



선우준상

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Clinical and electrographic spread patterns in frontal lobe epilepsy

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Frontal lobe epilepsy (FLE) is the second most common type of localization-related epilepsy after temporal lobe epilepsy. Clinical manifestations of frontal lobe seizures vary depending on which region of the frontal lobe is involved. When associated with bizarre and complex behavior manifestations, frontal lobe seizures can be misdiagnosed as psychogenic non-epileptic seizures. Semiological characteristics of frontal lobe seizures include early motor manifestations, vocalization, nocturnal tendency, brief seizure with minimal postictal confusion, and complex motor automatisms. Scalp electroencephalography (EEG) recording is somewhat helpful in the diagnosis and localization of FLE, but can be normal or misleading. Epileptiform discharges can be falsely lateralized if an obliquely oriented dipole projects neuronal activity to the opposite hemisphere. In addition to focal interictal epileptiform discharges in the frontal region, scalp EEG recording can reveal generalized spike-and-waves or bifrontal synchronous spikes, implying extensive epileptogenic network of FLE. Ipsilateral and contralateral temporal lobe spikes can also be found in interictal EEG recording. Ictal scalp EEG recording is usually less useful in localizing frontal lobe seizures than the interictal recording, because the seizure onset is frequently obscured by muscle artifact. The most common ictal pattern is non-localized and widespread changes with rapid propagation to other brain regions.

Key Words: Frontal lobe epilepsy, Electroencephalography, Seizure, Semiology

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