Deep Brain Stimulation for Chronic Pain: Irish Experience

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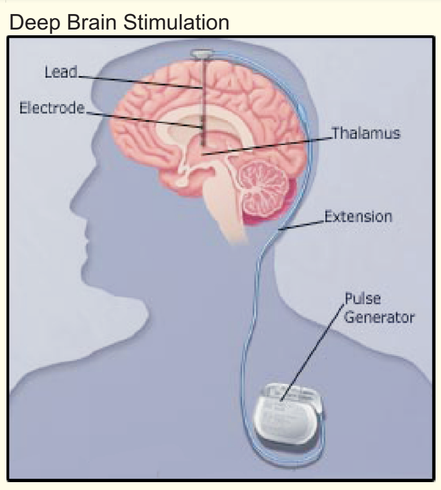
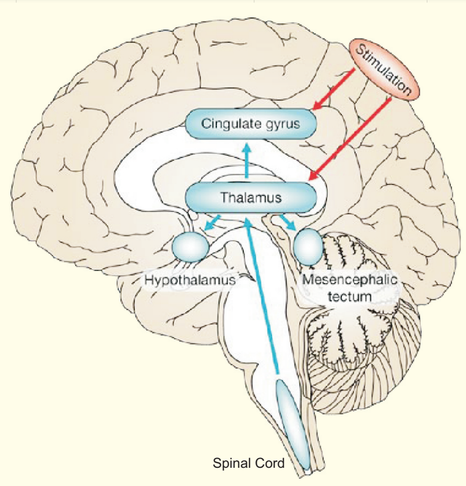
Background

Deep brain stimulation (DBS) is a recognised treatment for certain medical conditions. This intervention is being used for Parkinson's disease, OCD, essential tremors and dystonia. Its neuromodulatory role is being offered to patients with chronic intractable pain.





Objective

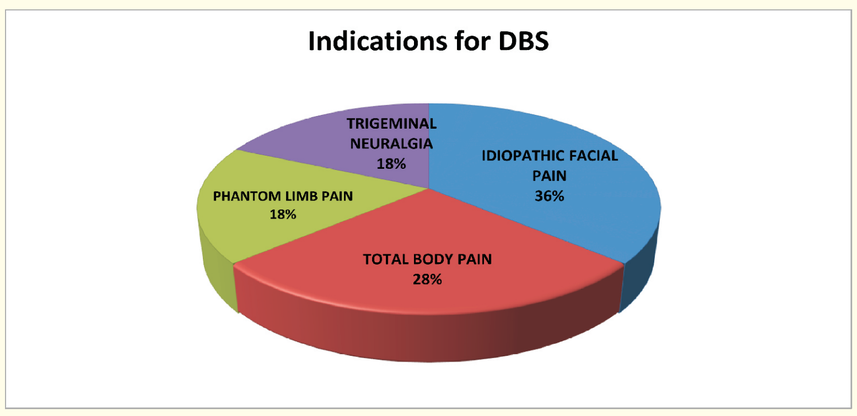
To assess the effectiveness and safety of DBS in patients referred from Saint Vincent University Hospital to John Radcliffe Hospital Oxford UK.

Method

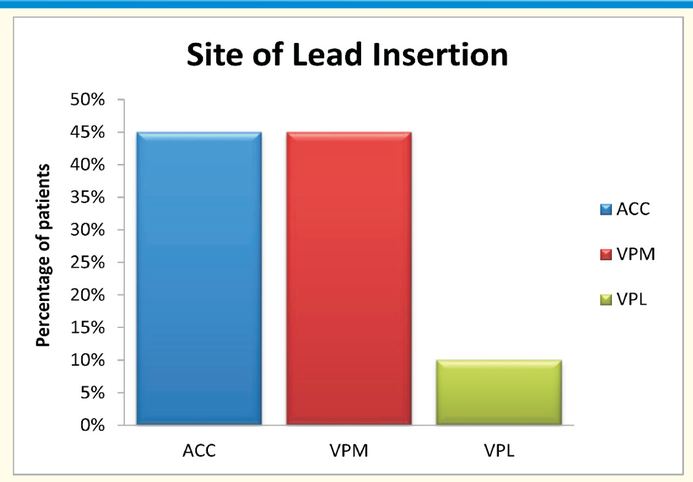
We performed retrograde analyses of patients who have DBS inserted for chronic pain during the period 2010-2014. Total 11 patients were referred for DBS.
We assessed the patients for pain relief, overall improvement in quality of life, changes in medication and associated complications.

Results

Mean duration of follow up after DBS insertion was 24.3 months. Mean age at the time of the procedure was 38 years. Most of the patients were female (7/11). Two patients had failed trial. Most of them had neuropathic pain. Rest have mixed neuropathic/nociceptive pain. Nearly 50% of the patients had leads inserted in the anterior cingulate gyrus.
Post-surgery NRS (numeric rating scale) dropped to 7 for 3 of the patients. One has drop to 3. For the rest has been staying 8-9. No significant change in medication, except for one patient. Who has 60% reduction in his medicines. Most of our patients did have complications ranging from headache to ongoing tremors and seizures. Most of the patients didn't have adequate pain relief. Few had serious complications. No improvement in quality of life, neither decrease in medications was noted. Our audit shows it may be helpful for carefully selected patients.



Age in Years (Mean)	38
Gender Distribution (n=11)	Male(n=4) 37% Female (n=7) 63%
Duration of Follow Up (Mean) Before DBS	30.2 Months
Duration of Follow Up (Mean) After DBS	24.3 Months
Pain Score(NRS) Before DBS (Mean)	10/10
Pain Score(NRS) After DBS (Mean)	7/10



Conclusion

In overall results of DBS in our series of patients can be regarded as unsatisfactory. However there are some who benefited from this method. Probably more careful selection is a key to success.

Acknowledgments

Verbal Consent taken from patients. No external funding and no competing interest declared.

Reference

Long Term Outcomes of Deep Brain Stimulation for Neuropathic Pain; Sanda G. J. et al. Neurosurgery Volume 72 Number 2 Feb 2013 221-231