Childhood Epilepsy with Centrotemporal Spikes

Formerly known as Benign Rolandic Epilepsy (BRE) or Benign Childhood Epilepsy with Centrotemporal Spikes (BECTS)

<table>
<thead>
<tr>
<th>It is the commonest school-age epilepsy (~15-25% of epilepsy in this age group).</th>
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<td>The seizures typically occur from sleep and are focal involving the face, mouth, and tongue. The person may not be able to speak. The seizure may evolve to a clonic seizure of the arm and sometimes become bilateral convulsive.</td>
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<td>The child can typically tell you the history if the seizure remains focal.</td>
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<td>The EEG has centro-temporal spikes with accentuation in sleep – therefore a sleep deprived or sleep EEG is important if the awake EEG is normal. Centro temporal spikes occur in up to 3% of children without epilepsy.</td>
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<td>Treatment is not necessarily required.</td>
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**DEMOGRAPHICS**

**Prevalence:** ~15% of children with seizures aged 1-15 years

**Age at Onset:** 3-14 years, Peak at 8 to 9 years.

**SYMPTOMS AND SIGNS**

**Seizure Semiology:** Infrequent focal seizures with unilateral facial sensory-motor signs and symptoms. Oro-pharyngo-laryngeal manifestations are prominent. There is speech arrest and hypersalivation.

- Oro-pharyngo-laryngeal manifestations are unilateral numbness and dyseaesthesia inside the mouth, cheek, teeth and tongue alone or usually with motor phenomena producing guttural sounds. This choking/gurgling noise often alerts the parent.
- Consciousness is commonly retained.
- Seizures may spread and have unilateral or bilateral convulsive features.
- Duration is ~1 to 2 mins but lasts longer if seizures progress to convulsions (1/3).
- A transient postictal deficit is common (e.g. crooked mouth).

**Neurological and Mental State:** Normal

**Timing:** 75% in sleep

**INVESTIGATIONS**

**EEG:**

- Normal background with centrotemporal spikes (CTS), which are abundant, usually in runs, may be unilateral or bilateral and are markedly accentuated during sleep. Rarely, CTS occur only during sleep. CTS occur in 2% to 3% of normal school-age children. They are age-dependant and remit in the second decade of life.
- Frequency, location, and persistence of CTS do not determine clinical manifestations, severity, and frequency of seizures or prognosis.
- EEG changes can outlast the propensity for seizures.
Neuro Imaging: Not usually required unless atypical clinical features and EEG.

LEARNING

- Memory difficulties and language problems are common.
- The latter may be associated with reading and spelling difficulties, which may not be recognised.
- Intervention helps.
- These deficits often improve with time.

PROGNOSIS

- Usually excellent.
- Seizures almost universally remit <16 years of age.
- Seizures are infrequent (10% to 20% singular).
- 10% to 20% may have frequent seizures.
- Rarely status may occur.

MANAGEMENT OPTIONS

- Continuous AED therapy may not be needed.
- If seizures are problematic for the child and family, such as bilateral convulsive seizures, AED therapy should be considered and discussed.
- A low evening dose of Carbamazepine can be considered for recurrent seizures. Other AEDs can be used.
- It is important to carefully discuss safety and pros and cons of treatment based on seizure semiology, time of seizure and frequency.

DISCUSSION WITH FAMILY

- Safety
- Epilepsy Medical Record
- Potential of performing baseline educational assessment (through school counsellor)
- Drug Handout.
- Parents are often very frightened. It is important to reassure them of the excellent seizure prognosis and to recognise that medication may not be necessary.

LINK TO USEFUL RESOURCES

- Epilepsy Action (UK) have information for Parents on Benign Rolandic Epilepsy

This page was created in March 2012. It was last reviewed in December 2017.

REFERENCES:
