

Knowledge and Attitude of Parents having Children with Febrile Seizure

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DOI: <https://doi.org/10.3329/jafmc.v17i2.58361>

Abstract

Introduction: Febrile seizure is the most common seizure disorder among children less than 5 years of age. Observing a child experiencing a seizure is extremely traumatic experience for a parent. Many parents do not have any previous knowledge regarding febrile seizure and become anxious after the episode.

Objectives: To study and understand the knowledge and attitude of parents whose children, aged between 6 months to 60 months, suffered from febrile seizure in Bangladesh.

Materials and Methods: This prospective study was conducted by providing a structured, self-completed, closed-ended questionnaire to every parent whose child was admitted to the Paediatric indoor of Combined Military Hospital (CMH), Dhaka, Bangladesh from 1st March 2016 to 28th February 2017. Chi-square test was used to analyze the findings.

Results: A total of 120 parents and children pairs participated in this study. Among these, 98 (81.7%) children had single seizure and the rest 22(18.3%) experienced more than one seizure episode. Only 20 (16.7%) parents knew that high fever could cause seizure in children. Thirty (25%) parents had thermometer in their house and 14 (11.7%) of them knew how to use thermometer properly. Most of the parents, 104 (86.7%) could not recognize seizure. When parents were asked about their concern regarding the impact of seizure on their affected child, 59 (49.2%) parents mentioned fear of having another attack and 24 (20%) parents included epilepsy. Ninety (75%) parents included their fear of another offspring to have the same disease and only 30 (25%) were not concerned about this.

Conclusions: The parental fear of febrile seizure is a major concern among most of the parents whose child suffered from this. Parents need to receive appropriate information regarding febrile seizure.

Key-words: Fever, Febrile seizure, Parents knowledge.

Introduction

Febrile seizure of a child can be defined as seizure that occurs when body temperature of a child, ranges from 6 months to 6

years old, is 38 degrees Celsius or higher and not due to the result of any CNS infection or metabolic imbalance and also occur in absence of history of previous afebrile seizures¹. About 4% of children under 6 years of age suffer from at least one episode of febrile seizure². It can be divided into two types; one is simple febrile seizure which lasts for 15 min or less and does not recur within 24-hours period. The other one is a complex febrile seizure that can recur within 24-hours period and can last more than 15 mins³. Simple febrile seizure does not increase the risk of mortality whereas complex febrile seizure increases the risk of mortality⁴.

Most of the parents become anxious and frightened observing their children suffering from a seizure. Some parents even think that their child is dying. Many of them are not only concerned about the prognosis of seizure disorder and safety of that child but also concerned of the safety of their other child/children⁵. To decrease parental anxiety, it is important that parents have proper knowledge about febrile seizure and its prognosis⁶.

Materials and Method

This study was conducted in the Pediatric indoor of Combined Military Hospital (CMH), Dhaka from 1st March 2016 to 28th February 2017 to understand the knowledge, beliefs and attitude of parents whose children suffered from febrile seizure.

Data were achieved from the parents who came to the hospital's pediatric unit with their children who had at least one incident of febrile seizure. The inclusion criteria for the participants were:

1. Children who were admitted in the hospital with febrile seizure.
2. Children who were admitted in the hospital with any reason, but they have physician's prescription mentioning that the child suffered from febrile seizure in the past.
3. Parents who agreed to participate in the study willingly.
4. Children who were not affected by any congenital and neurological diseases.

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Exclusion criteria included:

1. When the diagnosis of febrile seizure is not confirmed.
2. Children who had afebrile seizures.
3. Children have seizures due to other causes such as trauma.
4. Children less than 6 months and more than 6 years of age.
5. Parents refuse to participate in the study.

Structured, self-completed, closed-ended questionnaires were provided to parents. Parents were informed of the purpose of the study and were also informed that the study did not have any intervention aspect. Data were recorded using Microsoft Excel Spread Sheets. Comparison among groups was conducted using the χ^2 -test.

Results

A total of 120 parents filled up the form during the research period. Questions were included information about both children and their parents. Table-I shows demographic characteristics of children such as age and sex. Among 120 children, 72(60%) were boys and 48(40%) were girls. Children were selected from 6 months to 6 years of age. The highest numbers of febrile seizure, 68 (56.7%) cases were found among the children between 1-3 years of age.

