverpool Medical School in 1996 following the GMC guidelines on Tomorrow's Doctors to encourage student-centred and self-directed learning. Some universities have called upon their senior medical students to be PBL tutors. Overall aim was to conduct a systematic review of students' perceptions and performance in the context of student-led tutorials in undergraduate medical

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education. **Method:** EMBASE, Medline, The Education Resource Information Centre, Scopus, PubMed (all accessed via NICE Evidence Services) and Google search were used. Inclusion criteria were: Medical School has to be offering a PBL curriculum; all student tutors have to be volunteers; all participants should be medical students at the time of the study; studies carried out have to quasi-randomised controlled, or randomised controlled. **Results:** A total of 1278 entries were displayed, 78 articles were selected as potentially relevant to the review. Three studies were manually selected after reading their abstracts. **Conclusion:** All studies have shown that students' performance in tests has not been affected by having medical students as tutors. Conversely, student satisfaction is higher amongst groups led by students than those ran by faculty members. In addition, studies have shown that student tutors benefit from the experience both at academic and professional level. An area of future research that could be explored is the effectiveness of UK PBL student-tutors if the role has been made part of their medical education.

PP-11

Barnsley laparoscopic cholecystectomy course – course review

F Jarral, H Harvey, S Roomi, N Samuel, M. Khan, S Anwar, A Masri, M. H. Shiwani

Department of General Surgery, Barnsley Hospital NHSFT, South Yorkshire, UK

Background: We aimed to review the laparoscopic cholecystectomy (LC) course run at Barnsley Hospital from the point of view of usefulness for training and value-for-money, in comparison to other similar courses in the UK. **Methods:** The Google search engine, RCSEngland& Scotland websites and pubmed were used to identify courses offering LC training. Key search terms included "laparoscopic cholecystectomy course". We used information available from the course providers to draw comparisons in terms of training methods, faculty-delegate ratio and the course fee charged. **Results:** 5 courses currently offering varying degrees of training in LC were identified. Training methods included lectures; simulation based plasticand animal model training and practical theatre experience with one-to-one consultant supervision. 3 (including the Barnsley Course) exclusively offered training in LC. The remaining 2 offered LC principles as part of general laparoscopic techniques. All of the courses incorporated simulation based animaland plastic models but only the Barnsley course offered summative real-life theatre experience of LC supervised by Consultant Surgeons. The Barnsley course was the best value-for-money offering an intensive one day course for £250. In comparison, others ranged from £275 (Broadgreen Hospital: 1-day with no hands-on theatre experience) to £1055(RCSEng: 3 day course in core laparoscopic skills). **Conclusion:** We found the Barnsley LC course was the only one to offer comprehensive training in LC, consisting of short-lectures, plasticand animal model simulation training and hands-on theatre experience under direct consultant supervision. Not the least, it was the most cost-effective of the courses currently on offer.

PP-12

Effects Of False Cardiac Arrest Alerts To Performance Of Advanced Life Support Team

S. Tekindur [1], M. Yetim [2], Z. Guclu[1], M. Urkan[3], O. Kılıckaya[1]

[1]Gulhane Military Medicine Faculty, Department of Anaesthesia and Reanimation
[2] Van Military Hospital, Department of Anaesthesia and Reanimation
[3] Gulhane Military Medicine Faculty, Department of General Surgery

Baqckground: Advanced Life Support Team (ALST) can only be activated in situations that the patient is required cardiac or respiratory resuscitation. Members of ALST should be transferred to the scene quickly after the call by delegating their responsibility to the other medical staff but a specific part of these calls constitute false alerts. **Case report:**43-year-old female patient fainted in the hospital. While transporting nearest unit with prediagnosis of arrest, ALST was called for dedicated phone for emergencies. When ALST came to scene, the patient was already monitarized, they assesed as a asystole. Then immediately they considered to entubate the patient for preventing gastric aspiration. While they entubated the patient, he awaked, sat down and said that he was good but monitor still showed asystole. For this reason we controled monitorization and we observed false monitorization. **Conclusion and Results:** Cardiac and respiratory arrest is a relatively common event. That ALST reach the scene quckly and take conrol of cardiopulmoary resusitation (CPR) increases the CPR success but when ALST arrive the scene after emergency calls, they are often faced with situations which patients don't need any interventions. False cardiac arrest alerts decrease performance of ALST and lead to loss of workforce. **Keywords:** cardiac arrest, advanced life support, false alerts.

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PP-13

Title- Face, Content, and Construct Validity of Lap-X, a Novel Virtual Reality Simulator for training basic laparoscopic skills

S. Mukai[1], H. Egi[1], M. Hattori[2], H. Sawada[1], K. Kawaguchi[1], T. Suzuki[1], H. Ohdan[1]

[1] Department of Gastroenterological and Transplant Surgery, applied Life Science, Iinstitute of Biomedical and Health Science, Hiroshima University
[2] Advanced Medical skill training center Institute of Biomedicaland Health Sciences Hiroshima University

Background: The Lap-X (Epona Medical, Rotterdam, the Netherlands) is a novel VR simulator for training basic skills in laparoscopic surgery. The aim of this study was to evaluate the face, content and construct validity of the Lap-X as a VR surgical simulator of laparoscopic surgery. **Material and methods:** The face and content validity were evaluated using a structured questionnaire. To assess the construct validity, the participants, nine expert surgeons (median age: 40 (32–45)) (>100 laparoscopic procedures) and 11 novices performed three basic laparoscopic tasks using the Lap-X. **Results:** The participants reported a high level of content validity. The performance of the expert surgeons on the three tasks was significantly better than that of the novices in all parameters (Ps < 0. 05). **Conclusions:** This study demonstrated the face, content and construct validity of the Lap-X. The Lap-X was capable of differentiating between the skill levels.

PP-14

An Effective Treatment Of Idiopathic Granulomatous Mastitis: Prolactin Inhibitors

S. Destek[1] , V. O. Gul[2] , S. Ahioglu[2] , M. Tükenmez[3] , N. Aksakal[3] , M Keskin[3] , K. Rahmi Serin[4] , Y. Erbil[3]

[1]General Surgery Department, Tuzla Hospital, İstanbul, Turkey
[2]General Surgery Department, Edremit Military Hospital, Balikesir, Turkey
[3]General Surgery Department, Istanbul University Medical School, İstanbul, Turkey
[4]General Surgery Department Liv Hospital, İstanbul, Turkey

Background: Idiopathic granulomatous mastitis (IGM) is a rare chronic inflammatory disease, characterized by noncaseating granulomas and breast abscess formation. Its clinical diagnosis may miscible with breast cancer. The cause and pathophysiology is not fully understood. IGM is more common with autoimmune diseases, pregnancy and lactation period, oral contraceptive use and hyperprolactinemia**. Method:** Three patients evaluated in our clinic with a diagnosis of IGM and hyperprolactinemia and treated with prolactin inhibitör. **Result:** The average age of our patients was 36. 6. All of our patients had a painful and palpable mass in the left breast. One of the patients was 16 weeks pregnant. There was no contraseptive use history. Breast sonography revealed hypoechoic solid mass lesions suspicious for malignancy. Leukocytes counts, serum CRP and prolactin levels of patients were high. Pituitary microadenomas was detected in one patient examination. For differential diagnosis with inflammatory breast ca, breast tru-cut biopsy was performed with histopathological examination and finally IGM diagnosed. Culture antibiotic examination unremarkable. Prolactin inhibitor (Cabergoline 1 mg / week), short-term low-dose systemic steroids and broad-spectrum antibiotics were given to all patients. With the decreasing of serum prolactin levels revealed CRP leveles were within referange ranges and clinically treatments of patients provided. **Conclusion:**There is no quiete consensus about the IGM treatment. Prolactin antagonist, suppresses the delayed type hypersensitivity reaction of prolactin. Our cases treated with prolactin antagonist suggests an effective option of prolactin inhibitors IGM treatment by effects prolactin and /or prolactin receptor expression elevation which fundemantally roles in the IGM pathogenesis.

PP-15

A case of post-appendectomy ranitidine-induced bradycardia

E. Tunc[1], U. M. Meral[2], H. Genç[3]

[1] Department of Cardiology, Izmir Military Hospital. Izmir/Turkey
[2] Department of General Surgery,Izmir Military Hospital. Izmir/Turkey
[3] Department of Gastroenterology, Izmir Military Hospital. Izmir/Turkey

Background: Antacid use during and after surgery is important in terms of patient comfort. Our aim for presenting this case is to draw attention to serious cardiovascular side effects of ranitidine in surgical practice. **Patients and Methods:** Twenty-three-year-old male patient admitted with abdominal pain, nausea, vomiting and anorexia to the emergency room, acute appendicitis detected and appendectomy was performed. There were no complaints except fever probably caused by atelectasis postoperative(PO) first day. Intravenous Ranitidine treatment started after dispeptic complaints. Also analgesic was added. PO 2nd day; heart rate was measured 40/min and sinusal bradycardia was observed on the electrocardiogram(ECG). After consultation of cardiologist,

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we decided that bradicardic situation was due to ranitidine infusion. **Results:**Ranitidine treatment was stopped, omeprasole treatment was initiated and 24h heart rate monitorisation started. Heart rate gradually returned to normal sinus rhythm. The patient was discharged without any surgical problem 14th day postoperatively. **Conclusion:**H2 receptor antagonists show the effect of acid suppresion in the stomach by blocking histamine release. H2 receptors are not only limited to the gastric mucosa is also used in other systems. There are also H2 receptors in heart, sinus node and atrial tissue. Ranitidine is a commonly used drug in the emergency department, surgical clinics and intensive care. It may cause to cardiovascular side effects, rarely bradycardia. Parenteral medication of ranitidine should be done under careful monitoring in surgical practice,like our patient.

PP-16

The Affect Of İntraperitoneal Ropivacaine And İncisional Bupivacaine Combination To The Comfort Of The Patient By Laparoscopic Cholecystectomy Operation

V. O. Gul[1], S. Destek[2], E. Etkin[1], S. Ahioglu[1], S. Ozer[3]

[1] Edremit Military Hospital General Surgery Department Balikesir, Turkey
[2] Tuzla Hospital General Surgery Department Istanbul, Turkey
[3] Konya Military Hospital General Surgery Department Konya, Turkey

Background: In this study, our aim was to investigate the affect of intraperitoneal ropivacaine combined with postoperative incisional bupivacaine application to the pain level and patient comfort after laparoscopic cholecystectomy. **Method:** In our clinic, 53 ASA-I and II patients who were subjected to elective laparoscopic cholecystectomy were included in the study. 27 of the patients comprised the working group (Group 1), and 26 of them the control group (Group 2). In the working group, intraperitoneal 40 ml ropivacaine and at the end of the operation totally 10 ml of 2%-bupivacaine were injected to the trocar-sites, under the skin and to the fascia layer. For pain evaluation, VAS (visual analog scala) scores, nausea and vomiting, sedation level were evaluated and recorded when the patient was transported to postanesthesia care unit immediately and at 2, 4, 8, 12, 18 and 24. hours after the operation. Postoperative analgesia was provided by patient controlled intramuscular diclofenac sodium**. Results:** Whereas the VAS scores in Group 1 were found meaningfully low compared to Group 2 (p<0. 05),this difference was only at 24. hour statistically meaningless (p>0. 05). The amount of postoperative intramuscular diclofenac sodium used by patients was found in Group1 meaningfully low (p<0. 05**). Conclusion:** The combination of intraperitoneal ropivacaine and local postincisional bupivacaine applied in laparoscopic cholecystectomy provided a positive affect on the comfort of the patient in the time of recovery by decreasing the postoperative pain and the need for analgesics meaningfully.

PP-17

Infrequentcontent of strangulated inguinal hernia sac: ovaryand fallopian tube

E. Arslan[1], O. Ureyen[2], U. M. Meral[3], A. C. Tuncel[4], E. D. Ustun[5]

[1]Department of General Surgery, Demirci StateHospital. Manisa/Turkey
[2] Department of General Surgery,Bozyaka Training andResearchHospital. Izmir/Turkey
[3] Department of General Surgery,Izmir Military Hospital. Izmir/Turkey
[4]Department of Gynecology, Demirci State Hospital. Manisa/Turkey
[5]Department of Radiology, Demirci State Hospital. Manisa/Turkey

Background: A strangulated inguinal hernia containing fallopian tube and ovary is a very rare case in adult females**. Objectives:** We wanted to report this unusual case, because of its importance for reproductive age female patients. **Patients and Methods:** 42 year old multiparous patient admitted to emergency room with complaints of mild groin mass. In her story, the mass was in her groin for last 4-5 years but its size increased and pain began 3 days ago. In physical examination; irreductable, painful and hiperemic hernia sac was palpated at the left groin. All labarotory findings were normal. Superficial ultrasonography was performed and free fluid, omental tissues and a suspicious area was seen in the sac. **Results:** We decided to do emergency surgery. In exploration; hernia sac containing partial torsioned left ovary and fallopian tube was seen. After intraoperative gynaecologist consultation, salpingo-oophorectomy and Lichtenstein hernia repair was performed. The patient discharged postoperative 3rd day without any complication. **Conclusion:** Every pelvic organ can takeplace in groinhernia. Although the majority ofcases about inguinal hernia saccontaining ovary andfallopian tube are seen in pediatric age, reproductive age women can appeal with this table. We recommend appropriate preoperative evaluation, careful imaging, and immediate surgical intervention if necessary and multidisciplinary approach for treatment; in order toa dequately protect fertility function in young women. We also want to draw attention to preoperative patient consent about possible salpingo-oophorectomy to avoid potential juristic problems after surgery.

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PP-18

Amyand's hernia: uncommon content of inguinal hernia

U. M. Meral[1], M. Urkan[2], O. Ureyen[3], N. C. Oren[4]

[1] Department of General Surgery, Izmir Military Hospital. Izmir/Turkey
[2] Department of General Surgery, Gulhane Military Medical Academy, Ankara/Turkey
[3] Department of General Surgery, Bozyaka Training and Research Hospital. Izmir/Turkey
[4] Department of Radiology, Izmir Military Hospital. Izmir/Turkey

Background: Amyand's hernia is a rare form of an inguinal herniawhich occurs when the appendix vermiformis is included in the hernial sac. **Objectives:**We want to share this unusual case which was operated in our hospital and discuss the surgical technique. **Patientand Methods:**A 21-year old man with right inguinal irreductable mass was admitted to the hospital. He had a 3-years history of a right groin mass. The laboratory results were within normal limits. Elective surgery was planned. **Results:**During exploration, appendix vermiformis without having any inflammation was found adherent to the hernia sac and it was not reductable to the abdomen. Lichtenstein procedure with appendectomy was performed and the patient was discharged in postoperative 3rd day without any complication. **Conclusion:**The possibility of an adherent appendix to the hernia sac should always be kept in mind in patients with inguinal hernia. An appendectomy with a carefull dissection as well as hernia repairment should be chosen for surgical procedure.

PP-19

Wide Local Excision (WLE) Day Case Stay Audit

C. S. Milkhu, S. Clark

Leeds Breast Unit, Leeds Teaching Hospitals NHS Trust
St James's University Hospital, Beckett Street, Leeds. LS9 7TF.

Background: Most Wide Local Excision (WLE) operations in the Leeds Breast Unit performed as day case procedures. However, some patients stay overnight, negating the benefits of day case surgery. **Aims**: To audit a random selection of patients undergoing day case WLE procedure. To identify trends/ reasons for patients staying overnight. **Method:** Prospective audit using standard proforma over 4 weeks at random from 14th January – 14th Feb 2014. **Results:**14 wide local excision operations booked as per booking form. Average age of patient 52yrs (19-83). 7/14 patients had overnight stay (50%). 1 patient had an overnight stay due to social reasons (homecare/ living alone) = 1/7 = 14% (7% of total)1 patient stayed overnight due to urinary problems (not passed urine until late) = 1/7 = 14%5 patients stayed overnight due to post anaesthetic problems = 5/7 = 71% (36% of total), Of which; 4 had prolonged nausea and vomiting post operatively requiring overnight stay = 4/7 = 57% (29% of total), 3 patients had prolonged effects of anaesthetic (drowsy, patient flat, returned late from recovery) = 3/7 = 43% (21% of total), 2 patients had both prolonged N&V and effects of anaesthetic = 2/7 = 29% (14% of total)**Conclusion:**50% of day-case patients audited staying overnight, majority due to post anaesthetic issues. There were no pain issues. The majority patients had intra-operative morphine administration. A minority of patients stayed overnight due to other issues but some of these should not have been booked as day cases.

PP-20

Limberg flap procedure for surgical treatment of pilonidal sinus: retrospective analyse of postoperative early complications

O. Ureyen[1], E. Ilhan[1], T. Tekeli[1], M. A. Ustuner[1], E. Dadali[1], U. Gokcelli[1], U. M. Meral[2], O. Alpdogan[1],H. Gungor[1]

[1]Department of General Surgery, Bozyaka Training and Research Hospital. Izmir/Turkey
[2]Department of General Surgery, Izmir Military Hospital. Izmir/Turkey

Background and Aim: The main objective for treating pilonidal sinus disease(PSD) is minimal postoperative morbidity and recurrence rate. Seroma, hematoma, wound separation and infection may occur during early or late postoperative follow-up. Postoperative comfort, hospitalization period and treatment costs are associated with complication rate. **Objectives:** The aim of our study was to evaluate the complications after PSD that underwent Limberg flap(LF) procedure. **Materials and Methods:** From January 2013 to August 2014, PSD patients treated with LF were examined about age, gender, hospital stay, wound infection, re-hospitalization, postoperative urinary distention, postspinal headache and narcotic analgesic requirement in postoperative 30 days,retrospectively. **Results:** One hundred three patient were assessed. 92 was male and 11 was female. The average age was 26,4. Average hospitalization stay was 1,9 days. 2(1,9%) of patients re-hospitalized because of postspinal headache and hematoma,respectively. Wound infection occured in 5(4,8%) patient during 30 day follow-up. Only one patient(<1%) was complained about urinary retantion and one(<%1) needed narcotic analgesic medication in addition to routine postoperative analgesics. Postoperative flap necrosis,

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recurrence and wound seperation was not observed. **Conclusion:** LF is a safe method for surgical treatment ofPSD, because of fast return to daily activities, no significant pain and acceptable wound infection rates.

PP-21

A Review of the Oncological and Surgical Complications Associated with the Lipomodelling Technique for Breast Reconstruction in Breast Cancer Patients

E. A. Baker, P. Bhaskar

Professorial Unit of Surgery, University Hospital of North Tees, Stockton on Tees, UK

Background: Breast reconstruction after cancer surgery is becoming increasingly popular and various surgical techniques have been developed. Lipomodelling is one such technique however its safety remains controversial. Therefore this literature review aimed to assess the oncological and surgical safety of lipomodelling for breast reconstruction in breast cancer patients. **Methods:** Database searches (Cochrane library, MEDLINE, EMBASE, CINAHL, AMED and Open Grey) were conducted to determine studies meeting the eligibility criteria from January 2000 to February 2014. In addition reference lists and conference proceedings were hand-searched. Complications of interest were either oncological e.g. tumour recurrence or related to the surgical procedure e.g. fat necrosis or cyst formation.Relevant studies were assessed for quality using the MINORS tool, the relevant data was extracted and a narrative synthesis performed. **Results:** A total of 205 articles were identified from the combined database searches of which 44 made it through to stage two (eligibility) of the review. 31 of these studies were excluded leaving 13 studies to be assessed for quality. Five studies were included in the final review with a total of 1073 patients. All studies reported oncological events post-lipomodelling; 25 local recurrences, 20 regional recurrences and 29 distant metastases.Minor post-operative surgical complications were reported in 4.9% patients (cysts, fat necrosis or site-infections). **Conclusions:** Evidence from the review would suggest that lipomodelling is a safe technique however prospective randomised controlled trials with long term follow-up are required to validate the efficacy and oncological safety of this technique in practice.

PP-22

Who is responsible for my care?

C. Elliott[1]

[1]Divison of Plastic & Reconstructive Surgery, St Helens and Knowsley NHS Trust.

Background: To investigate if a regional plastics and trauma unit conforms to the Royal College of Surgeons of England's 'Good Surgical Practice' 2014 standards which state as surgeons we must ensure that the patient knows the name of the person responsible for their care. **Methods:** All patients under the care of a plastic surgeon were asked the same question; 'Do you know the name of the person responsible for your care?' Answers were recorded on a spreadsheet. Patients included ward patients, pre-operative patients and trauma patients.**Results:** 25 patients were asked in total; 12 trauma patients, 9 ward patients, 4 pre-operative patients. 12/25 (48%) did not know the name of the person responsible for their care. 11/12 (92%) of trauma patients could not provide a name and 1/4 (25%) of pre-operative patients were also unable. All ward patients knew the name of their responsible consultant. **Conclusion:** Currently we are not meeting the standards as set out in 'Good Surgical Practice'. Reasons for this may include - not introducing oneself to the patient, lack of staff awareness of who the consultant is on call and no point of reference for the patient to familiarise themselves with the consultants name. All of these points were proposed to be improved which will lead to greater patient satisfaction and better adherence to the standards, after which the second cycle of the audit will be carried out.

PP-23

Aggressive angiomyxoma of the perianal region in a male patient: case report

O.Ureyen[1], *E.Ilhan*[1], *U.M.Meral*[2], *U. Gokcelli*[1]

[1] Department of General Surgery, Bozyaka Training and Research Hospital. Izmir/Turkey
[2] Department of General Surgery, Izmir Military Hospital. Izmir/Turkey

Background: Aggressive angiomyxoma (AAM) is an unusual, locally aggressive mesenchymal neoplasm that typically occurs in the pelvis and perineum in adult women. It is a low grade neoplasm with a high risk of recurrence following surgery. **Objectives:** We present a case of AAM arising from the perianal region and making pressure to the anus. **Patient and Methods:** 66 year old man admitted with a slowly growing perianal swelling. 7x5 cm semisolid mass was palpated in physical examination. Ultrasonography confirmed physical examination about the mass and magnetic resonance(MRI) was performed, to identify the mass. There was a mass beside the anus,9x6x5 cm in side in

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the MRI. The preliminary diagnose for the mass was nerve sheath tumor according to the MRI imagery. The patient was operated under spinal anesthesia and the mass resected with disease-free margins. He was discharged 4th day postoperatively without any complication. **Results:** Histapathology after excision, pathologic examination gave a diagnosis of AAM. Follow-up six months later revealed no recurrence. **Conclusion:** The standard treatment for AAM is total excision and close follow-up. Expanded excisions should be essential for R0 resection, although it is controversial. We consider that; presentation of rare cases in literature would help to clarify the unknown.

PP-24

Use of multimedia devices in the process of informed consent in gastrointestinal surgery

U.M.Meral[1], M.Urkan[2], U.Alakus[3]

[1] Department of General Surgery,Izmir Military Hospital. Izmir/Turkey
[2] Department of General Surgery,Gulhane Military Medical Academy. Ankara/Turkey
[3] Department of General Surgery, Elazig Military Hospital. Elazig/Turkey

Background: Efforts to proceed patients' comprehension of their own medical treatments or research in which they are involved are prosessing, especially in point of informed consent procedures. The use of multimedia(MM) devices for informed consent about surgical procedures is spreading in parallel with the development of technology. **Objectives:** The aim of review is to explore the usage of MM devices for informed consent in gastrointestinal surgery.**Material Methods:** Medline and Pubmed search was undertaken using terms "multimedia", "informed consent" to identify relevant articles. This search identified 70 articles. Once duplicates (n = 12) were removed, remaining 58 articles were screened, resulting in 11 high-quality studies that met the inclusion criteria.**Results:** Four(36%) article were about the usage of MM devices in gastrointestinal surgical patients. All studies examined the difference between MM informed consent and standard verbal consent(SVC). Patients' answered questionnaires about their treatment before variable surgical procedures. They answered a greater proportion of correct answers after multimedia modules significantly. Also, studies examined the patient's anxiety level after MM consent and results were similar with SVC. **Conclusion:** It is important being informed about the treatment for patients. Comprehension in surgical patients is weak. Patients with lower educational levels may gain most from additional interventions. Use of MM devices augments the informed consent course by improving patient knowledge. It must be also important in gastrointestinal surgery, because of multiple risks for patients during surgery. We think that further well-designed randomized clinical trials of low risk of bias are necessary for gastrointestinal surgery.

PP-25

The effectiveness of statins in improving wound healing in experimental diabetes

K. Agarwal, M. Mistry, S. Shah, R. Nelapatla

School of Medicine, University of Liverpool. Liverpool, UK.

Background: Diabetics are prone to wounds, ulcers and impaired healing. This systematic review has been undertaken to critically appraise randomised controlled trials, to investigate how statins can alter the wound healing process in diabetics and their effectiveness in doing so. **Methods:** Medical databases such as Ovid Medline®, Scopus and Science Direct have been searched meticulously for articles from 2006 to current year with keywords such as "statin", "wound", "diabetes" etc. The results were then checked to make sure that the articles met the criteria such as RCTs and the use of statin as the intervention and a control drug for comparison. From the results, three were considered to meet the criteria for the purpose and had been chosen for reviewing. The articles have been appraised using the critical skills appraisal programme (CASP) as a guideline. **Results:** The results of these articles showed that statins do indeed improve the healing process of wounds in diabetics. All three articles demonstrated positive results in favour for the statin group with better healing. This is believed to be achieved by increasing the levels of substances such as nitric oxide products, various growth factors and down regulating the production of endothelin-1, all of which contribute to the healing mechanism. **Conclusions:** The trials have shown a positive outlook to the use of statins to help improve wound healing in diabetics; however, further trials are needed to be done with larger sample sizes and on humans to put together further concrete evidence demonstrating their effectiveness.

PP-26

An unusual presentation: Sacrococcygeal and vulvar pilonidal disease in a female patient

U.M.Meral[1], E.Celik[2], A.O.Meral[3]

[1] Department of General Surgery, Izmir Military Hospital. Izmir/Turkey
[2] Department of Pathology, Izmir Military Hospital. Izmir/Turkey
[3] Department of Dermatology, Izmir Military Hospital. Izmir/Turkey

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Background: Pilonidal disease(PD) is a common disease in young patients. Various types of surgical procedures were defined for definitive treatment. PD is usually localised to sacrococcygeal region but it can be detected in other regions.**Objectives:** We want to present unusual case of sacrococcygeal and vulvar PD.**Patient & Methods:** A 29 year old female patient was admitted to dermatology department with a painful mass on labium majus. Despite antibiotic treatment, lesion did not regressed and the patient was consulted to surgery for excision. In surgical examination,there was 1x1 cm. solid mass and an inactive orifis-shaped structure 2 cm. far to the mass. After detailed history and physical examination, PD was also detected in intergluteal groove.**Results:** The patient was operated under local anesthesia. Excision and primary closure was performed for both surgical regions. Histopathological results confirmed PD diagnosis in both specimens.A few hair shafts seen in the centre of the cystic lesion. **Conclusion:** Extraordinary localization of PD is important. There are few cases in literature about genital PD in female patients. Clinicians must be aware of the sacrococcygeal disease togetherness with unusual localization like our patient for early diagnosis and treatment.

PP-27

Importance of Facial Suture In The Development of Trocar Site Hernia After Laparoscopic Surgery

V. O. Gul[1], S. Destek[2], E. Etkin[1], S. Ozer[3]

[1]Edremit Military Hospital General Surgery Department Balikesir, Turkey
[2] Tuzla Hospital General Surgery Department Istanbul, Turkey
[3] Konya Military Hospital General Surgery Department Konya, Turkey

Background: Trocar site hernias are defined as hernias developing in cannulation site. Trocar site hernia is a serious complication during laparoscopy. Trocar site herniation can be difficult to diagnose because lead to variety of clinical conditions and it can occur at any time during postoperative period. This article is about the role of suturation of the insertion site to prevent trocar site hernia and its importance.Patients with trocar site hernia after laparoscopic surgery in our clinic were reviewed retrospectively; according to their age, sex, comorbidity, location and size of the hernia, the operation, risk factors and closure the insertion site by suture.**Method and Results:** In 167 patients who underwent laparoscopic surgery, patient's BMI was 31.3 and the mean age was 49.67. Port hernias were seen in 5 patients with sutured fascia and 4 patients with unsutured fascia during laparoscopic surgery. There is no statistically significant difference between both groups (P <0.05). Avarage BMI in patients with hernia was 36.2 and there was a one patient with chronic obstructive pulmonary disease from both group.**Conclusion:**Trocar diameter, trocar design, pre-existing fascial defects, direction of the trocar insertion, place where the trocar applied, and also diabetes mellitus, obesity, age and COPD effect significantly the development of the trocar site hernia.Closure of 10 mm or greater fascial defects is recommended to prevent trocar hernia development. However, in our study, it's observed that the closure of the fascial defects in the development of trocar hernia during laparoscopic surgery has not predominant.

