# Don't Forget The Bubbles

## FEBRILE CONVULSIONS

## Learners Guide

Author **Lakshmi Shenoy**
(Edits by the DFTB Team)
fellows@dontforgetthebubbles.com

### PRE-READING FOR LEARNERS

Expectation is for the learners to have watched or read one of the basic pathophysiology links before the session.

'Febrile seizures' (Korean Journal of Pediatrics)
'Febrile seizures' (Don't Forget the Bubbles)
'Febrile seizures' (NICE CKS)

### OUTLINE

- **Pre-reading**
- **The basics**
- **History taking and examination**
- **Basic cases**
- **Advanced cases**
- **Quiz questions**
- **Summary**

## BASIC CASES

## CASE 1

A 10 month old child is brought by the parents to ED, 60 mins post generalized clonic tonic seizures lasting for 1-2 mins. The child is back to his normal self, febrile with a temperature of 38.60 and red throat and obvious coryza revealed on examination. After a short period of observation in the ED, he looks well and has been eating and drinking normally and playing.

**1. What will be your management plan for the child?**
**2. When would you discharge him from the ED?**
**3. What discharge advice is to be given to the parents?**
**4. Parents are very anxious to know about the recurrence and chances of the baby developing epilepsy in future. What details and advice would you give them?**

## CASE 2

You are called to the resuscitation bay in your ED following arrival of the expected pediatric alert. It is a 13 month old female child with a history of two episodes of generalised clonic tonic seizures at home lasting for 3-5 mins, around 90 mins before presentation in the ED. Presently the child is found to be febrile with a temperature of 39.2o . Parents also give history of recurrent ear infections since the last 2-3 months, needing antibiotics (last course around 10 days ago).

**1. What are the red flags to be considered in a child presenting with febrile seizures?**
**2. What investigations and treatment options should you consider?**
**3. How do you know when to admit or have an assessment by the pediatric team?**

## ADVANCED CASE 1

20 month old Lucy presents to the A&E with a 36 hour history of diarrhoea and vomiting associated with a short, 2 minute seizure (started with facial tics and jerky movements of the right upper limb followed by generalised clonic tonic seizures). On examination she is febrile, well perfused with a CRT of less than 2sec, heart rate of 155 and respiratory rate of 35. Her general examination was normal, however she had a GCS of 14, was floppy and in a post-ictal state.

**1. What would be your next steps in managing Lucy and recommendations for evaluating complex febrile seizures?**

**2. Lucy has another prolonged generalised tonic clonic seizure in the ED. How would you manage her?**

**3. On further enquiry, it is clear that Lucy has an abnormal developmental history. Mum asks you if Lucy has epilepsy. What is your response?**

## ADVANCED CASE 2

16 month old Ron has been brought to the ED by his parents with active ongoing seizures since the last 20-25 mins.The seizures began as right sided focal and progressed to generalised clonic tonic. There is a history of fever, drowsiness and irritability since the last 24 hrs as reported by the parents. Cold sores are observed around the mouth of the child and the mother (since around 3-4 days)

**1. What is your management plan for the ongoing seizures?**
**2. What are the investigations and treatment for the child?**
**3. Can the seizure and encephalitis recur? What are the treatment options for the recurrence?**

## QUIZ QUESTIONS

### Question 1.

**A child with febrile convulsions who needs admission for observation:**

**A.** Who has had simple febrile seizures
**B.** Complete recovery of child back to normal self
**C.** Recurrent complex febrile seizures
**D.** Clear source of non serious source of fever noted

### Question 2.

**What is the most significant risk factor for development of febrile seizures?**

**A.** presence of family history
**B.** height of temperature at the onset of seizures
**C.** prematurity
**D.** vaccines

### Question 3.

**One of the complication of febrile seizures is**

**A.** decreased cognitive function in future
**B.** meningitis
**C.** epilepsy
**D.** encephalitis

## Take home points

1. Differentiating between simple vs complex febrile seizures is critically important
2. Complex febrile seizures include a heterogenous array of conditions and no standardized guideline can be recommended. Be directed by your clinical assessment.
3. Routine investigations or admission is not indicated in simple febrile convulsions
4. Mainstay of treatment for febrile seizures is parental education on future episodes and recognition of signs that the child needs urgent attention.
5. Children with simple febrile seizures have a 30% incidence of recurrence; subsequent use of antipyretics at fever onset does not lower the recurrence rate.
6. A slight higher risk of progressing to epilepsy seen in simple febrile seizures (2%) and complex febrile seizures (5%) as compared to the general population (1%)

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