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| **Title:**Outcome Analysis of Neuromodulative Surgery for Drug Refractory Epilepsy: A Review of 6-year Experience in Queen Elizabeth Hospital. **Authors:** SEE Ka Wing1, YE Wen Zhe1, CHAN Hiu Fai Germaine2, FONG Ka Wing2, TSE Michelle3, CHAN Iris3, CHEUNG Yuk Fai2, POON Tak Lap1, CHEUNG Fung Ching1**Institution(s):**Department of Neurosurgery, Queen Elizabeth Hospital, Hong Kong1.Department of Medicine, Queen Elizabeth Hospital, Hong Kong2Department of Clinical Psychology, Queen Elizabeth Hospital, Hong Kong3**Abstract:** ***Objective*:**Neuromodulative surgery improves seizure control in patients with drug resistant epilepsy yet unsuitable for resection surgery. Vagal nerve stimulation (VNS) and deep brain stimulation (DBS) are the 2 modalities of intervention available in Hong Kong. We would like to review our cases of neuromodulation, in order to formulate patient selection criteria. ***Method:***This was a six-year retrospective study of neuromodulative surgery for drug resistant epilepsy patients, in terms of patient selection, effectiveness of seizure control and comparison between vagal nerve stimulation and deep brain stimulation. ***Result:***In total 14 patients reviewed, 11 of them had VNS and 3 of them had DBS. After surgery, there were lower frequency and shorter duration of seizure attacks, less severe symptoms, and less secondary generalizations in those with partial onset. One year time after operation, >50% of the patient have seizure reduction by more than 50%. 2 of these patients also had improvement on psychiatric aspects with reduction in irritability. For outcome of DBS, all the 3 cases showed significant decrease in duration and severity of attacks. Out data also showed that in patients with temporal epilepsy, DBS had the tendency to improve seizure control more than those with VNS done. ***Conclusion:***Both vagal nerve stimulation and deep brain stimulation are effective neuromodulative surgery for drug resistant epilepsy. Good case selection is one of the keys to achieve satisfactory outcome. |