

EPILEPSY SURGERY

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Epilepsy affects 1% of the population, and about 30% of patients with epilepsy will turn out to be medically intractable. This proportion has remained unchanged despite the availability of many newer antiepileptic drugs and vagus nerve stimulation.

Epilepsy surgery is standard of care for medically intractable seizures [Benbadis et al 2000, Engel et al 2003]. In particular, temporal lobectomy has a very high success rate and a very low rate of complications, at least at experienced epilepsy centers. Seizure free outcome after temporal lobectomy is around 70-90%, and another 10-20% of patients obtain a significant improvement in seizure frequency. The vast majority of patients can be identified with a non-invasive evaluation. In addition, complications are very rare with standard temporal lobectomies. The only relatively common adverse outcome is a mild decline in memory, which can usually be predicted preoperatively. Neurological deficits such as motor or sensory symptoms are very rare. Death is exceptional during epilepsy surgery. On the other hand, patients with intractable epilepsy have an increased risk of mortality, due to both accidental death and sudden unexplained death in epilepsy (SUDEP). At epilepsy centers who treat intractable patients, death is far more common in medically treated patients than in surgery patients [Wiebe et al 2001, Benbadis et al 2007]

Furthermore, it is clear that early drug failure predicts medical intractability. Once the first antiepileptic drug has proven ineffective, the chances of success with the second trial are 13% and an additional 4% with the third trial [Kwan & Brodie 2000]. Thus, intractability declares itself early.

Despite this, the delay from seizure onset to referral for epilepsy surgery remains amazingly long (15-18 years), both in adults and children [Benbadis et al 2003]. Much of this delay is caused by lack of familiarity with and misconceptions about surgery. Based on the above, it is not justified to delay surgical treatment, at least for temporal lobectomies and when the presurgical evaluations very concordant. It is certainly unethical to not offer surgery in these cases, and to instead enroll patients in clinical trials [Benbadis et al 2000, Benbadis et al 2003].

A related issue is the delay for the correct diagnosis of psychogenic non-epileptic seizures is astoundingly long at 7-10 years [Reuber et al 2002]. This, together with the delay for surgery, strongly suggests that EEG-video monitoring is under-utilized. The general rule should be that patients who continue to have seizures frequently on antiepileptic drugs should be referred for prolonged EEG-video monitoring.

References

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