

Pediatrics Febrile Convulsion: A Silent Epidemic in Nigeria

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Abstract

Building healthcare capacity through health care reform in Nigeria is of great concern. Pediatrics febrile seizure has been astronomically increasing in most Sub-Saharan countries Particularly in Nigeria. It has been recorded to be one of the most common illness associated with high fever and represent the most common childhood seizure disorder, that exist only in association with an elevated temperature. The paper aimed to review related literature on febrile seizures that has been published both nationally and internationally. There is increasing evidences, that febrile seizures have little connection with cognitive function, so the prognosis for normal neurologic function is appreciable in children with febrile seizures. The paper also targeted at providing current medical and nursing managements of patient with febrile convulsion especially in a low resources countries where medical improvisation remained the only medical options for pediatrics health practitioners to effectively manages pediatrics febrile seizures. It also create a tradition of working with multilateral organization, nongovernmental organization and civil society organization to help develop and deliver the intervention and information that cover global health on pediatrics health condition. The paper is also prepared to raise the strategy and to sensitize stakeholders and institutions to focus on finding common objective to advance health care education and practice in Nigeria on the current trend in managing pediatrics febrile seizures. It is therefore, concluded that ,there is need for building programmed that create solution by total commitment to advancing collaborative efforts to enhance a wide range of array to hosts a comprehensive database for improving pediatrics health care education and practice and therefore, recommends that, efforts are needed to help build health care capacity and expand access to identifying, assessing and managing pediatrics conditions in Nigeria and also, shape positive global health field on pediatrics medical conditions.

Keywords: Healthcare, pediatrics, seizures, Nigeria, medical condition.

Background

Febrile seizures are the most common seizure disorder in childhood. It was reported that, the condition dated early in the 20th century, people have debated about whether these children would benefit from daily anticonvulsant therapy [1]. Epidemiologic studies have resulted to the classification of febrile seizures into 3 groups, as follows: simple febrile seizures, complex febrile seizures, and symptomatic febrile seizures. A febrile convulsion is a seizure or fit that happens because of fever which is a temperature higher than 38°C. The rapid rise in temperature causes an abnormal electrical discharge in the brain.

Available data showed that its cumulative incidence is approximately 3%, but it is quite varied in Nigeria with values ranging from 10-18% [1]. The International league against epilepsy (ILAE) defines febrile seizure as a seizure occurring in childhood after one month of age, associated with a febrile illness not caused by an infection of the central nervous system, without previous neonatal seizures or a previous unprovoked seizure, and not meeting criteria for other acute symptomatic seizures. It is often characterized by a generalized

tonic-clonic convulsion lasting less than 15 min, fever of non-central nervous system infection with full regaining of consciousness after the convulsion and occurring commonly in children between 3 months and 5 years [2].

A positive family history for febrile seizures can be elicited in 25-40% of patients with febrile seizures [3]. Studies also revealed strong association of the condition in monozygotic rather in dizygotic twins. There is increasing evidences that, febrile seizure gene has been mapped to chromosome 19p and 8q. More so, it was equally documented that, there is positive history in a first or second degree relative, occurrence of febrile seizure has been associated with: human herpes virus-6 infection, influenza viral infection and iron deficiency anaemia [4]. Epidemiological data uncover that nearly in every 3 children out of 100 will have a febrile convulsion. It is also associated with post vaccination crisis [5].

Classification of febrile seizure

- Simple febrile seizures
- Complex febrile seizures: Age, neurologic status before the illness, and fever are the same as for simple febrile seizure. This seizure is either focal or prolonged (ie, >15 min), or multiple seizures occur in close succession

- Symptomatic febrile seizures: Age and fever are the same as for simple febrile seizure
- The child has a preexisting neurologic abnormality or acute illness

Clinical manifestations of febrile convulsion

Symptoms of a febrile convulsion usually include:

- body stiffness and/or jerky movements
- loss of consciousness (blacking out)
- eyes rolling back in the head
- shallow breathing or altered breathing
- deep sleep for an hour or so afterwards.
- The setting is fever in a child aged 6 months to 5 years
- The single seizure is generalized and lasts less than 15 minutes
- The child is otherwise neurologically healthy and without neurologic abnormality by examination or by developmental history
- Fever (and seizure) is not caused by meningitis, encephalitis, or any other illness affecting the brain
- The seizure is described as either a generalized clonic or a generalized tonic-clonic seizure

Investigations needed for febrile seizures

- Urine test
- Complete blood count
- Chest X-ray
- Electroencephalogram
- Electrolytes essay
- Lumbar puncture: Strongly consider lumbar puncture in children younger than 12 months, because the signs and symptoms of bacterial meningitis may be minimal or absent in this age group. Lumbar puncture should be considered in children aged 12-18 months, because clinical signs and symptoms of bacterial meningitis may be subtle in this age group. In children older than 18 months, the decision to perform lumbar puncture rests on the clinical suspicion of meningitis

Prevention of febrile convulsions

- There is no definite way to prevent febrile convulsions.
- Using paracetamol or ibuprofen and taking off extra clothing.

- Paracetamol doesn't reduce the risk of febrile convulsions.
- Tepid sponging
- Use of diazepam to prevent reoccurrence [6].

Health risk of febrile convulsion

- Children with a previous simple febrile seizure are at increased risk of recurrent febrile seizures; this occurs in approximately one third of cases.
- Children younger than 12 months at the time of their first simple febrile seizure have a 50% probability of having a second seizure [3]. After 12 months, the probability decreases to 30%.
- Children who have simple febrile seizures are at an increased risk for epilepsy [7]. In a similar report, it was documented that the rate of epilepsy by age 25 years is approximately 2.4%, which is about twice the risk in the general population.
- Males have a slightly higher incidence of febrile seizures.
- Simple febrile seizures occur most commonly in children aged 6 months to 5 years.

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