

Eligibility and strategy for optimal epilepsy surgery



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Antiepileptic drug treatment is unsuccessful in one third of epilepsy patients. Over 75% of the cost of epilepsy care has applied to these patients. Epilepsy surgery offers the only opportunity to become free of seizures for these medically intractable epilepsy patients. High resolution MRI substantially improved the cost effectiveness and success of surgical treatment. There are rapidly diminishing chances of becoming seizure-free after trying three AEDs. Individuals who would be able to withstand neurosurgery and who have focal seizures which continue despite taking AEDs are candidates for epilepsy surgery. However, the number of epilepsy surgery is not higher today. Furthermore, there is a long interval between the onset of epilepsy and the referral for those who are referred to epilepsy surgery. The cost-effectiveness of epilepsy surgery is well known. However, the absence of randomized controlled trial to the superiority of the surgical intervention over to the continued pharmacotherapy hampers the early enrollment for the epilepsy surgery. There are two different categories of epilepsy surgery. They are resective and functional surgeries. Resective surgery is removing epileptogenic zone that give rise to seizures, and rendering the patient seizure free. Functional surgery is the palliative procedure to alleviate the burden of seizures. The goals of epilepsy surgery are lifelong stable seizure-free outcome without neurologic, cognitive, psychiatric compromise to enhance the quality of life of epilepsy patients. To select the adequate candidates for epilepsy surgery, we have to recognize the factors that determine medically refractory epilepsy, assess the information on outcome to epilepsy surgery and natural history over time, and assess the psychiatric and neuro-cognitive outcomes.
