

DEEP BRAIN STIMULATION OF NUCLEUS ACCUMBENS AND POSTERIOR SUBGENUAL CINGULATE DO NOT RESULT IN LASTING BENEFITS FOR PATIENTS WITH CHRONIC AND SEVERE TREATMENT RESISTANT DEPRESSION

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Deep Brain Stimulation (DBS) is emerging as a possible treatment for treatment refractory depression. In this pilot study 8 patients who had depression and had not responded or had stopped to respond to treatment accepted to participate in this double-blind partial cross-over study of DBS. On average they had received 18 psychotropics alone or in combination, 45 ECT sessions and all had had psychotherapy. Our neurosurgical technique allows to confirm the precise location of contacts during surgery. Four electrodes were inserted, two bilaterally in the subgenual cingulate with a trajectory of about 30 degrees to the horizontal and two bilaterally in the posterior part in the nucleus accumbens and in the ventral anterior capsule. There were 2 men, the average age was 49, patients had MDD diagnosed 19 years previously, an average current episode of 11 years and were above the 99th centile in SCL-90 scores. Average MADRS was 39 and GAF was 30. Sustained response and remission was obtained in three patients with stimulation in the ventral anterior capsule and in the anterior subgenual cingulate. Two patients achieved response/ partial response with stimulation if both targets. Three patients had no response. While temporary improvements were recorded with accumbens and posterior subgenual cingulate stimulation these were transient. Accumbens stimulation was associated with more serious adverse events. This approach needs to be studied in a larger group of people to confirm or refute these informative findings.