

## FEBRILE SEIZURES

### Definition of SIMPLE febrile seizure

Remember the difference between this and “seizure with fever”

- 6 months to 5 years
- fever >38 C rectally (100.4 F)
- generalized
- <15 mins
- no recurrence in 24 hrs
- no postictal neurologic abnormalities (e.g. Todd's paresis)
- occurs in neurologically nl kids without intracranial infection or h/o prior afebrile sz

### Epidemiology

- 2-5% of kids (US)
- peak incidence at 18 months of age
- Morbidity and mortality LOW
- 1/3 have complex features (1/5 focal, 1/5 multiple, 1/5 prolonged)
- Overall 1/3 will have a recurrence
- 10% will have 3 or more febrile seizures
- 2-10% go on to have epilepsy
- 5% Have >30 mins, accounting for 1/4 of all childhood status
  
- **Risk factors for FIRST febrile sz**
  - Febrile sz in 1<sup>st</sup>/2<sup>nd</sup> degree relative
  - Developmental delay
  - Day care
  - Neonatal nursery stay >30 days
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- **Risk factors for RECURRENT febrile sz**
  - FH of febrile szs
  - Age <12 mos (the longer they have to have more)
  - Peak temperature (42% RR at 1 yr if 101, 29% RR at 1 yr if 103)
  - Duration of fever (46% RR at 1 yr if within 1 hr)
  - Possibly, FH of epilepsy
  - No RF → <15% RR at 2 yrs
  - ≥2 RFs → >30% RR at 2 yrs
  - ≥3 RFs → >60% RR at 2 yrs
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- **Risk factors for EPILEPSY**
  - Developmental delay
  - Complex febrile seizure (possibly focal sz being strongest RF)
  - FH of epilepsy
  - Possibly, short duration of fever
  - Possibly, febrile status
  - **BOTTOM LINE:** “unprovoked seizures are still the exception, especially in neurodevelopmentally normal children”

### Evaluation

- Incidence of meningitis 2-5% so LP should be strongly considered <12 mos, or pre-treated, or clinical suspicion
- About 15% of kids with meningitis present with sz
- CSF more likely to be abnl if:
  - Suspicious exam findings
  - Complex feb sz
  - Saw a doc within 48 hrs before the sz
  - Sz on arrival to ED
  - Prolonged post-ictal state
  - Initial sz after 3 years old
- EEG is more likely to be abnl in older kids, with DD, FH of feb sz, or with complex feb sz; but does NOT predict epilepsy
- Otherwise AAP recommends no CT, no lytes/cbc unless other reason

### Treatment

- Might affect short-term recurrence slightly, but side effects?!
  - PB—drowsiness, sleep disturbance, hyperactivity, IQ
  - VPA—hepatotoxicity
- No effect on occurrence of epilepsy
- AAP Practice Parameter 2000—continuous/intermittent AEDs not recommended
  - If parental anxiety high (or high risk for prolonged or multiple feb szs), consider intermittent oral diazepam 0.33 mg/kg q8 x 48h
  - Or rectal valium

### Bibliography

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- 4) Shinnar S and Glauser TA. Febrile seizures. J Child Neurol 2002;17:S44-52.