



The Working Group of Young Surgeons – CAJC - Surgical Qualification Certificate for medical students

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Introduction

Germany is currently facing a shortage of surgeons. This problem will aggravate in the future (1). Furthermore, demographic shift and commercialization are resulting in an increasing workload in German hospitals (1, 2). At the beginning of their medical studies, around 30 % are enthusiastic about a surgical specialty; by the

end of their practical year, only 5-10 % are still interested (2). It is therefore important to counteract and encourage students to take an interest in surgery. The aim of the Surgical Qualification Certificate for medical students is to seed enthusiasm for surgery during medical school. Every surgeon will remember the first small steps in the operating room (OR) - the first skin suture, the first skin incision - and the enthusiasm this triggered. We - the CAJC (the Working Group of Young Surgeons of the DGAV) wanted to use these small elements to arouse interest in our specialty.

Implementation

The “Surgical Qualification Certificate for medical students” was developed by a founding member of the CAJC (Michael Zaczek) in 2013. It is a training program for medical school students after their first state examination. The certificate can be acquired during clinical traineeship, as a part of the practical year or as a student assistant.

Content of the training:

- Teaching of theoretical and practical basic knowledge (figure 1)
- Guarantee of exercises under medical supervision
- Proof of an assistance catalog (assistance to 15 laparoscopic/robotic procedures and 15 open surgeries)
- Examination of the required content during a final interview
- Issue the certificate (figure 2)

BASIC PART
OR rules Students must be familiar with the distribution of tasks of OR personnel (anaesthesia, anaesthesia care, OR nursing, surgery) as well as their competencies.
Sterility Students must be familiar with surgical hand washing, disinfection and correct behaviour at the operating table.
Perioperative training It is required that at least one case presentation (as part of a meeting or ward round) is given, which includes the medical history, diagnostics, surgical indication and postoperative course.
THEORETICAL PART
Surgeries Students must be able to describe the exact course of at least eight visceral surgical operations (e.g. appendectomy, cholecystectomy, herniotomies, thyroid/colon resection).
Materials knowledge The basics of the suture material used in visceral surgery (polyfil, monofilament, absorbable, non-absorbable suture, traumatic, atraumatic needle) as well as exemplary areas of application should be known. Common instruments (Overholt, Halsted clamps, scissors, forceps) must be able to be named. In addition, a basic knowledge of the technical aids used in visceral surgery is required (staplers, dissection devices).
PRACTICAL PART
At least two different node techniques
Mechanical node
At least two different skin sutures

Fig. 1: Theoretical and practical knowledge



Fig. 2: Surgical Qualification Certificate for medical students

The aim of the training:

- provide students with the tools they need to become much more active in the OR.
- Connecting students and departments and thus increasing the number of applicants.

Hospitals:

- Participating hospitals are German-speaking hospitals in Germany and in the meantime also in Austria.
- The training should be widely accessible, which is why the training is offered at the whole spectrum of hospital levels.
- To be able to offer the training as a clinic, the hospitals must establish a concept that shows how the training content is adapted to the clinic structures.

Success

The first hospitals in 2013 and 2014 were the Protestant Hospital Herne, the Landsberg am Lech Hospital, the St. Martinus Hospital Olpe and the University Hospital Marburg. Currently 54 hospitals are participating in the program and four to five new hospitals are added every year.

Up to 2023 more than 300 certificates have been issued. Monthly there are about 7 registrations for the certificate and about 5 are issued each month.

In the past the "Surgical Qualification Certificate for medical students" was evaluated by the Ruhr-University Bochum in the form of several master's theses. As part of a master's thesis by Anna Maria Melcher (Faculty of Social Sciences), interviews were conducted

with students who had completed the surgical certificate and students who had not, regarding their choice of specialist training. Opportunities for practical work and motivated teachers were factors that influenced the choice of their specialization. The Master's thesis confirmed that the certificate provides a good and realistic insight into surgery and can encourage students to consider surgery as a specialty (3).

We therefore believe that this certificate makes a modest contribution to inspiring the next generation of surgeons.

Future

We are currently working on digitizing our processes and want to develop a digital platform for applications and further communication. The aim is to create a communication platform through which future surgical residents can get in contact with each other and with the participating hospitals. We would like to launch a new evaluation to assess the quality of this training and the choice of a surgical profession.



Fig. 3: Information for students and interested clinics

References

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