

## Prevalence and Determinants for Risk Behavior in Management of Febrile Convulsion

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### Abstract

The term febrile convulsion is not a diagnostic entity. It simply describes any seizure that occurs in response to a febrile stimulus. It usually occurs between the age of 3 months and 5 years and occurs in 2-4% of young children. At the time of convulsions, family members follow the different malpractices which leads child in risk behavior. So keeping this view in mind, the present descriptive study was conducted with quantitative research design. The demographic variables and structured check list was used to collect the data. The results were shown that almost 40% of samples practiced to shake and arouse the convulsing child. 33.3% were used to slap the baby while convulsions occurs, 20% of samples suck the discharge from the child's mouth and nose and another 20% used to keep the baby in prone position during the course of the convulsions. In this present study it was observed that, majority of them (60%) were follow the traditional practices due to fear of unconsciousness and death. lack of transportation is the second most common cause and poverty is the 3<sup>rd</sup> most common cause for risk behavior in management of febrile convulsion. Other causes were found to be least reasonable for risk behavior. Even though some traditional practice are having scientific reason but few don't have empirical evident that put the child under risk. Lack of awareness, knowledge, transportation facility and poverty is the leading cause for this risk behavior, Mass enlightenment campaign for the community, especially the rural, against use of harmful traditional remedies to treat febrile convulsion at home is strongly advised to prevent delayed treatment and associated complications.

**Keywords:** Febrile Convulsion; Febrile stimulus.

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### Introduction

The term febrile convulsion is not a diagnostic entity. It simply describes any seizure that occurs in response to a febrile stimulus. It usually occurs between the age of 3 months and 5 years and occurs in 2-4% of young children. The typical febrile convulsion is a generalized tonic clonic seizure lasting between a few seconds and 15 minutes, followed by a period of drowsiness. Febrile seizures tend to occur in families, although the exact mode of inheritance is not known [1].

Each year, about 150,000 children and adolescents in the United States will come to medical attention for evaluation of a newly occurring seizure disorder of some type. Between 2% and 4% of all children in Europe and the United States experience at least one convulsion associated with a febrile illness before the age of 5 years. The cumulative incidence of febrile convulsions among children ranges from about 1% in China to more than 8% in Japan and 14% in Guam. The peak incidence of a first febrile convulsion occurs in the second year of life. Between 0.5% and 1% of children and adolescents experience a seizure associated with other acute metabolic or neurologic

insults; most of these occur in the neonatal period. The incidence of epilepsy (recurrent unprovoked seizures) in children and adolescents seems relatively consistent across all populations studied, ranging from 50 to 100/100,000. The highest incidence of epilepsy is in the first year of life. West syndrome accounts for about 2% of all childhood epilepsy, Lennox-Gastaut syndrome for 1–2%, childhood absence epilepsy (pyknolepsy) for 10–15%, juvenile myoclonic epilepsy for 5%, and idiopathic localization-related epilepsy for 10%. Between 0.5 and 1% of children experience a nonrecurrent, single, unprovoked convulsive episode. Following are the estimated numbers of children and adolescents with newly diagnosed convulsive disorders in the United States for the year 1990: febrile seizures, 100,000; neonatal seizures, 4,000; other provoked seizures, 6,000; single unprovoked seizures, 10,000; and epilepsy, 30,000 [2,3].

The incidence rates in India are comparable to those in the developed world. The Yelandur survey estimated the prevalence to be 3.28–5.71/1000 whilst the more recent Uttarakhand survey [4] found a prevalence of 2.27 per 1000 population. An EEG is not indicated for simple Febrile seizure (FS). There is widespread consensus that regular anti-epileptic drugs are not recommended in simple FS. However, prophylactic oral or rectal diazepam or oral clobazam can be used with antipyretics. The risk factors for experiencing subsequent FS are onset of seizures at a younger age, seizures with low-grade fever, complex FS, multiple FS and positive family history of FS or epilepsy. The risk factors for experiencing subsequent epilepsy are pre-existing developmental delay, positive family history of epilepsy and complex FS. The risk from the Yelandur study was estimated to be 1.2%. Some of the febrile seizure associated epilepsy syndromes have recently been described to be associated with mutations in sodium channel genes (SCN1A-related spectrum of epilepsies: Please see discussion that follows under the heading “Investigations”) [5].