Table-I: Demographic characteristics of affected children (n=120)

Age of the child		<1 year	1-3 years	4-6 years	Total (%)
Gender of the Child	Male	10	40	22	72(60)
	Female	7	28	13	48(40)
Total (%)	Both sexes	17(14.2)	68(56.7)	35(29.2)	120(100)

Among the parents, mothers were interviewed for 80(66.7%) cases and fathers were for 40(33.3%) cases. Only 30(25%) parents had thermometer available in their home while 90(75%) of them did not have thermometer in their house to check body temperature. Among these 30 parents, only 14(11.7%) knew how to use thermometer properly. Among these 14 parents, 10(71.4% of 14 parents) parents had educational qualification as undergrad or higher than that ($p < 0.05$). Twenty (16.7%) parents had previous knowledge regarding febrile seizure. Only 7(17.5%) fathers and 13(16.3%) mothers are included in this group. Gender of the study participants (mother or father) did not have any impact on this ($P > 0.05$). Among the children, 98(81.7%) had single seizure and the rest 22(18.3%) had multiple episodes of seizure (Table-II).

Table-II: Socio-demographic results of the participants (parents), number of seizures, use of thermometer by parents (n=120)

Parameter		Participants n (%)	First time Seizure	Recurrent seizures	Thermometer available	Knowledge to use thermometer	Parents prior knowledge regarding febrile seizure (%)
Gender of parents	Male (father)	40 (33.3)	31	9	8	5	7 (17.5)
	Female (mother)	80 (66.7)	67	13	22	9	13 (16.3)
Total (%)	-	120	98 (81.7)	22 (18.3)	30 (25)	14 (11.7)	20 (16.7)
Education level of parents	Illiterate	13 (10.8)	11	2	2	0	1
	Grade (1-5)	30 (25)	26	5	4	1	1
	Grade (6-10)	36 (30)	31	4	6	1	3
	Higher Secondary (11-12)	21 (17.5)	16	5	5	2	5
	Undergrade	10 (8.3)	8	2	7	5	5
	Higher than undergrad	10 (8.3)	6	4	6	5	5

Table-III included interpretation and first reaction of parents when they observed seizure. This table also included parental concern for the affected child. Only 16(13.3%) parents among 120 could recognize seizure, while 37(30.8%) parents interpreted seizure as shivering due to fever and 24(20%) parents thought it was fainting. When parents were asked what the first thing they did when they observed seizure, 22(18.3%) parents mentioned they cried followed by screaming 15(12.5%). Sixty-one (50.8%) parents were afraid that their child was going to die while 22(18.3%) feared that child might have any physical harm. Ninety (75%) parents feared their other children to have the same disease. When parents were asked what their greatest fear for their affected children, 59(49.2%) parents included the fear of having another attack while 36(30%) parents mentioned any kind of disability of their child due to seizure.

Table-III: Parents perception regarding febrile seizure (n=120)

Interpretation of seizure	Mother	Father	Total (%)
Recognized seizure	11	5	16(13.3)
Shivering due to fever	28	9	37(30.8)
fainting	18	6	24(20.0)
tiredness	9	6	15(12.5)
Do not know why	14	14	28 (23.3)
Total	80	40	120(100.0)
Reactions of parents observing seizure			
Crying	18	4	22(18.3)
screaming	9	6	15(12.5)
Fear of death of child	40	21	61(50.8)
Fear of bodily harm of the child	13	9	22(18.3)
Total	80	40	120(100)
Concern of parents for other offspring			
Fear of another offspring to have the same disease	62	28	90(75)
Do not fear another offspring to have the same disease	18	12	30(25)
Total	80	40	120(100)
Concern of parents for the affected child			
Having another attack	45	14	59(49.2)
Epilepsy	14	10	24(20.0)
Disability of child	20	16	36(30.0)
Others	1	0	1(00.8)
Total	80	40	120(100.0)

It is noticeable that only 20 (16.7%) of 120 parents had any previous knowledge about febrile seizure. Among these 20 parents, 10(50%) parents mentioned the incidence of previous

seizure of their child, 6(30%) parents mentioned their healthcare professional and 3(15%) mentioned family and friends as the source of knowledge (Table-IV).

