Original Research Article

Clinical profile of paediatric patients admitted with febrile seizures in Khaja Banda Nawaz institute of medical sciences and hospital Kalaburagi

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Abstract

Background: Febrile seizure (FS) is the most common neurological disorder observed in the pediatric age group. The estimates from the developing country data states that febrile seizure incidence is one in every 25 children in the population. The incidence is highest in children less than 3 years of age, with a decreasing frequency in older children. **Objective:** To assess the clinical profile of patients with febrile seizures. **Methodology:** Prospective observational study amongst admitted patients of febrile seizures in KBINMS Kalaburagi. **Results:** Out of 50 patients admitted during the study period, majority were infants i.e. 42%. Male children were 64% and females were 36%. Prevalence of simple febrile seizures in our study was observed to be 78% as compared to prevalence of complex seizures as 12%. 22 cases i.e. 44% had respiratory tract infection followed by 11 cases (22%) had Urinary tract infection and gastroenteritis each **Conclusion:** Febrile seizures are very common cause of hospitalization in paediatric age group especially in infants and respiratory and urinary tract infection was found to be commonest etiology for febrile seizures. Male preponderance in our study is also an important finding.

Key Words: Febrile seizures, children, paediatric.

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INTRODUCTION

Febrile seizure (FS) is the most common neurological disorder observed in the pediatric age group. The estimates from the developing country data states that febrile seizure incidence is one in every 25 children in the population.[1] The International League against Epilepsy (ILAE) has defined FS as seizure events in infancy or childhood are featured with temperatures over 38°C without any evidence of acute electrolyte imbalances in CNS infection or history. A child with FS experiences loss of consciousness, tremors in limbs on both sides of the body. It was seen that majority of the times febrile seizures will occur during the first day of a childs fever[2]. The direct cause of FS is unknown, but the most important associated factors are fever, epilepsy, hypoglycemia, hypocalcaemia, head injury, poisoning and drug overuse, respiratory infection, or gastroenteritis [3–5].The association between seizure and bacterial infection is conventional[6,7]. Irrespective of developing and developed country, febrile seizures are the most

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common type of acute seizures in children though it may not be life-threatening always[8]. Most are associated with infections and have a good outcome[9]. In tropical countries, febrile seizures are common but the prevalence of acute symptomatic seizures (which have a poorer outcome) may be higher than Western countries[6-8]. The incidence of both acute seizures and febrile status epileptics is higher[2, 9] and the outcome is worse since the etiology is different[8,11,12]. Acute seizures are therefore a major risk factor for neurological and cognitive impairment and for the development of epilepsy in children living in these regions.[13] The incidence is highest in children less than 3 years of age, with a decreasing frequency in older children. Seizures account for about 1% of all emergency department visits, and about 2% of visits of children's hospital emergency department visits[14]. In most of the studies, febrile seizures were reported to be the most common type seen in the pediatric population and account for the majority of seizures seen in children younger than 5 years of age[12]. Our study area is one of the backward district of Karnataka with moderate health structure facility. We experience many cases of febrile seizures from the draining part of Kalaburagi as well. So the study is conducted with an intension to find out the clinical profile of patients with seizures in KBNIMS, Kalaburagi.

AIMS AND OBJECTIVE

To assess the clinical profile of patients with febrile seizures

Methodology: This study was prospective observational study carried out at paediatric department of Khaja Banda Nawaz Institute of Medical Sciences, Gulbarga during the period of January to August 2018. All the patients

Inclusion Criteria: All children admitted in the pediatric ward with complaints of seizures (including recurrent episodes) in the age group of 1month to 12 years and children admitted for other complaints and developing seizures during the course of their illness were included.

Exclusion Criteria: Seizures in developmentally abnormal children were excluded.

Statistical Analysis: Detailed history along with family history of seizure was recorded on a prestructured proforma. Complete evaluation of each case was carried out with clinical and laboratory tests. Data thus obtained was entered in MS excel sheet and analysed by using SPSS 23.0 version IBM USA.

RESULTS

Table 1: Distribution of subjects according to age group

	Frequency	Percent
< 1	21	42
1 to 5	13	26
5 to 10	16	32
Total	**50**	**100**

Out of 50 patients admitted during the study period, majority were infants i.e. 42% followed by 32% from 5-10 years age and 26% from 1 to 5 years age.

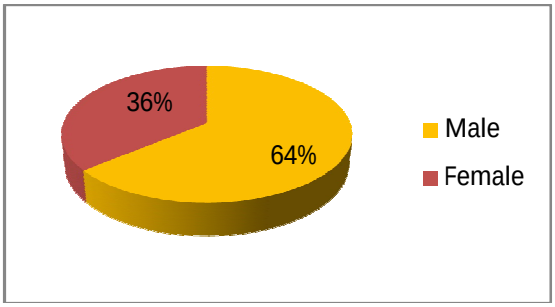

Figure 1: Distribution of subjects according to gender

Majority of the cases were males i.e. 64% and females were 36%.