PP-28

Mammaglobin-A Expression in Tissue and Plasma Samples from Breast Cancer Patients

E. A. Baker [1], N. Whiteoak[2], L. Hall [2], D. Wilson [1], P. Bhaskar[1]

[1] Professorial Unit of Surgery and [2] Histopathology Department, University Hospital of North Tees, Stockton-on-Tees, UK

Background: Human mammaglobin-A has been shown to be specifically expressed in breast tissue, over-expressed in some breast cancers and associated with less aggressive phenotypes. Mammaglobin-A protein expression has rarely been measured in plasma samples and it is not known whether the levels correlate to breast tumour expression and or the tumour histopathology.**Patients and Methods:** 80 patients who had undergone breast surgery (benign or breast cancer) were randomly selected after stratification for tumour grade. Breast (tumour) tissue and pre- and post-operative plasma samples from each patient were analysed for mammaglobin-A protein expression by immunohistochemistry and ELISAs respectively. Expression was compared with tumour histopathology. The study had ethics approval.**Results:** Positive mammaglobin-A expression was observed in 52% tissue samples, 81% pre-operative and 97% post-operative plasma samples. There were no associations between the tissue or plasma mammaglobin expression with tumour histological grade, receptor status, or size.Agreement in mammaglobin expression (positive or negative) between paired samples was 52% for pre-op plasma and tissue, 55% post-op and tissue and 82% pre and post-op plasma samples.Mammaglobin levels were significantly higher in post-operative plasma samples than pre-operative samples ($p<0.05$, Wilcoxon); post-operative plasma, median, 1.21(range, 0-8.48)ng/ml and pre-operative samples, 0.81(0-10.14)ng/ml.**Conclusions:** Positive mammaglobin-A protein expression was found in a higher proportion of plasma samples than tissue from breast cancer patients, with post-operative plasma samples demonstrating higher levels than pre-operative plasma. Plasma mammaglobin expression did not correlate with the corresponding tissue expression or tumour histopathology.

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PP-29

Breast Capsular Contracture: An Epidemiological Review

E. J. Nevins[1], J. Smith-Williams[2]

[1]Foundation Doctor, University Hospital Aintree, Liverpool, Merseyside, United Kingdom
[2]Foundation Doctor, Royal Liverpool University Hospital, Liverpool, Merseyside, United Kingdom

Background: Breast capsular contracture (CC) is the most common complication for patients who have silicone implant breast augmentation or reconstruction. CC results in breast pain, asymmetry or distortion of the reconstructed breast. This work aims to explore the incidence and risk factors for CC. **Materials and Methods:** A literature search demonstrated 18 publications between 1999-2013 reporting risk factors for CC in a total of 11,606 patients.**Results:** The incidence of CC ranges from 0-62%, however the case definition of CC varies significantly, as does the length of time for follow up. CC is less common in cosmetic procedures when compared to reconstructive procedures. Increasing age is consistently quoted as a risk factor for developing CC, as is meticulous interoperative haemostatasis, when compared to blunt dissection. Textured implants should be avoided in favour of smooth implants. Methods to reduce implant infection such as: nipple shields; antibiotic irrigation; and antibiotic impregnated meshes also reduce CC rates. Chemotherapy reduces the rates of CC in breast reconstruction. **Conclusion:** CC continues to occur even with advances in surgical technique and equipment. The underlying cause of this complication remains elusive and is likely a multi-factorial process. Before the incidence of CC can be accurately estimated there must be an agreed case definition. However, sterility and meticulous haemostasis is a must in the prevention of CC, and patients should be followed up for a number of years to monitor the development of CC.

PP-30

Title: Effect of regular NSAIDs on survival of breast cancer patients: a systematic review

L. Sutton, E.R. McGlone, K. Lambert

Department of Breast Surgery, Kingston Hospital, Surrey, UK.

Background: Evidence from laboratory and animal studies demonstrates that aspirin and other non-steroidal anti-inflammatories may alter cancer progression. We conducted a systematic review to investigate whether concomitant use of NSAIDs alters mortality in breast cancer patients. **Methods:** A standardised literature search was performed on the Medline database (1948 to 30th March 2015) with terms including 'breast cancer', 'NSAID OR aspirin' and 'recurrence OR mortality OR survivor'. Papers that were irrelevant, reviews or subsequently updated analyses of the same cohort were excluded.**Results:** The search yielded 135 papers, six containing the best evidence: four prospective and one retrospective cohort study, and one case control study. There were no randomised control trials. 16,167 patients were studied with follow up ranging from three to thirty years. All six studies looked at breast cancer mortality in patients using regular aspirin. The effect of non-aspirin NSAIDs was additionally investigated in four studies.Three studies found a significant reduction in breast cancer mortality for patients using aspirin compared to those not using aspirin (n=9382), one a non-significant reduction (n = 3,058) and two no reduction (n= 3,727). Further studies concluded that use of non-aspirin NSAIDs was associated with reduction in breast cancer recurrence (n = 2,292); and all-cause mortality (n = 591). **Conclusions:** There is some limited evidence that aspirin and other NSAIDs reduce breast cancer mortality. Further studies are warranted to confirm this association, to identify which groups of patients will particularly benefit, and to determine which type and dose of NSAID are most efficacious.

PP-31

Acquired Urehtrocutaneous Fistula: A Rare Complication of Pilonidal Sinus Surgery

Z. Demirer [1], A. Gürağaç [2], F. Dursun [3], M. Zor [4] , Ş. Başal [4]

[1] Eskisehir Military Hospital, Department of Urology, Eskişehir, Turkey
[2] Gülhane Military Medical Academy, Department of Urology, Ankara, Turkey
[3] Gümüşsuyu Military Hospital, Department of Urology, Istanbul, Turkey
[4] Gülhane Military Medical Academy Haydarpasa Training Hospital, Department of Urology, Istanbul, Turkey

Background: Acquired urehtrocutaneous fistulas (RUF) can be seen as a complication of trauma, surgery, cancer, or inflammatory disease mostly involving urethra. Here we presented a rare type of urehtrocutaneous fistula opened perianal area that occurred as a complication of pilonidal sinus surgery and also successfully repaired by a perineal approach. **Material/Patients and Methods:** A 20 year old male patient presented with recurrent febrile urinary tract infections and urine leakage from perianal area while micturating, without any complaints of fecaluria or pneumaturi for 4 years. He had pilonidal sinus excision surgery history about 3 years ago in another medical center. His complaints begun almost 2 years after the surgery. At lithotomy position bladder filled with methylene blue solution via a transuterhral 14 F nelaton catheter. Then

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catheter was removed, Fistüle orifis was detected during perianal inspection and methylen blue leakage was seen from fistüle orifices during mixcuration. A urethroscopy was performed and edematous region at the level of verumontanum at the prostatic urethra was detected but any fistula orifices opening that area cannot be seen. Finally 3 dimensional voiding computed tomography was performed and fistüle tract was identified that located between prostatic urethra and perianal area. Surgical excision of fistula tract was performed at exaggerated lithotomy position.**Results:**Total operating time was approximately 120 minutes with estimated blood loss of 100 ml. His transurethral catheter withdrawn at postoperatif 15 th day. The patient did not have any complaints or recurrence after 6 months of follow-up.**Conclusions:**Inspection of genital area at lithotomy position during micturation after filling the bladder with methylen blue solution and three dimensional voiding computed tomography can be helpful to detect urehtrocutaneous fistulas, location of fistula tracts and planning the surgical approach.

PP-32

Patient attitudes towards tissue donation

T. Ankers, K. Rankin

Department of Orthopaedic Surgery, Freeman Hospital, Newcastle upon Tyne

Background: The Newcastle Musculoskeletal Research Group (NMRG) collects tissue samples for use in research into arthritis. Little is known about the thoughts and feelings of the patients who are asked to donate their tissue samples. **Objectives**: This study aimed to assess the attitudes of patients towards donating tissue samples for medical research. **Method**: To investigate this further a questionnaire was produced with guidance from a member of NMRG. Patients undergoing arthroplasty at the Freeman Hospital Newcastle upon Tyne in June and July 2014 were asked to complete the questionnaire. Attitudes towards consent, anonymity, probity, animal research and the use of samples abroad were specifically assessed. Patients were also given the opportunity to voice their ideas and concerns with white space answers. **Results**: 52 questionnaires were completed. 67% of patients chose to donate their tissue. A statistically significant relationship between the decision to donate and receiving a good explanation of the reasons for donation was demonstrated. As might be expected consent and anonymity were considered important by patients. An overwhelming majority objected to the use of their tissue samples in animal research. A wide range of ideas and concerns were put forward. **Conclusions**: this paper shows that a thorough explanation improves the rate of tissue donation. A better understanding of patient attitudes towards tissue donation may help alleviate their concerns and maximise participation in research. Issues identified here will be used to deliver better explanations in further research projects.

PP-33

Congenital anonychia

A. Qureshi[1], K. Yuen Wong[2], I. Grant[2]

[1]University of Cambridge School of Clinical Medicine, Cambridge, United Kingdom
[2]Department of Plastic and Reconstructive Surgery, Cambridge University Hospitals NHS Foundation Trust, Cambridge, United Kingdom

Background: Congenital anonychia is rare with less than 20 reported cases in the English literature. We describe a case of congenital anonychia. **Material/Patients and Methods**: A fit and healthy 44-year-old delivered a 3950g male child via emergency lower Caesarean section at 41 weeks, due to failed induction of labour. The child was noted to have complete absence of nails on differing digits of all four limbs: left little finger, right ring finger and all the toes. He also hada fold at the apex of each ear. The child was otherwise healthy with no associated syndromes. The parents were unrelated with normal hands, feet and nails. The pregnancy was unremarkable with no known exposure of the fetus to any teratogen. The patient's father had a congenital absence of one kidney and the mother had a congenital cataract. An older sibling had no overt sign of any congenital idiosyncrasy. A genomic microarray test gave a normal result. Genetic analysis of the R-spondin 4 (*RSP04)*was declined for personal reasons. **Results**:Congenital hereditary nail anomalies are much more rare than those acquired during life. Various genes have been implicated in nail development. Mutations in the *RSP04* gene on chromosome 20 are associated with autosomal recessive isolated total congenital anonychia via a Wnt-signalling pathway defect. **Conclusion:** Our case presentation supports the proposal that mutations in *RSP04* responsible for anonychia follow an autosomal recessive pattern of inheritance. As congenital anonychia is extremely rare, it is important to actively rule out any associated syndromes.

PP-34

Retroperitoneal Gossypiboma

A. Gürağaç [1], S. Uğuz [1], E. Ozan Akay [1] , Z. Demirer [2], H. Tomruk [1], H. Cem Irkılata [1]

[1] Gülhane Military Medical Academy, Department of Urology, Ankara, Turkey
[2] Eskisehir Military Hospital, Department of Urology, Eskişehir, Turkey

Background: The term gossypiboma explain the condition retained surgical item that is unintentionally left in the patient after closure of the wound which leading to a multitude of complications. Herein we present a case of

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gossypiboma that was characterized by the presentation of an encapsulated retroperitoneal mass with chronic fistulization. **Material/Patients and Methods:** A 41 year old male patient presented with long standing pain and chronic fistulization at the right loin which were started after the renal surgery that performed on emergency basis 2 years before because of firearm injury. On physical examination vague tenderness and firmness with fistulization at the right loin attracted attention. Laboratory findings were within normal limits. Computed tomography scan revealed a 5x3 cm heterogen internal structure in the right retroperitoneum adjacent to the right kidney. At surgery, a 5x3 cm, well capsulated retroperitoneal mass was excised from the severe adhesion between the right kidney lower pole. The retained surgical sponge was found intraoperatively by cutting the mass. **Results:** Total operating time was approximately 140 minutes with estimated blood loss of 250 ml. His urethral catheter withdrawn postoperative second day and the the drain which placed retroperitoneal space withdrawn a day after. The patient did not have any complaints at 6 th months of follow-up. **Conclusions:** Although gossypiboma is a rare urological complication it can be a disaster for the patient and surgeons. Surgeons should be keep in mind this rare entity at every surgery and they should take care about risk factors. Prevention remain better than the cure.

PP-35

Rectourethral Fistula After Transurethral Resection of Prostate in a Patient who Underwent Low Anterior Resection of the Rectum Before

A. Güraǧaç [1], Z. Demirer [2], S. Uğuz [1], E. Aydur [1], N. Ersöz [3], İ. Yıldırım [1]

[1] Gülhane Military Medical Academy, Department of Urology, Ankara, Turkey
[2] Eskisehir Military Hospital, Department of Urology, Eskişehir, Turkey
[3] Gülhane Military Medical Academy, Department of General Surgery, Ankara, Turkey

Background: Although rectourinary fistula uncommon, they can develop as a complication of trauma, cancer, inflammatory bowel disease, perirectal abcesses or they most frequently appear as a complication of extirpative or ablative prostate surgeries. Here in we present a case of rectourethral fistula on an account of transurethral resection of prostate in a patient who underwent low anterior resection of the rectum before, which also successfully repaired by a perineal approach. **Material/Patients and Methods:** A 84 year old male patient who had history of low anterior reseciton of the rectum because of high grade dysplastic polyp 8 years before, presented with benign prostatic hyperplasia symptoms and he underwent transurethral resection of prostate resection, with approximately 50 gr of tissue resected. O postoperative day 5, the patient presented with pneumaturia and fecaluria. Cystourethroscopy and rectosigmoidoscopy confirmed the diagnosis of rectourethral fistula. The opening of the fistula was located at the prostatic urethra. Once the fistula tract between prostatic urethra and rectum became evident by perineal approach, the tract excised and the rectum and prostatic urethra dissected free from each other. The prostatic urethra was closed with 3-0 Monocryl suture using an interrupted one layer technique, the rectum was also closed with 3-0 poliglecapron using an interruppted two layers technique. The dartos flap was mobilized from the scrotum and placed between the rectum and the prostatic urethra, colostomy was also created. **Results:** Total operating time was approximately 150 minutes with estimated blood loss of 100 ml. His urethral catheter withdrawn postoperatif 21 th day and the drain which placed pararectal space withdrawn a day after. The patient did not have any complaints at 6 th months of follow-up. **Conclusion:** The rectourethral fistula is a rare, but devasting complication that can develop after transurethral resection of prostate. Treatment of this entity can be very challenging, the urologist should be keep in mind this entity especially in a patient with history of rectal surgery before.

PP-36

Acute mesenteric ischemia after adjuvant breast cancer chemotherapy:A case report

H.Gungor[1], O.Ureyen[1], U.M.Meral[2], D.Tunali[3], E.Ilhan[1]

[1] Department of General Surgery, Bozyaka Training and Research Hospital. Izmir/Turkey
[2] Department of General Surgery, Izmir Military Hospital. Izmir/Turkey
[3] Department of Medical Oncology, Bozyaka Training and Research Hospital. Izmir/Turkey

Background & Aim: Acute mesenteric ischemia (AMI) is a vascular disease, which is associated with high mortality and morbidity even in experienced institutes.Difficulties in diagnosis and treatment continues today. Mesenteric thrombosis usually develops due to arterial embolism or non-occlusive reasons. **Objectives:** We wanted to present a case of AMI after adjuvant chemotherapy.**Patient & Methods:** 38 year old female patient underwent segmental mastectomy and sentinel lymph node dissection because of infiltrative ductal carcinoma. Pathologic tumor was stage 1(T1N0M0). Clinical council of oncology decided chemotherapy,hormonotherapy and radiotherapy,as further treatment fort the patient. The patient admitted with severe abdominal pain and nausea,after 3rd line cyclophosphamide/docetaxel chemotherapy. There was generalized rebound tenderness and muscular defence in her physical examination. Interloop fluid and bowel wall thickening was detected in abdominal ultrasonography. Abdominal X-ray study was performed and showed several

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small-bowel loops with air-fluid levels. Laboratory findings were normal except leukocytosis (WBC:13800/mm³). **Results:** Emergency laparotomy performed and an ischemic 90 cm in-size small-bowel loop observed during exploration. Resection and end-to-end anastomosis was performed. The patient discharged without any complication in postoperative 7th day.Histopathological examination of small bowel was reported as massive polymorphonuclear neutrophils (PMNL) infiltration, vascular congestion and edema. Cardiological examination and protein C levels were normal. Chemotherapy and radiotherapy treatment was completed and the patient is receiving hormone therapy without any problem. **Conclusion:** Oncologic patients are under risk for thrombosis and chemotherapeutic agents potentiates the risk. AMI should be kept in mind when acute abdominal pain occurs during/after chemotherapy.

PP-37

Acute appendicitis associated with crossed-renal ectopia:An unusual presentation

U.M.Meral[1], O.Ureyen[2], N.C.Oren[3], H.Gungor[2]

[1] Department of General Surgery, Izmir Military Hospital. Izmir/Turkey
[2] Department of General Surgery, Bozyaka Training and Research Hospital. Izmir/Turkey
[3] Department of Radiology, Izmir Military Hospital. Izmir/Turkey

Background: Crossed renal ectopia(CRE) is a rare anomaly in urological clinical practice. The patients with this anomaly are usually asymptomatic. **Objectives:** We wanted to present a case of CRE admitted with acute abdominal pain. **Patient &Methods:** 22 year old man admitted with abdominal pain to the emergency department. His physical exam was positive for muscular tenderness and painful mass at the lower quadrant, His history was negative for nausea and anorexia. Urinary analyse was normal,WBC was 8800/mm³ and no neutrophilia detected . Abdominal ultrasonography(US) was performed and CRE malformation was revealed with a grade 1 pelvicaliectasis in the left crossed-ectopic kidney. There was no calcule or mass lesion associated with the pelvicaliceal dilatation. There were no inflammatory findings in right lower quadrant in US. CRE diagnosis revealed in abdominal tomography. Despite intravenous hydration and famotidine treatment, abdominal tenderness continued. We decided to surgical exploration.Results: In surgical exploration, appendix was normal in-size but inflamed. Also two intraluminal fecaloid was palpated. Appendectomty was performed. He was discharged 4th day postoperatively without any complication.**Conclusion:** Acute appendicitis is the most common surgical procedure in our clinical practice. Acute abdominal pain must be managed carefully in patients with unusual anatomy. Also surgeons should be aware of ectopic organs in surgical procedures, to avoid from intraoperative injuries.

PP-38

Auditing the effect of opening a novel surgical day-case unit in performing incision and drainage of abscesses

A. Tiley, A. Aldren

Background & Aims: Before the surgical day-case unit (SDU), patients with abscesses requiring incision and drainage (I&D) were rarely discharged for readmission the next day. Most were therefore admitted from the emergency department (ED) to await the next available theatre slot. This audit investigated if the opening of SDU improved the waiting times for I&D cases, and to see if less inpatient bed time was used. **Material & Methods:** The electronic patient record system was searched for all I&D cases for 2 months pre and post SDU. Only general surgery cases presenting via ED were included, where the abscess was the only reason for admission. Measures were; 'bed hours' – hours of inpatient bed time used, and 'patient waiting hours' – the hours between presentation and I&D. 'Bed hours saved' – the cumulative total bed hours prevented by discharged and readmission. **Results:** Table 1: Pre and post SDU results

Cases	Readmissions (%)	Patient waiting hours			Bed hours			Bed hours saved
		1stQt	Mn	3rdQt	1stQt	Mn	3rdQt	
Pre SDU 55	12 (22%)	14	20	29	14	26	43	205
Post SDU 49	24 (49%)	15	18	23	10	22	16	557

Conclusions: Only mild improvements in the wait experienced by patients (PWH) were seen. With noticeable decreases in the total bed hours (BH), and increase in the amount of hours saved (BHS), one concludes the SDU is allowing a similar volume of work to be done at much reduced cost. Using costing from similar studies, the average bed cost per case reduced from £353.90 to £242.93.

PP-39

Improving the Safety of General Surgery Locum Cover

M. Rimmer[1], T. Masilamani[1], M. Tahir[1], N. Low[1].

[1]Department of General Surgery, St Georges Healthcare, London.

Background: To improve the safety of general surgery locum cover at St Georges Hospital, London. **Methods:** We identified issues involving locum doctors through analysis of adverse events, incident reporting and feedback from doctors. This information was used to create a comprehensive induction pack for locum doctors working in the general surgery department containing information such as hospital lay out, how to order and review investigations and how to contact other member of staff in emergencies. **Results:** 31 critical incidents involving locums were reported over an 18 month

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period of which 6 related to lack of access to IT systems. We found that 71% of doctors surveyed felt that the quality of information given to locum staff was poor while 88% said they regularly disclosed computer passwords to locum staff. Of the doctors surveyed 100% felt that patient safety had been compromised using locum staff. **Conclusion:** The use of locum doctors has the potential to compromise patient safety. In an attempt to limit the risk to patient safety many staff breach IT governance rules and disclose passwords to locum doctors. We plan to introduce our locum pack across the general surgery department at St Georges and assess the impact this has on the number of critical incidents and staff perceptions of locum cover.

PP-40

How well do we manage paediatric extravasation injuries?

D. LH Ching[1], K. Yuen Wong[2]

[1] Kingston Hospital NHS Foundation Trust, UK
[2]Department of Plastic and Reconstructive Surgery, Queen Alexandra Hospital, Portsmouth, UK

Background: Extravasation injury occurs in up to 70% of neonates in hospital. Although most remain localised and heal spontaneously with conservative management, the sequelae of extravasation are often underestimated. **Objectives:** We evaluate management of extravasation injuries.**Material/Patients and Methods**: The management of paediatric extravasation injury was compared at 10 hospitals. Healthcare professionals including nurses and doctors working in neonatal intensive care, paediatric intensive care and general paediatric units were interviewed via telephone. Questions included awareness of protocols or guidelines, extravasation management, complications, use of extravasation kits and whether any training was received. Extravasation protocols or guidelines obtained from each hospital were also compared. **Results**: Fifty healthcare professionals were interviewed from 25 units based at 10 hospitals. All were aware of hospital protocols or guidelines, but only 16% were familiar with the content. Less than 50% of extravasation injuries were suggested to be referred to the plastic surgery team with great variation in referral criteria and time. The majority (70%) were unsure about the availability of extravasation kits and only 1 hospital was reported to have it on all relevant wards. None of the hospitals were reported to regularly audit extravasation injuries and 76% of healthcare professionals did not receive any training for extravasation management. **Conclusion**: There needs to be more awareness of the potential significant morbidity associated with extravasation injury. The lack of national guidelines in the United Kingdom has led to varying extravasation management within and across hospitals. Further investigation is required to establish best practice.

PP-41

Appendix in Recurrent Hernial Sac (Amyand's Hernia)

H. İ. Taşcı, M. Erikoğlu

Deparment of General Surgery, Necmettin Erbakan University Graduate School of Medicine, Konya, Turkey

Background: Amyand's hernia refers to the condition where the inflamed, perforated, or normal appendix is included in the hernial sac. It accounts for 1% of all inguinal hernias and it is hard to diagnose patients pre-operatively. **Case:** The 67-year-old male patient had had repair with mesh about 2 years before he referred to our clinic because of right inguinal hernia at another healthcare center. The patient referred to our clinic with complaints of pain in his right inguinal area and swelling which became evident upon coughing or straining for about 2 months. A surgical procedure to repair his recurrent inguinal hernia was planned and appendiceal tissue was seen within the hernia sac during the procedure. No appendectomy was performed since it was observed to be normal. Tension-free mesh hernioplasty was performed. The patient was discharged on post-op day 1 without any complications. **Conclusion:** Amyand's hernia is generally diagnosed intraoperatively and it is a rare form of hernia with no specific symptoms. In this case report we showed that appendix could be seen in the hernial sac even in a patient operated because of recurrence and we aimed at reviewing Amyand's hernia with literature.

PP-42

Papillary Thyroid Cancer Case With Radical Neck Dissection Upon Third Recurrence

M. Erikoğlu, H. İbrahim Taşcı,S. Şakir Tavlı

Department of General Surgery, Necmettin Erbakan University Graduate School of Medicine, Konya, Turkey

Background: Papillary thyroid cancer is the most common thyroid malignity and its survival rate is higher than other types of cancer. Therapeutic lymph node dissection is considered to be a part of the surgical treatment if there is macroscopic lymph node involvement in such patients. Repeated neck dissections increase the rate of morbidity in patients previously operated on because of thyroid cancers.**Case:** An 84-year-old female patient referred to our clinic with complaints of swelling on the right side of the neck and shortness of breath. She had undergone 3 surgeries at other centers because of papillary thyroid cancer (total thyroidectomy and two neck dissections because of recurrence) and had received radioiodine ablation treatment. Her neck ultrasonography and thin-needle

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aspiration biopsy revealed results corresponding to thyroid cancer recurrence. Radical right neck dissection, alongside with the excision of the recurrent mass in the right thyroid lodge, was performed. No complications were observed in the post-op period and she was discharged on day 2 without any problems. Neither radiological recurrence nor elevation in thyroglobuline levels was detected after an 8-month follow-up period. **Conclusion:** Consequently, cases can be treated with a lower morbidity rate at experienced centers, as is presented in our complicated dissection case, although the rate of morbidity for repeated surgeries in papillary thyroid cancer cases is higher than that of primary procedures.

PP-43

An Evaluation of Patient Letters Following Elective Endoscopic Procedures.

L. Brakspear, R. Patel, H. Dorrance

Department of General Surgery, The Victoria Infirmary, Glasgow, Scotland

Background: Patients often assume an active role in their own healthcare. It is important that information given to them after a procedure is explained well. **Objectives:** We aimed to evaluate the content of patient letters following an elective endoscopic procedure and whether they were uploaded to our electronic computer system.**Methods:** Data for all patients undergoing elective endoscopy were collected over a two-week period. The letter taken home by patients is written on a template with space for free text – these were examined for a number of parameters. **Results:**110 patients were included in the study (colonoscopy = 82; colonoscopy and gastroscopy = 11; gastroscopy = 11; flexible sigmoidoscopy = 6). 92% (101/110) of patients required sedation but this was not mentioned in 10% of letters. 59% (65/110) required some endoscopic procedure which was mentioned in all relevant letters. All patients were informed if there was intention to follow them up post procedure. 59% (65/110) of letters used medical terminology preferentially to 'plain English'. 0% had been uploaded electronically. **Conclusion:** Patient letter templates are useful aids for delivering information including follow up details and use of sedation, which might otherwise be forgotten. However our data highlights the importance of considering what is written in free text, as patients may not understand the information delivered. As we move further from written notes and more towards an electronic system, it is vital that such letter be uploaded so that it is known what has been communicated to patients.

PP-44

Tracheostomy in Surgical Practice

V. Pismenny, E. Krivoschekov, I. Pismenny, O. Zotov, T. Grigorieva

Samara State Medical UniversitySamara Regional Clinical Oncology CenterSamara, Russia

Background: The problem of tracheostomy application in the treatment of surgical patients of various categories still remains unsolved nowadays and requires complex and frequently inappropriate scheme of management of patients with severe forms of respiratory of insufficiency of various degree. **Materials and Methods**: The Department of Cranial and Neck Tumors performed tracheostomy in more than 4000 of patients with different cancerous lesions. The technology of performing tracheostomy does not require leaving cannula in the body in future.**Results**: The demands for tracheostomy application remains very important. Excluding these anatomical structures as potentially dangerous we obtain the access to oral cavity, larynx, pharynx, trachea as well as bronchialtree cleaning. Minor traumatic injuries of trachea, larynx and surrounding structures, absence of inflammatory signs on the mucous membrane and cartilage structures create contraindicating condition for tracheostomy and cannula removal. The advantages of tracheostomy described above could not be obtained with the prolonged usage of intubation tube, even if endoscopy is performed. A lot of methods of respiratory function restoration had been worked out during the years of surgical treatment of laryngeal and trachea areas.**Conclusion**: The method of trachea dissection worked out with tracheal pedicle flaps creating solved the problem of appearing decubitus on the mucous membrane and on the skin and made it possible to remove the cannula and restore the respiratory function in more than 3000 patients.

PP-45

Rates of Depression Pre-operatively and At Two Year Follow Up Post Bariatric Surgery

M.Rimmer[1], T.Lane[1], S. Lazaridis[1], M. Reddy[1], A.Wan[1], G.Vasilikostas[1].

[1]Department of General Surgery, St Georges Hospital, London.

Background: To assess the effects of undergoing bariatric surgery and the incidence of depression in patients two years post operatively. **Methods:** Patients who underwent either a sleeve gastrectomy or roux-en-y gastric bypass were contacted by phone to assess if they had a pre-operative diagnosis of depression and what medications they took for this. Patients were then asked, at two year follow up, if they still had a diagnosis of depression, what medications they

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took and do they feel their mood has improved since having the surgery. **Results:** Of the 150 patients contacted, 44 responded of which 35 reported they suffered from pre-operative depression. All 35 patients who reported depression were medicated for this. Two years post operatively only 16 patients reported depression, all of which were medicated for this. This is a significant reduction (P<0.05, Pre-op depression vs post-op depression) in the incidence of depression over a two-year period. **Discussion:** Undergoing bariatric surgery not only impacts on weight loss but also other associated co-morbidities such as depression and the need for anti-depression medication.

