Stereotactic and Functional Neurosurgery

Received: December 18, 2012
Accepted: January 7, 2013
Published online: May 7, 2013

Stereotact Funct Neurosurg 2013;91:270–271
DOI: 10.1159/000348322

Neurosurgeons Were Indeed Promoting Evidence-Based, Ethical, and Multidisciplinary Psychiatric Surgery!

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I read with great interest the paper by Lipsman et al. [1] on the narrative history of the International Society for Psychiatric Surgery (ISPS) between 1970 and 1983.

I was not aware that there was a meticulous record keeping and archiving of the ISPS, nor where that archival material is kept. I praise the authors to have made parts of those archives public.

What is equally interesting is to actually read the publicly available proceedings of the various meetings of that Society. One can find highly interesting material, that ought to be made more available today, since the record shows without doubt that: (1) there were indeed psychiatrists involved and active in those meetings of the ISPS; (2) neurosurgeons were indeed at the forefront of those who insisted on the need for multidisciplinarity, and (3) neurosurgeons were also at the forefront for an ethical and evidence-based conduct of stereotactic surgery for psychiatric illness.

I wish here to contribute with some additional *published* details that I feel need to be more highlighted than what is the case in the otherwise excellent narrative provided by Lipsman et al.

In the proceedings of the Third International Congress of Psychosurgery held in Cambridge, UK, on August 14–18, 1972, there is an introductory chapter by one of Sweden's most famous psychiatrists, Gösta Rylander, who eventually came to be very involved in anterior capsulotomy with Lars Leksell. In the talk that he delivered at that conference, he recounted how he once as a junior psychiatrist wished to introduce Moniz's lobotomy procedure in Sweden. He wrote: '… I approached Olivecrona, the neurosurgeon. He said definitely no, adding somewhat sarcastically that psychiatrists damaged the brain by electroshock treatment and that there was no reason to destroy part of it in such a doubtful way as Moniz had done' [2]. Already here, we have a testimony by a psychiatrist, who initially wished to push for lobotomy, and who gives a first-hand account of the conservative, if not aversive, attitude of one of the world's leading pioneer neurosurgeons towards lobotomy.

Lipsman et al. [1] wrote that 'reaching out to psychiatrists was found to be a critical component in the survival of the organization and the field' and that 'Obrador, now ISPS President at the Fourth Congress, also oversaw the confirmation of reports from the Ethics Committee and the Committee on Terminology and Assessment. The latter especially grew out of increasing criticism that neurosurgeons participating in psychiatric surgery failed to appropriately document their pre- and postoperative patient assessments. Efforts to formalize these assessments, informed by psychiatric consultation, established a precedent still in place today, without which the ethical conduct of psychiatric surgery could not take place'.

I beg to disagree with the authors about 'informed by psychiatric consultation'. For one, the 'efforts to formalize these assessments' was clearly proposed by a neurosurgeon, Lauri Laitinen, in a chapter in the very proceedings of that Fourth Congress [3]. Laitinen actually proposed a controlled randomized study of psychiatric surgery versus best psychiatric management, with evaluation conducted by independent psychiatrists (see more below). For the second, we have evidence today, in the modern era of psychiatric surgery, that psychiatric involvement, which is of course mandatory, is not a guarantee per se for a proper formalized and ethical assessment [4].

Lipsman et al. [1] wrote that 'the archives do not contain the program from the Madrid conference, although it is clear from subsequent correspondence that the focus remained on proving the efficacy and safety of psychiatric surgical procedures. Furthermore, the great majority of the presentations were subsequently published in the proceedings from the meeting'.

Indeed, in those proceedings, one can find the very interesting, and today very timely, paper by Laitinen [3] mentioned above, entitled 'Ethical aspects of psychiatric surgery'. In that paper one can read the following: 'Model of a controlled trial: the basic problem of psychosurgery is psychiatric. Therefore, the initiative in considering surgical treatment must be taken by the psychiatrist. As soon as he is sure that conservative treatment by every available method cannot cure the patient, he should consult the neurosurgeon. Psychosurgery will remain experimental for years. Therefore, its use should be concentrated and restricted to psychosurgical research units having strong and intimate affiliation with scientists from many disciplines' [3].

In that same paper, Laitinen proposed a 'prospective randomized study to compare stereotactic surgery vs. psychiatric management', and he outlined in detail a project for a multidisciplinary prospective controlled randomized trial by which eligible patients would be allocated to either stereotactic psychosurgery (e.g. cingulotomy, anterior capsulotomy) or to continued conservative therapy with prolonged follow-up examinations 'by psychiatrists, psychologists and scientists' [3].

