| PAEDIATRIC ACUTE CARE GUIDELINE | |
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| **Febrile convulsion** | |
| **Scope (Staff):** | All Emergency Department Clinicians |
| **Scope (Area):** | Emergency Department |

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# Febrile convulsion

Febrile convulsions are seizures in children aged between 6 months and 5 years that result from a sudden rise in temperature associated with an acute febrile illness

## Background

- Febrile convulsions are common in childhood, and are common ED presentations
- Most are simple febrile convulsions which are benign

### General

Febrile convulsions occur in 3-5% of children

- Between 6 months and 5 years
- 90% occurring between 6 months and 3 years
- The peak incidence is at 18 months of age
- Approximately 5% of children with febrile convulsions present with febrile status epilepticus

Febrile convulsions can be divided into **Simple** and **Complex**.

**Simple Febrile Convulsions:**

- Duration less than 15 minutes
- Generalised in nature (not focal)
- Only 1 seizure in 24 hours
- Occur in developmentally normal children
- No neurological abnormalities post seizure

**Complex Febrile Convulsions** either:

- Prolonged (> 15 minutes)
- > 1 seizure in 24 hours
- Focal in nature

**The risk of recurrent febrile convulsions is increased with:**

- Multiple initial seizures (occurs in 10-15% of febrile seizures)
- < 12 months at first febrile convulsion
- Low grade temperature at first seizure
- Family history of febrile seizures
- Brief duration between fever onset and febrile seizure
- Developmental delay

**Future Risk of Epilepsy:**

- Complex febrile convulsions
- Family history of epilepsy
- Any neuro-developmental problem in the child

If one risk factor, chance of epilepsy is 2% (which is double the population risk)
If two or more risk factors, chance of epilepsy is 10%

# Assessment

- A febrile convulsion can be the presenting complaint of an illness
- It is important to identify the source of the fever
- Most children with a simple febrile convulsion require no further investigation
- Children with complex febrile convulsions may require admission and further investigations

### History

- Afebrile seizure – make sure there is a history of fever at the time of seizure or documented fever in ambulance or ED
- Determine if the child has had a vaccination in the past 14 days
- If so, a WAVSS WA Vaccine Safety Surveillance: Adverse Reaction Reporting Form needs to be completed

### Investigations

- Usually no investigations are required for a simple febrile convulsion
- For complex febrile convulsions consider blood tests, urine, lumbar puncture and CXR

## Management

### Initial management

- Ensure high flow oxygen is provided whilst the child has a decreased level of consciousness or is still fitting
- If the child is still fitting for more than 5 minutes proceed to ED Guideline: Status Epilepticus
- Treat the underlying cause of fever if appropriate
- Antipyretics such as paracetamol have **not** been shown to prevent convulsions but may be worth considering for symptomatic relief of discomfort and pain

### Discharge criteria

Children can be discharged who:

- had a simple febrile convulsions and are fully recovered and parents are happy for discharge
- have an obvious cause of fever and have been observed in ED for 2 hours post seizure

Discuss all other cases with a Senior ED Doctor regarding the need for admission

### Referrals and follow-up

- For simple febrile convulsions, GP referral in next few days

### Health information (for carers)

At discharge provide parents with the following:

- Febrile Convulsion Fact Sheet
- Information regarding antipyretic use
- Verbal and written first aid advice regarding home seizure management

**Facts For Parents:**

- Approximately 30% of children who have had a febrile convulsion will have a recurrence
- Of those that have a reoccurrence 50% will occur within the first year, 90% within 2 years

## Nursing

- For seizures in progress commence high flow oxygen and turn the patient on their side
- See ED guideline: Status epilepticus

### Observations

- Baseline observations include heart rate,respiratory rate and temperature. Blood pressure, oxygen saturations and neurological observations if clinically indicated
- Minimum of 1 hourly observations should be recorded whilst in the ED
- Continuous $SpO_2$ monitoring is required while the patient has a reduced level of consciousness

### Tags

convulsion, febrile, fever, fit, seizure, status epilepticus

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