PP-46

Local Anesthesia in Inguinal Hernia Repair Surgery

Tsiminikakis N[1], Katsanevakis E[1], Argiriou EO[2], Kontezakis P[1], Kriaras A[1], Mayrigiannaki E[1], Daskalaki S[1], Bountoutsidis A[1], Ioannou K[1], Psomiadou V[3], Bongiorni C[4], Antoniou C[1], Oikonomou K[1]

[1] 2nd Surgical Department, General Hospital of Chania, Crete, Greece
[2]1stDepartment of Surgical Oncology, Metaxa Cancer Hospital, Piraeus, Greece
[3] Surgical Department, Pammakaristos General Hospital of Athens, Greece
[4] Vamos Healthcare Centre, Crete, Greece

Background: Inguinal hernia repair surgery has become a rather common and routine operation, with minor complications. In the effort of minimizing any complications, anesthesia methods should be evaluated.**Objectives:** To evaluate the use of local anesthesia in inguinal hernia repair surgery with mesh.**Material/Patients and Methods:** Within a 4 year timeline, 99 patients (93 male and 6 female) undergone inguinal hernia repair surgery with mesh. The following parameters were examined: intra-operative patients' tolerance, duration of the operation, length of post-operative hospitalization period, postoperative pain, immediate complications and relapse frequency. The procedure of local anesthesia comprises administering 2% lidocaine solution in 0,9% NaCl at a ratio of 1/1 (30 ml) and a solution of ropivacaine 10% (30 ml). The initial administration of 20 ml of the aforementioned solution took place 20 min prior to skin incision. After the opening of the external oblique aponeurosis, the inner orifice of the inguinal canal was filtrated, in addition to the base of the hernia sac, in cases of indirect inguinal hernias.**Results:** Local anesthesia was well tolerated. In 3 cases, intraoperatively general anesthesia had to be given. The average duration of surgery was 50 mins. Postoperative hospitalization period ranged from 4-24 hours. Oral administration of NSAIDs was necessary for 32 patients for 1-2 days. Immediate postoperative complications included 5 subcutaneous hematomas (5,05%), 2 scrotal swelling (2,02%) and 1 intense postoperative neuralgia (1,01%). During the postoperative follow-up (1-44 months) no relapse has been reported. **Conclusion:** The inguinal hernia repair surgery with mesh placement (tension free technique) under local anesthesia is considered a fast, safe, low cost, well tolerated method, that minimizes hospitalization period. The rates of immediate postoperative complications are comparable to other techniques.

PP-47

Isolated jejunal perforation following blunt abdominal trauma. A case series and review of literature

A. Jackson, K. Jetha, R Balakumar, N Samuel, MH Shiwani, A. Masri

Department of General Surgery, Barnsley District General Hospital, United Kingdom

Background: Small bowel injurydue to blunt abdominal trauma(BAT) is rare; however critical if not diagnosed and managed early. We present 3 cases of isolated jejunal perforations(JP) presenting to a district general hospital following BAT.Case1: 6-year-old boy sustained BAT following go-karting collision and was discharged after a period of observation. He represented 16-hours later with peritonism and haemodynamic instability. CT scan revealed free intraperitoneal air and fluid. Complete jejunal transection was found at laparotomy.Case2: 16-year-old male sustained BAT after awkward football tackle; he was discharged after a 12-hour observation period. He represented 48-hrs later with worsening abdominal pain. CT scan revealed free intraperitoneal gas and fluid. At laparotomy a single 15mm JP was found 10cm from DJ flexure.Case3: 18-year-old male sustained BAT following an RTA. Initial CT did not report any evidence of intraabdominal injury. Due to worsening abdominal signs, a diagnostic laparoscopy converted to laparotomy revealed a 1cm JP.**Methods:** Literature search of PubMed with the MeSH terms: 'jejunal perforation; blunt trauma' was undertaken to identifysimilar case reports.**Results:** Isolated JP occurs in <1% of BAT cases. The mechanism of immediate small bowel injury includes shearing forces and sudden increases in intraluminal pressure resulting in a blowout injury. Compression necrosis of the bowel wall at the time of the injury, followed by a subsequent increase in intraluminal pressure can result in delayed perforation.**Conclusion:** The diagnosis of isolated JP remains challenging. A high index of suspicion is crucial to identify both early & delayed perforations.

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PP-48

Management of long and sharp unusual ingested foreign bodies

K. Khan, K. Siddique, S. Anwar, M.H. Shiwani

Department of Surgery, Barnsley Hospital NHS Foundation Trust, South Yorkshire, UK

Background: Ingestion of foreign bodies is a common reason for attending emergency department. Radiolucency and the length of the object are important factors that affect their management. Objects over 10 cm length are less likely to pass through the duodenal curve. We present here the management of two challenging cases. **Patients and Methods:** First patient was a 40 year old gentleman who accidentally swallowed a 22cm plastic fork 10 years ago. Over the years he remained asymptomatic and completely forgotten about it. He presented as an emergency with coffee ground vomiting. He had attempted retrieval of fork by emergency gastroscopy, which failed because one prong of fork penetrated into gastric mucosa. Hence was retrieved by an open gastrotomy. Our second patient was a 51 year old psychiatric patient, who swallowed batteries & broken arms of her spectacles confirmed radiologically. She was treated conservatively for 5 days & passed batteries spontaneously. Later she was admitted with abdominal discomfort & vomiting. Multidisciplinary team recommended endoscopic removal under general anaesthetics. At endoscopy the deeply embedded specs arms was dislodged from the gastric mucosa and safely retrieved under direct vision by advanced endoscopy skills. Patient was discharged after 2 days without any complications. **Conclusions:** Objects longer than 10cm are less likely to pass spontaneously. Sharp objects carry much higher risk of perforation hence necessitating early endoscopic intervention. MDT approach can help optimize the patient care with good outcome.

PP-49

Chyle leak after breast surgery

K.Y. Wong, A. Elfaki, M. Irwin

Department of Plastic and Reconstructive Surgery, Cambridge University Hospitals NHS Foundation Trust, Cambridge, United Kingdom

Background: Chyle leak is a well-known complication following neck dissection, thoracic and abdominal surgery. It is however rare following breast surgery. **Objectives:** We review the literature and present a case of chyle leak following immediate breast reconstruction and axillary node clearance.**Material/Patients andMethods:** A 51-year-old female had an immediate post-mastectomy latissimus dorsi flap breast reconstruction and level II axillary node clearance for left invasive breast cancer. The surgery was uneventful and she was discharged on day five postoperatively. She was readmitted ten days postoperatively with a cloudy axillary drain output of 1 litre over 24 hours. Biochemical analysis confirmed a chyle leak. The patient was managed conservatively with bed rest and a low-fat diet. Her wound, electrolytes, liver function tests and fluid balance were closely monitored. The chyle leak resolved spontaneously six days later. **Results:** Chyle leak post axillary dissection has a reported incidence of 0.3-1.0%. It is suggested to result from anatomical variations and injury to the left subclavian duct or its tributaries. There is limited literature regarding optimal chyle leak management due to their relative rarity. Conservative management is adequate for most cases. Various surgical and interventional techniques have been described including direct ligation of the visible leak site, use of sclerosing or bonding substances and local flaps. Other procedures described include transabdominal cannulation and thoracoscopic ligation of the thoracic duct. **Conclusion:** Chyle leaks are rare following breast surgery but important to recognize as they can be associated with significant morbidity and mortality.

PP-50

Proton magnetic resonance spectroscopy in non-alcoholic fatty liver disease.

R. Nelapatla, K. Agarwal, S. Shah

School of Medicine, University of Liverpool, United Kingdom.

Background: The aim of this structured review is to research and consider the diagnostic capabilities and advances of ^{1}H-MRS/ Proton MRS with regards to diagnosing non-alcoholic fatty liver disease. This technique has the potential to noninvasively diagnose, grade and follow the disease providing improvements both practically and clinically. **Methods:** Many literature databases were used including a search engine to examine articles and journals regarding 1 H-MRS and NAFLD. **Results:** The literature search conducted produced a result of 42 articles. These were read and were narrowed down further to relevant articles. Out of the 42, 4 were picked to be reviewed in this systematic review. **Conclusion:** 1 H-MRS can be used as a diagnostic tool over other techniques to distinguish and determine hepatic triglyceride content in patients with NAFLD. Liver biopsy is currently the gold standard, but with further research proton MRS has much potential to be the primary diagnostic standard as it provides non-invasive and quantitative methods.

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PP-51

Introduction of an abscess pathway in a NHS district general hospital. Results of a service improvement audit

R. Balakumar[1], N. Samuel[1], A. Jackson[1], MH. Shiwani[1]

[1]Department of General Surgery, Barnsley Hospital NHS Foundation Trust, South Yorkshire, UK

Background: Simple uncomplicated abscess are common acute surgical presentations requiring incision and drainage under general anaesthesia. Such patients are often prioritized lower on the emergency lists causing longer inpatient stay, with its associated expenditure. **Objectives:** To optimize patient's journey through the hospital and better utilization of limited resources, an abscess pathway was introduced and prospectively audited to establish its feasibility. **Material/Patients and Methods:** The Abscess pathway allowed patients to be assessed in the acute surgical assessment unit; they were allowed home to return the following morning and be operated first on the emergency list. Post-operatively, they were discharged home (nurse-lead) the same day. This process was audited before and after introduction of pathway. Data was gathered using patient notes and the hospital electronic system. **Results:** A total of 40 and 35 patients were included for the preliminary and subsequent audit cycle. Introduction of the pathway reduced mean (S.D) inpatient stay from 29.3 (14.2) to 10.2 (7.2) hours (P<0.001); reduced pre-op waiting times from 12.5 (7.7) to 3.4 (2.5) hours (P<0.001); resulted in only 15% of patients waiting more than 6 hours as against 68% prior to its introduction. In-patient hospital costs per patient (calculated at £250 /bed/day for non-clinical services) were mean (S.D) cost to £312.50 (157.60) and £27.78 (80.06) per patient respectively (P<0.001), saving £284.72 (95%CI 218.97-350.46) per patient. **Conclusion:** The abscess pathway has resulted in significant reduction in pre-op waiting times and total inpatient stay without compromising patient safety. This has inturn reduced the costs and improved capacity of the hospital.

PP-52

Is total thyroidectomy riskier in thyrotoxicosis?

D. FN Fung, V Kurup

Department of General Surgery, University Hospital of North Tees, North Tees and Hartlepool NHS Foundation Trust, United Kingdom

Background: Indications of total thyroidectomy include thyroid cancers, multinodular goitres for pressure symptoms or cosmetic reasons, and definitive treatment for thyrotoxicosis. **Objectives:** This study aims to compare the morbidities associated with total thyroidectomy between the thyrotoxic and euthyroid group of patients. Significant complications include haematoma requiring evacuation, temporary and permanent hypocalcaemia and recurrent laryngeal nerve injury. **Method:** This is a retrospective study of all total thyroidectomies performed or supervised by a single surgeon in a district general hospital over an eight year period (2006 – 2014). Case notes and department database were analysed. Data was collected on patient demographics, length of hospital stay, mortality and complications. Serum calcium was measured post operatively on day 1 or 2 and at 6 months. **Results:** 267 total thyroidectomies were performed. 132 total thyroidectomies were indicated for thyrotoxicosis on 17 males and 115 females (1:6.8). Of the 135 euthyroid patients, there were 23 males and 112 females (1:4.9). The mean age was 50 and the median length of hospital stay was two days in both groups. There was no mortality in our study. The incidence of complications in the thyrotoxic group versus euthyroid group were as follows: for haematomas 1.8% vs 0.7%, immediate hypocalcaemia 31.8% vs 34.1%, hypocalcaemia at 6 months 12.9% vs 9.6%, recurrent laryngeal nerve palsy 1.5% vs 2.6%. **Conclusion:** The study showed no significant difference between the morbidity of total thyroidectomies for thyrotoxicosis and non thyrotoxicosis. However the incidence of hypocalcaemia at 6 months was slightly higher in the thyrotoxic group.

PP-53

Complications of central venous catheters such as arrhythmias: a case report

S. Tekindur 1, M. Yetim 2, Z. Guclu1, O. Kılıckaya1, M. Urkan3,

[1]Gulhane Military Medicine Faculty, Department of Anaesthesia and Reanimation
[2] Van Military Hospital, Department of Anaesthesia and Reanimation
[3] Gulhane Military Medicine Faculty, Department of General Surgery

Background: Central venous catheters (CVCs) are used to provide temporary or long-term vascular access. They are useful in the management of various conditions, such as those requiring regular blood sampling, total parenteral nutrition and haemodialysis. Complications associated with the insertion and maintenance of CVCs includes pneumothorax, arterial puncture, arrhythmias, malposition, infection and thrombosis. We present a case report about arrhythmia caused by CVCs malposition. **Case report:**A 89 - year-old man presented to our intensive care unit with respiratory distress after haemodialysis. He was entubated due to carbondioxide retention. Electrocardiogram showed ventricular premature beats with a heart rate averaging 110 beats/min. Blood pressure was 80/50. Chest x-ray revealed

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that CVC's tip was in right atrium. We thought that cause of arrhythmia and hypotension may be malposition of CVC. We decided to pull the catheter back 3 cm. After this procedure, arrhythmia and hypotension got better. **Conclusion and Reults**: More than 15% of patients undergo CVC cannulation experience complications, which can be mechanical, thrombotic, or infectious. Cardiac arrhythmias occur less frequently. The most common cardiac arrhythmias during the procedure are atrial and ventricular premature beats. The traditionally preferred position of the catheter tip is in the distal third of the SVC to minimize complications such as vascular perforation, local vein thrombosis, catheter malposition and arrhythmias. CXR is still considered the gold standard for identifying catheter malpositions. We suggest that place of CVC tip is confirmed with chest x-ray after CVC cannulation.

PP-54

Transfusion Related Acute Lung Injury After Plasmapheresis (TRALI)

B. Girgin[1], S. Tekindur [1], M. Yetim [2], Z. Guclu[1], M. Urkan[3], O. Kılıckaya[1]

[1] Gulhane Military Medicine Faculty, Department of Anaesthesia and Reanimation
[2] Van Military Hospital, Department of Anaesthesia and Reanimation
[3] Gulhane Military Medicine Faculty, Department of General Surgery

Background: TRALI is defined as an acute lung ınjury that is related to a blood transfusion; it may occur within the first 6 to 48 hours following a transfusion. TRALI is caused by the presence of leukocyte antibodies in transfused plasma. TRALI is believed to occur in approximately one in every 5000 transfusions. **Case Report:** A 38-year old female patient with acute aneurysm rupture was taken to our intensive care unit for recovery and further treatment. After 21 days, her hemoglobin, white blood cells and thrombocytes had started to rapid decrease. Trombotic trombositic purpura was diagnosed after peripheral blood smear and then plasmapheresis was made with 15 fresh frozen plasma. The second day of plasmapheresis, she developed acute lung injury. Her oxygen saturation decreased to 78% and a chest x-ray revealed bilateral pulmonary infiltrates. She continued to receive oxygen and FiO2 was increased. Her oxygen saturation improved after the decision of shutting off the plasmapheresis. **Conclusion and Results:** TRALI is a syndrome that occur a spectrum from mild to fatal acute lung injury associated with transfusion of blood and blood components. The keys to the diagnosis of TRALI are high clinical suspicion, differentiation the other possibilities of acute lung injury or acute respiratory distress syndrome. Clinicians who administer transfusions and plasmapheresis should be aware of the signs and symptoms of TRALI in all patients.

PP-55

Mucocele of Appendix: Clinical and Radiological Findings of A Case

Akay S[1], Turgut S[2], Oztas M[2], Eksert S[3]

[1] Sirnak Military Hospital, Department of Radiology, Sirnak, Turkey
[2] Sirnak Military Hospital, Department of General Surgery, Sirnak, Turkey
[3] Sirnak Military Hospital, Department of Anesthesiology and Reanimation, Sirnak, Turkey

Background and Aims: Mucocele of the appendix is a term that refersto musin filled appendix and it is based on the gross or macroscopic appearance of the appendix. This formation is most commonly caused by epithelial proliferation, either benign or malignant. **Patient and Methods:** A 31-year-old man was admitted to General Surgery department of our hospital complaining of abdominal pain for 2 days. He denied any nausea, vomiting or lack of appetite. He also stated that he had sometimes vague abdominal discomfort for 3 years. **Results:** On physical examination, abdominal pain with palpation and rebound tenderness were observed at right lower quadrant. Laboratory data was otherwise normal except leukocytosis (13.000/mm^3). Three centimeter in diameter, long and rigid tubular segment full of heterogeneous intense material that originates from cecum was detected at right lower quadrant, on US. On CT examination performed for further evaluation, extent of the rigid segment and adjacent fat tissue changes were confirmed and mucocele of appendix was primarily suggested. In the lights of these findings, an appendectomy plus partial cecum resection was perfrmed one day after his admittance. Due to wound infection in postoperative third day, outpatient dressing was continued for extra 3 weeks. **Conclusion:** The diagnosis of mucocele of the appendix is frequentlyincidental, and it represents only 0.25% of indications for appendectomy. More than 50% of cases present with pain in right iliac fossa suggestive of acute appendicitis. A complete physical examination, US and CT scan if needed, suggest the diagnosis in most of the cases and guide the surgeon preoperatively.

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PP-56

Rectus Muscle Hematoma: An Entity That Must Be Evaluated In Differential Diagnosis of Acute Appendicitis

Akay S[1], Turgut S[2], Oztas M[2], Kantemir A[3]

[1] Sirnak Military Hospital, Department of Radiology, Sirnak, Turkey
[2] Sirnak Military Hospital, Department of General Surgery, Sirnak, Turkey
[3] Sirnak Military Hospital, Department of Orthopedics and Traumatology, Sirnak, Turkey

Background and Aims: Acute appendicitis is the most common abdominal emergency requiring surgery with an estimated lifetime prevalence of 7%. But the diagnosis can sometimes be complicated because of the pathologies that show similar physical examination and laboratory findings. **Patient and Methods:** A 20-year old man was admitted to General Surgery department of our hospital with right-sided abdominal pain complaint for a week. **Results:** On physical examination, abdominal pain with palpation and rebound tenderness at the lower right quadrant were observed. On US, pericecal region was normal and no finding that can be consistent with appendicitis was detected. However in lineer probe examination, right rectus abdominis muscle was thicker than the left side and there was a heterogeneity in the muscle parenchyma. Inside heterogeneous site, a 20×5 mm size (Transverse×Anteroposterior), anechoic cyctic lesion having thin septa was seen. Additionally, another similar lesion was detected in the left rectus muscle (10×5 mm in size), as well. The lesions were primarily thought as a rectus hematomas. When the patient was reinvestigated regarding any trauma, sportive activity, or anticoagulant drug usage, he specified a heavy sportive activity (weightlifting) one week ago. Due to the decrease in size of hematoma, the patient was discharged with 10-day-bedrest. **Conclusion:** Despite its high prevalence, the diagnosis of acute appendicitis remains challenging. The differential diagnosis list shows a very wide spectrum. Rectus muscle hematoma is also one of them and it must be always in mind in the patients with acute abdomen findings, especially presence of abdominal trauma, heavy sportive activity and anticoagulant drug use history.

PP-57

Venous Thromboembolism (VTE) prophylaxis in day case surgery

K.Kyprianou, J.Chai, A.King, M. Stevens, C.Wong

Department of General Surgery, North Bristol NHS trust, Southmead Hospital, UK

Background: Venous Thromboembolism (VTE) prophylaxis in Day Case Surgery (DCS) is recommended by NICE guidelines. However, the understanding and implementation of those guidelines by the healthcare professionals has not been yet clearly demonstrated. **Objectives:** To assess the basic knowledge of guidelines related to VTE prophylaxis and its implementation by the health care professionals on DCS patients.**Patients and Methods:**A questionnaire was distributed to healthcare professionals working in DCS (nurses, pharmacists, doctors) assessing their knowledge on administration of VTE prophylaxis. A prospective audit was carried out, reviewing the clinical records of 84 patients undergoing DCS, over a two-month period. Data was collected on completion of VTE risk factor assessment checklist, appropriate prescription and administration of VTE prophylaxis.**Results:** Out of 69 (68%) of healthcare professionals responded that DCS was not an exclusion criterion for VTE prophylaxis. 48% said that they would give VTE prophylaxis to patients undergoing day case surgery. Looking at the clinical records, risk factors for VTE were correctly identified in all 84 patients. However, out of 37 patients identified having VTE risk factors, only 2 (5%) had prophylaxis prescribed and administered. **Conclusion:**The audit demonstrated that guidelines were poorly adhered to in clinical practice, despite existing checklists aiding the identification of risk factors and prompting consideration of VTE prophylaxis. We recommend that healthcare professionals should be made aware of guidelines on VTE prophylaxis with regards to DCS, through departmental induction and teaching. Re-auditing will occur following implementation of the aforementioned interventions.

PP-58

Umblical Pilonidal Sinus: Etiology and Conservative Treatment Approach

Turgut S[1], Oztas M[1], Ozdemir Y[2], Gulec B[2]

[1] Sirnak Military Hospital, Department of General Surgery, Sirnak, Turkey
[2] Gulhane Military Medical Academy, Haydarpasa Training Hospital, Department of General Surgery, Istanbul, Turkey

Background and Aims: Umblical pilonidal sinus is a rare disease. However, when examined specifically, it can be seen

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that it is more common than thought. The cases with umblical pilonidal sinus and their treatment results who admitted to our general surgery department between December 2013 and January 2015, were evaluated. **Material and Methods:** Presence of infection, time of the complain onset, age, gender, occupation, hair type, umblical depth, sacral pilonidal sinus history of the cases, weekly bath number, tight clothes and belt use history were investigated. **Results:** Thirty one cases were evaluated. Umblical discharge (n= 31), pain (n= 17), hemorrhage (n= 17), hair in umblucus (n= 2), and bad odor (n=1) were expected signs and findings. Duration of the complain was changing between 1 day and 4 years. According to Ferriman Gallwey Classification, 17 cases were type 2, 7 cases was type 3. The mean umblical depth was 18,93 mm (4 – 93 mm). Ten cases had positive family history. The mean weekly bath number was 3,8 (1 – 7). Sixteen cases had brunette skin, 10 were wheat-colored, and 5 were fair-skinned. There was a history of permanent tight clothes and belt use in 9 and 23 cases, respectively. Umblical cleaning using povidon iodine was performed, daily intraumblical washing and umblical shaving were suggested to all the cases. The cases responded well to this conservative treatment except 2 cases.**Conclusions:** Although umblical pilonidal sinus is a rare disease, it can negatively effect the patient comfort. Treatment response rates are very high with simple individual hygene precautions and regular dressing.

PP-59

Polythelia as an incidental finding: Analysis of 17 cases

Turgut S[1], Oztas M[1], Akay S[2], Eksert S[3]

[1]Sirnak Military Hospital, Department of General Surgery, Sirnak, Turkey
[2]Sirnak Military Hospital, Department of Radiology, Sirnak, Turkey
[3]Sirnak Military Hospital, Department of Anesthesiology and Reanimation, Sirnak, Turkey

Background and Aims: Polythelia is a rare minor anomaly that generally originates form embryonic milk line. It can arise from back, hip, neck and vulva, as well. There is no need to treat but it can be an important entity if it associates with renal and urinary tract malformations. In this paper, we aimed to present some accompanying anomalies in polithelia patients who were admitted to our hospital due to different reasons. **Material and Methods:** Clinical and physical examination data of 576 patients admitted to our general surgery department were examined about polythelia between November 2013 and January 2015. The patients were evaluated by general surgery and other related departments. General laboratory examination and abdominopelvic ultrasonography (US) was performed to all patients. **Results:** Polithelia was incidentally detected in 17 out of 576 patients (2,95%). An extra nipple was on the right side, on the left side, and bilateral in 6, 9 and 2 cases, respectively. Laboratory results were usual. Grade 1 hepatosteatosis in 5, umblical hernia in 3, and simple cyst at central gland of prostate in 2 cases were detected on US examinations. Additionally, one patient had a history of hypospadias operation 23 years ago. **Conclusion:** The first polythelia case was reported by Leichterstein in 1878. This entity can be seen in 0,2-5,6% of population due to different factors. Although its major association is with urinary tract anomalies, possible accompanying anomalies must be in mind and examined in the patients with polythelia.

PP-60

Retention of a Robinson drain: Successful laparoscopic foreign body retrieval following abdominal surgery

J. M. Norris[1], S. Ravi-Shankar[2], A. A. Abdullah[3], H. Charfare[3]

[1]Department of Surgery, University of Cambridge, Cambridge, Cambridgeshire, UK;
[2]Department of Emergency Medicine, King's College Hospital, King's College Hospital NHS Foundation Trust, London, UK;
[3]Department of Surgery, Bedford Hospital, Bedford Hospital NHS Trust, Bedford, Bedfordshire, UK.

Background & Aims: Foreign body retrieval has traditionally been performed by open surgery, however, laparoscopy is now being utilised with increasing frequency. We present a case that adds to the sparse literature of laparoscopic foreign body retrieval.**Patient & Methods:** A 46-year-old female presented with epigastric pain, radiating to her suprapubis. She had a history of hysterectomy four-years previously. A preliminary diagnosis of ureteric colic was made, however CT-KUB demonstrated a tubular structure in the right upper quadrant. Close scrutiny of the history revealed that following hysterectomy, she had been discharged with an abdominal Robinson drain in situ, which was then removed with difficulty by the district nurse, after three days. Given the unusual history and CT findings, a retained drain was suspected. She underwent laparoscopy, during which a vascularised capsule was discovered, suspended from the abdominal wall to the pelvis. The capsule was opened and a severed 20G Robinson drain was retrieved, confirming the diagnosis.**Results:** The patient made an uneventful postoperative recovery. Six-week follow-up demonstrated dramatic symptom improvement. Review of the literature revealed only a handful of case reports discussing drain retention and associated complications, including adjacent structure erosion. Fortunately, our case was not associated with such major morbidity, however long-term sequelae remain unknown. **Conclusions:** Our case adds to the literature surrounding retained surgical drains, and laparoscopic retrieval of foreign bodies. Here, we have demonstrated the suitability of laparoscopic foreign body

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retrieval; the importance of a detailed patient history; and the necessity for careful and complete drain removal.

PP-61

Our experience with the resection of the head of the pancreas with the second portion of the duodenum

F. J. A. Serrano[1], M. E. C. García[1], J. L. y Olea[1], G. G. Plaza[1], R. A. R. Dorado[1], C.D.T. Flores[1],M. M.Martín[2], J. R. H. Hernández[1]

[1]Department of Gastrointestinal Surgery, Hospital Universitario Insular de Gran Canaria.Las Palmas de Gran Canaria. Spain.
[2]Department of Pathology. Hospital Universitario Insular de Gran Canaria.

Background: Cephalic pancreatectomy with resection of the second portion of the duodenum is carried out specially in the treatment of intraductal papillary mucinous tumor of the pancreas (IPMN). **Objective:** Evaluate the benefits of this technique *in benign or low-grade malignancy cases*. Setting: Hospital Insular de Gran Canaria, Spain; Public hospital. **Patients and methods**: Between June 2010 and May 2013, we performed this surgery in 9 patients: 7 males, 2 females, aged between 17 and 72 years. Diagnostics: Pancreatic endocrine neoplasia, 3 cases. Ampulloma, 2 cases IPMN, 1 case. Choledochal cyst, 2 cases. Recurrent Pancreatitis, 1 case. **Results**: Postoperative hospitalization was between 12 and 77 days. There was no mortality in this series of cases. The most frequent complication was gastrointestinal intolerance. Over the long-term, one patient presented pancreatitis due to stenosis of the Wirsung-jejunal anastomosis. One patient died at 6 months because of a cerebrovascular accident. **Conclusions:** Technically it is a complex surgery, but it offers a better long-term gastrointestinal control and preservation of the pancreatic function.

PP-62

Quality of life after intersphincteric dissection during low anterior resection for ultralow rectal cancer: comparison of intersphincteric vs LAR or perineal colostomy:review

U.M.Meral[1], M.Urkan[2], U.Alakus[3]

[1] Department of General Surgery,Izmir Military Hospital. Izmir/Turkey
[2] Department of General Surgery,Gulhane Military Medical Academy. Ankara/Turkey
[3] Department of General Surgery, Elazig Military Hospital. Elazig/Turkey

Background: The most important goals of lower rectal surgery are radical resection and postoperative functional healing,in rectal cancer cases. Anterior resection, intersphincteric resection(ISR) and perineal colostomy are different types of surgeries used for rectal cancer. All these surgeries are alterntive for permanent colostomy. **Objectives:** The aim of this review is to have a look at the articles about this topic and compare the results of quality of life. **Material Methods:** Web of science sarch was undertaken using term "rectal cancer", "intersphincteric" and "perineal colostomy". The search identified 25 studies. 15 high quality clinical study and 3 reviews discussed. **Results:** Beside investigation of general surgical complications, Wexner score and Fecal Incontinence Quality of Life(FIQL) was measured and compared in studies. Except one study, ISR was significantly related with increased defecation frequency, different levels of fecal incontinence and postoperative patient discomfort about defecation, compared to coloanal anastomoses. Postoperative fecal incontinence scores, presence of pre/postoperative chemo-radiotherapy, postoperative rehabilitation and experience of surgeon were investigated in two studies; all of these parameters were significant in quality of life indexes. **Conclusion:** Quality of life scores are dependent on lots of factors after surgery. Avoiding from permanent colostomy, is the main purpose of sphincter sparing surgery. Compared with customary coloanal anastomoses, in these patients with ISR, high fecal incontinence scores and lower quality of life indicators are detected.

