Frontal Lobe Epilepsy

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Abstract

While frontal lobe epilepsy accounts for only 10-20% of patients in surgical series, the prevalence in non-surgical cohorts is probably higher. Frontal lobe epilepsy (FLE) probably represents 20-30% of partial seizures.

Clinical diagnosis:
The seizures which most of the time occur without warning, are often short and are followed by very rapid recovery. They frequently occur from sleep, and may occur in clusters of 5-6 or more per night, usually with partial recovery between, but status epilepticus is also common.

Seizure manifestation:
The seizure semiology is dependent on the area of cortex activated during a seizure and therefore can give important clues as to the presumed epileptogenic zone.

Frontal lobe seizure semiology with predominantly positive motor symptoms can be grouped into three main categories:

Frontal clonic seizures
Bilateral asymmetrical tonic seizure
Complex motor seizure

Rarer seizure types include: seizures characterized by brief lapses of awareness, akinetic seizures, aphasic seizures or seizures characterized by early head version without loss of awareness.

Electroencephalography

Interictal EEG recordings are often challenging and it is reported that up to 40% of patients with FLE do not have Interictal epileptiform discharges. The yield of prolonged video EEG recordings and careful review of EEG samples with closely spaced midline electrodes may be of higher yield.

Imaging

CT scan, MRI, PET and SPECT are used for determination of the lesion or abnormality. MRI can detect small area of dysplasia and heterotopia.

Treatment

The pharmacological treatment of FLE is as for other focal epilepsies. There are no good comparative drug trials specific to FLE. Surgery is less successful than for TLE with complete remission after focal resection in only 20-40%, even in the most highly selected cases.

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