

Seizures are relatively common in childhood. Due to maturational changes that occur most rapidly in the first two years of life, and to a lesser extent in the subsequent two decades, the developing brain has a relatively reduced threshold for seizure activity. Not only is the incidence for seizure disorders more common in childhood and adolescence, the types of seizures are more varied. Classification of childhood seizure types helps to provide information for correct anti-epileptic therapy as well as information on the prognosis for resolution of seizures.

Benign rolandic epilepsy, or benign childhood epilepsy with centrotemporal spikes, is one such classification with a characteristic presentation, response to anti-epileptic therapy, and prognosis. A relatively common seizure type in childhood, it represents up to approximately 24% of all seizure types in children between the ages of 5 and 14 years. The onset is usually between the ages of six and nine years, but can occur as early as two years. Complete resolution always occurs by 16 years of age. Patients are otherwise healthy with normal development. Diagnosis is aided by characteristic EEG findings and seizure presentations.

The most common presentation of this seizure type involves abnormal movements or sensation of the face and mouth. In children older than 6 years of age, twitching of one side of the face is common. Seizures with prominent manifestations involving the tongue and throat are also common, and may occur during sleep, or involve impairment of consciousness in the awake child. Hypersalivation and the inability to swallow can cause drooling. A generalized tonic clonic seizure can occur if the seizure discharges spread diffusely over the brain.

In a child with typical seizures, the EEG, or electroencephalogram, is usually diagnostic. Epileptiform discharges occur in the regions of the brain controlling facial, mouth, and throat movements and sensations, which are the lower portions surrounding the rolandic fissure, hence, the name of the epilepsy, benign rolandic epilepsy. These discharges have a characteristic shape which is rarely seen in other seizure types, and which also aids in the diagnosis. Another aid in diagnosis is that the discharges are most pronounced during sleep portions of the recording.

The exact mechanism of this seizure type is unknown, but hypotheses include an age dependent change in functioning of a particular receptor in the brain. A strong familial tendency supports a genetic transmission. A family history of epilepsy has been reported to be as high as 32%. Even in patients without a family history of seizures, siblings often have typical EEG findings without clinical seizures. Because of the relative specificity of presentation of this seizure type, neuroimaging, including a CT scan or MRI of the brain, is rarely indicated.

Because seizures are often sporadic, often only occur at night, and usually do not interfere with a child's daytime functioning, treatment with an epileptic medication is not automatic. The decision to treat a child with benign rolandic epilepsy depends on the particular manifestations of seizures in the child and whether daytime seizures occur,

weighed against potential side effects of the anti-epileptic medication. If an anti-epileptic medication is initiated, the seizures are usually responsive to carbamazepine (Tegretol, Tegretol XR, Carbatrol) at relatively low doses. Therapy is usually continued for at least two years or until the child reaches 15 years of age.

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