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PP-63

Implementation of an Enhanced Recovery After Surgery Programme in Pancreatic Surgery

M Mistry

School of Medicine, University of Liverpool. Liverpool, UK

Background: The concept of 'Enhanced Recovery After Surgery' (ERAS) incorporates multimodal optimisation of patient care. Previous studies have indicated that clinical pathways significantly decrease hospital stay and reduce complication rates, yet the prevalence of postoperative complications still remains high. **Objectives:** The study aims to evaluate and track the performance of our centre after implementing the ERAS pathway in patients with pancreatic disorders. **Materials/Patients and Methods:** Perioperative data from 192 consecutive patients that underwent major pancreatic resectional surgery by the means of the ERAS protocol were prospectively collected and analysed. A systematic literature search was used to identify other studies with the use of ERAS in pancreatic surgery, and the evidence was critiqued. **Results:** 57.8% of the patients were male the median age was 65 years. 137 patients received pancreatic head resections; there were 12 distal pancreatectomies, 13 total resections and 15 other types of pancreatic surgery. A high risk comorbidity profile (ASA grade III – IV) was seen among 30.8% of the patients. Patients were discharged on median day 13 with a 30 day readmission rate of 10.9%. The 30 day mortality was 2.1% whereas surgical and medical morbidities were 39.1% and 15.1% respectively. Overall morbidity rate was 47.9%. **Conclusion:** After implementation of the ERAS pathway, major outcome parameters were either the same or lower than those documented by other studies. However, some studies have demonstrated a significantly shorter length of stay which suggests measures should be taken in the future to improve our outcomes further.

PP-64

Mixed Approach, Laparoscopic-Laparotomy, For The Treatment Of Choledochal Cyst

C. González Serrano, L. Hierro-Olabarría Salgado, S. Ruiz Carballo, M.I. Cruz, González, S. García Herrero, A. Gómez Palacios, J.J. Méndez Martín, I. Iturburu Belmonte

Hospital Universitario Basurto, Bilbao, Basque Country, Spain.

Background: Choledochal cyst (CC) is a rare disease of the biliary tree, characterized by either isolated or combined dilatations of the extra and intrahepatic bile ducts. We report one case of type I CC with surgical management by mixed approach. **Patient & Methods:** A 25-year-old woman is presented. She came to emergency department with cyclical episodes of abdominal pain, vomiting and fever. Blood analysis featured bilirubin 2.9mg/dl and GPT 247UI/L. The abdominal ultrasound showed a cystic dilatation of the hepatic hilum suggesting choledochal cyst. CholangioMR confirmed a cystic dilatation of the common bile duct, consistent on type 1 CC. **Results:** Surgery with total cyst excision and Roux-en-Y hepatoenterostomy was performed using mixed approach. A 4-port technique was used as laparoscopic approach. First gallbladder was removed. Then, the cyst was dissected from proximal to distal end. The jejunum was amputated distal to the Treitz ligament, using an Endo-GIA linear stapler. The Roux limp of the jejunum was pulled on antecolic manner. A side-to-side jejunojejunostomy was created. Due to the technical difficulty of performing the hepaticojejunal anastomosis, we decided to perform right subcostal minilaparotomy for open access. An end to lateral anastomosis was performed by interrupted absorbable suture. **Conclusions:** Total resection with biliodigestive bypass is the treatment of choice for CC. Laparoscopic resection is a feasible procedure but it requires a greater degree of technical skill. Tanaka et al. reported, like us, performing a minilaparotomy to create a hepaticojejunostomy after laparoscopic excision of the CC in order to avoid technical difficulties and complications.

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PP-65

Xanthogranulomatous cholecystitis simulating gallbladder carcinoma

S. Ruiz Carballo,C. González Serrano,I. Iturburu Belmonte, I. Cruz González, L. Hierro-Olabarria Salgado, I. Del Hoyo Aretxabala, , A. Gómez Palacios, J.J. Méndez Martín

Hospital Universitario Basurto, Bilbao, Basque Country, Spain.

Background: Xanthogranulomatous cholecystitis (XGC) is a benign chronic inflammation of the gallbladder, which can clinically and radiologically mimic neoplasm. The aim of this study is to analyse the clinical, radiologic and intraoperative findings of patients with suspicion of gallbladder carcinoma (GBC). **Patients and methods:** Between January 2008 and December 2012 were identified 114 patients who had undergone cholecystectomy with a histopathologic diagnosis of XGC. However, 2 cases (1.75%) were finally diagnosed as having XGC coexisting with GBC. **Results:** Of the 114 cholecystectomy patients reviewed, 9 (7.89%) were suspicious of malignancy. The ultrasonography reported 3 cases (2.94%) of gallbladder carcinoma, whereas the computed tomography scan 2 patients (5.88%). Both of the image techniques demonstrated the thickening of the gallbladder wall. The intraoperative findings confirmed the presence of thickening of the wall and fibrous adhesions to adjacent organs, which made the surgeon suspect of GBC in 6 patients (5.26%). The rate of surgical conversion to open repair was 66.67% (4 cases). Finally, the postoperative histopathological examinations revealed XGC and GBC in 2 cases (22.22%). However, the radiologic and the intraoperative findings diagnosed just only case.**Conclusions:** Xanthogranulomathous cholecystitis (XGC) is an unusual and destructive inflammatory condition of the gallbladder. This entity is characterized morphologically by a severe fibrosis and foam cells causing asymmetrical thickening of the gallbladder wall and local extension of the process, closely resembling a malignant tumour. Therefore, differentiation is essential by means of intraoperative histologic examination to ensure optimal surgical treatment.

PP-66

Chronic Pancreatic Pseudocyst Causing Atraumatic Splenic Rupture Without Evidence of Acute Pancreatitis: A Case Report, Review of the Literature and Theory of Pathogenesis

E. J. Nevins[1], T. Wright[1], L. Alexander[2], C. Bromley[3], Y. Rado[4]

[1]Foundation Doctor, University Hospital Aintree, Liverpool, Merseyside, United Kingdom.
[2]4th Year Medical Student, University of Liverpool Medical School, Liverpool, Merseyside, United Kingdom.
[3]Department of General Surgery, Chrissie Tomlinson Memorial Hospital, George Town, Grand Cayman, Cayman Islands.
[4]Department of Radiology, Chrissie Tomlinson Memorial Hospital, George Town, Grand Cayman, Cayman Islands.

Background: Splenic rupture usually occurs after trauma. We report a case of atraumatic splenic rupture (ASR) secondary to pancreatic pseudocyst (PP) and hypothesise the pathogenic mechanisms. **Patient and methods:** A 29 year old male presented to the emergency department with abdominal pain and no history of trauma. CT abdomen demonstrated a PP in direct contact with the inferior pole of the spleen and a heterogenous hypodense area of the splenic hilum. Serum amylase remained normal. Over 24 hours he developed a peritonitic abdomen and laparotomy demonstrated splenic rupture. A pathology report revealed chronic fibrosing pancreatitis and PP invading the spleen. The patient made a full recovery. A literature review of ASR secondary to pancreatic complications was performed. **Results:** Literature demonstrated that only 6% of PPs affect the spleen. 7% of ASRs are due to chronic pancreatitis, but PPs are seldom implicated as a direct cause for ASR. PP is, however, an independent risk factor for all splenic complications. The pathogenesis of ASR secondary to PP is not well described, but may be due to splenic vein thrombosis, mechanical distortion of the spleen, or direct enzymatic destruction. **Conclusion:** ASR secondary to PP is a rare complication that has been neglected in the literature. We have hypothesised the pathogenesis for this infrequent occurrence. Impending ASR should be considered in patients complaining of abdominal pain where imaging shows a PP in direct contact with the spleen. Additionally, ASR should be considered in patients with PP who develop haemodynamic instability.

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PP-67

Isolated hepatic perfusion in the treatment of unresectable colorectal cancer with liver metastases

U.M.Meral[1], M.Urkan[2], U.Alakus[3], E.Lapsekili[2]

[1] Department of General Surgery,Izmir Military Hospital. Izmir/Turkey
[2] Department of General Surgery,Gulhane Military Medical Academy. Ankara/Turkey
[3] Department of General Surgery, Elazig Military Hospital. Elazig/Turkey

Background: In various gastrointestinal malignancies, liver metastases are the determination of the cancer stage and usually cause of mortality**.** Resection of metastatic hepatic lesions with clean margins is associated with increased survival. Isolated hepatic perfusion (IHP) is an actual treatment modality for unresectable liver metastases. **Objectives:** The aim of review is to discuss the studies about the usage of IHP in colorectal liver metastases. **Material Methods:** Medline and Pubmed search was undertaken using term "isolated hepatic perfusion" and "colorectal liver metastases". This search identified 81 articles. 16 studies were analyzed. **Results:** Four of these sixteen studies were phase 1 study. Mostly, IHP was performed with types of chemotherapy such as melphalan,5 Fluorouracil, oxaliplatin and TNF-Alpha with mild hyperthermia. In a randomized prospective study; it was noticed that, IHP after resection increases tumor free survival but there was no significant difference in Overall survival(25 months) between systemic chemotherapy (21,7 months). The morbidity of IHP was detected up to %40 of patients in different studies. Hepatotoxicity is the most common morbidity and 3 month follow-up showed that, liver enzymes turned to normal levels in two or three months in %60 of patients. **Conclusion:** IHP can provide significant benefit in patients whose disease is refractory to other therapies On the other hand, from retrospective studies, IHP demonstrated no significant survival benefit compared with systemic chemotherapy alone as first-line therapy.IHP should be considered in the context of prospective clinical trials evaluating in multidisciplinary treatment approaches.

PP-68

Pancreatic incidentalomas (PIs)

L. Hierro-Olabarria Salgado, C. González Serrano, M.I.C. Cruz González, S. Ruiz Carballo, I. Del Hoyo Aretxabala, I. Iturburu Belmonte, A. Gómez Palacios, J.J. Méndez Martín

Department of Gastroenterological Surgery, Basurto Universitary Hospital, Bilbao, Basque Country, Spain.

Background & aims: Incidentally discovered pancreatic lesions are increasing due to the widespread use of highly sensitive imaging techniques.The authors show their experience in the surgical management of PIs laparoscopically assisted. **Patient & Methods:** Since 2010 nine patients have been operated by laparoscopic approach, including six male patients and three females. The mean age was 62 years. Four cases of them were accidentally diagnosed during oncological follow-up. The others five cases were identified on diagnostic tests requested for different symptoms.One patient was treated by distal pancreatectomy with splenic preservation; five patients by distal pancreatectomy with splenectomy; and three patients by segmentary resection of the pancreatic tail with splenic preservation. The pathological results were: neuroendocrine tumor in four patients; serous/mucinous cystoadenoma in four; and renal metastasis in one. **Results:** The postoperative period run uneventfully in all the cases but one who had an hematoma and required laparoscopic drainage. The mean follow-up period is 16 months. **Conclusions:** It is paramount to characterize these lesions in order to decide which can be safely observed and which should undergo an operation. Cystic PIs smaller than four cm are likely to be benign and should be monitored (annual CT).Cystic PIs bigger than four cm and mucinous tumors of all sizes need to undergo surgical resection. Due to their premalignancy, solid PIs smaller than 2 cm may be monitored, but the others should be surgically removed. In our experience, the laparoscopic approach is a good option for this kind of lesions.

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PP-69

Pancreatic-type acinar cell carcinoma of the stomach with the primary carcinoma from other organs

Y. Yonenaga[1], M. Kurosawa[2], M. Mise[1], S. Higashide[1], T. Morimoto[1], Y. Yata[1], K. Hanaki[1], Y. Kanda[1]

[1]Department of Surgery, Nagahama City Hospital, Japan;
[2]Department of Diagnostic Pathology, Nagahama City Hospital, Japan

Background & Aims: Pancreatic acinar cell carcinoma (ACC) is a rare neoplasm, and pancreatic-type ACC of the stomach is extraordinarily rare. So far, there have been no reports on pancreatic-type ACC of the stomach with the primary carcinoma from other organs. We examined two cases with multiple primary carcinomas, including gastric tumors, by immunohistochemical analysis and electron microscopy. **Patient & Methods:** Two cases of acinar cell carcinoma from the stomach were investigated pathologically. The first case had gastric cancer and his past history included urinary tract cancer. The second case had pancreatic cancer and gastric cancer simultaneously. Resected or autopsy specimens were investigated by routine staining with hematoxylin and eosin, and immunostaining using antibodies for exocrine markers, endocrine markers, and neuroendocrine markers. In addition, ultrastructural examination was performed. **Results:** The gastric tumors of both cases consisted of cancer cells with acinar patterns resembling pancreatic ACC. The cancer cells of the first case were positive for exocrine markers including chymotrypsin and lipase, and neuroendocrine markers including chromogranin A (40%) and synaptophysin (40%). An electron microscopy study confirmed the presence of zymogen granules in the cancer cells. The final diagnosis was pancreatic mixed acinar-neuroendocrine carcinoma. The cancer cells of the second case were positive for chymotrypsin, chromogranin A (5%), and synaptophysin (5%). Ultrastructurally, the cancer cells contained zymogen granules. The final diagnosis was pure pancreatic-type acinar cell carcinoma. **Conclusion:** We confirmed two extremely rare cases with gastric pancreatic-type ACC with the primary carcinoma from other organs.

PP-70

Acute Colonic Pseudo-Obstruction (Ogilvie's syndrome) as a post-operative(caesarean section) complication.

M. Urkan, G. Yagcı

Department of General Surgery, Gulhane Military Medical Academy, Turkey;

Background: Colonic pseudo-obstruction characterized by a dramatic dilatation of the colon with the absence of any mechanic obstruction. This rarely complication occurs after medical / surgical conditions such as electrolyte imbalance, sepsis, spinal trauma, caesarean section(CS).**Case:** A healthy 35-year-old, gravida 3, parity 3, female was admitted for elective uncomplicated CS with epidural anesthesia at term of gestation. she informed her gynecologist with the abdominal distension and no flatus. After treated with Disodium phosphate, she was examined with severely abdominal tenderness like the clinical evidence of peritonitis. Although she was threaded with conservative medical ways, her condition deteriorated evidence of ileus and peritonitis. Emergency laparotomy was performed, and caecal perforation with evidence of caecal ischemia was found. There were not find any other obstructive reasons. A right hemicolectomy was performed with ileostomy and mucus fistulotomy.**Discussion:** Ogilvie's syndrome(OS) is reported just scarcely case series. Some of them have been reported following CS. The pathogenesis of OS is still vaguely. Some concepts related pathogenesis of OS with the imbalance of colonic innervation. it can be misdiagnosed like a paralytic ileus easily. early diagnosis and treatments are important steps in preventing ischemia and perforation.**Conclusion:**Conservative management with which corrections of the fluid, electrolyte balance and nasogastric suction were not adequate initially. Although, high level irrigation of colon may be accelerating the ischemia and perforation, most cases can be diagnosed with colonoscopic decompression successfully. To pay attention about careful management of early postoperative dilatation with increasing ratio of CS and OS.

PP-71

The Role of Tissue Engineering in Vascular Surgery

O. M.S El-Taji, J. B Naik

Department of Vascular and Endovascular Surgery, Royal Liverpool University Hospital, United Kingdom.

Background & Aims: Although vascular bypass grafting is a widely performed method of revascularization in patients

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with peripheral vascular disease, the availability of suitable autologous vessels is scarce. Since their first application in the 1960's, synthetic vascular grafts have shown excellent results in large diameter arterial reconstruction; however theytend to perform poorly in small diameter applications. The absence of autologous tissue with parallel properties to that of the native vessels has directed many research groups towards creating the ideal artificial vascular substitute through tissue engineering methods. Here we outline these advances in the basic research and clinical application of tissue engineering and stem cell technology in vascular surgery. **Methods:** Our search was carried out using the PubMed database to assess the current trends in the field of tissue engineering in vascular surgery. The use of different stem cells, scaffolds and methodological approaches were reviewed and assessed through a comprehensive literature review. **Results:** Currently *in vivo* approaches to regenerating tissue in patients for revascularization have demonstrated more success in comparison to *ex vivo*grown vascular conduit approaches. In recent years some multipotentstem cells (e.g. MSCs) have shown the ability to initiate a regenerative response within the graft when seeded on an appropriate scaffold with appropriate biomolecules. **Conclusions:** Tissue engineering is an encouraging method which may overcome the boundaries of existing small diameter vascular replacement approaches in the very near future. Current evidence however does not justify its use as a clinical standard in mainstream vascular and endovascular practice.

PP-72

Do we practice what we preach with complete responders in rectal cancer?

N. Ormsby, H. Joshi, R Rajaganeshan

Department of Colorectal Surgery, St Helens and Knowsley Teaching Hospitals NHS Foundation Trust

Background & Aims: There is a lack of conclusive long-term studies evaluating risk and benefit in the surgical management of patients who show a complete pathological response following radiotherapy in rectal cancer. The trend in practice is becoming increasingly conservative. We questioned whether increased age and/or comorbidity influenced management when complete pathological response was detected. **Methods**: Questionnaires were submitted to all the colorectal cancer surgeons within Merseyside. The participants were asked for their practice in managing 3 patient cohorts (60, 70, 80 years of age) with complete pathological response and varying comorbid status. They were also asked for their preference if they faced the same scenario personally. **Results:** 10 colorectal cancer units with 33 colorectal surgeons were surveyed. The response rate was 23/33 (70%). 5% of surgeons would offer surgery to 70-80 year old patients with multiple comorbidities, whereas 22% would if the patient was 60. 27% of surgeons would offer surgery an 80 year old with no medical comorbidities, and 55% would if they were 60 with no comorbidities. 66% of surgeons would not have surgery if they personally had completely response. 44% would want different treatment from what they would offer their patients. **Conclusions:** Patients with complete response get different treatment according to surgeon preference. 44% of surgeons would advise their patients something they would not choose personally. More study into the long-term risk and benefit of surgical vs conservative management of complete responders is required.

PP-73

Enhanced Recovery After Surgery in Colorectal Surgery – Evaluation of a Single Centre Practice

A. Al-Amin, S. Mehmood, J. Lee, S. Yeung, E. Jehangir

North Cumbria University Hospitals NHS Trust, Cumberland Infirmary, Carlisle, UK

Background: Enhanced Recovery After Surgery (ERAS) protocol is a well-established practice in provision of perioperative care in elective colorectal surgery. The protocols are based on pathophysiological principles and aim to minimise stress response, promote early return of gut function and prompt recovery. **Objectives:** To evaluate the compliance to enhanced recovery after surgery(ERAS) protocol in patients undergoing elective colorectal surgery. **Material/ Patients and Methods:** Patients undergoing elective colorectal resections over a four months period were included in the audit. A prospective review of case notes and anaesthetic records was undertaken against the ERAS Society guidelines for perioperative care in elective colonic surgery. **Results:** A total of26 patients were included in the audit. Male to female ratio was 19:7 and mean age was 69.7 (SD 9.95).Greater than half (n=16) operations were started laparoscopically with a conversion rate of 18.8%. Contrary to guidelines, none of the patients underwent a pre-operative nutrition screening. All patients received antibiotic prophylaxis in accordance with local protocol. Whereas all patients were given prophylaxis against venous thromboembolism, none of the cancer patients received 28 days of postoperative low molecular weight heparin. Abdominal drains were inserted in 46% and another 4% received nasogastric tubes. Majority of patients (77%) were fed early in the postoperative period (within 24 hours). Notably, most of them (81%) used chewing gum to facilitate early return of gut function. **Conclusions:** Staff education and regular audit underpin successful implementation of ERAS. Our results indicate that more stringent measures, such as introduction of a formal ERAS checklist, may be necessary to improve compliance.

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PP-74

Recurrence of malignant neuroendocrine tumors – an abnormal manifestation

Peiffer S, Cathomas R, Schraffl D, Villiger P

Department of General Surgery, Regional Hospital Graubünden, Chur, Switzerland

Background: Malignant neuroendocrine tumors (NET) of the small intestine represent a very rare disease. Recurrence rate of completely resected NET of the small intestine has not been described yet, but depends on the proliferation rate (Ki67). **Case report:** A 64-year-old female with family history for colorectal and gastric carcinoma underwent regular screening. Because of elevation of CA 19-9 a CT-scan was carried out and revealed a tumor of the small intestine of 14mm in diameter. The tumor was resected and classified as a NET (pT4-N1-G1, Ki67 < 1%). After 4 years of follow-up, CT-scan showed two suspicious lesions again. Ga-DOTATOC-PET/CT verified tumor recurrence in both sites and segmental resection was performed. Histological exam showed the same histology of NET as before (pT2-N1-G1, Ki67 < 1%). **Discussion:** Bilocal recurrence of NET of the small intestine with high differentiation and low proliferation rate is rather unlikely with no exact data for recurrence rate in current literature. Following the latest ENETS guidelines of 2009 follow-up should be carried out with regular CT-scan and measurement of chromogranin A according to TNM stage and Ki67 rate at diagnosis. For exact diagnosis and localization somatostatin receptor imaging, either octreotidescintigraphy or Ga-DOTATOC-PET/CT, should be used. As Ga-DOTATOC-PET/CT may have higher sensitivity than octreotidescintigraphy, according to latest results it should nowadays be favored. **Conclusion:** Even in case of low proliferation index, follow-up for NET should be performed according to current ENET guidelines in order not to miss tumor recurrence. In case of changing diagnostic matters reduced comparability has to be taken in concern.

PP-75

Hydrodissection for dissection in calot's triangle in laparoscopic cholecystectomy

C. Ee Ng, T. Fasih

General Surgery department, Queen Elizabeth Hospital, Gateshead, UK

Background: Diathermy use near Calot's triangle is questionable and blunt dissection is now recommended by many surgeons to avoid bile duct injury, the incidence of which is higher with laparoscopic surgery. We describe our experience of using hydrodissection to deal with difficult gallbladder during laparoscopic cholecystectomy to identify the anatomy clearly.**Method:** We use hydrodissection and the suction probe to open up the planes in the Calot's triangle. Tissue can be peeled down by gentle movements of the probe tip and constant flushing of the tissue simultaneously. This helps to take down adhesions around the gallbladder and form clear windows between cystic artery and duct and behind these structures and liver before applying clips to the artery and duct. The continuous water flow cleans the operating field and minimises pooling of blood. The action is similar to finger dissection during open surgery. At the end of the procedure most of the water can be aspirated back after tilting the bed in the Trendelenburg position.**Conclusion:** Laparoscopic cholecystectomy can be a challenging even in the hands of experienced surgeons. Using hydro dissection is a sensible option for difficult cases and use of the suction probe is a safe instrument for dissection.

PP-76

Role of Cardiopulmonary Exercise Tolerance as a Pre-operative Assessment Tool in Hepatectomy

S. Abdalla[1]

[1]Department of Orthopaedics, Arrowe Park Hospital, Liverpool, United Kingdom

Background: Colorectal cancer (CRC) is currently the third most diagnosed cancer around the world and the fourth most diagnosed in the UK, with an incidence of approximately 40,700 each year in the UK. At diagnosis 25% of these patients have synchronous metastatic liver disease with an additional 25-50% developing metachronous liver disease at a later period of time. Hepatectomy procedures have now been established as the only curative measure for colorectal liver metastases (CRLM), with median 5-year survival overall survival rates ranging between 20 and 58%. Cardiopulmonary exercise tolerance (CPET) has now become a well-established pre-operative assessment tool that helps provide a dynamic and wide array of results regarding the patients' cardiopulmonary performance such as the anaerobic threshold (AT) and the body's maximum oxygen uptake known as VO_{2max}. **Objectives:** Describe the role of CPET in hepatectomy due to CRLM. **Material/Patients &Methods:** PubMed and OvidSP online library search.**Results:**Very few studies in the past have considered this tool in relation to intra-abdominal surgery, and even fewer in relation to hepatic surgery.**Conclusion:**Although CPET is currently a frequently used preoperative tool that helps predict risk, its full role in decision-making is not very well understood. The only definitive outcome it shows is that older patients who perform well on CPET might gain some reassurance, and high-risk patients who perform poorly face a potentially uncertain response to surgery. Thus, CPET results need to be acknowledged however this should be added to clinical status and judgment for a holistic risk assessment.

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PP-77

Small cell carcinoma of oesophagus; a primary extrapulmonary disease

Y. Haqzad, M. Ajaykumar, V. Naik, M. H. Shiwani

Department of upper gastrointestinal surgery, Barnsley Hospital NHS Foundation Trust, UK

Background: Small cell carcinoma of oesophagus is a rare, highly aggressive tumour characterised by early dissemination and poor prognosis. Surgery, chemotherapy and radiotherapy have been used alone or in combination for the treatment of this rare disease. Despite several reports describing small cell carcinoma of oesophagus treated with chemotherapy, radiation therapy combined with surgery, the evidence is still patchy. We report the aggressive nature and outcome of a patient with small cell carcinoma of oesophagus post radiation therapy. **Results:** An 87 years old lady presented late with dysphagia to solids. Endoscopy showed a large polypoid mass in the mid oesophagus. Histology confirmed primary small cell carcinoma of the oesophagus with no distant metastasis on staging computing tomography. Multidisciplinary team discussed with her all the management options available and she opted for radiation therapy only. Her response to radiation therapy was sparse and therefore her condition deteriorated rapidly requiring an oesophageal stent. **Conclusion:** Evidence is limited and usually in the form of case reports/series which makes the management of primary small cell carcinoma of oesophagus difficult for the multidisciplinary team. Case reports help our understanding of the clinical course of this rare entity with regards to different management strategies.

PP-78

The "sunk" colostomy: a novel corrective approach to achieve satisfactory function

Siddique K, Prud'Homme G, Samuel N,Avil-Griffiths K, Offori T.

Barnsley Hospital NHS Foundation Trust, South Yorkshire, UK

Background: Gastrointestinal stomas are a frequently performed surgical procedure with associated early or late complications. Some of these complications demand advanced technical skills and expertise to manage. We present here a challenging case of sunken colostomy affecting patient's quality of life and a novel approach to achieve a satisfactory functional outcome.**Case report:** A 63 year old male underwent defunctioning loop colostomy for locally advanced rectal cancer with liver metastasis. Three months later he presented with difficulties managing his stoma. He had developed a horizontal skin crease along the stoma leading to obliteration of stomal opening causing ineffective stoma bag adhesion, resulting in painful parastomal ulcers. The patient was reluctant to consider stoma resiting owing to his job which involved leaning against machinery on his right side. Urgent surgical intervention was required so that his neo-adjuvant therapy would not be delayed. Our novel approach involved the excision of large supero-lateral elliptical fold of anterior abdominal wall down to the fascia with resultant opening up of colostomy. Care was taken to ensure precise excision resulting in flattening of abdominal wall as well as avoidance of future stoma appliance impingement. **Discussion:** This technique draws parallels to the principles of blepharoplasty of upper eyelids, where droopy eyelid tissue is recontoured to unblock the visual axis. This approach also carried the advantage of operating away from the stoma site thereby preventing potential complication of stomal injury and wound infections. **Conclusion:** Early successful result has established the feasibility of this novel approach, which has not been reported before.

PP-79

Indications of pulmonary resection as a part of curative intent surgical treatment in patients with simultaneous liver and pulmonary metastases arising from colorectal cancer: What Does Cumulative Evidence Say?

Oztas M[1], Urkan M[2]

[1]Sirnak Military Hospital, Department of General Surgery, Turkey
[2]Gulhane School of Medicine, Department of General Surgery, Turkey

Background and Aims: Indications of pulmonary resection as a part of curative intent surgical treatment in patients with simultaneous liver and pulmonary metastases is not well defined due to the lack of conclusive studies with high level of evidence. In the current paper, our aim was to review the current knowledge on this topic. **Material and Methods:** A search of Medline database and Web of Science was performed to identify articles related with the indications of pulmonary resection as a part of curative intent surgical treatment in patients with simultaneous liver and pulmonary metastases until January 2015. The search was limited to papers written in English. Studies investigating nonsurgical approaches were excluded. **Results:** The initial search retrieved 79 articles. Fifty five of them (69.6 %) were not relevant to the topic or including repeated information and therefore excluded. Prognose in patients with concomitant liver and pulmonary metastases from colorectal cancer was worse than the patients with isolated liver metastases. Five year survival rate in patients undergone surgical resection for extrahepatic metastases was better

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than patients treated with nonsurgical treatment. Studies showed that the major prognostic factors were multiple extrahepatic metastases in different sites, early recurrence and completeness of resection. **Conclusion:** Our analysis suggested that in the era of modern systemic therapies, surgical resection of colorectal liver metastases with concomitant extrahepatic disease is safe and feasible in selected patients and complete resection yields a clearer survival rate. However, lack of prospective trials limit reaching strong conclusions.