The study was conducted between December 2000 and February 2001. Our findings show that 71% of urban mothers compared to 25% of rural mothers attributed the cause of FC to fever ( $\chi^2=24.17$ ;  $p<0.001$ ). Seventy-five percent of mothers from rural community and 28.6% of urban mothers attributed the cause to witchcraft and/or evil spirits. Twenty-five percent of rural mothers also attributed abnormality of the spleen as a cause of FC. All the mothers, both urban and rural, were not directly involved in the management of the convulsive

episode due to panic and confusion. Ninety-two percent of urban and all the rural mothers permitted the use of traditional medicine while 7.1% of urban mothers employed prayers during convulsion. Twenty percent of urban and twenty-two percent of rural mothers use urine (human and or cow's) for treating FC at home. Other home remedies include kerosene, fuel and crude oil. These all put the child under risk at pre hospital stage. The traditional practices vary from state to state and country to country [6]. By keeping this in view this study was conducted to know the traditional practices and determinants for risk behaviors in villages of Jhunjhunu, Rajasthan, India.

“A cross sectional descriptive study to assess prevalence and determinants for risk behavior in management of febrile convulsion among parents of under five children at selected village in Jhunjhunu.”

### Objectives of the Study

1. To assess the prevalence of risk behavior followed for management of febrile convulsion among parents of under five children.
2. To assess the determinants for risk behavior for management of febrile convulsion among parents of under five children.

### Method

#### *Research Approach and Design*

The research approach used for this study is Quantitative approach. A cross sectional descriptive study design was adopted to Prevalence and determinants for risk behavior in management of febrile convulsion

#### *Target Population*

Parents and care givers of under five children

#### *Accessible Sample*

Parents and care givers of under five children living in Jhunjunu

#### *Sample Size: 15*

*Sample Design:* Non probability purposive convenient sampling technique was adopted.

#### *Development of Tool*

The semi-structured questionnaire was developed after referring many literature and opinion from experts in the field.

• **Description of the Tool: the Tool Consist Three Sections**

*Section-1 demographic Variables* includes responder, age of the parent, educational status of respondent, occupation of the parent, type of family, number of children, religion, gestational age of child, Nearly Availability of health care services, Child age at first febrile seizure episode and area of residency.

*Section 2:* A checklist to assess common traditional practices include Stimulate the convulsing child by slapping, Application of oil on eyes, Sudden refer the child to temple or untrained person, Apply cow urine on mouth, Skin laceration, Burns to the part of body, Place the child into prone position, Restrain the convulsing child, Shake and rouse the convulsing child, Application of olive oil on whole body, Start running of onion on back of child, Put spoon into mouth of child, Giving old shoes for smelling, Cardiac massage to relieve episode, Pour water to keep child cool and calm, Lower the child body temperature by using palm oil., Application of eucalyptus oil, Suck discharge from the child's nose and mouth, Giving iron metal in hand and others if any.

*Section 3:* a check list to assess determinants for risk behaviors includes Poverty, Poor knowledge and awareness, Lack of availability health facility, Lack of accessibility of health services due to distance, Lack of approachability of health services due to politics, Lack of transportation, Cultural belief, Family history of epilepsy/genetically problem, Forcing by others/ forefathers, Fear of death and unconscious, Lack of education and others if any.

*Ethical Clearance:* No interventions involved so ethical clearance was not obtained

- *Data Collection:* Data was collected from 15 samples after getting consent, samples were selected with non probability purposive convenient sampling technique. The objectives and purpose were explained to get consent. The data was collected though in depth interview method in the natural setting, a semi structured questioner was used to collect data, and assess their common practices and cause for that. Data were entered into excel sheet for analysis and interpretation.
- *Analysis and Interpretations:* Descriptive statistics was used for interpretation of result. Tables, were used.

## Result

**Table 1:** Frequency and percentage distribution of demographic variables

N=15

S. No.	Demographic Variable	Frequency	Percentage (%)
1.	Responder		
	Father	10	66.7
	Mother	2	13.3
	Others	3	20
2	Age of Parent		
	Below 25 Year	6	40
	25-30 Year	4	26.6
	31-35 Year	2	13.3
3	Above 35 years	3	20
	Educational status of the respondent:		
	Illiterate	4	26.6
	1 to 10 std	6	40
4	Higher secondary	3	20
	UG and PG	2	13.3
	Occupation of the respondent :		
	Health care professionals	1	6.7
5	Unemployed	5	33.3
	Employed	9	60
5	Type of family		
	Nuclear	5	33.3
	Joint	9	60
6	Single	1	6.7
	No. of children		
	1	5	33.3
	2	2	13.3
	3	1	6.7
	More than 3	7	46.7

