



DEBATE

High Intensity Focal Ultrasound (HIFU) is a newly developed technique intending

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Abstract

Point of view: Yes

Pallidotomy and thalamotomy began in the 1950s and electrolytic thalamotomy with electrophysiological intraoperative assessment became established for the treatment of tremor in the 1960s. This procedure waned for over 2 decades with pharmacological developments (i.e. levodopa and other drugs). Surgery for movement disorders regained prominence when pallidotomy first and deep brain stimulation (DBS) soon after were applied to the treatment of Parkinson's disease (PD) and dystonia in the 1990s. Lesion of the subthalamic nucleus (STN) have been less popular because of the fear to cause hemiballism, but actually employed in many countries, particularly because of the high cost and technological demands of DBS, without major complications.

Clinical trials have investigated the safety and efficacy of thermal lesions created by transcranial, HIFU, which now

offers the possibility of using more frequently focal ablative treatment for movement disorders. The outcomes of HIFU treatment is highly predictable as essentially should be the same than well-established for thalamotomy, pallidotomy and subthalamotomy. The potential side effects are also the same without the risk of intracranial surgery. Recent, still preliminary data, indicates that HIFU can indeed be used with marked efficacy for the treatment of essential tremor and other disorders with tremor predominant manifestation, including Parkinson's disease. The reduced invasiveness and excellent benefit to risk profile allows to use it to treat patients that otherwise could not benefit from surgical procedures. This is a welcome addition to the therapeutic armamentarium of movement disorders.

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