PP-80

Who does benefit from palliative resection in advanced stage gastric cancer: Systematic review of preoperative selection criteria

Oztas M[1], Urkan M[2]

[1]Sirnak Military Hospital, Department of General Surgery, Turkey
[2]Gulhane School of Medicine, Department of General Surgery, Turkey

Background and aims: Gastric cancer (GC) is one of the most common cancers and it is often diagnosed at advanced stage. In this paper, our aim was to review the current knowledge regarding preoperative selection criteria for palliative resection in advanced stage GC patients. **Material and Methods:** A search of Medline database and Web of Science was performed to identify articles related with the topic published until January 2015. The search was limited with papers written in English. **Results:** The initial search retrieved 228 articles. Forty five of them (19.7%) were excluded due to the lackof relevance to the topic or repeated articles. Studies that included to the analysis showed that the major prognostic factors in advanced GC were stage, histologic type, completeness of resection and combined therapy status. Multivisceral resection, metastasectomy, intraperitoneal chemotherapy improve survival rate in selected patients. Most of the trials revealed that advanced age is not a contraindication for palliative resection. **Conclusion:** Our analysis suggested that palliative resection with combined medical therapy may improve survival in selected patients with advanced GC. Multidisciplinary approach is necessary for every patient. Those patients have had better survival rate than the past due to progress in surgical treatment and new chemotherapy agents. Satisfactory prognostic outcomes with a low operative risk can be achieved in selected patients. Especially, in condition such as a single metastasis, adjacent tissue invasion or peritoneal spreading, surgery must be performed as a part of combined treatment if the patients' condition is appropriate for surgery. However, further prospective researches are needed for strong evidences.

PP-81

Laparoscopic management of an accessory/ectopic liver attached to the gallbladder: Case report and literature review

N Samuel, H Shiwani, MH Shiwani

Department of General Surgery, Barnsley Hospital NHSFT, South Yorkshire, UK

Background: Anomalous hepatic tissue are rare and almost always an incidental finding at operations or autopsies.We hereby report of an aberrant liver on the serosal surface of a gallbladder, found incidentally at the time of laparoscopic cholecystectomy; its intraoperative management and a literature review of its significance. **Patient & Methods:** A 46-year-old lady underwent laparoscopic cholecystectomy for gallstone disease. At laparoscopy, accessory liver tissue was seen attached to the gall bladder with a pedicle of tissue connecting with the native liver. The pedicle of tissue was ligated and divided between clips and the accessory liver excised en-block with the gallbladder. Histology of the 22x5 mm lump grossly resembling liver parenchyma confirmed normal liver tissue. An English literature search was conducted on MEDLINE from January 2002 to July 2014 using the search terms: ectopic liver, heterotopic liver, accessory liver and gallbladder. **Results:** 10 articles were found reporting on 11 cases of accessory hepatic tissue attached to the gallbladder. Reported incidence of accessory/ectopic hepatic tissue ranged from 0.28 to 0.7%. They are typically asymptomatic and function like normal liver tissue. However, ectopic livers have increased neoplastic potential over normal liver tissue; have been associated with abdominal pain due to torsion; intraperitoneal bleeding; impaired liver functions; and other congenital abnormalities. **Conclusion:** The surgical technique to remove this lesion has not been reported very clearly in the literature. We suggest that the tissue which connects this anomalous liver with the native liver should be dealt with by ligating, dividing and removing it en-bloc.

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PP-82

iPancreas: A simple mnemonic for the initial management of acute pancreatitis in secondary care

W. Ye[1], J. M. Norris[2]

[1]School of Clinical Medicine, University of Cambridge, Cambridge, Cambridgeshire, UK.
[2]Department of Surgery, University of Cambridge, Cambridge, Cambridgeshire, UK;

Background & Aims: Acute pancreatitis is a common and potentially serious condition, with multiple complications if not managed well. To aid the recall of NICE recommendations for the management of acute pancreatitis in secondary care, we summarise the initial investigations and treatments in a simple mnemonic: iPancreas. **Material & Methods:** The initial investigations and treatments included in our mnemonic were taken from NICE clinical knowledge summaries on the management of acute pancreatitis, updated in 2010. **Results:** The important NICE recommendations are summarised in a mnemonic, iPancreas, where 'iPa' refers to the initial investigations and 'ncreas' refers to the initial treatments.

i Imaging (CT, MRI, or ultrasonography)
P Prognostic screen to identify severe pancreatitis
a Amylase and lipase levels
n Nutritional support
c Cholecystectomy if suspected/proven gallstone-pancreatitis
r Resuscitation of fluids
e ERCP within 72 hours of pain onset if gallstone-pancreatitis
a Antibiotics
s Supplemental oxygen

Conclusions: We believe that this simple mnemonic is a useful teaching aid that will improve recall and application of the NICE recommendations, especially for medical students and junior physicians, and will serve as an invaluable aide-memoire to allow efficient management of the important condition that is acute pancreatitis.

PP-83

A Method of Forming Intestinal Anastomosis After Low Anterior Resection

Z. Totikov, V. Totikov, A. Kachmazov

Surgical Disease Department №2, North-Ossetian State Medical Academy, Vladikavkaz, Russia

Background: To reduce complications after application of low colorectal and coloanal anastomosis and the cost of treatment of patients after low anterior resection. **Material and Methods:** In our clinic was developed and used a new method of applying coloanal and low colorectal anastomosis. This method has been used in the treatment of 54 patients , including 46 patients after low anterior resection for rectal cancer , 3 patients after reresection previously imposed and complicated fistula or stricture low colorectal anastomosis in 3 patients about the gunshot wounds of the rectum and 2 patients with rectal hypogangliosis complicated megacolon . This method was carried out in 14 patients under the guise of the proximal transversostomia. **Results:** Postoperatively, 3 (5.6%) patients partly formed anastomotic leakage. Two patients it does not require additional surgery. A third patient required surgical correction of the fistula. Not in one case, we did not have marked the development of strictures. **Conclusions:** Proposed method of applying coloanal and low colorectal anastomosis when the low anterior resection of the rectum is an alternative hardware anastomoses, while not increasing the number of anastomotic leakage, reduced the number of strictures and the costs of treatment of patients.

PP-84

Optimization of Surgical Treatment of Locally Advanced Cancer of the Colon Complicated by Acute Bowel Obstruction

Z. Totikov, V. Totikov

Surgical Disease Department №2,
North-Ossetian State Medical Academy,
Vladikavkaz, Russia

Background: working out of an optimal surgical treatment in patients with locally advanced cancer of colon complicated with the bowel obstruction. **Material and methods:** Under our supervision there were 132 patients. We define 4 stages in the clinical course of obstruction. **Results:** The resection performed to the patients with the 1 stage of obstruction resulted in anastomosis formation. The patients with 2 and 3 stages of obstruction in bad condition, with tumor located right at the 1 step of the operation there were performed ileostomies, those with tumor located left were performed transversed colostomies via mini excess. In 7-10 days the radical operative measure is madeafter correction of metabolic disturbance and concomitant diseases. To the patients with the 2 and 3 stages of obstruction with low anesthesia risk and with the tumor located distal part of sigmoid colon there were formed transversed colostomies. In 7-10 days the radical operative measure is made.The surgical interventions combined with intraperitoneum chemotherapywas performed by 42,3% patients. Postoperative complications were among 19,4%. The lethality was – 6.2%. **Conclusions**: The suggested tactics allows us to increase the quantity of radically operated patients and decrease lethality. The transversed colostomies via mini excess applied to the patients with the cancer of distal part of sigmoid colon and with low anesthesia risk

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allows us to decline Hartmann's operation and avoid hard reconstructing and recovering stages.

PP-85

A review of the clinical outcomes following fertility-sparing treatments for early stage cervical cancer at Liverpool Women's Hospital

B. Patel

University of Liverpool

Background: Cervical cancer is the twelfth most common cancer among females in the UK and generally affects women of child-bearing age. Therefore, there is a strong need for successful fertility-sparing treatments with good outcomes. **Objectives:** The aim of this service evaluation is to assess fertility, obstetric and recurrence outcomes following fertility-sparing treatment for early stage cervical cancer. **Material/Patients and Methods:** 33 case notes were evaluated for 17 parameters such as diagnosis, complications, residual tumour, recurrence and pregnancy following treatment. **Results:** 33 women had either a cone biopsy or trachelectomy as fertility-sparing treatment for their cervical cancer. The obstetric outcomes following fertility-sparing treatments included 5 live births of a possible 9 in 7 women. 80% of which were born at ≥37 weeks and 20% at 36 weeks. The rate of early miscarriage was 11% and the rate of late miscarriage, 22%. With regards to fertility, the rate of cervical stenosis requiring surgical dilatation treatment was 6% following fertility-sparing surgery. These patients had IVF therapy for their sub-fertility but neither achieved any pregnancies. The rate of disease recurrence was 3% in this series following radical abdominal trachelectomy and radiotherapy in a patient who unfortunately died 3 years following completion surgery. These results correlate with recurrence rates of other series.**Conclusion:** The data highlights the effectiveness of fertility-sparing treatments in a select population which meets the demands for fertility preservation in women with early stage cervical cancer. The obstetric, fertility and recurrence outcomes are generally good and in keeping with the current literature.

PP-86

Bulky fibroids during pregnancy and labor. Management of two cases

Mizrahi S., Lepage J., Merlot B., Ivars J., Lucot J-P., Subtil D.

Departmentof gynecology-Obstetrics, Pôle Femme-Mère-Nouveau-Né, Hôpital Jeanne de Flandre, Centre Hospitalier Régional Universitaire de Lille, Lille, France.

Background: Fibromas concern 0,1 to 3,9% of all pregnancies and we observe complications in 10% of them. Bulky fibroids can cause intense pain during pregnancy and hemorrhaege during delivery. Surgery is not recommended in the first line but can be necessary.**Material & Methods**: We report two observations of bulky fibroids: one of 30 cm of diametre and the other of 27cm. The treatment was different in both cases. **Results**: In the first case, the fibroma was asymptomatic and let in place. A caesarean was programmed at 37 weeks and a 1500 ml hemorrhaege occured during the caesarean. The myomectomy was decided a few months later, a hysterectomy was necessary due to local conditions of the myoma, it weighed 10600 gr.In the second case, intense pain due to myoma necrobiosis led to a myomectomy that was realised in the first semestre at 11 weeks; a 3000 gr fibroma was removed. The pregnancy and delivery took place without any complication. **Conclusions**: We remind the possibility of surgery during pregnancy. MRI images of the fibroma before myomectomy, during the pregnancy, are shown for both cases, as well as photographs of the caesarean in the first case and of the myomectomy at 11 weeks.

PP-87

Calcifying Epithelioma Of Malherbe As Determined By Subcutaneous Mass Excision

S. Destek[1],V.O. Gul[2], E. Etkin[2], S. Ahioglu[2], S. Ozer[3]

[1]Tuzla Hospital General Surgery Department Istanbul, Turkey
[2] Edremit Military Hospital General Surgery Department Balikesir, Turkey
[3] Konya Military Hospital General Surgery Department Konya, Turkey

Background: Calcifying epithelioma of Malherbe, also known as Pilomatricoma, is a benign tumor which originates from matrix of the hair follicles. It also called calcifying epithelioma. It's common in women who are especially in the first two decades of their life. The most frequent localization is the head, neck and upper extremities. Some cases called pilomatrix carcinoma have been reported showing

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malignant transformation. In this presentation we aimed to evaluate the patients who underwent intervention because pilomatricoma which is very important because of its ability to malignant transformation.**Method:** Data from five patients who has subcutaneous mass complaints from pilomatricoma diagnosed by histopathological examination admitted to our surgery clinic between the 2011 and 2014 were evaluated retrospectively. **Result:** The mean age of the patients was 43 and the female/male ratio was 2/3. Lesions of 2 patients are on the upper extremities (40%), in 2 patients lesions are in the neck region (40%) and lesions of one patient were located in the scalp (20%). Lesions in all cases are single, rigid or elastic subcutaneous nodule formation. In two patients the lesion was cystic formation. The range of tumor diameters was 8 to 25 mm (average 13.6). Surgical excision was performed in all cases. Calcifying epithelioma of Malherbe was diagnosed with pathological examination. There is no recurrence during follow-up of patients. **Conclusion:** Pilomatricoma is a common disease but can be mixed with the other subcutaneous localized tumor due to the lack of pathognomonic signs and having various atypical forms. Although it's a benign tumor, in the literature malignant pilomatricoma cases that are developed from pilomatricoma and having distant metastasis are also available. Therefore, keep in mind the pilomatricoma for differential diagnosis during excisional biopsy is recommended to surgeons.

PP-88

Ophthalmomyiasis Externa

A. Ilhan[1], U. Yolcu[2], F. C Gundogan[3], A.Sen[4], F. Akay[5]

[1]Erzurum Military Hospital, Ophthalmology Department., Erzurum, Turkey
[2]Sarikamis Military Hospital, Ophthalmology Department, Kars, Turkey
[3]Gulhane Military Medical School, Ophthalmology Department, Ankara, Turkey
[4]Erzurum Military Hospital, Microbiology Department, Erzurum, Turkey
[5]İzmir Military Hospital, Ophthalmology Department, İzmir, Turkey

Background & Aims: Ophthalmomyiasis is the infestation of ocular tissues by fly larvae. It is common in warm climates. Close animal contact is a great risk factor. Here we present a 21 years old male working as a garbage man complaining about bilateral redness and lacrimation in his eyes. **Patient & Methods:** During biomicroscopic examination, there was a mobile larva under the lower left lid. It was partially paralysed with topical anesthetic, removed with a cotton swab and sent to microbiologic analysis.**Results:** The result was "first stage oestrus ovis larva". The patient's history of poor sanitized work area, ocular surface signs and symptoms together with laboratory result led us to ophthalmomyiasis externa. Ocular surface irrigation and topical antibiotherapy solved the problem completely. **Conclusions:** This rare case demonstrates that ophthalmomyiasis externa can mimic a simple conjunctivitis and may be a result of poor sanitation conditions. It also underlines the importance of thorough ophthalmologic examination to detect such exceptional cases.

PP-89

Photopic and Mesopic Pupil Diameter in Emmetropes and Moderate Myopes

A. Ilhan[1], U. Yolcu[2], U.r Erdem[3]

[1]Erzurum Military Hospital, Opthalmology Department., Erzurum, Turkey
[2]Sarikamis Military Hospital, Ophthalmology Department, Kars, Turkey
[3]Gulhane Military Medical School, Ophthalmology Department., Ankara, Turkey

Background & Aims: To prospectively compare the mesopic and photopic pupil size between emmetropes and moderate myopes using a OPD Scan. **Patient & Methods:** The pupil diameters of 70 normal subjects and 120 healthy modearate myopic subjects were measured with the OPD scan pupillary function in a low and high light situation that simulated the level of light, encountered while driving at night. **Results:** The mean (_SD) age of the emmetropic subjects was 30.78 years 10.03 (range, 18–54 years) and the mean (_SD) age of the myopic subjects was 27.35 years _8.43 (range,21–52 years). The mean (_SD) scotopic pupil diameter was 6.46_0.90 mm (range, 4.5–8.0mm) in the emmetropic group and 6.98_0.67 mm (5.5–8.5 mm) in the myopic group. The unpaired Student t -test showed that the difference in the scotopic pupil diameter between emmetropes and myopes was statistically significant (P_.0001). **Conclusions:** The mean scotopic pupil diameter in myopes was larger than that in emmetropes. Therefore, a large ablation zone of the cornea or an appropriate optical size of the phakic intraocular lens should be considered in refractive surgery. Preoperative scotopic pupil measurements may be necessary in all refractive patients.

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PP-90

Safer Laser Refractive Surgery "Standard Deviation Method" and Beyond: Tips and Tricks

A. Ilhan[1], U. Yolcu[2], U. Erdem[3]

[1]Erzurum Military Hospital, Ophthalmology Department., Erzurum, Turkey
[2]Sarikamis Military Hospital, Ophthalmology Department, Kars, Turkey
[3]Gulhane Military Medical School, Ophthalmology Department., Ankara, Turkey

Background & Aims: We aimed to explain a comprehensive method to minimize the risk of excimer laser complications including corneal ectasia, night vision problems, and dry eye after surgery for the treatment of refractive errors of the eye. We also explain our 'Standard deviation method' to prevent corneal ectasia with literature review. **Patient & Methods:** We performed retrospective analysis of 17700 consecutive eyes with excimer laser LASIK surgery in 3 clinics in 9 years with same surgical system and same standarts. We also performed a questionnaire after the last visit after 6 months to determine the night vision and dry eye problems of 318 participated LASIK surgery patients for their moderate myopia using same protocol 2 centers, Sex, Age: 166 women (33±7.33), 152 men (32 ±5.06) No significant difference. Follow up: 9.66±3.41 mo LASIK surgeries were performed with Nidek's EC 5000 CXII NAVEX platform Treatment parameters have been optimized based on pachimetry, flap diameter, and simulated for post-operative changes at OATz (Aspheric), CATz (Topo-based) or OPDCAT (WF based) modules of Final Fit software. Nidek MK 2000 microkeratome with 130 micron thin flap thickness and 9.5 mm flap size used for LASIK **Results:** 3 refractive surgery clinic with the same laser and standards, 8 years and over 17700 procedures no corneal ectasia encountered so far. **Conclusions:** Standard Deviation Method for Excimer Laser Refractive Surgery works well so far. To have night vision and glare free surgery, surgeons must do wider transitional zone surgery with larger flap. To have wider refractive surgery limits surgeons must have tools with less SDs.

PP-91

The Efficacy and Repeatability of NeurOptics Pupillometry in Mesopic Conditions

A. Ilhan[1], U. Yolcu[2], U. Erdem[3]

[1]Erzurum Military Hospital, Ophthalmology Department., Erzurum, Turkey
[2]Sarikamis Military Hospital, Ophthalmology Department, Kars, Turkey
[3]Gulhane Military Medical School, Ophthalmology Department., Ankara, Turkey

Backround and Aims: In this study our purpose was to compare the pupillometric measurements of NIDEK OPD-scan(OPD) and NeurOptics Pupillometry (NP) in mesopic conditions in order to assess the efficacy and repeatability of NP. **Patients and Methods:** In order to assess the efficacy and repeatability of NP, mesopic pupil diameters of 44 eyes (22 participants) were measured by same person using NP and OPD in two different times. The mean age of participants was 30.68±8.1 ranging from 20 to 50. Their medical histories were unremarkable except simple refractive errors and/or successful (uncomplicated) refractive surgery. 14 eyes had a history of refractive surgery. **Results:** Pearson correlation analyses revealed that both the results of two devices and the first and the second results of NP measurements were significantly correlated. When we accept a gap of 0.5 mm or more as a fault, 37 of the 44 first measurements (84.1%) and 41 of the 44 second measurements (93.2%) were found successful. The first and the second measurements of NP were also compared. 33 of 44 were successful. Furthermore, there was no tendency of higher or lower results when the unsuccessful results were analyzed. **Conclusion:** The results demonstrates that according to the comparisons to NIDEK OPD-scan, NeurOptics Pupillometry device is efficient and repeatable in mesopic pupillometric measurements.

PP-92

Supernormal Full-field Electroretinogram of a Patient with Nystagmus

A. Ilhan[1], U. Yolcu[2], F. C. Gundogan[3]

[1] Erzurum Military Hospital, Ophthalmology Department., Erzurum, Turkey
[2] Sarikamis Military Hospital, Ophthalmology Department, Kars, Turkey
[3] Gulhane Military Medical School, Ophthalmology Department., Ankara, Turkey

Backround and Aim: To report a supernormaal full-field electroretinogram of a patient with nystagmus.**Patient and**

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Method: A 21 year old patient complaining about nystagmus and low vision. Routine ophthalmologic examination was followed by pattern visual evoked potentials (PVEP) and full-field electroretinogram (ERG). **Results:** Visual acuity was 20/20 in both eyes. Choroidal vascular structures were abnormally apparent due to the hypopigmentation of pigment epithelium. PVEP was almost non-recordable in all patterns. ERG showed significantly higher potentials than the normal limits in all potentials including rod response, standard-combined response, cone response and 30-Hz response.**Conclusion:** We assume that the abnormally high amplitudes recorded in ERG can be attributed to the hypopigmentation of retinal pigment epithelium. Lack of melanin may lead to insufficient absorption of light and multiple reflections of a light beam may amplify the potentials.

PP-93

Retinocytoma

A. Pellumbi[1], A. Ilhan[2], Y. Uysal[1]

[1]Gulhane Military Medical School, Ophthalmology Department., Ankara, Turkey
[2]Erzurum Military Hospital, Opthalmology Department., Erzurum, Turkey

Backround and Aim: We would like to present the clinical features of a 21-year-old complaining about reduced vision in his left eye and finally diagnosed with retinocytoma. **Patient and Method:** Visual acuity was 20/20 in the right and 20/200 in the left eye. Bilateral anterior segment biomicroscopy and right fundoscopy was unremarkable. Fundoscopic examination of the left eye showed a 5 optic disc diameter sized retinal mass of at the superior border of optic disc which is elevating retina and carrying calcific plaques also named as “cottage cheese”. It was surrounded by a hyperpigmented demarcation line. There were also discrete bone-spicule-shaped pigmentations at the inferior nasal mid-peripheral retina. Ocular ultrasonography (USG), fundus fluorescein angiography (FFA) and optical coherence tomography (OCT) were performed to reach the diagnosis. **Results:** OcularUSG displayed a 4.21×10.26 cm sized mass with hyper-reflective spots. FFA demonstrated hypofluorescence in the early phase and staining in the late phase. Images from the central part of the lesion obtained by OCT revealed that retinal thickness is more than 1 mm in that sectors. Patient’s history, examination, results imaging techniques and benign clinical course led us to “retinocytoma”. **Conclusion:** Retinocytoma is likely to show malignant transformation and turn into “retinoblastoma”. They can be present in the same eye or different eyes of same patient. Annual follow-up is essential in order to detect retinoblastoma. Besides, they must be referred to genetic counseling as their children have the risk to develop retinoblastoma.

PP-94

Diode laser-assisted transcanalicular dacryocystorhinostomy: the effect of age on the results

F. Akay[1], U. Yolcu[2],A. Ilhan[3], F. C. Gundogan[4],Y. Yildirim[1], S. Toyran[1]

[1]Department of Ophthalmology, Izmir Military Hospital, Izmir, Turkey
[2]Department of Ophthalmology, Sarikamis Military Hospital, Kars, Turkey
[3]Department of Ophthalmology, Erzurum Military Hospital, Erzurum, Turkey
[4]Department of Ophthalmology, Gulhane Military Medical School, Ankara, Turkey

Background & Aims: To explore the effect of age in the success of transcanalicular diode laser-assisted dacryocystorhinostomy (TCDCR). **Material & Methods:** Seventy eyes of seventy patients who underwent TCDCR for the treatment of nasolacrimal duct obstruction as a primary surgery were in this retrospective, nonrandomized study. Patients were divided into two groups regarding age. Mean ages were 21.3+3.3 and 60.3+7.3 in group 1 and group 2, respectively. Records of 3rd, 6th and 12th month follow-up examinations were evaluated noting anatomic and functional outcomes. Functional success was defined as the absence of epiphora with questioning of the patient. Anatomical success was defined as the patency of the neo-ostium with irrigation.**Results:** At third month of follow up, 67% of cases in group 1 showed anatomic and 52% functional success. In group 2, the rates were %100 and %92, respectively. Functional and anatomic success rates were the same for both 6th month and 12th month visits; %46 in group 1 and %76 in group 2. The results of group 2 were significantly better for all three follow-up periods ($p<0.05$.**Conclusions:** Our study clearly explored that better TCDCR results were present in elderly patients compared with the young patients. We think that the possible contributing factor seems to be diminished inflammatory response in the elderly population.

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PP-95

Hotzprocedure to correct lash ptosis: case report

A. Tas[1], A. Ilhan[2], U. Yolcu[3], F. C. Gundogan[1]

[1]Department of Ophthalmology, Gulhane Military Medical School, Ankara, Turkey
[2] Department of Ophthalmology, Erzurum Military Hospital, Erzurum, Turkey
[3] Department of Ophthalmology, Sarıkamıs Military Hospital, Kars,Turkey

Background & Aims: To present a case with upper eyelid lash ptosis corrected with Hotz procedure.**Patient & Methods:** A 47-year-old male presented with a chief complaint of left eye tearing. He was diagnosed with bilateral superior eyelid lash ptosis. Upon the admission of only the left eye's operation by the patient, skin and orbicularis muscle excision and tarsal fixation (Hotz procedure) were performed. Skin incision was made and a thin strip of skin and orbicularis muscle was excised. The incision line was closed by suturing the free edges of the wound getting a small bite from proximal tarsus using with 6/0 vicryl suture. **Results:** Postoperatively and at the 12-month follow-up examination, normally-directed eyelash position was observed and the patient had no complaint. **Conclusions:** Hotz procedure is to be told a safe and effective method in the patients with lash ptosis whom has no accompanying eyelid pathologies

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PP-96

Choroidal Thickness Changes in Type 1 Diabetes Mellitus Without Clinical Diabetic Retinopathy at Young Adults

A. Ilhan [1]; F. Akay[2], S. Uzun[3], F. C. Gundogan [4], U. Yolcu[5]

[1]Erzurum Military Hospital, Ophthalmology Department., Erzurum, Turkey
[2]Izmir Military Hospital, Ophthalmology Department, Izmir, Turkey
[3]Etimesgut Military Hospital, Ophthalmology Department, Ankara, Turkey
[4]Gulhane Military Medical School, Ophthalmology Department, Ankara, Turkey
[5]Sarikamis Military Hospital, Ophthalmology Department, Kars, Turkey

Backround and Aim: The purpose of this study was to determine the ChT changes in young type 1 DM patients without DR, to investigate the possible relationship between ChT changes and some certain parameters such as duration of disease, age and glycosylated hemoglobin (HbA1c) by using SD-OCT in patients with DM type 1 compared to normal control subjects.**Material and Method:** We reviewed 60 eyes of 60 type 1 DM patients and 60 eyes of 60 healthy (age and sex matched) subjects. Patients were recruited if there was no sign for clinical DR. Control subjects had not been diagnosed with any ocular disease, diabetes or other systemicdiseases. Each subject underwent a complete ophthalmic examination, including best corrected visual acuity(BCVA), slit-lamp bio-microscopy, Goldman applanation tonometry and indirect ophthalmoscopy.Eyes of all subjects were examined with SD-OCT. But only right eyes' data were used.**Results:** Subfoveal choroidal thickness was significantly thinner in the diabetic group (p=0.049). ChT comparisons of N1,N2 and N3 showed significant changes also (p=0,003, p=0,0, p<0,001 respectively). Although T1, T2, and T3 ChT tended to be thicker in the study group, there was no significant difference (p > 0.05). **Conclusion:** In conclusion, the choroidal thickness of subfoveal and nasal regions was significantly decreased in DM patients compared to controls. Further investigations on larger populations are required to define the exact role of choroidal thickness changes in the development of diabetic retinopathy.

PP-97

Treatment Of Descemet's Membrane Detachment with Air Tamponade And Pre-Descemetic Fluid Drainage

M. Eren[1], A. Ilhan [2], U. Yolcu [3], U. Erdem [4]

[1]Aksaz Military Hospital, Ophthalmology Department, Mugla, Turkey
[2]Erzurum Military Hospital, Ophthalmology Department, Erzurum, Turkey
[3]Sarikamis Military Hospital, Ophthalmology Department, Kars, Turkey
[4]Gulhane Military Medical School, Ophthalmology Department, Ankara, Turkey

Backround and Aim: To present the clinical properties and treatment outcomes of two patients diagnosed with Descemet's membrane detachment (DD) with air tamponade and pre-descemetic fluid drainage. **Patient and Methods:** Patient 1: A 45-year-old female referred with vision loss in her right eye for more than 8 months. She had a history of phacoemulsification surgery 13 months ago. Slit-lamp examination demonstrated edema and DD. Central corneal thickness was 915 microns. Visual acuity(VA) was hand-motions. DD was confirmed with anterior segment optical coherence tomography (AS-OCT). Pneumotic Descemetopexy (PD) was performed with 0,5 ml 20%-SF-6. Residual pre-Descemetic fluid was drained with a 27-gauge needle. Patient 2: A 76-year-old male referred with sudden vision loss in his left eye at the third day of phacoemulsification surgery. Slit-lamp examination

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demonstrated edema and DD. Central corneal thickness was 940 microns. VA was hand-motions. DD was confirmed with AS-OCT. Pneumotic Descemetopexy (PD) was performed with 0,5 ml 20% SF-6. **Results:** Patient 2 recovered completely and VA improved to 20/40 within the first day. Descemet's detachment in patient 1 did not resolve with the initial management. Descemetopexy and pre-descemetic fluid drainage was repeated 7 days. DD resolved after the second drainage. Central corneal pachymetry was 610 microns. VA gradually improved up to 20/40 in the right eye 3 months after the interventions. **Conclusion:** Our case report demonstrates that long standing DD can be treated with PD and pre-Descemetic drainage. Resolution of DD may achieve acceptable visual outcomes even one year after the onset of detachment.

