



FEBRILE SEIZURES

ANNA PIWOWARCZYK

ANNA WŁASIENKO

DEPARTMENT OF PEDIATRICS WITH CLINICAL ASSESSMENT UNIT

THE MEDICAL UNIVERSITY OF WARSAW

FEBRILE SEIZURES



- **2-4 % of children between 6/12 and 5 years old**
- **Peak incidence between 12-18mo**
- **Male to female ratio of 1.6:1**
- **Associated with fever**
- **Children admitted to paediatric wards**

CRITERIA FOR FEBRILE SEIZURES

- A convulsion associated with an **elevated temperature** $>38^{\circ}\text{C}$
- Age **$> 6/12$ and < 5** years
- **Absence** of CNS infection
- **No metabolic** abnormality associated with convulsions
- **No history** of previous afebrile seizures

RISK FACTORS

- Age
- Fever
- Viral infection (HHV-6, adenovirus, RSV, influenza)
- Recent immunization (MMR, DTP)
- Family history of febrile seizures

SIMPLE FEBRILE SEIZURES

- Generalized seizures lasting **less than 10 mins**
- **Not recurring** in **24-hour period**
- Recur in ~1/3 of children during early childhood
- **Benign** phenomenon
- Risk of future epilepsy - **slightly higher** than the general population

SIMPLE FEBRILE SEIZURES PLUS

- > 1 episode in 24-h
- Generalized
- **Without** neurologic abnormalities between episodes

Mastrangelo et al.
European Journal of Pediatrics, 2014

COMPLEX FEBRILE SEIZURES

- Focal onset **or**
- Prolonged (> 15min.) **or**
- Recur within the first 24 hours
- a **↑ risk of recurrence during early childhood** and an **↑ likelihood of future afebrile seizures**

SIMPLE & COMPLEX SEIZURES

SIMPLE FEBRILE SEIZURES

< 10 mins

1x / 24 h

Tonic -clonic

Otherwise heathy
child

COMPLEX FEBRILE SEIZURES

>15 mins

>= 2x / 24 h

Focal

Signs of CNS
infection

DIFFERENTIAL DIAGNOSIS

Shaking chills — involuntary movements characterized by fine, rhythmic, symmetrical oscillatory movements about a joint.

- they rarely involve facial or respiratory muscles
- not associated with loss of consciousness

Central nervous system infection

- seizures are usually focal/status epilepticus
- other signs & symptoms (headache, vomiting, ICP, meningeal signs, altered consciousness, petechial rash)

MANAGEMENT IN FEBRILE SEIZURES

- History of simple febrile seizure and a reassuring about nonfocal exam, **diagnostic testing is unnecessary**
- **Diagnosis of the underlying febrile illness**
- **Parents' education** (antipyretic drugs, non-pharmacological methods)

LP IN FEBRILE SEIZURES- WHEN?

- Children < **12 months** of age - special consideration
- If immunizations for *H.i.* type b or *S. pneumoniae* are not up to date or cannot be verified
- Generally **unwell** patients
- Patient is **on antibiotics**
- Symptoms of **CNS inflammation**

TREATMENT

- Drug of first choice - **benzodiazepines iv/pr**
 - AIM: stop convulsions
 - if iv access- give iv
 - if no iv access- give pr:
 - **< 15 kg 5mg**
 - **> 15 kg 10 mg**
- Antipyretic drugs (paracetamol)
- Oxygen (mask) if ↓ SaO₂

TAKE HOME MESSAGE

**Children with febrile
seizures are:**

- typically well appearing
- post-ictal drowsiness usually resolves within 5 to 10 min.