

Original Research Article

Parental knowledge, attitude and practices regarding febrile convulsion

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ABSTRACT

Background: Febrile convulsion is a condition which can emotionally traumatize most parents. Inadequate knowledge regarding febrile convulsion can cause parental anxiety. This study is conducted to assess the level of parent's knowledge, attitude and practices regarding febrile convulsion.

Methods: It was a prospective questionnaire study conducted over a period of one year from January 2016 to January 2017 in Department of Paediatric of a tertiary care hospital KIMS, Bangalore. 110 children with febrile convulsion in the age group of 6 months to 5 years were enrolled.

Results: Out of 110 children, 82 had single convulsion and 28 had recurrent convulsions. Mean age of onset of first febrile convulsion was 20 months. About 50 (45.45%) had experienced convulsion with one-episode of fever. Only 46 (41.8%) of parents recognized convulsion. Others interpreted convulsion as shivering (20.9%), evil effect (7.2%), excessive cry tantrum (10.9%), fainting spell (8.18%) and lethargy (20%). 88 (80%) did not carry out any intervention prior to getting the child to hospital. Effect of convulsion on parents was fear of death (82.7%), fear of epilepsy (17.3%), fear of recurrence (34.5%). 85% parents did not know that convulsion can occur due to fever. 32% thought that traditional treatment would help. Only 38% had thermometer at home and 23% knew the normal range of body temperature. Preventive measures were known to 44%.

Conclusions: A higher level of understanding regarding practices was shown among higher socioeconomic and higher educational status. The efficiency of parental first aid practices can be evaluated and significant improvement can be achieved by giving adequate awareness and education.

Keywords: Febrile convulsion, Parental knowledge, Practice, Questionnaire

INTRODUCTION

Febrile convulsion is the most common type of convulsion in childhood. It is also one of the most common causes of hospital admissions in children under five years of age.¹ Febrile convulsion is the most found result of high fever, which occurs in 4-10% of children under 6 years of age.² Of these, upto 30% have recurrent seizures.

The peak incidence of disease is at 18 months.³ Approximately 6-15% of febrile convulsions occur after

age of 4 years and onset after 6 years is very unusual. 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.⁴ Genetic factors are clearly important for the occurrence of febrile convulsion.⁵

Although approximately 15% of children with epilepsy have had febrile seizures, only 2-7% of children who experience febrile seizures proceed to develop epilepsy

later in life.⁶ Rarely febrile convulsion can cause brain damage.⁷ Parental anxiety and apprehension is due to inadequate knowledge of fever and febrile convulsion. Most of the parents who witness their child's first febrile seizure find it a frightening experience and many think that their child may die because of it. Parents and other family members may have changes in behavioural activities with a sense of fear of fever and febrile seizures.⁸ It will be more panic for parents to see their child experiencing febrile convulsion. In their panic, their initial reaction is usually inappropriate. This frightening event causes a wrong parental belief that febrile convulsion will cause brain damage, choking, mental retardation, learning disorders, epilepsy or even death.⁹

It is necessary to assess the factors influencing prevention of febrile convulsions through patterns which identify and reinforce factors that affect behaviour.¹⁰ Therefore understanding and improving parental KAP towards febrile convulsion is very essential. A quick assessment tool for obtaining information about parental responses to febrile convulsion is required for educating parents and for use in clinical practice.¹¹

Many studies have investigated the Etiology and natural history of febrile convulsion and evaluated various management strategies, but very little information is available about parental KAP. Various questionnaires about KAP can be found in the literature.^{11,12} This study was undertaken to study knowledge, attitude and practices of parents of children with febrile convulsions.

METHODS

This Prospective study was carried over a period of one year from January 2016 to July 2017 in the Department of Paediatrics of a tertiary care hospital KIMS, Bangalore. The parents of 110 children with febrile convulsion in the age group of 6 months to 5 years were enrolled after obtaining their informed consent. A well-prepared questionnaire was completed by parents of each child with febrile convulsion both admitted and OPD basis follow up cases.