PP-98

Spinal Stenosis Incidence In Total Arthroplasty Patients

O. Ersen[1], S. Bilgic[2], I. Yanmis[2]

[1]Maresal Cakmak Military Hospital, Erzurum, Turkey
[2]Gulhane Military Medical Academy, Istanbul, Turkey

Background: Spinal stenosis can be a challenging problem for total joint replacement patients and usually degenerative process affect more than one joint at the same time. In this study we want to evaluate spinal spinosis incidence in total joint arthroplasty patients. **Methods:** Patients with history of primary total arthroplasty were retrospectively evaluated for spinal stenosis between May 2010 and June 2013. Total knee and total hip arthroplasty patients who had at least one year follow up were included in the study. Patients with residuel low back pain after 2 weeks of conservative treatment were investigated for spinal stenosis. X-ray evaluation and magnetic resonance imaging were performed for these patients. **Results:** 176 patients were included in this study. 83 patients (47 female, 36 male) were in hip replacement group, 93 patients (54 female, 39 male) were in knee replacement group. The mean age was 63,2 in hip group and 62,9 in knee group. Total 31 patients (18 hip, 13 knee) suffered of low back pain. After conservative treatment 17 continued. X-rays showed 6 patients with lumbal degenerative scoliosis. After MRI 13 patients were diagnosed as spinal stenosis. 6 patients (4 hip, 2 knee) with spinal stenosis needed surgical treatment. **Conclusion:** Degenerative arthritis usually effect more than one joint. Before considering a joint replacement treatment one should evaluate possible artritis of other joints and that could change surgical treatment order.

PP-99

Relation Between Pes Planus And Low Back Pain

O. Ersen[1], S. Bilgic[2], S. Ekinci[3]

[1]Maresal Cakmak Military Hospital, Erzurum, Turkey
[2]Gulhane Military Medical Academy, Istanbul, Turkey
[3]Agri Military Hospital, Agri, Turkey

Background: Low back pain is a common complaint of pes planus patients. Beside this low back pain is a common complint and its relation with pes panus deformity is undetermined. Also effect of pes planus on lumbar region is unstudied. The aim of this study is to evaluate low back pain complaints and lumbar radiologic measures of pes planus patients. **Methods:** Sixty-one 61 male patients who admitted to our clinic for administrative purposes included in the study. After clinical examination patients divided into two groups with or without low back pain. Lateral weightbearing foot graphies and anteroposterior and lateral lumbar x-rays evaluated. Calcaneal pitch, talometatarsal angle, Lumbar scoliosis and lordosis, sacral slope, pelvic incidence, pelvic tilt evaluated and patients asked to fill oswestry disability index. **Results:** There were 36 patients in low back pain group and 25 in control group. Average age was 22,1in LBP group and 24,3 in control group. No statistical difference in foot measurements and lumbar measurements found between the groups. Oswestry scores were 39,8 (14-74) and 26,5 (0-58). **Conclusion:** This study aimed to determine lumbosacral effect of pes planus deformity and its relation to low back pain. Scores between the groups were similar and no relation between low back pain and pes planus deformity was found.

PP-100

Is Pes Planus Affect Calcaneal Angles?

O. Ersen[1], S. Bilgic[2], Y. Yurttas[3]

[1]Maresal Cakmak Military Hospital, Erzurum, Turkey
[2]Gulhane Military Medical Academy, Istanbul, Turkey
[3]Gulhane Military Medical Academy, Ankara, Turkey

Background: Pes planus is described as lowered medial longitudinal arch of the foot. When evaluating this deformity radiologically calcaneal pitch is most used angle. There is no study evaluating Böhler and Gissane angles' change in pes planus deformity. In this study we aimed to determine Böhler and Gissane angles of patients with pes planus deformity. **Methods:** Between July2012-April 2014 190 male patients who admitted to our clinic for administrative purposes included in the study. After clinical pes planus

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deformity determined calcaneal pitch, talometartarsal angle, Böhler and Gissane angles measured radiologically. Measurement were compared to reference values for the Turkish population.**Results:** Average age was 23±2,6 (20-38). Average calcaneal pitch was 13,9°,talometatarsal angle 9,2°. Average Böhher angle measured was 33,5° and Gissane angle was 106,8°. Compared to reference values for the Turkish population Gissane angle found decreased while Böhler angle found same as the population. **Conclusion:** The effect of pes planus deformity to calcaneal angles is an untouched topic. In this primary study we found Gissane angle, angle between anterior and posterior facet of the calcaneus decreased in pes planus patients. Further studies including both genders will show much about this topic.

PP-101

Rare complication of clavicle fracture surgery

O. Ersen [1], S. Bilgic [2], K. Kara [3], U. Yener [3]

[1]Deparment of Orthopaedics, Maresal Cakmak Military Hospital, Erzurum, Turkey
[2]Department of Orthopaedics, Gulhane Haydarpasa Training Hospital, Istanbul, Turkey
[3]Department of Radiology, Gulhane Haydarpasa Training Hospital, Istanbul, Turkey

Background: Clavicle fractures are common; however, complications are rare. Pseudoaneurysm of the subclavian artery have been published in the literature usually as a late complication. **Method:** A 19-year old male admitted to our department with a history of clavicle fracture treated surgically in another hospitals orthopaedic department ten months ago. His complaints were numbness and weakness in his left hand and arm for a few weeks. He was refered to MRI to evaluate cervical pathologies. In MRI 5*3 cm iso-hyperintens supraclavicular mass found posterior to fracture site. Further evaluation was made by ultrasonography and CT. In ultrasonography ying-yang sign and bidirectional flow was found and by CT with 2 cm lumen due to most medial screw of implant diagnosed. **Results:** Complications of clavicle fracture include nonunion, malunion, brachial plexus injury, pneumothorax and vascular injuries, including pseudoaneurysm. Three characteristic findings on sonography, were a fluid-filled structure seen on grayscale adjacent to a supplying artery and which may have variable echogenicity, pulsatility with bidirectional flow ("to and fro" sign); and the detection of swirling, turbulent blood flow within the pseudoaneurysmal cavity, creating a yin-yang sign on color Doppler, which resembles the ancient Chinese yin-yang symbol. This is a case demostrating all radiological findings od pesudoaneurysm. **Conclusion:** Although subclavian injuries are rare complications after surgec... treatment of clavicle fractures they should not be underestimated in early and late postoperative period.

PP-102

Chondroblastoma of patella

S. Bilgic [1], O. Ersen [2],K. Kara [3], C. Ozturker C[3], U. Yener [1]

[1] Department of Orthopaedics, Gulhane Haydarpasa Training Hospital, Istanbul, Turkey
[2] Deparment of Orthopaedics, Maresal Cakmak Military Hospital, Erzurum, Turkey
[3] Department of Radiology, Gulhane Haydarpasa Training Hospital, Istanbul, Turkey

Background: Tumors of the patella are rare. One of the most frequent tumor in this localization is chondroblastoma. In this study we present chondroblastoma in one half of patella.

Case Report: A 26-year-old man reported a 1-year history of right knee pain aggravated by exercise and improved at rest. On physical examination, there was no joint effusion, no pain on palpation, and no skin calor. There was no difference in appearance of the right patella compared with the left, range of active motion of the knee was o-normal. Laboratory studies were all within normal ranges. Plain radiographs demonstrated a radiolucent lesion in the right patella. Magnetic resonance imaging showed a lobulated lesion occupying greater than 50% of the patella. Lesion has cyctic component on posterior side and anterior cortex as minimally corrupted. Lesion was hypointense in T1, hyperintense in T2.Intraoperatively, no abnormality was found in the soft tissue. Small bne window used to reach the lesion to protect patellar tendon. The osteolytic lesions were thoroughly curetted and filled with autogenous bone graft taken from the iliac crest. **Conclusion:** Chondroblastoma is a rare benign cartilaginous neoplasm that typically invades in the epiphyses in the second or third decades of life. Despite the risk of recurrence of this lesion in the patella, curettage followed by filling the cavity with bone graft is recommended to avoid early degenerative changes in the knee.

PP-103

Exact Trace of Clavicular Plate on Skin

O. Ersen[1], S. Bilgic[2], F. Akyildiz[3]

[1]Maresal Cakmak Military Hospital, Erzurum, Turkey
[2]Gulhane Military Medical Academy, Istanbul, Turkey
[3]Malatya Military Hospital, Malatya, Turkey

Background: One of the most common complication that required plate removal is implant related skin irritation and pain on pressure especially where bone is just under the skin like elbow, clavicle or ankle. Skin irritation of plates is

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sometimes inevitable but exact trace of the plate and its screw on the skin is rare. **Methods**: A 21-year-old male admitted to our clinic wtih the complaint of skin irritation and pain of his right shoulder. After a motorcycle accident he had open reduction and internal fixation surgery about a year ago. He requested plate removal due to his complaints. **Results**: In physical examination on clavicular region exact trace of the plate, its screws and even its colour was able to seen. During surgery same atipic insicion was used to expose the plate and plate was removed. No complications occured. Patients dicharged from hospital in third postoperative day. **Conclusions:** Although anatomical locking compression plate are related with less skin irritation and fewer plate removal request, surgeons should be careful when working in the regions with less soft tissue coverage.

PP-104

Mean Platelet Volume Of Adult Fracture Patients

S. Bilgic[1], O. Ersen[2], U. Yener[1], F. Colakoglu[1], O. F. Dirican[1]

[1]Gulhane Military Medical Academy, Istanbul, Turkey
[2]Maresal Cakmak Military Hospital, Erzurum, Turkey

Background: Trauma is the most common cause of death for young people and studies were tries to understand effect of trauma in the body. Mean platelet volume reflects size of the platelets and corralates with platelet function. Some studies asserted that MPV can be use like an inflammatory marker as White Blood Cell and Platelet count. In this study we evaluate MPV of surgically treated fracture patients. **Methods**: Surgically treated 72 fracture patients in our orthopaedic department in 2014 was retrospectively evaluated. Patients younger than 14 years and osteoporotic fractures excluded from the study. MPV of 59 patients (44 male, 15 female) were evaluated and compared to normal population. **Results:** Average age was 31,05±15 and average MPV was 7,17±0,8 in our patients. Most common fracture site was distal radius. There were no difference between our fracture group's MPV and normal population distrubiton MPV. **Conclusions:** Although some studies suggests that MPVwas related to trauma severity of fractures in our study we can not found likewise. Further comprehensive prospective trials are needed for determining the role of MPV levels in trauma patients.

PP-105

Correction of Length Descrepancy of Radius and Ulna with Distraction Osteogenesis: Three Cases

K. Koca , S. Akpancar , C. Yıldız

Department of Orthopedic Surgery, Gulhane Military Medicine Academy, Ankara

Background: The aim of study was to investigate the results of patients with isolated length discrepancy between ulna and radius underwent distraction osteogenesis with unilateral external fixator.**Methods:** Two patients with multipl enchondromatosis and ulnar club hand had isolated ulna shortening and a patient with radial club hand had radial shortening. The patients underwent ulna and radial distraction osteogenesis with unilateral external fixator. Range of wrist and forearm motion, deformities and length discrepancy of ulna and radius were compared at preoperative and postoperative.**Results:** Duration of external fixation and follow up were 2.6 and 23.3 months respectively. Mean distraction osteogenesis was 1.66 cm. No patient reached to length of normal side. Range of rotation of forearm was increased 15 degrees. Range of ulnar-radial deviation was increased 21.6 degrees. Deformity of 15 degrees at patient with multiple enchondromatosis was corrected. **Conclusion:** Deformities and loss of function due to isolated ulna or radius shortening might be reduced with distraction osteogenesis by unilateral external fixator.

PP-106

The Fixation Technique of the Distal Radius and Ulna Unstable Fractures: 3 Cases

K. Koca[1], Y. Erdem [2], S. Akpancar[1], Ş. Ekinci [3], C. Yıldız[1]

[1] Department of Orthopedic Surgery, Gulhane Military Medicine Academy, Ankara;
[2] Department of Orthopedic Surgery, Girne Military Hospital, Kıbrıs;
[3] Department of Orthopedic Surgery, Ağrı Military Hospital, Ağrı

Background: We aimed to present the results of surgical treatment of three cases with unstable distal radius and ulna fractures. Radius was treated with cross K-wire and ulna was treated with titanium elastic nail (TEN). **Methods:** Three patients with unstable distal radius and ulna fractures were firstly treated with closed reduction and long arm cast. Due to the lack of reduction and incompatibility of the radio-ulnar articular surface, surgical treatment was planned for these patients. Under general anesthesia, after closed reduction, radius was fixed with two K-wires. Then TEN was

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inserted from proximal of ulna. TEN was passed at fracture line with rotator moment of TEN. Anatomic reduction and distal radio-ulnar joint compliance was achieved by rotation of TEN. Long arm cast was applied to patient in neutral position.**Results:** The mean age of the patients was 9 (7-11) and the mean follow-up was 10 months. Long arm casts were turned in to a short arm cast at 2 weeks and were completely removed at 4 weeks after trauma. After cast and percutaneous pins were removed, active and passive motion of wrist and forearm was started. After 10 days wrist and forearm has become full range of motion. Distal radio-ulnar articular surface was congruent in the radiography. **Conclusion:** In conclusion, in the irreducible unstable fractures of the distal radius and ulna, closed reduction and percutaneous cross K-wire fixation of Radius and fixation of ulna with TEN is a highly successful method.

PP-107

Recurrent Shoulder Instability After Traumatic Shoulder Dislocation and Glenoid Fracture

K. Koca, S. Akpancar, N. Can, H. Özkan, S. Tunay

Department of OrthopedicSurgery, GulhaneMilitary Medical Academy, Ankara, Turkey

Background: This study is aimed to present a case thathadtraumatic recurrent shoulder instability due to antero-inferior fracture of glenoid. **Patients and methods:** An 88 years-old lady came to emergency department with severe pain and swelling in shoulder after falling in the bath. Motion of right shoulder was painful and severe limited. Antero-inferior dislocation of shoulder andantero-inferiorfracture of glenoid was determined on the AP radiography and computer tomography.Dislocation was closed reduced with ketamine inhalationfor two times after a first and second day of trauma but dislocation was recurred. Therefore, surgery was planned to fix glenoid fracture and labral tear. Firstly, arthroscopic assisted fixation was tried, but fracture was not able to reducearthroscopic procedure. So we preferred to open surgery with axillar incision. The inferior glenoid fragment was reduced and fixed by 2 anchors. In addition, 2 Kirschner wire applied from acromion to humeral head to provide extra stabilization. Shoulder was stabilized with sling for three weeks. After three weeks of surgery, K-wires were removed and passive motion was started. After four weeks of surgery, active shoulder motion was started. **Results:** Patient had 95^0 abduction, 100^0 flexion and 70^0 external rotation of shoulder at third months after surgery. Radiograph showed that shoulder joint was reduced position at last follow up. **Conclusion:** Traumatic shoulder dislocation may result in glenoid fracture and recurrent instability in elderly patient. If the fragment was large, arthroscopic assisted fixation is very difficult. Open reduction and fixation may be necessary.

PP-108

Unstable Pulse in a Patient with Elbow Instability

K. Koca, S. Akpancar, N. Can, S. Tunay

Department of Orthopedic Surgery, Gulhane Military Medical Academy, Ankara, Turkey

Background: We aimed to present very unusual casewho had medial epicondyle fracture with elbow instability andwithout distal pulses. **Methods:** A 12-year-old boy referred to the emergency department with the complaint of pain and swelling in his elbow due to fall down on his hand. The motion of elbow was painful and limited. Distal pulses were palpable at first check. On the radiographic evaluation, medial epicondyle avulsion fracture determined. Short arm casting brace was applied. Radial pulse was not palpable when we did control examination. So brace was removed. We realized that elbow was instable and when the elbow subluxated radial pulse lost. Then we planned to fix the medial epicondyleimmediately. We saw that fracture fragment was at humeroulnarjoint. In addition, capsule and flexor muscles at origin were extensive damaged. Firstly we fixed the medial epicondyle fragment with one screw and K-wire. Then we dissected the brachial artery. We were not able to get pulse on the brachial artery.Then we used papaverin and we heat the extremity. When we got the radial pulse, we closed skin and applied short arm casting brace. **Results:** After 4 weeks of cast immobilization, cast was removed and given to physical therapy exercises.After two weeksthe elbow motion was full rangedand neurovascular examination was normally. **Conclusion:** Vascular injury might be associated with medial epicondyle fractures. In case of this condition, epicondyle should be fixed by open reduction and internal fixation; soft tissue and vascular injury should be repaired immediately.

PP-109

Correction of Shortness of the Fourth Metatarsal with Distraction Osteogenesis

K. Koca, S. Akpancar, N. Can,S. Tunay

Department of Orthopedic Surgery, Gulhane Military Medical Academy, Ankara, Turkey

Background: The aim of study was to present a patient who had shortness of fourth metatarsal and underwent distraction osteogenesis with unilateral external fixator. **Methods:** Twenty-year-old female patient referred to our outpatient clinic with complaints of deformity of fourth toe and unable to wear summer shoe due to cosmetic problem. Fourth toe on the left foot was short and dorsal movement position compare to other toes. On the radiography, fourth

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metatarsal was short and thin compare to other metatarsals.To correct shortening of forth metatarsal and obtain better cosmetic position, surgery was planned. Osteotomy was performed to metaphyseal region of forth metatarsal and to arrangement of web space a second osteotomy was performed to third metatarsal. Two Kirschner wires were inserted intramedullary to third and forth metatarsals.Then unilateral external fixator was placed to fourth metatarsal. After seven days of distraction, osteogenesis was started and 1 mm(4×0.25) lengthening was performed daily. A total of 1,5 cm distraction was obtained and lengthening discontinued. After 2 months waiting for consolidation, external fixator was removed from forth metatarsal and first Kirschner wire was removed from third metatarsal and other was removed two weeks later. **Results:** A total of 1,5 cm distraction osteogenesis was applied to patient. At the end of the surgical procedure forth metatarsal was lengthened to normal size. Foot functions and cosmetic appearance were improved. No complications were occurred in the patient. **Conclusion:** Deformity and cosmetic problem caneliminate with distraction osteogenesis without complication in patients who has short metatarsals.

PP-110

Unforeseeable Result in a Patient with Crush Injury

S. Akpancar, E. E. Bahtiyar, K. Koca, Y. Yurttaş, S. Tunay

Department of Orthopedic Surgery, Gulhane Military Medicine Academy, Ankara, Turkey

Background: The aim of this study is to present patient who had foot crushed injury and underwent Chopart amputation. **Methods:** A 24-year-old male exposed the crush injury to his left with big piece of rock. There was no extensive soft tissue injury. Pulses of dorsalis pedis and tibialis posterior arteries were palpable. On the Doppler USG tibialis anterior artery flow was triphasic, tibialis posterior was biphasic and dorsalis pedis was monophasic. Dorsal aspect of the foot was mild cold. Plantar aspect was warm and non cyanotic. Patient was consulted to cardiovascular surgery and ilioprost treatment was started in order to thrombosis inhibition.**Results:** Necrosis began on first and second toes in ten days after trauma. Necrosis advanced quickly, although pulses were palpable. Debridement was performed at 2 weeks after trauma. Then serial debridement and irrigation were performed. Chopart amputation was needed at 6 weeks after trauma. **Conclusion:** Crush injury may result in disturbance of microcirculation and cause severe amputation, even if peripheral pulses were obtained.

PP-111

Isolated Femur Metastasis of a Patient with Renal Cell Carcinoma

B.F. Alp [1], S. Yılmaz [1], E. Kaya [1], A. Gürağaç [1], Z. Demirer [2], I. Yıldırım [1]

[1]Gülhane Military Medical Academy, Department of Urology, Ankara, Turkey
[2]Eskisehir Military Hospital, Department of Urology, Eskişehir, Turkey

Background: Renal cell carcinoma (RCC) represents 2-3% of all malignancies, with an annual increase in incidence of ~2%. Renal cell carcinoma represents approximately 90% of kidney neoplasms; 20-25% of the patients initially present with advanced disease and nearly 5% present with a single metastatic site. Here in this study, we describe a rare case of a swelling in the right leg, which was the first presentation of metastatic RCC.**Material/Patients and Methods:** 59-year old male patient has consulted our clinic from orthopedics clinic. In his medical history he told that had right leg swelling. In his radiologic imaging evaluation with femur radiography, computed tomography (CT), magnetic resonance imaging (MRI) and positron emission CT (PET-CT) it was detected 78x61x71 mm heterogeneous enhancement of the left lower pole kidney mass and isolated right femur metastasis. Left radical nephrectomy was carried out with the diagnosis of isolated femur metastasis of RCC. After it was confirmed with the pathology report as a RCC, postoperative tenth day partial hip replacement was carried out for his femur metastasis. **Results**: Total operating time was approximatelly 105 minutes with estimated blood loss of 150 ml on the left radical nephrectomy. Total operating time was approximatelly 90 minutes with estimated blood loss of 100 ml in second operation. Post operative first day patient was walked with the control of the physiotherapist. Seven day after the second operation patient was discharged the hospital with no complication. **Conclusion:** This case reflects the unusual manifestation of RCC presenting as right leg swelling. Clinicians should keep in mind these types of rare cases when patients present with different complaints.

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PP-112

The use of Stimulan with tailored antibiotics for salvage of chronic diabetic feet infections

T. El Gamal, N. Howard, G. Jackson, D.. Harvey, P. Evans, S. Platt

Department of Orthopaedics, Wirral University Teaching Hospitals

Background: Management of chronic diabetic feet infections is challenging and labour intensive.**Objective:** To improve outcome in diabetic feet infections by using local tailored antibiotics in Stimulan. **Methods:** 15 patients underwent salvage surgical debridement for diabetic foot infection .The mean age was 51.5; 12 males and 3 females. 11 patients type I and 4 type II diabetics. All were discussed in the diabetic foot Multidisciplinary Team Meeting. All had Magnetic resonance imaging preoperatively to define the extent of infection. All 15 patients had chronic osteomyelitis; 8 phalangeal, 3 metatarsals and 4 calcaneus. Surgical debridement was undertaken in 6, 5 toe amputations and 4 ray amputation. Standard biopsies were sent for microbiology and histopathology. All patients had Stimulan paste mixed with tailored antibiotic injected into the deep tissues and or bone.8 patients had postoperative negative pressure wound therapy (NPWT) dressings. 7 underwent primary closure. 8 were treated with oral antibiotics and 3 had intravenous antibiotics. 4 patients did not receive any antibiotics. **Results:** The seven patients who underwent primary closure have healed with no recurrence. The 8 patients who underwent NPWT have demonstrated absence of infection. Due to the extensive debridement undertaken in these patients the limiting step in healing was epithelisation of the wound. **Conclusions:** Local antibiotic delivery is efficacious in the treatment of chronic diabetic foot infection. We postulate that a tailored antibiotic regime based on cultures would have greater efficiency in treating chronic diabetic feet infections.This is a small study with promising outcomes.

PP-113

A complete audit cycle of BOAST 7: fracture clinic services in a major trauma centre

J. Kukadia, R. Fawdington, W. Mahmood, H. Ribee, J. Lim

Department of Trauma and Orthopaedics,
University Hospitals of North Midlands NHS Trust,
Stoke-on-Trent, UK.

Background and Aims: In August 2013, the British Orthopaedic Association Standards for Trauma (BOAST) published guidelines for the care of fracture clinic patients. Our aim was to audit the quality of our services against BOAST guidelines and identify areas for service improvement. **Patient and Methods:**All new patients attending fracture clinic over a one week period in March 2014 were included and audited against BOAST guidelines. Patients that were incorrectly coded as 'new', had rearranged appointments or no identifiable referral date were excluded. Following recommendations of the first audit cycle, the criteria were re-audited in November 2014. **Results:**Following our exclusion criteria, a total of 173 and 217 patients were included in the final analysis of the respective audit weeks.Seven of the 13 guidelines were met following the first cycle. Eighty percent of patients were seen within 72 hours of initial presentation and following re-audit we achieved 89% following amendments to local referral guidelines. With an established scaphoid protocol, it was decided that rapid reporting of imaging for other time-dependent surgery would be discussed on an individual basis and patients would not receive copies of clinic letters, although patient information leaflets are now provided. **Conclusion:** With areas for service improvement identified and implemented, we improved upon 3 criteria set out by BOAST in our re-audit. Ongoing recommendations include establishing a Chronic Regional Pain Syndrome protocol and stating a maximum time period for planned operative admissions, with scope to improve the number of patients seen within 72 hours of referral.

PP-114

Variations in muscle bulk asymmetry in adolescents with idiopathic scoliosis.

R. Nelapatla, K. Agarwal, S. Shah

Faculty of Health and Life Sciences, University of Liverpool, United Kingdom

Background: This study aims to dwell into the understanding of muscle bulk asymmetry in patients with adolescent idiopathic scoliosis.**Methods:** Anthropometric data regarding left and right muscle girth measurements for biceps, thighs and calves was collected from 345 patients with AIS and 397 age matched controls between 1972-2000. The data was collected from various sites in Liverpool, United Kingdom. The statistical analysing programmes, Microsoft Excel and IMB SPSS Statistics were used to implement statistical research on the data acquired.**Results:** Statistical significance was acquired in one out of the three muscle groups looked at. Although statistical significance wasn't acquired for the other two, general trends showed that there was muscle variation and asymmetry in all muscle groups between left and right limbs in the case population. No statistical significance was noticed when comparing the case population to controls when looking at difference in muscle bulk between left and right limbs.**Conclusion:** The study conducted has confirmed that there are variations in muscle bulk symmetry between left and right limbs in patients with

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AIS. Analysis has revealed that biceps had greater muscle bulk in the left limb when compared to the right, similar to the calves, while thighs had more in the right compared to the left. Various reasons exist in explaning the asymmetry in muscle bulk in these patients varying from muscle pathology as a primary cause for the development of scoliosis to muscle bulk variations being an extra-articluar manifestation of the disease.

PP-115

Os Odontoideum: Management Approach

S. Abdalla[1]

[1]Department of Orthopaedics, Arrowe Park Hospital, Liverpool, United Kingdom

Background: Os odontoideum is a rare abnormality of the atlantoaxial joint, defined as an independent ossicle of variable size with smooth circumferential cortical margins separated from the foreshortened odontoid peg. It is of two anatomical types, orthotopic and dystopic. The aetiology of the disorder is controversial however; it is currently divided into an acquired (traumatic) or congenital (embryological) cause. **Objectives:** Assess the surgical management approach & evidence for the repair of os odontoideum. **Matieral/Patients & Methods:** PubMed & OvidSP online library searches.**Results:** Eight case-series and the most recent management guidelines were reviewed, as patients with this condition can either be asymptomatic or present with a wide array of neurological dysfunctions. **Conclusion:** The various studies and case series that have been conducted over the past four decades have provided class III evidence showing that surgical intervention in patients with C1-C2 instability associated with an os odontoideum have been proven to be successful and effective in the case where a posterior fusion and internal fixation approach is used, regardless of the construct. This alongside the use of a post-operative halo immobilisation technique has shown success in 40-100% of the cases. On the other hand, these studies also indicated that in those patients who are minimally symptomatic or asymptomatic with a stable C1-C2 os odontoideum could be managed non-operatively with little or no morbidity over time. However, due to the neurological deficit occurring in a small number of patients managed non-operatively following minor trauma; careful longitudinal observation has been strongly recommended.

PP-116

Zimmer Periprosthetic Fracture Plate Audit of 18 months

S. Abdalla[1], *O. Richards*[2], *S. Scott*[2]

[1]Department of Orthopaedics, Arrowe Park Hospital, Liverpool, United Kingdom
[2]Department of Orthopaedics, Aintree University Hospital, Liverpool, United Kingdom

Background: The Zimmer periprosthetic fracture plate is designed as a line of polyaxial locking plate indicated for temporary internal fixation and stabilization of fractures and osteotomies of long bones (e.g. periprosthetic fractures, comminuted fractures, and supracondylar fractures). Complications include infection and implant failure with a variable time to union. **Objectives:** Assess the outcomes, defined as successful union at 8 months of follow-up following the use of Zimmer periprosthetic fracture plate. **Material/Patients & Methods:** Conducted as a retrospective audit covering 18 months.Suitable patients were attained through review of the surgical logbook in theatre in addition to cross-reference with Zimmer logbook of cases since the introduction of the plate. Additionally individual case notes and radiological findings were reviewed. **Results:** N=10 suitable patients were attained, (age range of 61 to 92). ASA grade of 3 or above n=8. Fracture sustained through a fall n=8, sustained intra-operatively n=2). Indications included recon intra-medullary nail for proximal femoral fracture (n=4), total knee replacement fractures (n=3), total hip replacement fractures (n=2), combined hip and knee replacement fracture (n=1). Intra-operatively adequately reduced fractures n=9 (n=1 was fixed in moderate flexion). Complications included wound infection (n=3), other infection (n=2), ileus (n=1), metal work failure (n=1) and, death (n=1). Union was successfully achieved at 8 months of follow-up (n=4).**Conclusion:** Periprosthetic fracture patients have high ASA grade/co-morbidities, which skew results as any operative procedure more likely to have poor outcome. However, the procedure was classified as a 'high risk' procedure as the outcomes were not on par with standard aspired (<50% union at 8 months).

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PP-117

An audit of the adequacy of plain radiographs performed pre- and post-operatively for patients with femoral neck fractures

K. Rowland, E Lindisfarne, R Kampa

Department of Trauma and Orthopaedic Surgery, Worthing Hospital, Western Sussex NHS Trust.

