Original Article

Demographic, Clinical and Etiological Profile of Children Admitted with Febrile Seizures in a Tertiary Care Hospital of North India

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How to cite this article: Raza Ali Abid, Yudister, Shreeya Rajput. Demographic, Clinical and Etiological Profile of Children Admitted with Febrile Seizures in a Tertiary Care Hospital of North India. Indian Journal of Public Health Research & Development 2023;14(4).

Abstract

This retrospective hospital-based study was conducted in Paediatric emergency from 1st June 2022 to 30th November 2022 to study the clinical demographic and etiological profile of paediatric patients admitted with febrile seizures.

Out of total enrolled 243 children, 153(63%) were male and 100(37%) were females. Mean age of the patients was 23.5 months. Mean time interval between onset of fever and occurrence of seizures was 18 hours. Overall, 170(70%) patients had simple seizures. Only 85(35%) patients had positive family history and 73(30%) had recurrence of seizures during the same episode of illness. Acute respiratory infection was the commonest cause for febrile seizure in 190(78%) children.

Keywords: Febrile seizure, Children, Age

Introduction

Febrile seizures are seizures that occur between the age of 6 and 60 months with a temperature of 38°C (100.4°F) or higher, that are not the result of central nervous system infection or any metabolic imbalance, and that occur in the absence of a history of prior afebrile seizures. Febrileseizures are among the leading causes of paediatric emergency hospital admissions and affect 2- 5% of neurologically healthy infants and children[1].The peak incidence in children is between 12 months and 18 months of age[2]. This study was planned to evaluate the febrile seizure epidemiology and risk factors, clinical presentations, as well as triggers commonly implicated in febrile seizures.

Methods

The prospective hospital-based study was conducted in the Paediatrics Department of Government Medical College Jammu, Jammu and Kashmir. Children reporting in paediatric emergency with fever provoked seizures were screened for Febrile Seizure as per definition. Those included in the study were children aged 06-60 months admitted with Febrile Seizure diagnosis. Those with age < 6months or > 60 months, afebrile seizures, CNS infections, developmental delay, electrolyte imbalance, known cases of inborn error of metabolism and known cases of chronic diseases were excluded from study.

A total of 243 patients were included in the study over a period of 6 months from 1st June 2022 to 30th November 2022. The sample was irrespective

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of gender, race, ethnicity, geographical distribution and socioeconomic status. Informed written consent of parents and approval of institutional ethical committee were obtained. Data was collected using a predesigned proforma. Simple Febrile Seizure was defined as a generalised seizure with no focal seizure activity or focal manifestations during the postictal period, lasting less than 15 minutes and not recurring within the next 24 hours or during the same febrile illness. A Complex Febrile Seizure was defined as a seizure with features suggestive of focal activity at the onset, during or in the postictal period or a seizure lasting more than 15 minutes or a seizure that recurred within 24 hours or within the same febrile illness. Frequency and percentage were calculated for qualitative variables like age, gender, family history, type of Febrile Seizure.

Results

Of the 243 cases, 153(63%) were male and 100 (37%) were female with male-to-female ratio being 1.5:1. In terms of age, 146 (60%) patients were in the 19-24-month group, and the mean age of the patients was 23.5 months. Only 85 (35%) patients had positive family history of Febrile seizure and 73(30%) had recurrence of seizures during the same episode of illness. Besides, 158(65%) patients had only one episode of seizure during the illness. Single-episode category patients had increased frequency of simple seizures. ARI was the commonest cause in 190(78%) patients, acute gastroenteritis in 30 (12%) patients, enteric fever in 12 (5%) , urinary tract infection in 4 (1.65%) and dengue in 5 (2%) patients.

Discussion

Our documented mean age of onset of seizures is consistent with various studies[3,4,5,6]. FebrileSeizure usually occurs within first 24 hours of onset of feverand our study results are consistent with results of earlier studies[7,8]

Majority of our patients had first episode of seizure and it is in line with results reported earlier[9]

Conclusion

Majority of patients were male and presented within the first 24 hours of fever, with first episode and simple FS. Anaemia, malnutrition, raised TLC were found to be FS risk factors. Further studies are needed to assess the association of FS with malnutrition and bacterial infections.

Funding: Nil

Conflict of Interest: Nil

Ethical clearance: Ethics committee of Gmc Jammu

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