Febrile seizures were diagnosed as seizures associated with a temperature of 38°C or higher, ruling out central nervous system infection and other metabolic causes. Children less than 6 months, more than 6 years, with prior afebrile seizure history or any other cause of convulsion were not included in the study. Children with history of neonatal convulsion, neurological abnormality, developmental delay were excluded from study. When the seizure had ceased, and condition stabilized, the forms were completed by parents under supervision.

The questionnaire included demographic details like parents' educational qualification, occupation, socioeconomic status, family size, age and sex of child, age at first febrile convulsion, previous history of convulsion, medications.

Questions were asked to parents regarding their knowledge, attitude and concerns regarding febrile convulsion, past experiences and beliefs related to it, whether they were able to recognise convulsion, possible causes, necessary medical evaluation, investigations, performed first aid practices during episode, recommended and non-recommended practices for seizure, risk of recurrence or developing subsequent epilepsy, opinion about treatment, necessity of anticonvulsants and relevant sociocultural perspectives, consequences of febrile convulsion, response to their child's first febrile convulsion and anticipated practices for recurrent episodes, normal body temperature, availability of thermometer, how to check temperature, future concerns of child and their offspring. The data collected was analysed.

RESULTS

110 questionnaires were analysed. Fathers answered 23 (20.9%) and mothers answered 87 (79.1%) questionnaires. Out of affected children, males were 67 (60.9%) and females were 43 (39.1%). 72 were from core family and 38 were from extended family as shown in Table 1.

Table 1: Family characteristics.

Characteristics	Number (Percentage)
Responder	
Father	23 (20.9%)
Mother	87 (79.1%)
Level of education	
Illiterate	15 (13.6%)
Primary school	13 (11.8%)
Middle school	38 (34.5%)
High school	19 (17.3%)
College/graduate	25 (22.7%)
Mothers occupation	
Housewife	33 (37.9%)
Worker	54 (62.1%)
Family type	
Core	72 (65.4%)
Extended	38 (34.5%)
Socioeconomic class	
Upper	10 (9%)
Upper middle	15 (13.6%)
Middle	23 (20.9%)
Lower middle	32 (29.1%)
Lower	30 (27.2%)

Age of child ranged from 6 months to 4.8 years. 82 (74.5%) children had single convulsion and 28 (25.4%) had recurrent convulsions.

Mean age of onset of first febrile convulsion was 20 months. About 50 (45.4%) had experienced convulsion with fever only once as shown in Table 2.

Table 2: Child characteristics.

Characteristics	Number (Percentage)
Child gender	
Male	67 (60.9%)
Female	43 (39.1%)
Age	
6 months to 1 year	18 (16.36%)
1-2 years	20 (18.18%)
2-3years	34 (30.9%)
3-4years	25 (22.7%)
4-5years	13 (11.8%)
Febrile convulsion episode	
First	84 (76.36%)
Recurrent	26 (23.63%)
Time of convulsion with fever	
One	50 (45.45%)
Two	38 (34.54%)
Three	19 (17.27%)
Four	3 (2.72%)

46 (41.8%) parents recognised convulsion, 23 (20.9%) interpreted convulsion as shivering, 22 (20%) as lethargy, 12 (10.9%) as excessive cry tantrum, 9 (8.18%) as fainting spell and 8 (7.27%) as evil effect as shown in Figure 1. Effect of convulsion on parents was as shown in Figure 2. 91 (82.72%) parents were afraid of death, 44 (40%) had fear of other sibling getting affected, 38 (34.54%) had fear of recurrence, 15 (13.6%) had fear of brain damage and 19 (17.27%) had fear of epilepsy. Effects were more in mother compared to father.

