Seizures and episodic events presenting to the CED

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

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 available in the hypertension guideline.
- Head circumference in infants < 2 year.
- Assessment for injuries or bruises. Keep an open mind regarding possibility of NAI.
- Skin for neurocutaneous markers (café-au-lait spots, hypopigmented patches etc)
- Detailed neurological examination and mental state.

Management

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

- **Blood sugar level** – please document in notes
- **ECG:** to be performed if not done previously – please document your ECG interpretation in the notes, as ECGs can go missing. QTc interval must be calculated
- **Bloods**: "Baseline" bloods for first fit – FBC, Blood film, U&Es, LFTs, Bone profile, Vit D, Magnesium and TFTs (lactate on gas)
- **Consider urine toxicology** with consent in older children. Send with chain of evidence if: child protection concerns, perplexing neurology, arrythmias

Indications for urgent cranial imaging:

- Persistent focal neurological signs / signs or symptoms of raised intracranial pressure or space occupying lesion.
- New focal seizure – for admission for investigation to ensure review and imaging is timely.
- 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 *(unless fulfills criteria above)*

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 < 2 years
- Diagnostic uncertainty
- Suspected infantile spasms
- Focal seizures any age group – to consider imaging
- 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 2 week referral to the epilepsy clinic at RACH.
Use OPD referral form and symphony discharge letter or Careflow discharge summary if admitted to SSU and hand to CED reception team to action. Please include ECG.
For urgent queries please email uhsussex.epilepsyteam@nhs.net.

EEG should not routinely be requested unless multiple seizures witnessed by medical team (or video recordings **confirming** seizures). If ordered please email epilepsy team.
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 Afebrile 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

If diagnostic uncertainty, advise parents to video events (see below)

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

Buccal midazolam (Buccolam®) to be prescribed only if definite and continuous prolonged seizures i.e. over 5 minutes.

Children should not be sent home from CED with a new prescription of Buccolam.

The purpose of admission is that 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 Guidance: NG 17 Epilepsies in children, young people and adults. Published: April 2022