Background and aims: Plain radiographs are the first line modality for imaging femoral neck fractures. Pre-operative imaging is necessary for diagnosis, classification and surgical planning. Post-operative radiographs are important for hemi- and total arthroplasty for displaced intracapsular fractures to assess prosthesis position, cement mantle, offset and leg-length and to exclude peri-prosthetic fracture. The aim of this audit wasto determine the adequacy of pre and post-operative radiographs performed in patients with femoral neck fractures. **Patient and Methods:** A retrospective audit was carried out of pre-operative imaging for 100 consecutive patients presenting with femoral neck fracture between October 2014 and January 2015 in a trauma and orthopaedic unit. 46 post-operative radiographs were reviewed for the patients who underwent treatment with arthroplasty. Departmentalstandardsfor hip fracture patient radiographs were used. **Results:** Only 38% of the pre-operative radiographs were adequate for all criteria. 99% had antero-posterior (AP) radiograph and a lateral of the affected hip. The proximal third of femur was visible bilaterally in 41%. Greater and lesser trochanters were visible bilaterally in 63% and 90% respectively. 50% (n=23) of post-operative radiographs were adequate for all criteria. 76% (n=35) demonstrated the prosthetic tip and 63% (n=29) the tip of cement plug. **Conclusion:** Adequacy of pre- and post-operative radiographs in patients with femoral neck fractures was poor. The intervention performed was education of radiographers and junior doctors in the Emergency and Orthopaedic Departments to request and perform radiographs of AP Both Hips, not AP Pelvis.

PP-118

Audit of income loss related to incorrect coding of Neck of femur operations and co-morbidities at a district general hospital

McLachlan G., Das R., Antognini D., Colgate- Stone T.

Department of Trauma and Orthopaedics, Darent Valley Hospital, Dartford, United Kingdom

Background: Coding is an important aspect of how hospitals are paid for operations. **Objectives:** To assess the accuracy of clinical coding of neck of femur operations and co-morbidities at a district general hospital.**Materials/ Patients and Method:** 30 patients with neck of femur fractures were randomly selected. They were assessed for operation performed and existing comorbidities (CM); and compared with clinical coding documentation, based on their electronic discharge summaries (EDS). A new section for CM was created on the EDS and operation coding awareness was increased- this was re-audited. **Results:** Initially only 54% of patients had CM correctly coded, despite 93% having CM. Only 14% had the operation coded correctly. This equated to an average of £1500 income loss per patient. After the EDS implementation 93% of operations and 74% of CMs were coded properly. **Conclusion:** Mis documentation and subsequent mis coding of operations and CM represents a great loss in income for hospitals. These patients were taken from a one month period which equates to a loss of approximately £540,000 a year. Clearer documentation has been shown to improve clinical coding accuracy and this is reflected in the reduced income loss of £514 per patient, once CMs were included on EDSs and clinicians were made aware of the coding mismatch. There is still improvement that can be made and this audit suggested the inclusion of operation code on the neck of femur pathway, as well as an increased number of CM to be included on the EDSs.

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PP-119

Intestınal perforatıon after lumbar dıscectomy: A case report

Eksert S[1], Boga I[1], Ozkan G[1], Purtuloglu T[1], Oztas M[2], Yanarates O[1], Kurt E[1].

[1]Gulhane School Of Medicine, Department of Anesthesiology and Reanimation, Ankara, Turkey
[2]Sirnak Military Hospital, Department of General Surgery, Sırnak, Turkey

Background and Aims: Nerve root decompression operations due to herniated nucleus pulposus are applied as often at neurosurgery.The complication rate is between 2.5-13.7%. These complications include nerve injury, dural rupture, retroperitoneal vascular injury, as rare ureter and intestinal injury. We report an intestinal injury due to L4-L5 intervertebral disc surgery that was treated successfully and discuss it in light of current literatüre. **Patient and Methods:** 34 year-old, ASA I female patient was scheduled for L4-L5 lumbar discectomy due to disc herniation. Patient was monitorized and entubated after anesthesia induction. Patient's vital sign was stable during 90 minutes in operation. Paitent was extubated. Patient was taken to the post-anesthesia care unit and vital signs were stable. Operation region and abdominal pain was determined.

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There was abdominal defense and rebound and general surgical consultation was requested. At the patient's direct abdominal radiography free air was determinated under diaphragm. Diagnosis of bowel perforation was made and 4 hours after lumbar discectomy primary intestinal repair was performed by general surgery. **Results:** İntestinal perforation is a rare complication of discectomy. İn a study, 5200 lumbar discectomy surgey, only 2 intestinal perforation complication cases have been reported. If postoperative intestinal complications is suspected in this type of operation, sign of acute abdomen as abdominal pain, defense, rebound should be questioned. The peri-operative analgesics can mask for this examination. Radiological examinations and necessary consultations must be taken quickly. **Conclusions:** Peri-operative analgesic administered should be kept in mind that delays the diagnosis of intestinal perforation and take heed in such this suspicion.

PP-120

Daily senior review and documentation in trauma and orthopaedic surgery

A. Colby[1], S. Montgomery[2]

LAS Orthopaedic Clinical Fellow[1]/Consultant Orthopaedic Surgeon[2]
University Hospital Aintree NHS Foundation Trust, Liverpool, UK

Background and Aims: Daily senior review is of paramount importance to provide optimal clinical care and facilitate timely discharge. Also, the General Medical Council state in Good Medical Practice 2013 that "work should be recorded clearly, accurately and legibly…containing relevant clinical findings, decisions made and actions agreed". This audit aims to evaluate whether all trauma and elective Orthopaedic patients at one unit receive a daily senior review, which is fully documented in the case-notes, and whether a Comprehensive Unit-based Safety Programme (CUSP) toolkit can better facilitate this? **Methods:** Case-notes for all patients admitted under Trauma and Orthopaedics on three separate non-consecutive days during a two-week period were scrutinized, examining them for the presence of CUSP toolkits and whether these were adequately completed. **Results:** 71 case-notes containing 291 CUSP toolkits were analysed. 46.4% had a completed toolkit for everyday since admission; however for those that did not, over half (55.2%) did not have a senior review documented elsewhere for the missing days. Only 1.4% of case-notes had a full complement of up-to-date CUSP toolkits completed entirely correctly. For patients on Orthopaedic wards, most common errors were failure to document date and time (69.7% incorrect), ward and bed number (30.7% incorrect), patient alerts (70.7% incorrect) and overall compliance in documentation of required parameters such as MRSA status, investigations, observation and fluid charts (23% incorrect). **Conclusion:** In conclusion, better education for clinical staff is needed to improve compliance both with daily senior review, CUSPtoolkits and overall documentation to provide optimum patient care.

PP-121

Diagnosis and management of acute pulmonary embolism after lumbar discectomy: a case report

S. Tekindur [1], M. Yetim [2], Z. Guclu[1], M. Urkan[3], E. Zorlu[4], O. Kılıckaya[1]

[1] Gulhane Military Medicine Faculty, Department of Anaesthesia and Reanimation
[2] Van Military Hospital, Department of Anaesthesia and Reanimation
[3] Gulhane Military Medicine Faculty, Department of General Surgery
[4] Gulhane Military Medicine Academy, Haydarpasa Training Hospital, Department of Neurosurgery

Background: Acute postoperative respiratory distress following noncardiac surgery can be a serious adverse event, and is most often caused by pneumonia, pulmonary embolus, pneumothorax, atelectasis and heart failure. Pulmonary embolism is a common perioperative cardiovascular emergency . We present a patient with early postoperative respiratory distress, and was diagnosed as acute pulmonary thromboembolism. **Case report**: A 60-year-old female patient who had lumbar discectomy under general anesthesia developed respiratory distress, tachypnea and tachycardia, with progressive fall in blood pressure as soon after mobilization. Low molecular weight heparin had been prescribed. Right atrial and ventricular dilation was found on echocardiography. D-dimer, protombin time and activated partial thrombin were normal. In concern for pulmonary embolism, computerized tomographic angiography was performed and reported as pulmonary embolism. Heparin therapy was consitituted on diagnosis of acute plumonary embolism. She recovered from the pulmonary embolism by thrombolytic therapy and heparin and discharged from the hospital without any additional problem. **Conclusion and Results:** Postoperative pulmonary embolism may occur within two weeks of surgery. Maintaining a clinical suspicion for pulmonary embolism is important. The most common signs are nonspecific: dyspnoea, chest pain, tachypnoea, tachycardia and hypotension. Trombolytic therapy with co-administration of heparin should be preferred for postperative pulmonary embolism. Postoperative thromboprophylaxis such as low molecular weight heparin and compression stockings may be essential for the patient with risk factor of pulmonary embolism.

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PP-122

VTE prophylaxis in ankle fracture fixation: what should we be doing?

J. Kukadia, L. Bevington, S. Mulay

Department of Trauma and Orthopaedics, Burton Hospitals NHS Foundation Trust, Burton upon Trent, UK.

Background and Aims: Venous thromboembolism has become increasingly important in surgical patients. Whilst there has been research into the efficacy of VTE prophylaxis in ankle fracture surgery, there is little conclusive evidence or guidelines as a result. With immobility and lower limb surgery being important risk factors for VTE events, it is not unreasonable that guidance should be provided. We aim to establish our current practice and baseline risk in this type of surgery to provide recommendations. **Patients and Methods:** A total of 124 patients with ankle fracture fixations between 2012-2014 were included in our retrospective study. Data was collected on patient demographics including risk factors, thromboprophylaxis during admission and on discharge and VTE events. **Results:** 76% of patients had enoxaparin during admission. 48% and 14% were discharged with aspirin and enoxaparin respectively. The remaining had no prophylaxis during admission or discharge. Despite receiving admission and discharge prophylaxis 3 patients suffered VTE events, one patient developed deep vein thrombosis (discharged on aspirin) and two patients developed pulmonary embolisms (one discharged on aspirin and the other 6 weeks of enoxaparin as they were high risk). **Conclusion:** Like other studies, our results suggest aspirin has limited efficacy in preventing VTE events. We suggest individualised VTE assessment to identify high risk patients that may benefit from warfarin rather than standard local regimes. Although small, our study highlights the need for larger studies to provide definitive guidance on prophylaxis in ankle fracture surgery, as individual patient risk remains unchanged upon discharge.

PP-123

Reporting Quality of Observational Studies in PlasticSurgery Needs Improvement – A Systematic Review

R.A. Agha, S. Young Lee,K. Jin Lee Jeong,A. J. Fowler, D. P. Orgill

Academic Surgical Collaborative, United Kingdom Brigham and Women's Hospital and Harvard Medical School, Boston, United States of America.

Background: Our objective was to determine the compliance of observationalstudies in plastic surgery with the Strengthening the Reporting of ObservationalStudies in Epidemiology (STROBE) statement checklist**. Methods:** All cohort, cross-sectional, and case-control studies published in five major plastic surgery journals in 2013 were assessed for their compliance with the STROBE statement. **Results:** One hundred thirty-six studies were identified initially and 94 met the inclusion criteria. The average STROBE score was 12.4 (range, 2–20.1) with a standard deviation of 3.36. The most frequent reporting deficiencies were not reporting the study design in the title and abstract 30% compliance; describing the setting, locations, and relevant dates, including periods of recruitment, exposure, follow-up, and data collection (24%); describing efforts to address sources of bias (20%); reporting numbers of individuals at each stage of the study (20%); and discussing limitations (40%). **Conclusions:** The reporting quality of observational studies in Plastic Surgery needs improvement.We suggest ways this could be improved including better education, awareness among all stakeholders, and hardwiring compliance through electronic journal submission systems.

PP-124

Exploring alternative treatments in complex wound healing: a sweet and simple solution?

Ashraf FA, Patel N, Ahmed RA, Sharif KA, Ahmad MU.

School of Medicine, University of Liverpool, Liverpool, UK.

Background: Complex wound is used to describe those wounds which can be difficult to manage; these wounds can lead to various further challenging complications. There is differing opinion on how to manage complex wounds. Recent literature has suggested that honey may be suitable, having been used as an ancient remedy. Honey has anti-bacterial and anti-inflammatory properties, which also promotes autolytic debridement as well as stimulating wound tissue growth; suggesting a potential use in complex wounds. **Aim:**

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To explore the potential use of honey in the management of complex wounds. **Methods:** A review of the literature was conducted using PubMed, Cochrane, Scopus and Ovid, searching for "honey AND wound healing". Papers which included the treatment of burns were excluded. A review was then conducted of the studies. **Results:** There were some encouraging findings. Honey showed better antimicrobial properties for post-operative wounds when compared to the use of antibiotics. Honey dressings also showed shorter wound healing times in comparison to traditional dressings. Scarless healing was reported in some wounds; however there was limited evidence. Honey managed to treat some wounds where conventional treatments were unsuccessful. However, honey had inconsistent results in the treatment of ulcers. **Conclusion:** In the treatment of complex wounds, honey may be used as an alternative or adjunct therapy. However, due to limited research and poor evidence quality regarding the use of honey, there is limited clinical relevance. Larger randomised, blinded studies are needed to effectively evaluate the use of honey in complex wounds.

PP-125

Long Term Results of Cases with free flap usingNidek MK-2000 microkeratome in LASIK surgery

U. Erdem[1],U. Yolcu[2],A. Ilhan [3], F. C Gundogan[1], S. Altun[1]

[1]Department of Ophthalmology, Gulhane Military Medical School, Ankara, Turkey
[2]Department of Ophthalmology, Sarikamis Military Hospital, Kars, Turkey
[3]Department of Ophthalmology,Erzurum Military Hospital, Erzurum, Turkey

Background & Aims: To report the clinical properties and visual outcomes of patients with free flap after LASIK. **Material & Methods:** Clinical properties and outcomes of free flap developed cases were retrospectively reviewed in records of 1752 eyes of the 985 consecutive LASIK cases. All surgeries have been performed with Nidek MK-2000 microkeratome and Nidek EC CX2 laser system. In all patients, fiduciary marks were placed on the cornea before preparation of flaps.**Results:**Twelve eyes of twelve patients had free flap (%0.68). Free flap was developed first operated eye of eight patients. Eight of free flaps were secured with single or cross-interrupted suture. Four of free flap was repositioned to its original position, allowed air drying at least 5 minutes and then a bandage contact lens was applied. Corrected distance visual acuity was increased in 9 patients for one line, did not change in 3 eyes. At postoperative sixth month mean spherical equivalent were 0.72 ± 0, 42 diopters, mean postoperative defocus equivalent were 0.08± 0.95 diopters.**Conclusion:**Free flaps are likely to develop in eyes with low pachymetric values, low keratometry readings, and high corneal astigmatism. Proper management provides satisfactory visual and refractive outcomes in patients with free flap.

PP-126

Do We Really Need Limbal Transplantation For Severe Ocular Surface Burns With Total Limbal Neovascularization ? A New Surgical Method: "In-Vivo Corneal Stem Cell Augmentation"

S. Altun[1], A. Ilhan[2], U. Yolcu[3], U. Erdem[1], Şenol Yildiz[4]

[1]Gulhane Military Medical School, Ophthalmology Department., Ankara, Turkey
[2]Erzurum Military Hospital, Ophthalmology Department., Erzurum, Turkey
[3]Sarikamis Military Hospital, Ophthalmology Department, Kars, Turkey
[4]Gulhane Military Medical School, Underwater and Hyperbaric Medicine Department, Ankara, Turkey

Background and Aim: We aimed to explain a new surgical approach, without limbal transplantation, to severe ocular surface burns with limited area of intact corneal epithelium.**Patient and Method:** Data of 7 eyes with severe corneal and total limbal neovascularization with limited area of intact corneal epithelial island was analyzed. In all 7 eyes, neovascular membranes and symblepharons were removed, and smoothened with diamond burr including 2 mm of corneal limbus. Limited area of intact epithelium at central or paracentral sectors (as small as 1mm-sized) were excluded from surgical intervention. We didn't perform limbal transplantation. All smoothened areas including corneal limbus exposed to 0.01mg/ml MMC for 1 min. Patients underwent to hyperbaric-oxygen-therapy (2.4 ATA,%100-oxygen, for 90-minutes) for 10 days supported by topical antibiotics, vitamin C, platelet-rich-plasma, tetracyclines and etc. which we call as "corneal stem cell augmentation".**Results:** No intraoperative complications have been faced. In 5 eyes, epithelium recovered in 10 days. In these eyes, mean Snellen VA increase was 4.0 (± 1.2) lines. In 2 eyes, epithelium recovered in 30 days with 2 lines of Snellen VA increase. **Conclusions:** In vivo stem cell augmentation is a safe and minimally invasive technique for certain cases with limited area of corneal epithelium. This surgical method seems superior to all previous treatment options in certain cases because it does not need limbal transplantation or ex vivo stem cell interventions. These results also supports the hypothesis that corneal epithelium can itself act as a potential stem-cell source to recover all corneolimbal area.

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PP-127

Emergency readmissions in a plastic surgery department

K. Y. Wong

Department of Plastic and Reconstructive Surgery, Cambridge University Hospitals NHS Foundation Trust, Cambridge, United Kingdom

Background: A no-payment rule for emergency readmissions was proposed by the Department of Health in 2011. This was to reduce the level of emergency readmissions and to improve accountability of hospitals to patients for the 30 days after discharge. During the 2010-11 financial year, our hospital had 2930 emergency readmissions equating to a potential income loss of £7 million. **Objectives:** Evaluation of emergency readmissions in our plastic surgery department. **Material / Patients and Methods:** Data was retrospectively collected from the finance department, coding department and case notes for the first six months of the 2010-11 financial year. The audit was repeated for the first six months of the 2011-12 financial year. **Results:** A total of 69 emergency readmissions were identified equating to a potential income loss of £134,000. Only 51% were true emergency readmissions with others arising due to coding errors. These findings helped inform the hospital on negotiating with the Primary Care Trust new exclusion criteria and emergency readmission thresholds. With the implemented changes in place, a re-audit in 2011 found that over six months we had decreased our emergency readmission rate by 60%. This equated to cost savings of more than 90% or £130,000 over six months. **Conclusion:** Performance measures alone may not be particularly useful unless combined with knowledge of how they relate to patient outcomes and delivery of care. Accurate coding is vital to ensure correct financial reimbursement and is something that healthcare professionals need to be actively involved with.

PP-128

Assessing clinical coding accuracy of plastic surgery trauma care episodes

C.S. Brown, K.Y. Wong

Department of Plastic Surgery, Queen Alexandra Hospital, Portsmouth, United Kingdom

Background: Healthcare Resource Group (HRG) codes define the tariff associated with each episode of care. They are generated from diagnostic and intervention codes. For the latter, all procedures performed in the National Health Service are coded via the Office of Population Censuses and Surveys (OPCS) classification system. We assess the HRG coding accuracy of trauma care episodes within our department and the consequent financial implications. **Material & Methods:** Coding of all plastic surgery trauma procedures over a 3-month period was retrospectively analysed. Comparison was made between operation notes and OPCS codes assigned by both theatre staff and hospital coders. Areas of inaccuracy were assessed including procedure code, site of surgery and co-morbidities. New OPCS codes were assigned to each operation by the surgical trainees and the resultant HRG codes were used to determine if financial remuneration changed. **Results**: A total of 100 cases were reviewed. Of the initial codes generated by theatre staff, 81% were changed by hospital coders. There were 139 OPCS codes generated by the hospital coders of which 21% were incorrect, with only 5% correlating exactly to those assigned by the surgical trainees. Revised coding generated 100% more codes with potential income loss from these inaccuracies equating to £75 000. **Conclusions**: Accurate coding is crucial for audit, research and fair financial remuneration. However, the current coding system is complex and healthcare professionals often lack training on the subject. There also needs to be more communication between healthcare professionals, clinical coders and the finance department to ensure accuracy.

PP-129

Vibrating forceps enhances laparoscopic surgical skills.

H. Sawada[1], H. Egi[1, 2], M. Hattori[2],T. Suzuki[1], S. Mukai[1], Y. Kurita[3] and H. Ohdan[1]

[1] Department of Gastroenterological Surgery, Hiroshima University, Hiroshima, Japan
[2] Advanced Medical Skills Training Center, Graduate School of Biomedical Sciences, Hiroshima University, Hiroshima, Japan
[3] Department of Engineering, Hiroshima University, Hiroshima, Japan

Background and Aims: Laparoscopic surgery has many proven advantages for patients, so the number of laparoscopic surgery has been increased. However there are disadvantages in laparoscopic surgery such as loss of tactile sensation. Surgeon's skill and experience compensates for the decline in the sense of touch due to an improved ability to process visual information. Stochastic Resonance (SR) was known to improve the sensitivity of a nonlinear system to weak periodic or aperiodic stimuli in the presence of non-zero level of noise. Recent years, SR was known to improve human tactile sensation. In this study, we demonstrated to enhance the tactile feedback in laparoscopic surgery using SR to enhance laparoscopic surgical skills. **Material and Methods:** Ten surgeons participated in this study. A vibration actuator was attached on laparoscopic forceps, and the improvement in tactile sensation and surgical skills when usingthe forceps were tested. Fine touch tests were

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performed using the Semmes-Weinstein test kit. Moreover, we planned laparoscopic knot tying tasks in the dry box and under controlled vibrations.**Results:** The experimental results demonstrated that appropriate vibration enhances the tactile sensitivity and surgical skills.**Conclusion:** The experimental results suggested the usefulness of the application of SR to laparoscopic surgery.

PP-130

Noninvasive monitoring of functioning spleen tissue after organ saving operations in animal model

I. Miko[1], K. Peto[1], A. Furka[2], N. Nemeth[1], E. Vanyolos[1], I. Garai[3], S. Barna[3], A. Deak[1], F. Kiss[1], T. Nagy[3], D. Balogh[1], I. Furka[1], J. Varga[3]

[1]Department of Operative Techniques and Surgical Research, Institute of Surgery, Faculty of Medicine, University of Debrecen, Hungary
[2]Division of Radiotherapy, Department of Clinical Oncology, Faculty of Medicine, University of Debrecen, Hungary
[3]Department of Nuclear Medicine, Faculty of Medicine, University of Debrecen, Hungary

Background: After splenic injuries it is recommended to save sufficient spleen tissue to prevent severe consequences as OPSI and thromboembolic events. **Objectives:** We aimed to identify functioning residual spleen tissue after spleen resection and autotransplantation using SPECT-CT hybrid technique.**Materials and Methods:** 35 examinations were performed on 23 animals in 6 groups: non-operated control (C, n=1), sham-operated control (SH, n=2), splenectomy (SE, n=4), partial resection (R1/3, R2/3, n=4 respectively), spleen autotransplantation (AU, n=8) at 6, 15 and 18 months postoperatively. Tc-99m labelled, heat-denatured RBCs were used. Dynamic then SPECT images were acquired by a two-headed gamma camera, followed by CT images.**Results:** On the parametric images only the spleen and the urinary bladder were visualized, proving the specificity of the method. Scintigraphy demonstrated the function of preserved splenic tissue in all cases, but not all replanted chips were found at all time points, although the fused display with CT made the identification easier and more precise. In some animals the liver curves also showed a monotonous increase in time, indicating that part of Tc-99m released from the RBCs; yet the spleen function could be judged.**Conclusion:** Our study demonstrated that hybrid SPECT-CT imaging, with CT localizing the autotransplanted chips, establishes the detection of functioning spleen tissue with higher confidencethan SPECT itself. Nevertheless, even CT-scan was unable to indicate every autotransplanted chips that the subsequent operative follow-up revealed. No significant relation was found between the uptake of the radiopharmaceutical and the percentage of the preserved spleen tissue. (Grant: OTKA K-105618).

PP-131

Change of leukocyte antisedimentation rate and other hematological and hemorheological parameters in beagle dogs with splenectomy and different amount of residual spleen after the mandatory vaccination

I. Miko[1], E. Toth[1], F. Kiss[1], I. Furka[1], K. Peto[1], A. Furka[2], A. Deak[1], E. Vanyolos[1], A. Olah[3], L. Toth[4], I. Benko[5], N. Nemeth[1]

[1]Department of Operative Techniques and Surgical Research, Institute of Surgery, Faculty of Medicine, University of Debrecen, Hungary
[2]Division of Radiotherapy, Department of Clinical Oncology, Faculty of Medicine, University of Debrecen, Hungary
[3]Department of Laboratory Medicine, Faculty of Medicine, University of Debrecen, Hungary
[4]Department of Pathology, Faculty of Medicine, University of Debrecen, Hungary
[5]Department of Pharmacology and Pharmacotherapy, Faculty of Medicine, University of Debrecen, Hungary

Background: Complex splenic functions justify spleen saving operations in case of traumatization. Our previous experiments showed increased leukocyte antisedimentation rate (LAR) especially under hyposplenic-asplenic conditions. **Objectives:** We aimed to determine the LAR and hematological-hemorheological changes caused by vaccination 1.5 years after splenectomy and in animals with different amounts of residual spleen tissue. **Materials and Methods:** 17 beagle dogs were subjected into 6 groups: control (n=3), splenectomy (n=3), one-third and two-third (subtotal) spleen resection (R1/3, R2/3, n=3/each), autotransplantation with 10 spleen-chips according to Furka's method (n=5). Vaccination by RabigenMono and Vanguard Plus5 was applied in the 16th postoperative month triggering immune response. Blood samples were collected in the 6th, 9th, 18th postoperative months, before and 1 week after vaccination. LAR was calculated by Bogar's method, erythrocyte sedimentation rate (ESR) and leukocyte count were analyzed, and blood-smears were made.**Results:** After vaccination control and R1/3 groups showed the highest LAR decrease. In the autotransplantation group LAR were almost equal while in splenectomy and R2/3 group a greater LAR increase were observed. Leukocyte count did not change, ESR increased in R2/3 group. Smears showed numerous stab-segmented neutrophils and altered-shape erythrocytes. **Conclusion:** In long-term follow-up animal study LAR can be an applicable and important parameter for monitoring/assessing the residual spleen tissue's function. In case of asplenic conditions LAR could be particularly important to signal the possibility of potential complications

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in time. However, we emphasize that to form an opinion, other laboratory measurements have to be taken into consideration case by case. (Grant: OTKA K-105618).

PP-132

Early microcirculatory changes in the *Escherichia coli* induced sepsis model on pigs

F. Kiss[1], L. Molnar[2], E. Hajdu[2], A. Deak[1], A. Molnar[1], M. Berhes[2], N. Nemeth[1], B. Fulesdi[2]

[1]Department of Operative Techniques and Surgical Research, Institute of Surgery, Faculty of Medicine, University of Debrecen, Hungary
[2]Department of Anesthesiology and Intensive Therapy, Faculty of Medicine, University of Debrecen, Hungary

Background and Objectives: Microcirculatory impairment is crucial in the sepsis pathophysiology. We aimed to investigate the early microcirculatory changes and their relations to body temperature and hemodynamics in a porcine model of fulminant sepsis. **Materials and Methods:** Twenty female juvenile Hungahib pigs (18.6±1.9 kg) were anesthetized (ketamin+xylazin). Tracheostomy, and left femoral artery and external jugular vein cannulation were performed. In the Sepsis group (n=11) *E. coli* suspension (ATCC-25922, $9.5x10^6$ in 3 hours) was intravenously administered, while in Control group (n=9) physiological saline solution was used in equivalent volume. Skin microcirculation was monitored by laser Doppler flowmetry (blood flux unit, BFU), body temperature was measured on the skin and via venous cannula, and modified shock index (MSI: heart rate/mean arterial pressure, [1/Hgmm.s]) were determined prior to the induction of bacteremia and 1, 2, 3 and 4 hours afterwards.**Results:** After initiating bacteremia 5 animals died within 2-3.5 hours. BFU continuously in the Sepsis group dropped by 41.2% (mean values) at the 1st hour, and it lowered by 69.1% versus base at the 4th hour. Skin and core temperature increased by 6.9% and 3.2% in the Controls, while in Sepsis group only by 5.3% and 4.7%. MSI values of Sepsis group increased by 40.7% in the 3rd hour and 34.9% by the 4th hour versus base values. **Conclusion:** In the early phase of bacteremia and sepsis microcirculatory and tissue perfusion distortion develops soon, prior to hemodynamic changes. The magnitude of microcirculatory impairment does not correlate with skin and core temperature. (Grant: KTIA_13_NAP-A-II/5).

PP-133

Intermittent Androgen Deprivation Therapy in Locally Advanced or Advanced Prostate Cancer

S. Göktaş [1], Ş. Başal [2], S. Yazıcı [3], E. Aydur [4], Z. Demirer [5], I. Yıldırım [4]

[1] Selcuk University Medical Faculty, Department of Urology, Konya, Turkey
[2] Gulhane Military Medical Academy Haydarpasa Training Hospital, Department of Urology, Istanbul, Turkey
[3] Hacettepe University Medical Faculty, Department of Urology, Ankara, Turkey
[4] Gülhane Military Medical Academy, Department of Urology, Ankara, Turkey
[5] Eskisehir Military Hospital, Department of Urology, Eskişehir, Turkey

Background: To determine the effectiveness of intermittent androgen deprivation in the treatment of patients with locally advanced or advanced prostate cancer. **Material / Patients and Methods:** Twenty two patients with locally advanced or advanced prostate cancer were treated with intermittant androgen deprivationin. Patients with bone metastases were excluded from the study. Maksimum androgen blockade was given for 3 months after the diagnosis of prostate cancer. Patients were followed up every 3 months with serum PSA values. Therapy was then reinstituted for a 6 month period (2 cycles) when serum PSA level reached ≥ 2 ng/ml or PSA doubling time was less than 12 months or patient had symptomatic progression. Treatment free period and progression was evaluated. **Results**: Mean serum PSA level at the time of diagnosis was 26.6 ng/ml (range 3.1-101.9 ng/ml). Nineteen patients received primary hormonal therapy while 3 patients received hormonal therapy due to local recurrence after definitive therapy. Patients with a mean age of 74,2 years received mean 2.7 cycles (range 1-6) of hormonal therapy. After a mean follow up of 64.8 months (range 12-129 months), patientes have spent an avarage of % 64,2 of the time not receiving therapy. Mean treatment-free period was 20.7 months (range 6-48). None of the patients demonstrated disease progression during the follow-up period. **Conclusions:** İntermittent androgen deprivation is a viable and safe option for the treatment patients with locally advanced or advanced prostate cancer.