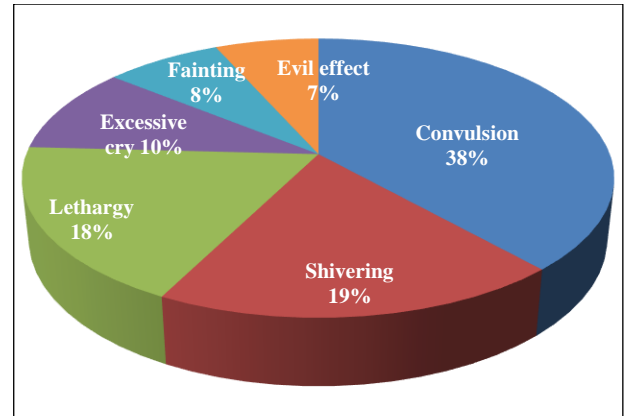


Figure 1: Perception of convulsion.

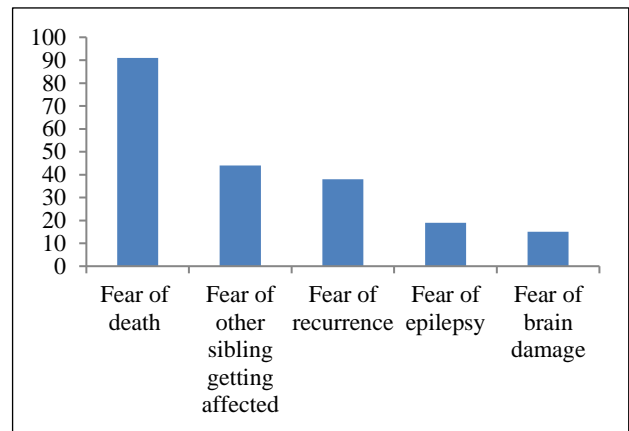


Figure 2: Effect of convulsion on parents.

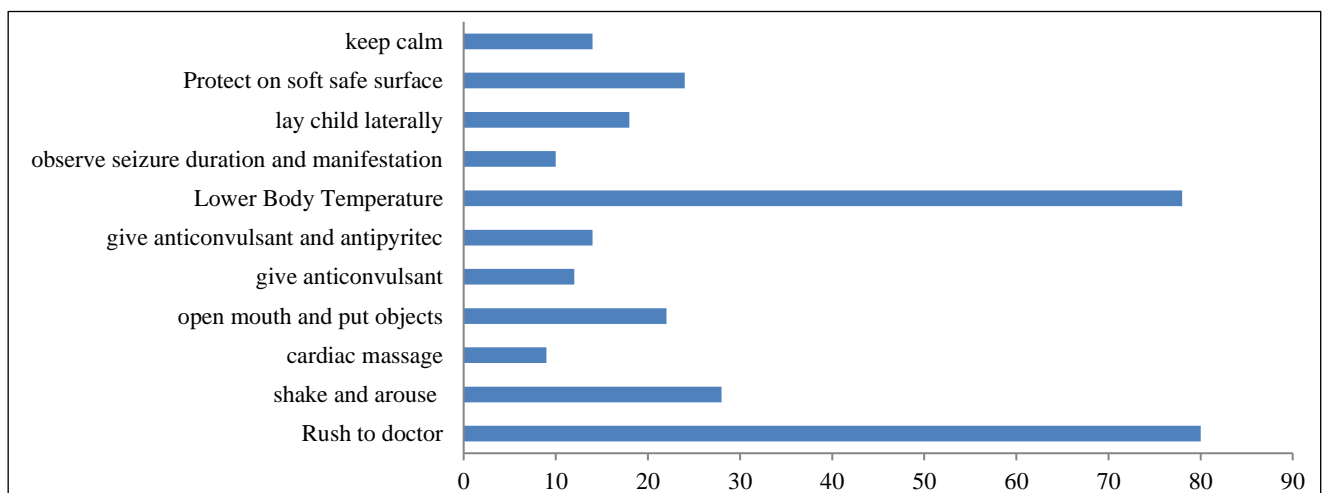


Figure 3: Action carried by parents during convulsion.