Table 2: Distribution of subjects according to age and gender

	Male		Female		Total
	Freq	%	Freq	%	
< 1	29	90.6	13	72.2	42
1 to 5	16	50.0	10	55.6	26
5 to 10	19	59.4	13	72.2	32
Total	**32**	**100.0**	**18**	**100.0**	**100**

Proportion of males were 90.6% as compared to 72.2% in infancy whereas proportion of males were 59.4% and females 72.2% from 5 to 10 years age.

Table 3: Distribution according to age and type of seizures

	Simple febrile		Complex febrile		Total
	Freq	%	Freq	%	
< 1	16	41.0	4	36.4	42
1 to 5	21	53.8	6	54.5	26
5 to 10	2	5.1	1	9.1	32
Total	**39**	**100.0**	**11**	**100.0**	**100**

Fischers exact test-4.2, df-2, p-0.031, Significant

Prevalence of simple febrile seizures in our study was observed to be 78% as compared to prevalence of complex seizures as 12%. Prevalence of simple febrile seizures in infants was 41% as against complex febrile seizures of 36.4%. The difference was observed to be statistically significant (P<0.05).

Table 4: Distribution according to gender and type of seizures

	Simple febrile		Complex febrile		Total
	Freq	%	Freq	%	
Male	24	61.5	8	72.7	32
Female	15	38.5	3	27.3	18
Total	**39**	**100.0**	**11**	**100.0**	**100**

Chi square test-0.46, df-1, p-0.49, Not Significant

Prevalence of simple febrile seizures was found to be 61.5% compared to 38.5% amongst female children. Prevalence of simple febrile seizures was found to be 72.7% compared to 27.3% amongst female children. The association was observed to be statistically significant (P<0.05).

Table 5: Distribution according to cause of seizures

	Frequency	Percent
Respiratory tract infection	22	44
Urinary tract infection	11	22
Otitis media	6	12
Gastroenteritis	11	22
Total	**50**	**100**

Etiology of febrile seizure after clinical assessment was found out. In 22 cases i.e. 44% had respiratory tract infection followed by 11 cases (22%) had Urinary tract infection and gastroenteritis each.

DISCUSSION

In our study we found that out of 50 patients admitted during the study period, majority were infants i.e. 42% followed by 32% from 5-10 years age and 26% from 1 to 5 years age. Majority of the cases were males i.e. 64% and females were 36% with male to female ratio as 1.77:1 In our study proportion of males were 90.6% as compared to 72.2% in infancy whereas proportion of males were 59.4% and females 72.2% from 5 to 10 years age. Sarvana S[15] from south India observed that incidence of seizures among different age group was: 1 month to 1 year 29.2% (152), 1-3 years 27.3 % (142), 4-6 years 18.1% (94) and 7 to 12 years was 25.4% (122). There were 300 (57.7%) males and 220 (42.3%) females with male to female ratio of 1.36:1. Singh RD[16] studied 331 patients with seizures and out of 331 children 192 (58%) were males and 139 (42%) were females (Male: Female ratio =1.38:1). Therefore, our findings are consistent with the findings of Sarvana S[15] and Singh RD[16]. Incidence of seizures decreased with increasing age and so in our study found. 6 months to 5 yrs age is more prone if the fever is not controlled with proper medications. They are more prone to CNS infections and metabolic derangements. Our findings stated that prevalence of simple febrile seizures in our study was observed to be 78% as compared to prevalence of complex seizures as 12%. Prevalence of simple febrile seizures in infants was 41% as against complex febrile seizures of 36.4%. The difference was observed to be statistically significant (P<0.05) Singh RD[16] also found that in febrile seizures 48(71%) children had simple febrile seizures while 20 (29%) patients had complex febrile seizures. Febrile seizures have been reported to be one of the most common causes of seizure attack in children [14,17]. Etiology of febrile seizure in our study was found that in 22 cases i.e. 44% had respiratory tract infection followed by 11 cases (22%) had Urinary tract infection and gastroenteritis each. Most of the studies also supported that in majority of febrile seizures, the common etiology was respiratory tract infection and Urinary tract infection.[8,9,11]

CONCLUSION

Febrile seizures are very common cause of hospitalization in paediatric age group especially in infants and respiratory and urinary tract infection was found to be commonest etiology for febrile seizures. Male preponderance in our study is also an important finding.

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