



## Neurosurgical treatment of obsessive-compulsive disorder

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This paper suggests that neurosurgical operations can improve symptoms in patients with severe treatment-refractory Obsessive Compulsive Disorder (OCD). However, it is unclear which procedure is best and which may produce the most side-effects. I reviewed the literature on the efficacy and complications of our frequently used neurosurgical procedures (cingulotomy, capsulotomy, limbic leucotomy and sub caudate tractotomy) that are used to treat refractory OCD. Since the vast majority of patients who underwent surgery were severely and chronically disabled, it is likely that these procedures were of assistance in alleviating some of their symptoms. It is currently impossible to determine which surgical procedure is the best for a particular patient. Despite a lack of controlled data and inconsistencies in the literature, it appears that when non-surgical treatments have failed to improve OCD symptoms significantly in severely ill patients, at least partial relief can be obtained by some people with OCD by neurosurgery. Results of cumulative studies strongly support the need for continued research in this area.

With the use of available medication and behavioral therapies to treat patients with Obsessive-Compulsive Disorder (OCD), the outlook for the majority of patients is quite good (Jenike, 1990; Jenike et al, 1990). There are, however, a very small number of patients who not only remain refractory to all conventional treatments, but also are extremely ill and essentially non-functional. Such patients are unable to work, marry, have children, function socially and even may not be able to leave a particular room in their house. Their lives are a twisted torment of obsessions and compulsions, with no hope for improvement. For such treatment-refractory and severely ill patients with OCD, clinicians are obligated to consider any treatments, even neurosurgical options that may provide some relief. Unfortunately, many clinicians and patients associate neurosurgery with the much unsophisticated technique of lobotomy, with its resultant well-documented and drastic changes in personality. This has led to prejudice against neurosurgical procedures as treatments for psychiatric illnesses. In addition, with more effective treatment techniques, the numbers of refractory patients who might be candidates for such operations has diminished quite dramatically.

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None the less, for the few very severely ill patients who do not respond to optimal treatments, it is important to at least consider whether or not they may benefit from modern restricted procedures that seem to produce few side-effects. For over a decade I had not referred any patients with OCD for neurosurgical intervention despite having one of the main centers performing these procedures in the same hospital. Conceptually, it did not seem logical that removing a small piece of brain tissue could improve the lives of such severely ill patients. In addition, I was aware of the controversial nature of these procedures and did not wish to get involved in such controversy unless there were likely to be tangible rewards for the patients. However, as my clinic followed an increasing number of patients, the population of refractory patients grew, and I eventually felt obliged to investigate the potential benefits of these operations more fully. My general principle has been: would I refer one of my close family members for such an operation or would I undergo it myself? If, after careful consideration of the available data, I could not answer in the affirmative, I decided not to recommend this option to the patient. Our retrospective (Jenike et al, 1991) and prospective (Baer et al, 1994) reviews of the outcomes and complications of one of these operations (cingulotomy); summarised later in this paper, gave us reason for optimism. OCD is one of the most commonly reported psychiatric disorders in the medical literature with regard to neurosurgical procedures (Mindus & Jenike, 1992). Modern stereotactic surgical interventions produce lesions only millimetres wide, which are placed with great precision in brain structures that appear to be important for symptom production. The clinician who is contemplating neurosurgical intervention for his otherwise treatment-refractory patient with OCD will need to know general selection guidelines, indications and contraindications, the procedures available, their probable outcome, the hazards involved, what pre-operative work is needed and the rationale behind neurosurgery for OCD.

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