



History

- ▶ Age (1–72 months of age; peak: 18 months)
- ▶ Seizure type
- ▶ History of fever and infectious diseases
- ▶ Drug history
- ▶ Developmental history
- ▶ Past medical history (seizures?)
- ▶ Perinatal history
- ▶ Immunization status
- ▶ Family history (e. g. febrile seizures)

Physical examination

- ▶ Acute
 - Infectious focus? Focal neurological symptoms/ Cranial nerve palsies
 - Meningeal signs (Neck stiffness, Kernig or Brudzinski signs, ...)
 - Irritability, behaviour
- ▶ Post-acute:
 - Developmental delay?

Course

- ▶ Complete (neurological) recovery within approx. 1–2 hours after a simple febrile seizure

Clues to diagnosis

Simple febrile seizure?

- ▶ Seizure type: generalized, tonic clonic > atonic
- ▶ 70 % of simple febrile seizures stop spontaneously within less than 5 minutes
- ▶ Duration < 15 minutes

Complex febrile seizure?

- ▶ Focal onset seizure (which secondarily generalizes)
- ▶ Duration > 15 minutes
- ▶ Seizure clusters:
 - Recurrent seizures within 24 hours
- ▶ No complete neurological recovery in the postictal period

Metabolic disorders?

- ▶ Dehydration with electrolyte imbalance
- ▶ Lasting decreased consciousness

Meningitis/Encephalitis?

- ▶ Decreased consciousness, headache, photophobia
- ▶ Neck stiffness, meningeal signs (pitfalls: may be absent or more subtle in children < 12–24 months of age)
- ▶ Irritability
- ▶ Vomiting
- ▶ Petechiae/purpuric rash
- ▶ Bulging fontanelle

Other reasons?

- ▶ Traumatic brain injury (TBI)
- ▶ Battered child

- ▶ > 18 months of age
- ▶ Obvious infectious focus
- ▶ < 18 months of age
- ▶ No obvious infectious focus
- ▶ Child is pretreated with antibiotics
- ▶ Recurrent medical consultation during the same period of fever

Investigations/ Laboratory

- ▶ Blood
 - Full blood count and differential
 - Blood culture, PCR: HSV
 - CRP
- ▶ CSF¹
 - White cell count, protein, glucose
 - Culture, PCR: HSV
- ▶ Urine analysis
 - Cytology
 - Culture

- ▶ Obvious infectious focus
- ▶ CSF normal
- ▶ Child in no obvious distress
- ▶ Complete (neurological) recovery

- ▶ **NO** obvious infectious focus
- ▶ Child critically ill
- ▶ CSF pleocytosis
- ▶ Lasting neurological symptoms or decreased consciousness

- ▶ Developmental delay

▶ Simple febrile seizure

▶ Further investigations

See chapter A.07 Neurometabolic dysfunction
▶ GLUT1-Deficiency Syndrome

See chapter J.04 Meningitis and encephalitis

See chapter A.08 Traumatic brain injury and A.10 Battered child



Developing epilepsy?

- ▶ Recurrent febrile seizures
- ▶ Afebrile seizures
- ▶ Developmental delay

See chapter E Epilepsy

- ▶ Dravet-Syndrome Spectrum (SCN1A mutation testing; if negative: SCN9A and PCDH19)

¹ Recommended for children < 18 months of age; strongly recommended for children < 12 months of age (please follow the national guidelines)



<ul style="list-style-type: none"> ▶ Continuing febrile seizure (> 3 minutes) 	<ul style="list-style-type: none"> ▶ Diazepam rectally (< 15 kg 5 mg, > 15 kg 10 mg) ▶ Diazepam (as IV injection over 3–5 minutes) 0,25 mg/kg/single dose 	<p>Continuing seizure:</p> <ul style="list-style-type: none"> ▶ Midazolam IV 0,1–0,2 mg/kg/single dose <p>Or</p> <ul style="list-style-type: none"> ▶ Lorazepam IV 0,05–0,1 mg/kg/single dose <p>Or</p> <ul style="list-style-type: none"> ▶ Diazepam 0,25 mg/kg/single dose <p>In case of continuing seizure:</p> <ul style="list-style-type: none"> ▶ Phenobarbital IV 10 mg/kg/single dose 	<p>Continuing seizure: Switch to the treatment algorithm of convulsive status epilepticus (see chapter A.02 Status epilepticus (SE))</p>
<ul style="list-style-type: none"> ▶ Spontaneously stopped febrile seizure 	<ul style="list-style-type: none"> ▶ Physical examination (complete neurological recovery within approx. 1–2 hours?) ▶ Monitoring 	<p>Continuing fever: antipyretic treatment</p> <ul style="list-style-type: none"> ▶ Physical methods ▶ Antipyretic drug treatment <ul style="list-style-type: none"> – Paracetamol rectally: 75 mg < 6 months, 125 mg 6–24 months, 250 mg 2–8 years, 500 mg > 8 years every 6–8 hours orally: 10–15 mg/kg/single dose every 6 h; IV: 10–15 mg/kg/single dose orally every 6 h (max. 60 mg/kg/d) – Ibuprofen 2,5–10 mg/kg/single dose (max. 600 mg/single dose) every 6–8 h orally – Metamizole 10 mg/kg/single dose every 4–6 h p.o./IV 	
<p>Questions, you should discuss with the parents:</p> <ul style="list-style-type: none"> ▶ Diagnosis? ▶ How often can a febrile seizure occur? ▶ Does a simple febrile seizure have adverse effects on neurocognition or development? ▶ Is a febrile seizure the beginning of a (lifelong) epilepsy? ▶ Are there effective preventive procedures? (E. g. is antipyretic treatment working as a relapse prophylaxis?) 			
<p>Consultation after a febrile seizure</p> <ul style="list-style-type: none"> ▶ At which date? ▶ Which consultant? ▶ Which examinations? 			
<p>Drug treatment in case of a relapse</p> <ul style="list-style-type: none"> ▶ Diazepam rectally (< 15 kg 5 mg, > 15 kg 10 mg) <ul style="list-style-type: none"> – How to use? – How to preserve? 			