

Fits, Faints and Funny Turns

BACKGROUND

- Epilepsy affects 1 in 200 children
- Diagnosis is largely based on history
- A clear description of the episode is key
- Camera/mobile phone videos by parents enhance our ability to make an accurate diagnosis

DIFFERENTIALS

- Benign neonatal sleep myoclonus
- Shuddering
- Febrile seizures
- Reflex anoxic seizures
- Breath-holding
- Night terrors
- Vasovagal syncope
- Migraine
- Pseudoseizures
- Long QT syndrome

FEBRILE SEIZURES

- Affect 3% of children aged 6 months – 6 years
- Seizure during an acute febrile illness (> 38.5°C)
- Most are simple (generalised tonic-clonic, last < 15 minutes, do not recur within same illness)
- Increased risk of recurrence if:
 - ✓ First seizure before 15 months
 - ✓ Seizure at low temperature
 - ✓ Complex first seizure
 - ✓ Family history
- Parental education important
- Rectal diazepam can be used at onset if history of prolonged febrile seizures

HISTORY

- What was child doing?
- Description of episode
 - ✓ Limb movement
 - ✓ Stiffening
 - ✓ Eye rolling/deviation
 - ✓ Incontinence
 - ✓ Tongue biting
 - ✓ Colour change
 - ✓ Level of consciousness
 - ✓ Duration
 - ✓ Could it be interrupted?
- How long to full recovery?
- Chest pain/palpitations?
- Developmental concerns
- Difficulties at school
- Family history

EXAMINATION

- Centiles
- Head circumference
- Full neurological exam including fundoscopy
- Skin examination for neurocutaneous stigmata
- Vital signs
- Developmental exam

INVESTIGATIONS

- Blood sugar
- 12-lead ECG (calculate QTc)
- EEG
- MRI

TREATMENT

- Antiepileptic medication is usually started after the second unprovoked seizure

TAKE HOME MESSAGES

- The history of an attack is key to diagnosis
- Misdiagnosis is common
- Be aware of differentials
- Consider ECG to rule out prolonged QT and WPW

REFERRAL

- Children with first **afebrile** seizures need to be assessed by a paediatrician
- Referral to a paediatric neurologist if:
 - ✓ Recurrent seizures
 - ✓ Seizures and developmental delay
 - ✓ More than 1 medication required for seizure control
- Follow up of child with seizures by a consultant paediatrician or paediatric neurologist

INDICATIONS FOR EEG

- To support a diagnosis of epilepsy when the clinical history is suggestive of an epileptic event
- Usually performed after the **second** epileptic seizure
- May help to determine recurrence risk, make a syndromic diagnosis and identify precipitating factors
- EEG should NOT be performed to exclude a diagnosis of epilepsy when the clinical history suggests a non-epileptic event

INDICATIONS FOR MRI

- Abnormal or focal neurological exam
- Focal seizures
- Refractory epilepsy
- Neonatal or infant onset epilepsy

REFERENCES

- NICE Guidelines (CG137) January 2012: *The epilepsies: the diagnosis and management of the epilepsies in adults and children in primary and secondary care*