Fits, faints and funny turns

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- Dull?
- Difficult?
- Academic?
Learning objectives

- Differential diagnosis
- What is and is not epilepsy
- Guidelines that help
- What DGH paediatricians can offer
Diagnosis of fits faints and funny turns

- Event might be epilepsy
- Misdiagnosis of epilepsy a significant and common problem with major long term consequences
Seizure

- Seizure denotes a sudden attack from whatever cause
- An epileptic seizure is a manifestation of epileptic (excessive and/or hyper synchronous) usually self-limited activity of neurons of the brain. ILAE

- A non epileptic seizure can look the same but arises as a consequence of a different mechanism
- (i.e. non epileptic)
Potential mimickers of epilepsy

- Syncope
  - 1. Neurally mediated (vasovagal, RAS, orthostatic)
  - 2. Breath holding episodes, compulsive valsalva
  - 3. Cardiac - Cardiac conduction defect – long QT
- Neonatal – apnoea, jitteriness, sandifer syndrome, benign neonatal sleep myoclonus, hyperekplexia
- Sleep disorders
- Daydreaming / inattention
- Psychological including stereotypies
- Migraine variants – familial hemiplegic, benign paroxysmal vertigo
- Motor tics
- Movement disorders
- Oculomotor disorders
Paroxysmal Events in Children: Potential Mimickers of Epilepsy

Obeid M, Mikati MA.
Common referrals

Childhood epilepsies
Toddlers with non specific stares / tantrums
Breath holding / reflex anoxic attack
Night time events – parasomnias
Boys who faint
Academic underachievement ? Petit mal
Tics, motor stereotypies
Anyone Can Have Epilepsy...
Can YOU Tell Who Does?

I DIDN'T THINK SO!
How to distinguish an epileptic seizure

- Sudden fall
- Jerking of limbs
- Blank stare
- Incontinence of urine
- Racing heart
- Headache
- Generalised stiffening
Toddlers and pre school
Snapshots

Bob takes care of this monster-under-the-bed business once and for all.
teenagers
Sudden cardiac death
Don’t end up in the news!

ECG for every COLLAPSE
Risk taking, lifestyle and mental health
What else do you want to know?
How to take a history

- Plenty of time
- Detailed eyewitness accounts—avoid interpretation of others
- Pay close attention to the very first events
- Time sequence
- Active demonstration
Diagnosis / misdiagnosis

- Clinical decision based on history and examination
- Consider differential diagnoses
- There is no definitive test
- It may not be possible to make a definite diagnosis of events – watch & wait
- Prospective diary/video may be very helpful
Video

- Easy to request – events often difficult to capture
- Amazing or appalling quality
- Co – reviewed by colleagues
Available guidelines

- NICE – The diagnosis and management of the epilepsies in adults and children in primary and secondary care update Jan 2012
- NICE – transient loss of consciousness
- National clinical audit of epilepsy related death May 2002
- SIGN – Diagnosis and management of epilepsies in children and young people March 2005
Following a first non febrile seizure - what NICE says

- Seen in ED or referred to general paediatrician
- Recent studies have suggested that up to 1/3 children diagnosed with epilepsy may not have it
- History and examination (cardiac, neurological, developmental and mental status)
- First aid information to families whilst awaiting diagnosis
- Onward referral to “specialist” if epileptic seizure suspected
- Ideally seen within 2 weeks by “specialist”
"You weren't listening. I said, 'DON'T fall.'"
**EEG**

**True or false?**

1. An abnormal EEG confirms the diagnosis of epilepsy
2. If an EEG is negative it makes epilepsy unlikely
3. The EEG is a useful test if the child’s attack is probably non epileptic
EEG can be very useful- NICE says

- Performed only to support diagnosis of epilepsy AND classify syndrome
- Perform prior to AED Rx
- When a standard EEG hasn’t contributed to diagnosis and classification a sleep EEG should be done
Imaging

- Neuroimaging can help determine cause of epilepsy
- MRI is investigation of choice
Imaging – NICE says

- All focal epilepsies (except BREC)
- Extremely important if <2yrs / abnormal neurology
- 1st line treatment failure
- Idiopathic generalised epilepsy syndrome- MRI not routinely required
1. A comprehensive individual careplan
2. Epilepsy specialist nurses should be integral part of care
3. Individualised AED treatment strategy with monotherapy goal
4. Diagnosis of epilepsy critically evaluated if optimal dose of 1st line AED fails
Drugs

Why do we treat epileptic seizures?

- Prevention/ rescue of unpleasant seizures
- School performance
- Risk of death
- Seizures beget seizures?
Drugs

Is it epilepsy?
Syndrome diagnosis?
Which drug?
Daily AED or rescue (both)
What is treatment goal?
Written information
Medicinesforchildren.org.uk
Learning points

- History is everything
- Video invaluable
- Don’t forget ECG, safety advice, patient information
- Consider differential diagnosis. Watch and wait?
- Family support
Coping with epilepsy

- Information, information, information
  - Diagnosis and treatment options
  - Medication, side effects and off license prescribing
  - Safety and injury prevention.
  - Education and learning
  - Employment and lifestyle issues
  - Voluntary agencies

- Recognition of cognitive, developmental, behavioural and psychiatric co-morbidities
Fear

Parent/ child/ teenager/ care giver/ professional

Loss of normal child
Loss of control over life
Disturbed sleep
Afraid to trust another care giver
Epilepsy stigma
Co morbidities
Sleep /behaviour/ learning
Co-morbidities important

ADHD
ASD
Learning difficulties
Remove stigma and return to normal childhood
empowerment

And that’s just the staff!
SUDEP

- Sudden, unexpected, witnessed or unwitnessed, non-traumatic and non-drowning death in patients with epilepsy with or without evidence of a seizure, and excluding documented status epilepticus, in which post mortem examination does not reveal a toxicological or anatomical cause of death.
Epilepsy

- A neurological group of conditions characterised by **recurrent** epileptic seizures

**Note**
- There is no single condition of epilepsy, rather many different conditions characterised by recurrent epileptic seizures
Epilepsy syndrome

- Different types of epilepsy are called epilepsy syndromes
- ILAE defines an epilepsy syndrome as:
  - *A complex of signs and symptoms that define a unique epilepsy condition with different aetiologies*
- Useful to guide treatment and prognosis
Epilepsy Syndromes

- Childhood absence epilepsy
- Juvenile myoclonic epilepsy
- Lennox Gastaut syndrome
- Benign rolandic epilepsy of childhood