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PP-134

Urethral reconstruction: The past, present, and future

O. M.S El-Taji, A. Baird

Department of Urology, University Hospital Aintree, United Kingdom

Background: Since its first application, the use of buccal mucosal grafts has become popular in complex urethral reconstruction. The traditional materials and methods used have however been associated with numerous complications, particularly from the use of direct allogeneic grafts. The substantial progression within tissue engineeringover the previous two decades has resulted in techniques which hold novel therapeutic promise for urethral reconstruction. Here we outline these advances in the basic research and clinical application of tissue engineering and stem cell technology in urethral reconstruction. **Methods**: Our search was carried out using the PubMed database to assess the current trends in the field of tissue engineering in urethral reconstruction. The use of different stem cells, scaffolds and methodological approaches were reviewed and assessed through a comprehensive literature review.**Results:** In recent years, significant progress has been made in the field of tissue engineering and regenerative medicine, thus providing a legitimate argument for its use in the future. Several strategies are available for urethral reconstruction using tissue engineering, however most lack objective validation. Our findings suggest that the most successful therapeutic strategy is the acellular matrix bioscaffold model. **Conclusions:** Current evidence does not justify the use of tissue engineering strategies as a clinical standard in mainstream urological practice. Multiple hurdles still exist in the application of stem celltechnology. The Holy Grail in the field of cell biology and transplantation will not solely be to control stem cell differentiation *in vivo*, but also to manage their growth following transplantation.

PP-135

Holmium Laser Lithotripsy in Patient with Ileal Conduit Diversion

Z. Demirer [1], A. Gürağaç [2], F. Dursun [3], M. Zor [4] , Ş. Başal [4]

[1] Eskisehir Military Hospital, Department of Urology, Eskişehir, Turkey
[2] Gülhane Military Medical Academy, Department of Urology, Ankara, Turkey
[3] Gümüşsuyu Military Hospital, Department of Urology, Istanbul, Turkey
[4] Gülhane Military Medical Academy Haydarpasa Training Hospital, Department of Urology, Istanbul, Turkey

Background: Urolithiasis risk is increases after radical cystectomy postoperative due to anatomical and metabolic changes. The reported incidence of stones associated with urinary diversion ranges from 9% to 11% after ileal conduit diversion. Open surgical treatment has limited role because of high recurrence rate, postoperative tissue adhesions and anatomical changes. This makes minimally invasive endourological techniques popular. However, these techniques have not been well tested in patients with urolithiasis after urinary diversion. Here we reported holmium: YAG laser lithotripsy for stomal stone in patient with ileal conduit diversion. **Material/Patients and Methods:** A 70-year-old man undergone cystectomy with an ileal conduit diversion because of invasive bladder cancer was admitted to our hospital for a follow-up visit. Computed tomography peformed and a 22 mm diameter urinary stone was detected in ileal conduit. This was confirmed by endoscopy with a rigit cystoscope. Holmium: YAG laser lithotripsy was performed under general anesthesia and all stone fragments removed (Figure 1). Stone-free status obtained in the patient. **Results:** Total operating time was approximatelly 20 minutes. The patient tolerated the procedure well. No intraoperative or postoperative complications were occurred. He was discharged from the hospital at the next day after the surgery. The convalescence was uneventful. Biochemical analysis of the stone revealed magnesium ammonium phosphate (struvite). **Conclusions:** Urinary stone formation is a frequent complication of urinary diversions with high recurrence rates. Endoscopic treatment modalities combined with Holmium: YAG laser lithotripsy with its high success rates and low morbidity can be use for treatment of urinary diversion stones as an effective, safe, and minimally invasive approach.

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PP-136

An unusual case of non-urothelial bladder tumour

D. LH Ching[1], E. Anastasiadis[1], S. Sandhu[1], R. morley[1]

[1]Department of Urology, Kingston Hospital NHS Foundation TrustUK

Background: Bladder tumours can be subdivided into urothelial and non-urothelial tumours. Non-urothelial tumours account for less than 5% of all bladder tumours. Due to the low incidence, they are often not on the urologist's differential diagnoses. **Objectives:** We present an unusual case of non-urothelial bladder tumour. **Material/Patients and Methods**: A 77 year old lady with a background of multiple comorbidities presented with an incidental 2.2cm enhancing nodule anteriorly in the bladder on CT scanning. A TURBT was performed and during the procedure the patient experienced fluctuating levels of blood pressure which required emergency stoppage and optimisation. Macroscopically the tumour was a tan brown sub-mucosal lesion with normal smooth bladder mucosa. Histology specimen obtained was strongly positive with synaptophysin, chromogranin, neuroendocrine marker CD56 and neuron specific enolase, which confirms a diagnosis of bladder pheochromocytoma. **Results**: Majority of patients reported in the literature diagnosed with bladder pheochromocytoma presented with sympathomimetic related symptoms and haematuria. Our patient was asymptomatic hence did not provide any indication of an unusual bladder tumour pre-operatively. **Conclusion**: Surgical intervention of bladder pheochromocytomas have a possibility of precipitating malignant hypertension intra-operatively. In suspicious cases, adequate pre-operative preparation is necessary to ensure patient safety. There is currently no general consensus on the management of bladder pheochromocytomas. Questions remain about the need for balance between anaesthetic risks, cystoscopy and follow up.

PP-137

A culture of open reporting results in improved quality of bladder tumour resections: A closed loop audit

D. LH Ching[1], E. Anastasiadis[1], P. Patel[1], A. Kothari[2], S. Sandhu[1]

[1]Department of Urology, Kingston Hospital NHS Foundation Trust, UK
[2]Department of Histopathology, Kingston Hospital NHS Foundation Trust, UK

Background: Cystoscopic transurethral resection of bladder tumour (TURBT) provides initial diagnostic information. The presence of detrusor muscle is essential for accurate staging. Since 2010, our institution has annually audited the quality of tumour resections and has adopted an "open culture" whereby all inadequate resections are openly reported to individual surgeons. Here we present the findings of our closed loop audit from 2010-2014. **Objectives:** We evaluate the role of open reporting on quality of TUBT specimens. **Material/Patients and Methods**: We examined all bladder tumour resection specimens for the presence of muscle between the months of October-December each year from 2010-2014. We compared the yearly results to determine whether highlighting inadequate resections would improve the quality of specimens. P-values were calculated using the z-test for independent proportions. **Results**: Over the last 5 years for the selected 3 month period, a total of 244 cases were performed by 5 consultants in a single hospital. In 2010, 37% (11/30) of cases were without muscle, 24% (9/38) in 2011, 8% (4/52) in 2012, 14% (6/42) in 2013 and 15% (12/82) in 2014. The reduction in samples without muscle from 2010-2014 is statistically significant (p=0.01). **Conclusion**: The percentage of muscle negative cases have decreased from 2010-2014. An "open culture" whereby mistakes are openly reported for everyone to learn is often advocated as an important step in improving the quality of care. Our audit proves that this system has improved the quality of resections over the years and has reduced the number of patients requiring re-resections.

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PP-138

Testis Sparing Surgery In Small Testicular Masses With No Malignancy Suspicion

F. Ates[1], E. Malkoc[1], M. Zor[1], Z. Demirer[2], B. Firat Alp[3], S. Basal[1], A. Guragac[3], I. Yildirim[3]

[1]GMMA Haydarpasa Research and Training Hospital, Urology Department
[2]Eskişehir Military Hospital, Urology Department
[3]GMMA Medical Faculty, Urology Department

Background & Aims: In this study we aimed to determine the safety, efficacy, and the concordance of frozen and permanent section analysis of TSS in the patients who had STMs which have little or no malignity suspicion.**Methods and Materials:** Fifteen TSS performed patients who had testicular lesions <25 mm and testicular lesion volume <30% of whole testis were included to the study. All patients had normal serum tumor marker levels and ultrasonographic evaluation was not highly suspicious for malignancy. Surgery was performed via an inguinal approach with temporary cord occlusion and frozen section analysis (FSA) of the lesions (fig 1). While benign findings allowed for TSS, cancer prompted total orchiectomy. **Results:** The mean patient age was 25.33. Predominant complaint was swelling (9 patients). Five patients had pain and three patients diagnosed incidentally. The mean lesion diameter was 16mm. Fourteen (93%) of all cases had benign pathology and underwent TSS. Only one patient, whose FSA revealed malign formation, underwent radical orchiectomy. Complete histopathologic concordance was observed between the results of frozen and permanent sections. After a mean follow-up of 23 months all patients, except three who were lost of follow-up, were free of disease. **Conclusions:** The main key points for accurate decision making between TSS and radical orchiectomy are intraoperative FSA and preoperative externalization of possible malignancy suspicion with physical examination, ultrasonographic evaluation and serum tumor marker analysis.

PP-139

Laparoscopic Bladder Diverticulectomy

Z. Aktas[1], F. Dursun[1], M. Zor[1], E. Malkoc[1], O. Bakal[2], F. Ates[1], S. Basal[1], K. Karademir[1]

[1]GMMA Haydarpasa Research and Training Hospital, Urology Department
[2]Gumussuyu Military Hospital, Urology Department
[3]GMMA Haydarpasa Research and Training Hospital, Anesthesiology Department

Background & Aims: The symptomatic congenital bladder diverticula are rare anomalies and occasionally may need surgical treatment. Herein we report a patient with bladder diverticulum which treated with laparoscopic approach with the guidance of cystoscopic transillumination instead of open surgery. **Case report:** A 21 years old man presented with dysuria and frequency was admitted to our clinic. Urine analyses and urine culture were all normal. Urinary system ultrasonography revealed a 5 cm diameter diverticulum in the posterior wall of the bladder, and intravenous pyelography confirmed the diagnosis (fig 1). A laparoscopic bladder diverticulectomy with the guidance of intraoperative cystoscopy and a D-J implantation was performed due to increased residual urine volume. Cystoscopic evaluation and artificial bladder filling with saline solution guided us to identify and localize the diverticulum during laparoscopy. The lesion was dissected and excised from the normal bladder wall (fig 2) and the defect was closed by intracorporeal suturing. The patient had an uneventful recovery and discharged on postoperative second day. **Conclusion:** Laparoscopic bladder diverticulum excision is an effective and safe treatment choice. Preoperative D-J insertion and cystoscopic evaluation and artificial bladder filling may help and facilitate the procedure. This may also lead decreased operative time.

PP-140

Bladder perforation: A complication of a major abdominal surgery

Z. Guclu[1], M. Ince[2], S. Tekindur[1], M Urkan[2]

[1]Department of Anaesthesiology & Reanimation, Gulhane Military Medical Academy Ankara, Turkey;
[2]Department of General Surgery, Gulhane Military Medical Academy Ankara, Turkey

Background: Hyperthermic intraperitoneal chemotherapy (HIPEC) is a treatment used for peritonitis carsinomatosa associated with intraabdominal tumors recently. For this treatment a major abdominal surgery requiring a large resection concerning many organs in addition to total peritonectomy is performed. We hereby report a case of bladder rupture during the operation for peritonitis carsinomatosa related to ovarian cancer. **Methods:** A 66-year-old, ASA I woman with ovarian cancer was admitted for the operation under general anesthesia. A single lumen foley catheter was routinely inserted into the urinary bladder before the operation. An extended surgery was performed including abdominal hysterectomy, bilateral salpingo-oophorectomy, total peritonectomy, omentectomy, partial colon resection, ileocolostomy, splenectomy and HIPEC. Urinary bladder was suspended for the dissection of para-aortic and iliac lymph nodes according to oncological principles. At the end of the operation a 2 cm laceration in the superior anterior bladder wall was determined while washing the abdominal cavity and it repaired by primary closure. The operation was completed with uneventful extubation of the patient. **Results and Conclusion:** Bladder rupture is a potential complication during peritonectomy

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and dissection of para-aortic lymph nodes. At major and long standing procedures filling the bladder with isotonic saline visualize the organ and prevents perforation while dissecting. Hence, it is convenient to insert a double lumen foley catheter which is compatible for giving saline into the urinary bladder.

PP-141

Lower urinary tract symptoms, bladder dysfunction and renal transplantation: A systematic review of the literature

J. M. Norris[1], S. Ravi-Shankar[2]

[1]Department of Surgery, University of Cambridge, Cambridge, Cambridgeshire, UK;
[2]Department of Emergency Medicine, King's College Hospital, King's College Hospital NHS Foundation Trust, London, UK

Background & Aims: Patients with end-stage renal disease on dialysis have prolonged periods of oliguria and reduced bladder volumes, in the preoperative period. Following successful renal transplantation, they initially experience a range of lower urinary tract symptoms (LUTS), including: frequency, urgency, nocturia, and urge incontinence. Additionally, they have increased infection rates, low cystometric capacity and reduced voiding volumes. These symptoms and problems often improve over time, with variation existing between individuals. The aim of this systematic review is to describe our current understanding of LUTS and bladder dysfunction following renal transplant surgery. **Material & Methods:** The MEDLINE database was systematically searched from 1946 to January 2015. Studies pertaining to LUTS and bladder dysfunction in renal transplantation were included, and relevant exclusion criteria were applied. Studies were highly heterogeneous and so were combined thematically, rather than statistically. The current literature was not amenable to meta-analysis.**Results:** 5,585 articles were identified, of which 74 were suitable for inclusion. Content was assimilated using the following most common themes: (1) preoperative LUTS/bladder dysfunction; (2) intraoperative implications; (3) postoperative LUTS/bladder dysfunction; (4) impact on quality of life; (5) risk factors; (6) investigations; and (7) potential therapies. **Conclusions:** LUTS and bladder dysfunction following renal transplantation are prevalent, intrusive problems that take months to years resolve. This systematic review has elucidated our limited current understanding in this prescient area. Rigorous evidence in this field is lacking, and future studies must focus on refining investigation and management to improve the quality of lives of this vulnerable patient population.

PP-142

The Effects Of Treatment Modalıtıes On Outcome In Dıabetıc Foot Patıents And Retrospectıve Evaluatıon Of Comorbıdıtıes

E. Ozay[1], O. Ersen[2], S. Bilgic[1], O. Rodop[1]

[1]Gulhane Military Medical Academy, Istanbul, Turkey
[2]Maresal Cakmak Military Hospital, Erzurum, Turkey

Background: Diabetic foot is one of chronic complications of diabetes which causes the longest hospitalization and a problem ends up with amputation even death. Therefore in treatment process multidiciplinary approach will be more beneficial rather than one doctor follow-up. **Methods:** We evaluated the effects of treatment modalities on outcome in diabetic foot patients in our hospital last two years and analyse the comorbidities retrospectively. In the study 166 diabetic foot patients evaluated Treated patients divided into three groups; conservative, minor and major amputation. Major amputation group compared with conservative and minor amputation group as one. Patients were evaluated according to fasting blood glucose level, HbA1c level, localization of the wound, Wagner classification, ESR, CRP, urea and creatine levels and white blood cell count. **Results:** Men/women ratio was approximately 2/1. We could not show any advantage of sex in major amputation patients. The mean diabetes duration was 18.5 years. However there was no statistically significant relation between diabetes duration and major amputation. The mean fasting blood glucose level was 185 mg/dl, mean HbA1c level was 7.52. These shows poor glycemic control in our patient group. No relation was found between glycemic regulation and major amputation. There was a statistically significant relation between peripheral vascular disease (PVD), neuropathy and also chronic renal failure with major amputation. **Conclusions:** It is seen that some of the patients appealed at the last stage and statistical analyses showed that multidiciplinary approach is effective preventing major amputation.

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PP-143

Successful prediction of Endo-Venous Ablation (EVA) of Great Saphenous Vein (GSV) outcomes and the requirement for stab avulsions with the tourniquet Trendelenberg test

CS Milkhu, C Riga, A Solodkyy, S Renton, TS Hussain, D Greenstein

North West London Hospitals NHS Trust, Northwick Park Hospital

Background: The aim of this study was to assess the predictive value of the tourniquet test for EVA of GSV outcomes and the requirement for stab avulsions. **Method:** 19 patients (10 men, 9 women) with GSV reflux and no short saphenous or deep system venous disease were prospectively recruited in the study; mean age 52 yrs (range 32-84). All patients presented with visible varicosities and skin changes; mean CEAP score was 3.36 (range 2-5). Pre-EVA, the number of varicosities before and after the tourniquet Trendelenberg test was recorded. All patients underwent EVA of the GSV under local anaesthetic without stab avulsions. At 6-weeks post-EVA, the number of residual varicosities were recorded and compared to the pre-operative findings.**Results:** The mean number of varicosities observed pre-EVA was 5.7 (range 1-11) before and 1.5 (SD 1.4) after the Trendelenberg Test, versus 1.4 (SD 1.2) post-EVA. Mean difference between the pre-EVA and post-EVA groups was -0.2 (95% CI -0.7 - 0.4); p=0.55 (paired T-test). The Trendelenberg test showed a positive correlation in predicting the number of varicosities post-EVA (pearson coefficient: 0.64; p<0.001). **Conclusion:** The tourniquet test is a valuable bedside tool in determining the outcome post-EVA and the need for stab avulsions. It can be used to tailor intervention with important implications for cost and patient satisfaction by avoiding the need for multiple procedures and clinic follow-ups.

PP-144

Screening for Peripheral Arterial Disease: What is the Evidence?

S. Shah[1], G. Antoniou[2], F. Torella[2]

[1]Faculty of Health and Life Sciences, University of Liverpool, Liverpool, UK
[2]Liverpool Vascular and Endovascular Service, Royal Liverpool University Hospital, Liverpool, UK

Background: Peripheral Arterial Disease (PAD) is an increasingly prevalent condition caused by atherosclerosis of the lower limb arteries. Most patients with PAD also have atherosclerosis of the coronary and cerebral vessels; therefore, screening for PAD may detect patients at risk of myocardial infarction and/or stroke, who could benefit from secondary prevention. The clinical benefit of mass screening for PAD, however, is uncertain. **Methods:** Using the ten WHO criteria for evaluation of a screening programme, we analysed the potential merits of conducting PAD screening, using ABPI, by reviewing the evidence within the domain of each individual criterion. A comprehensive literature search was systematically carried out in order to identify relevant articles in relation to PAD screening. An evaluation and critical overview of all evidence in favour of and against the implementation of PAD screening was undertaken.**Results:** Screening for PAD fits most of the WHO criteria. On current evidence, and generally in line with current guidelines, a potential target population could include anybody aged 70 years or older and those aged 45-69 with at least one risk factor for PAD. However, evidence on the cost-effectiveness of screening is based purely on theoretical modelling. Furthermore, the benefits of some secondary prevention measures, such as antiplatelet therapy and statin therapy, in asymptomatic patients are uncertain. **Conclusions:** Randomised trials evaluating PAD screening in asymptomatic individuals at risk are needed before widespread implementation can be advocated. Further studies assessing the merits of commencing anti-platelet and statin therapy are also required.

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EVAR for a Streptococcus Group A infected aneurysm of the abdominal aorta

K. Saziye[1], R. Olivier[2], K. Afksendyios[1]

[1]Service of Cardiovascular Surgery, University Hospital of Geneva, Switzerland.
[2]Service of Nuclear Medicine, University Hospital of Geneva, Switzerland

Background: Mycotic aneurysms are uncommon and account for only 1%-1.8% of aortic aneurysms. A mycotic aneurysm is a destruction of the vessel wall leading to dilatation of an artery caused by infection due to a microorganism. Gram-positive bacteria such as the *Staphylococcal* species, *Enterococcus* species, and *Streptococcus* pneumonia, are the most common. Streptococcus group A causing mycotic aneurysm is extremely rare. Standard therapy is the surgical excision of AAA carry high surgical risks and mortality (13.3-40%). Endovascular aortic stent grafting has significant advantages over open aneurysm repair of infected aneurysm. **A Case report:** An 85-year-old female was admitted to the hospital with abdominal pain, temperature of 38.5°C, white blood count of 23/mm^{3}and a C-reactive protein of 245 mg/dL. A blood culture showed growth of Group A β-hemolytic streptococcus *(Streptococcus pyogenes).*The abdomen was soft but tender in the mid abdomen with a pulsating mass. CT image of the abdominal aorta demonstrated a saccular abdominal aortic aneurysm with irregular aneurysmal dilatation (maximum 6.4 cm) of the infra-renal abdominal aorta. **Treatment:** An endoprosthesis (Endurant II®, Stent Graft System, Medtronic ®) was performed via the left axis, in infra-renal position of the abdominal aorta.The patient was discharged 3 weeks post EVAR, with an oral antibiotic for six months. Six-month follow-up CT-scan showed no pathological findings. Total clinical follow-up time >12 months.The use of endovascular aneurysm repair (EVAR) for mycotic aortic aneurysms simplifies the procedure and provides a good alternative in combination with pre-and postintervention antimicrobial therapy in a high-risk patient.

PP-146

Surgical treatment for Aberrant Right Subclavian Artery: A literature review and a case report

C S Chean[1], S Sajad[1], A Ravat[1], A Omotoke[1], S S Poon[1], D Jones[2]

[1]Faculty of Medicine, University of Liverpool
[2]Department of Vascular Surgery, Royal Liverpool and Broadgreen University Hospital

Background: Aberrant right subclavian artery is the most common developmental abnormality of the aortic arch. It is seen in about 0.5-1.8% of the population. The aberrant right subclavian artery is formed by the persistence of the distal portion of right dorsal aorta and the 7th intersegmental artery.**Objectives:** In some cases of aberrant right subclavian artery (arteria lusoria), the retro-oesophageal/ tracheal course of the artery can compress the oesophagus, leading to dysphagia lusoria. Although most patients are asymptomatic, other potential complications are the formation of aneurysm/fistulae with a risk of rupture. A case report has been written and its potential surgical interventions are discussed. **Patient & Methods:** A 75-year-old female presented with mild ischaemic symptoms of the right arm, who then underwent a CT scan, which showed an aberrant right subclavian artery with significant stenosis. Conservative management was preferred due to paucity of symptoms. If symptoms exacerbate, a transbrachial angioplasty is indicated. **Results:** No standard approach is used to repair this anomaly. Median sternotomy, thoracotomy, subclavian or endovascular approaches are usually used, depending on factors such as age and presence of aneurysm. In these surgeries, the distal end of the ligated artery is attached to the right common carotid artery. **Conclusion:** For persistent symptoms i.e. dysphagia, surgical intervention is considered to achieve ligation, repositioning of the artery and oesophageal dilatation. The subclavian approach has been associated with lower morbidity and rapid recovery. However, in paediatric patients, due to the limited exposure of the vessel and the difficulty in controlling haemorrhage, other options might be considered.

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Improving productivity & efficiency of regional vascular surgery multi-disciplinary meeting

G. Dobson, D. Neeson, L. Lau

Vascular Surgery Unit, Royal Victoria Hospital, Belfast, UK

Background: Multi-disciplinary team (MDT) meetings form a cornerstone of modern vascular & endovascular surgery. **Objectives:** Junior doctors are tasked with preparing the weekly meeting, and we set out to find ways to reduce the time spent preparing the patient list, and increasing the number of patients discussed in each weekly meeting. **Methods:** We employed the recognised Plan, Do, Act, Study (PDSA) Quality Improvement methodology. Junior doctors were surveyed to ascertain the time spent preparing the MDT. The records of previous meeting were interrogated to ascertain the proportion of patients discussed in each meeting, and proportion that were rolled over to the following week. Secretarial staff & Consultants were also asked for opinion on changes to be made. **Results:** Following 4 PDSA cycles of change the time spent by juniors preparing the patient list was reduced from 2.3 hours to 0.75 hours with the introduction of an online electronic care record to generate the patient list. Following the introduction of consultant dictated referral letters to the MDT and use of online electronic care record to add specific patient details the proportion of cases discussed increased from 35 to 55%. This represents an increase of approximately two thirds. **Conclusions:** The changes implemented have allowed Junior Doctors to spend more of their time with other activities such as OPD & theatre during their Vascular Surgery rotation. The proportion of cases discussed has increased due to more focused discussions during the MDT meeting, resulting in improved patient care.

PP-148

Feasibility of EVAR as a day case

O. El Bakbachi, G.A. Antoniou, F. Torella, S. Neequaye

Liverpool Vascular and Endovascular Service, Royal Liverpool University Hospital, Liverpool, UK

Background: EVAR is possible as a day case if careful selection includes non-clinical factors. We carried out a literature review for the four best studies supporting a day case EVAR. **Methods:** Medline was searched using the PubMed interface. MeSH terms and keywords were used with Boolean operators. 625 retrieved, the best four papers were selected for this review. Keywords are review; EVAR; AAA; fast-track; ambulatory; same day discharge. **Results:** The first study is a prospective single centre case series which recruited 101 patients undergoing standard EVAR. The authors managed to discharge 30% of these patients the same day. In the second half of the study and as day case EVAR protocol use increased across the unit the percentage of same day discharge patients increased to 45%. Costs were also analysed. The second paper also performed an investigation into the feasibility and safety of ambulatory percutaneous EVAR. Same day discharge was achieved in 33% of the patients. A single centre case series concluded that 40% of cases can be discharged on the same day with an emphasis on postoperative monitoring. Another study conducted in Belgium and Switzerland investigated the possibility of treating a category of EVAR patients as outpatient. 96% were discharged several hours after EVAR. **Conclusion:** Postoperative care at home for monitoring purposes, transport and distance from the hospital in case of need of a readmission were part of the day-case EVAR selection criteria. Larger cohort evidence is needed to establish the clinical benefits and to elaborate a standardised day case protocol.

PP-149

Case Report of An Upper Limb Venus Ulcer

P. Kundasamy[1], M. Rimmer[1], E. Chelma[1]

[1]Department of Vascular Surgery, St Georges Hospital, London.

Background: Venus ulcers of the upper limb, following arteriovenous access surgery are very rare, with few cases reported[1,2] We present a case of a patient presenting with a left upper limb ulcer following a brachial vein transposition for left auxiliary vein to right internal jugular vein jump graft and arteriovenus fistula formation for hemodialysis. **Case report:** A 62 year old man, with a history of extensive arteriovenous vascular surgery access to his left arm, presented with a left swollen arm, after a thrombosed jump graft. **Results:** Clinical examination demonstrateda venous ulcer on the left upper limb.Ultrasound venous doppler confirmed total occlusion of the jump graft with diffuse lymphoedema at the site of swelling. The patient underwent declotting of the left axillary vein to right internal jugular vein jump graft. **Conclusion:** Upper limb venous are rare with only two other cases being reported in the literature. We present a case of venous ulcer forming due to an occluded jump graft and excessive pressure in draining area and the following rescue. 1.Davis RP, Lipsig LJ, Connolly MM, Flinn WR. Varicose ulcer of the upper extremity. *Surgery*. 1985 Sep;98(3):616-8. 2.Boulenger-Vazel A, Viseux V, Schoenlaub P, Auffret M, Staroz F, Plantin P. [Venous ulcer on the hand due to a treatment-related arteriovenous fistula]. *Annales de dermatologie et de venereologie*. 2005 Nov;132(11 Pt 1):887-90.

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Tantalum and cellular interaction

E. Gee[1], J A. Hunt[2], A. Saithna[3]

[1]Honorary research fellow, Southport and Ormskirk NHS Hospitals Trust, U.K.
[2]Clinical Engineering (UKCTE), Institute of Ageing and Chronic Disease, Duncan Building, Daulby Street, Liverpool, L69 3GA, U.K.
[3]Southport and Ormskirk NHS Hospitals Trust, U.K.

Introduction: Tantalum is used in orthopaedic surgery because it readily osseointegrates with host bone and allows immediate weight bearing. It also has the potential to provide a scaffold for fibrous ingrowth and soft tissue re-attachment. It is therefore commonly usedin revision arthroplasty and tumour surgery,to augment bone loss and to facilitate re-attachment of tendons and ligaments. However, clinical results are variable and the aim of this study was to review the literature in order to gain an overall understanding of the basic science of soft tissue attachment to tantalum **Methods:** A systematic review of the literature was performed and eligible studies were critically appraised and relevant data extracted. **Results:** Tantalum has beneficial cellular effects; it stimulates human osteoblasts and upregulates leukocyte activity. However, it is shown to have an inhibitory effect on fibroblasts, which may be one explanation for variable levels of soft tissue integration in clinical series. **Conclusion:**Tantalum has previously been considered to be biologically inert. However recent evidence demonstrates that it does influence cellular activity but exactly how is not well studied nor clearly understood. Given that clinical results are mixed this is clearly an area that warrants further study as manipulation of the biomaterial properties may offer a potential avenue for improving clinical outcomes.