Table-IV: Source of parents' knowledge regarding febrile seizure (n=20)

Source	Total (% of 20 parents)	% of 120 parents
Previous seizure by the child	10 (50.0)	8.3
Healthcare professional	6 (30.0)	5.0
Self- study	1 (05.0)	.8
Information from family members, friends	3 (15.0)	2.5
Total	20 (100.0)	16.7

Discussion

Although febrile seizure is the most common seizure disorder in children less than 60 months of age⁷, it is a frightening and traumatic experience for parents⁸. Many research were conducted to know and understand the causes, treatment options, and prognosis of febrile seizure but the number of research and studies on the attitude and knowledge of parents about febrile seizure are not sufficient. This study was initiated to understand parents' knowledge, concerns, perceptions regarding febrile seizure in children in Bangladesh.

For this research, children under 60 months of age were selected as most of the children who suffer from febrile seizure ranged from 6 months to 6 years of age and after 6 years it is uncommon⁹. Among the participants in this research, boys were 60% and girls were 40%. Similar finding was found by Parmar et al, in 2001 where the percentages were 55 and 45 respectively¹⁰.

In this study, researchers found that almost half of the parents' who observed their child experienced a seizure, feared of the death of their child. Study that was done by Rutter and Metcalfe, in 1978, concluded that one third of the parents were afraid of the safety of their child's life². Another study conducted in 1999, concluded that almost half of the parents were feared of their children's death when they observed the seizure for the first time¹¹.

Current study found that although 20(16.7%) parents had knowledge about febrile seizure, only 16(13.3%) could able to recognize it. Researchers concluded that 12 parents could not able to recognize febrile seizure in their child although their children had previous history of febrile seizure. Thirty seven (30.8%) parents interpreted the seizure as shivering and 24 (20%) concluded it as fainting. A research conducted by Shandil et al found these numbers as 39% and 17.4% respectively¹². Another study in Egypt concluded that 86.7% parents had previous knowledge of febrile seizure⁸. This high percentage can be explained by the higher literacy rate and better healthcare

services of that country. In the current research, researchers found that only 30% parents had thermometer in their home. Parmar RC et al in 2001 found this number as 15%¹⁰. It is noticeable that thermometer was more available to families where parents had higher educational qualification.

Previous research established that after the first incident of seizure, the risk of children having another episode of seizure increases and if untreated, almost half of the children suffer from another episode of seizure by 2 years of the initial one¹³. Proper management can reduce the recurrence of febrile seizure or even to have the first episode of seizure, and generally febrile seizure has good prognosis. This information can decrease the anxiety and concern of parents of a child with febrile seizure^{13,14}.

Current research also found that 20 (16.7% of 120 parents) parents had previous knowledge about febrile seizure and among them only 6 (30% of 20 parents) received information from their healthcare professionals. Another study conducted by Parmar RC et al in 2001, concluded that 31% of parents had previous knowledge about febrile seizure and among them only 19% received information from their healthcare personal¹⁰.

Current study concluded that 49.2% parents feared that their child would have recurrent febrile seizure episode, while Stuijvenberg MV et al found that the main concern of 45% of parents participated in the research was recurrent seizure of their child¹¹. When parents observed their children to have a seizure, the highest numbers of parents that is 61 of 120 (50.8%), feared that their child was dying. Another research found this percentage as forty-seven¹¹. Misinterpretation of febrile seizure and uncertainty about the prognosis caused big negative impact on parent's mind.

Conclusion

Febrile seizure is a common but treatable and preventable condition in children. Observing a child experiencing a seizure is traumatic to parents and it causes negative impact on parent's perception. Parents need to receive proper knowledge to understand febrile seizure and this would reduce excessive parental anxiety.

Recommendations

An interventional study in 1998 included an educational intervention program for parents and they demonstrated that the education of parents improved knowledge and attitude of parents of children with febrile seizure¹⁵. We can also arrange program like this. Health-care workers, including physicians, nurses, and medical assistants, should take responsibility to inform parents about febrile seizure, including causes, management, prognosis during parents' visits to health-care institutions. Parents should be provided with information regarding the home management of fever, what to do during seizure and when to visit a clinician if seizures happen.

Acknowledgements

The parents and children at the CMH, Dhaka for participating in this study and the authority of the hospital for giving the opportunity to conduct this study.

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