88 (80%) did not carry out any intervention prior to getting the child to the hospital. Other measures taken were shaking and arousing convulsing child in 28

(25.4%), opening mouth and put objects in 22 (20%), keeping keys in child's hand in 24 (21.8%), doing cardiac massage in 9 (8.2%), giving anticonvulsant in 12 (10.9%), giving anticonvulsant and antipyretics in 14

(12.7%). 78 (70.9%) lowered body temperature, 24 (21.8%) protected on soft safe surface, 18 (16.36%) laid child laterally, 14 (12.7%) kept calm (Figure 3).

Prior to episode of convulsion, 85% parents did not know the fact that the convulsion can occur due to fever. For 60% of the parents every subsequent episode of fever was like a nightmare. 32% thought that traditional treatment like banding, going to religious places, providing hot and warm food to child, keeping child warm would help. 30% expressed fear of convulsion affecting their other offspring. Only 38% had thermometer at home and 23% knew the normal range of body temperature. Preventive measures were known to 44% only. Awareness of febrile convulsion and the preventive measures was more in higher socioeconomic status and educated parents.

DISCUSSION

Febrile convulsion is a benign condition with an excellent prognosis and normal cognitive outcome but is associated with a great deal of anxiety and apprehension by the parents. 2-5% of neurologically healthy children experience at least 1 episode of febrile seizure.⁶ In this study only 41.8% (48) of parents recognised convulsion. Others interpreted convulsion as shivering, evil effect, excessive cry tantrum, fainting spell, lethargy. 85% parents did not know the fact that the convulsion can occur due to fever. For 60% of the parents every subsequent episode of fever was like a nightmare. 30% expressed fear of convulsion affecting their other offspring. 82.72% parents thought that their child may die due to convulsion. 58.18% did not carry any intervention before carrying the child to hospital. High proportion of parents perceived febrile seizure as epilepsy and believed that anticonvulsants were necessary.

In this study boys were 67 (61.9%). This predominance may be explained that boys are predisposed to infection as they have an XY chromosome and in general condition X chromosome is strongly related to the production of immunoglobulin.¹⁴ Mean age of first episode of febrile seizures was 20 months and this was due to brain immaturity. Ca⁺ and Na⁺ channels which mediate neuronal excitation is developed relatively early and excitatory synapses form before inhibitory synapses.¹⁵

Counselling parents, making them aware about the disease, explaining them what febrile convulsion is, relation between fever and convulsions, measures to be taken when child is convulsing, what not to be done and first aid is very crucial. Hence, parents must be informed that most febrile convulsions spontaneously recover with excellent long-term prognosis. Studies have shown that significant improvement was achieved by educating the parents.¹⁶ Myths regarding febrile convulsions can be eliminated by adequate education. Parents should be advised regarding how to remain calm in the course of a seizure, not to get panic and act wisely. They should be

taught how to measure temperature using a thermometer and how to do tepid sponging when the child has fever. They should be counselled regarding the correct dose of an antipyretic agent (paracetamol or ibuprofen) that need to be given at home when fever is detected.

The source of information about febrile seizure was health workers (42.3%), relatives and neighbours (36.5%) and mass media (22%). Mass media can play an important role in creating awareness. Health workers remain to be the number one source of information regarding febrile convulsion.¹⁶

Parents can handle second episode of convulsion in a calm way without getting panic if properly educated and counselled. They should also be demonstrated to place their child in the left lateral position with chin up for optimal airway patency in case of recurrence.¹⁷ During visit for immunisation or general check-ups, parents should be taught simple method of checking temperature, treatment of fever. Information, education and Counselling plays a very important role in this aspect.

CONCLUSION

Parental fear of febrile convulsion can result in mismanagement. The efficiency of parental first aid practices can be evaluated and significant improvement can be achieved by giving adequate information to the parents. Creating awareness among parents by adequate health education and counselling can reduce their apprehension and fear.

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