

IS DEEP BRAIN STIMULATION FOR DEPRESSION A THERAPEUTIC BREAKTHROUGH? REVIEW OF THE LITERATURE

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Background: Depression is one of the most common psychiatric illnesses. Despite availability of several treatment modalities, a significant number of patients remain non-reponders. Highly advertised preliminary results from recent studies have shown that Deep Brain Stimulation (DBS) may offer beneficial effect on severe depression. **Objectives:** To analyse clinical findings presented in the limited number of studies on DBS for treatment-resistant depression. **Methods:** Original papers were collected through search of Medline, the Web of Science, and the Ovid database. Additionally, recently published meeting abstracts were reviewed. **Results:** Five papers and three abstracts were included. They reported original trials and case studies of DBS in various areas of the brain as follows: Anterior cingulum areas 25 and 24 (20+ patients), anterior internal capsule/ventral caudate (6 patients), nucleus accumbens (4 patients), inferior thalamic peduncle (1 patient). In about two-third of patients receiving DBS in subgenual cingulum, there was a 40% or more improvement on Hamilton Depression Rating Scale at follow-up of 6 months or more. The improvement following DBS in other brain targets was variable or anecdotic. No severe side effects have been reported. **Conclusions:** DBS in various parts of the limbic system may decrease symptoms of severe depression. However, there is no consensus on which brain area to target, and the number of patients receiving DBS is so far too small or insignificant. Prospective randomised studies with blinded outcome evaluations are needed in order for DBS in any of the targeted brain areas to be accepted for treatment of refractory severe depression.