Seizures and episodic events presenting to the CED

Author: Dr N Sudarsan / Dr E Glenday / Dr M Lazner/ Dr K Anderson / Jo Whittick
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See also: ***Febrile convulsions*** / *APLS management of status epilepticus*

Introduction

- For any child with a first seizure it is crucial to provide written and verbal information regarding the diagnostic processes, first aid and follow up plans.
- Always use the first seizure leaflet.
- It is very important to document the eye witness account in great detail when it is still fresh in their minds.

Assessment

Important points in the history:

Before	During	After
Aura? Stops activity midway? Pallor? Pre-syncope (dizziness / sweating / nausea)?	Onset and offset (sudden or gradual) Progression (?focal onset / generalised) Eyes: - open or closed? - flickering? - Up rolling? Limb movements Responsiveness Involuntary / automatisms (e.g. lip smacking / fidgeting / swallowing) Incontinence / tongue biting? Duration	Confusion / sleepiness or lack of it Post ictal paralysis (Todd's palsy)

Other things to consider:

- Background history of other seizure types e.g. myoclonus / absences?
- Other important comorbidities e.g. HIE, VP shunts, renal failure (hypertensive encephalopathy), prematurity / developmental delay, autistic spectrum disorder etc.
- Current anti-epileptic therapy and dose?

Examination

Always perform:

- Blood pressure. Centile charts **here**.
- Head circumference in infants < 1 year.
- Assessment for injuries or bruises. Keep an open mind regarding possibility of NAI.
- Skin for neurocutaneous markers (café-au-lait , hypopigmented patches etc)

- Detailed neurological examination and mental state.

Management

For first afebrile seizure, or if not already done, do the following investigations:

- **Blood sugar level**
- **ECG:** assess rhythm and PR / QTc interval.-
- **Bloods**: FBC, U&E, Calcium / Magnesium, LFTs.
  Venous blood gas in under 2s.

Indications for urgent cranial imaging:

Persistent focal neurological signs.
New focal seizure with signs of raised intracranial pressure or space occupying lesion.
Trauma / NAI
VP shunt in situ
N.B. Contrast is needed if suspicion of venous sinus thrombosis.

MRI with epilepsy protocol is the investigation of choice in seizures. CT indicated if MRI not available immediately.

Do not request an outpatient MRI unless there is a strong suspicion of a space occupying lesion.

Decision to image otherwise well children can be made during outpatient consultation in epilepsy clinic. Discuss with CED consultant if in doubt.

Admission

The majority of children with isolated afebrile seizures, even if first episode, do not need admission to hospital.

Indications for admission – discuss with CED senior

- Infants < 1 years
- Diagnostic uncertainty
- Suspected infantile spasms
- Multiple or poorly controlled seizures
- Prolonged seizures requiring resuscitation.
- Seizures with an underlying disorder requiring further investigation or treatment e.g. hypertension, metabolic problems.
- Significant parental anxiety.

Discharge and follow up

All children with one or more afebrile seizures or diagnostic uncertainty

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URGENT referral to the epilepsy clinic at RACH.
Use OPD referral form and symphony discharge letter or e-OASIS discharge summary.

EEG should not routinely be requested unless multiple seizures witnessed by medical team (or video recordings **confirming** seizures).
If in doubt about the nature of the event, do not request EEG.

Safety-netting and advice

Information to give to carer & young person (give first seizure leaflet):

How to recognise a seizure.
First aid.
When to contact emergency services or seek emergency help.
Risks relating to seizures and how to avoid them. e.g. baths, swimming, road safety, heights.

Rescue Medication – ONLY FOR CHILDREN ADMITTED TO THE WARD OR HDU

To be prescribed only if definite and continuous prolonged seizures i.e. over 5 minutes.
Buccal Midazolam (Buccolam) is the medication of first choice.

Parents need training and written instructions at the time of prescription.

Video recording and event log

Please advise parents to obtain as many video recordings as possible and a diary of events as this can be a valuable piece of information at subsequent clinic appointments.

Non-epileptiform episodic events

For example, tics, “funny do’s”, stereotypies or repetitive movements where there is diagnostic uncertainty.

- Can be referred to epilepsy clinic
- Fill in OPD referral form and referral letter

For further information regarding seizure type – please see NICE guidance listed below.

References:

NICE Guidelines: Epilepsies: diagnosis and management. Clinical guideline. CG137 Published: January 2012. Last updated: February 2016.