Laitinen also wrote that 'it may even be possible to treat the patient with repeated electrical stimulation without macroscopic destruction of brain tissue', showing that he was aware of the potential of deep brain stimulation (DBS) in surgical alleviation of psychiatric symptoms.

Finally in that same paper, Laitinen criticized vehemently the practice of Tulane University psychiatrist Robert Heath. Laitinen wrote, commenting on a paper of Heath [5] from 1972: 'In these

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two patients electrodes and cannulas implanted into most structures of the brain numbered no less than 19 and 29, respectively, and little attempt was made to document why this was important for the patients' treatment. There is no doubt that in this study all standards of ethics had been ignored. The ethical responsibility of the editors who accept reports of this kind for publication should also be discussed' [3]. Incidentally, 25 years later in a review of the practices of Tulane psychiatrist Heath, published by psychologist Baumeister in 2000 in the *Journal of the History of the Neurosciences* [6], the author wrote: 'The central conclusion of the present review is that the Tulane electrical brain stimulation experiments had neither a scientific nor a clinical justification… these experiments were dubious and precarious by yesterday's standards.'

Finally, Lipsman et al. [1] wrote under the paragraph heading 'Lessons learned': 'It can be argued that the backlash against psychiatric surgery was due not only to the haphazard use and abuse of novel surgical techniques, but also to the lack of organization in the field, leading to poor methodology and a failure to adequately report results.'

In my opinion, this is becoming an often repeated dogma that is not always true. One should remember that at that time, the psychiatric diagnoses were not always clear and there were no modern established scales to rate the results of interventions. The surgeons of that era are often made scapegoat for circumstances beyond their control. In fact, one of the pioneers of stereotactic psychosurgery of that era, Thomas Ballantine from Harvard, was praised by ethicist Joe Fins in a paper in 2003, in which Fins wrote about the role of Ballantine in promoting a multidisciplinary approach to stereotactic psychosurgery, whereby 'decisions to operate were to be made in conjunction with a psychiatrist, who would also make psychiatric follow-up available, and patients and family were to be informed of potential risks and benefits' [7].

Furthermore, if one browses the PubMed database, using the search words 'ethics' and 'deep brain stimulation' one finds that the first paper dealing with ethics of DBS was published in 1980, and authored by three neurosurgeons [8]. That paper, entitled 'Indications and ethical considerations of deep brain stimulation', was published 7 years before the start of the modern DBS era. The next paper dealing with psychiatric DBS and ethics did not appear until 2003 [7], that is when modern DBS had moved towards psychiatry and behavior.

The September 2009 issue of the *Archives of General Psychiatry* featured a paper entitled 'Scientific and ethical issues related to deep brain stimulation for disorders of mood, behavior, and thoughts' [9]. This paper summarized a 2-day conference that examined scientific and ethical issues in the application of DBS in psychiatry, in order to 'establish consensus among participants about the design of future clinical trials of deep brain stimulation for disorders of mood, behavior, and thought' and to 'develop standards for the protection of human subjects participating in such studies'. None of the 30 participants at the meeting, 19 of which are authors of the paper, was a neurosurgeon.

So, concerning the 'lessons learned' and the 'backlash against psychiatric surgery', I wish to state that neurosurgeons certainly knew these lessons and even lectured about these 'lessons'. Most of the backlash has more to do with myths and mantras than with facts, and the responsibility may be shared between neurosurgeons and psychiatrists. In fact the record shows that even in the contemporary use of psychiatric surgery, failure to adequately report results still occurs even in the practices of modern multidisciplinary teams [4], and failure to behave in a proper multidisciplinary spirit lies with others than neurosurgeons [9].

There is no need to continue holding to a myth that denigrates neurosurgeons and to continue to consider neurosurgeons as scapegoats of a practice (lobotomy) that was popularised and misused by a non-neurosurgeon. Did not neurosurgeon James Watts break with neurologist Walter Freeman? And was it not a leading psychiatrist, Ørnulf Ødegård, director of Norway's main psychiatrist hospital, who published the following in 1953 in the Norwegian Medical Journal: 'Psychosurgery can be easily performed by the psychiatrist himself with the tool he might have in his pocket, and strangely enough it may be harmless and effective' [10]. In today's discourse on psychosurgery, does anybody cristicize or blame psychiatrists for misuses of the early era? No! In the collective conscience of lay people, and even of professional academic people working in this field, the perception of psychiatric surgery is best illustrated by this quote from an eminent ethicist: 'It is ethically untenable for this work to proceed by neurosurgeons in isolation without psychiatrists determining the diagnosis and suitability of patients for treatment' [11]. We neurosurgeons need to challenge the myth that neurosurgeons were 'in isolation'. Praise again to the paper of Lipsman et al. [1], as a first step in putting the historical record straight.

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