

Febrile Seizures

Harbor-UCLA PEM Curriculum

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Febrile Seizures

Background information

- **Epidemiology:** ~2-5% population, age between 6-60 months. Runs in families (ask fam hx! Some people call them “fits”)
- **Definitions:**

Simple Febrile Seizure	Complex Febrile Seizure
<ul style="list-style-type: none">• Brief (<15 minutes)• Generalized, tonic-clonic (non-focal)• Typical age 6-60 months (6mo-5y)• Developmentally normal• No more than one episode in 24 hours	Febrile seizure not meeting simple criteria

- **Common associated illnesses:** viral respiratory and GI illnesses. Sometimes seizure is first presentation of the viral syndrome

Management (Simple febrile)

LP Considerations (weak evidence)

- Age <12 months
- Un/under-vaccinated
- Recent antibiotics
(?partial tx meningitis)



Do it if H&P c/f meningitis!

Resus	Support ABCs, Treat active seizure >5 mins with benzodiazepine (see status epilepticus topic for more details of seizure management)
H&P pearls	H: description of seizure, associated symptoms, fam hx seizures P: Age appropriate neuro exam, signs of trauma, signs of fever source
Work-up	Targeted workup for <u>fever source</u> only Good H&P, studies like UA, UCx, viral studies as needed Neuroimaging and EEG NOT recommended
ED Course, Dispo	Observe until back at neuro baseline (should be reasonable time 1-2hrs) Provide lots of reassurance and education; this is TERRIFYING for parents
Seizure Safety Education	Place child on a safe surface (bed, floor), don't put anything in their mouth, look at the clock; Don't put in a bath to "cool off" (drowning risk if repeat sz); No swimming or biking/skating/scootering alone; Call EMS if lasting >3-5 mins (most self resolve before then)
Fever control?	Use for comfort as with any febrile illness Only one study with maybe decreased recurrence with ATC APAP

Complex Febrile Seizure

Case-by case considerations

- Why was it complex?
 - Duration, focality more concerning than just number of events
- **Retrospective review** 839 complex febrile sz in France, 5 cases bacterial meningitis
 - **Multiple complex features**, especially prolonged in all cases, (none only complex due to number of events)
 - **Abnormal neuro exam** in all cases

An example approach to how different aspects of a complex febrile seizure might change evaluation			
	Duration >15 mins	Focality	>1 episode in 24hrs
Potential concern	Meningitis, tox	Structural dx mass/bleed	Epilepsy?
Lab workup	Expanded	Target fever source	Target fever source
LP	Do it (when stable)	Consider	Unlikely to need
Emergent Imaging	Highly consider	Highly consider 	Unlikely to need
Dispo	Admit	Workup dependent	DC if baseline
	 If at neuro baseline, and non-focal neuro exam, consider outpatient MRI imaging as unlikely to have finding requiring immediate intervention		

Recurrence Risks

What's the risk of epilepsy? Who needs neuro referral?

Risk of recurrence (simple febrile seizure)	<ul style="list-style-type: none">• First episode <12 months: ~50% have recurrence• First episode >12 months: ~30%
Simple Febrile Seizure Risk of epilepsy	<ul style="list-style-type: none">• Single episode: similar to general population rate of epilepsy (~1% population)• Recurrent episodes ~2%
Epilepsy development risks	<ul style="list-style-type: none">• Early age of onset <12 months• Family hx epilepsy• Complex febrile seizures
Neuro prognosis	<ul style="list-style-type: none">• Simple febrile seizures: expect normal development• No reported deaths in literature from simple febrile seizure
Neurology referral?	<ul style="list-style-type: none">• Not developmentally normal• Complex febrile seizure• Recurrent simple febrile seizure (if parents are insistent)• EEG studies should be >7 d after seizure (reduce false positives)

References

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