7	Religion		
	Hindu	9	60
	Christian	0	0
	Muslim	6	40
8	Gestational age of the child		
	Pre term	0	0
	Term	14	93.3
	Post term	1	6.7
9	Nearly Availability of health care services		
	Yes	13	86.7
	No	2	13.3
10	Child age at first febrile seizure episode—		
	0-1 years	8	53.3
	1 to 2 years	1	6.7
	2 to 3 years	1	6.7
	3 to 4 years	2	13.3
	4 to 5 years	3	20
11	Area of residency:		
	Rural	6	40
	Urban	8	53.3
	Semi urban	1	6.7

#### *Prevalence of Risk Behavior for Management of Febrile Convulsions*

It was observed that out of 15 samples 5 (33.3%) were used to slap the baby while convulsions occurs. Were as 20% of samples used to refers the child to temple or untrained person during or after the course of convulsion. It was found that another 20% of samples were used to keep the baby in prone position during the course of convulsion. Almost 40% of samples practiced to shake and arouse the convulsing child. Only one (6.7%) sample tries to put some object in the mouth to prevent tounge bite. Out of 15, only 1 sample used to practice cardiac massage to relieve the episode. Were as 20% of samples suck the discharge from the child's mouth and nose.

#### *Determinants of Risk Behavior for Management of Febrile Convulsions*

It was shown that out of 15 samples, 5 (33.3%) samples were below poverty line and 66.7% of samples were having poor knowledge and awareness about management of febrile convulsion. Around 26.7% of samples have complaint that due to lack of accessibility, approachability and availability of health care services was reason for their risk behavior for management of febrile convulsions. Almost 40% of samples were said that lack of transportation facility was the main reason and 4 (26.7%) were used to follow their cultural norms. It was also found 13.3% of samples were had a family history of convulsion and they follow the same remedy for febrile convulsions and the percentage of sample forced to follow their traditional practices. A majority of them (60%) were follow the traditional practices due to fear of unconsciousness and death.

#### **Discussion**

In this present study it was found that almost 40% of samples practiced to shake and arouse the convulsing child. Secondly, out of 15 samples 5 (33.3%) were used to slap the baby while convulsions occurs. Were as 20% of samples suck the discharge from the child's mouth and nose and another 20% used to keep the baby in prone position during the course of the convulsion.

To determine the knowledge, attitude and practice (KAP) of home management of febrile convulsion (FC), by mothers in the community, focus group discussions (FGD) were conducted in two communities, Uselu (urban) and Evbuomodu village (rural), both in Edo State, Southern Nigeria. The study was conducted between December 2000 and February 2001. Our findings show that 71% of urban mothers compared to 25% of rural mothers attributed the cause of FC to fever ( $\chi^2=24.17$ :  $p<0.001$ ). Seventy-five percent of mothers from rural community and 28.6% of urban mothers attributed the cause to witchcraft and/or evil spirits. Twenty-five percent of rural mothers also attributed abnormality of the spleen as a cause of FC. All the mothers, both urban and rural, were not directly involved in the management of the convulsive episode due to panic and confusion. Ninety-two percent of urban and all the rural mothers permitted the use of traditional medicine while 7.1% of urban mothers employed prayers during convulsion. Twenty percent of urban and twenty-two percent of rural mothers use urine (human and or cow's) for treating FC at home. Other home remedies include kerosene, fuel and crude oil. This finding support first objectives of this present study [7].

In this present study it was observed that, majority of them (60%) were follow the traditional practices due to fear of unconsciousness and death. lack of transportation is the second most common cause and poverty is the 3<sup>rd</sup> most common cause for risk behavior in management of febrile convulsion. Other causes were found to be least reasonable for risk behavior.

A study was conducted to explore factors associated with delay in seeking treatment outside the home for febrile children under five. Using a pre-tested structured questionnaire, all 9176 children below 5 years in Iganga-Mayuge Demographic Surveillance Site were enumerated. Caretakers of children who had been ill within the previous 2 weeks were asked about presenting symptoms, type of home treatment used, timing of seeking treatment and distance to provider. Children who sought care latest after one night were compared with those who sought care later. The result showed that, Those likely to delay came from the lowest socio-economic quintile (OR 1.45; 95% CI 1.06–1.97) or had presented with pallor (OR 1.58; 95% CI 1.10–2.25). Children less likely to delay had gone to drug shops (OR 0.70; 95% CI 0.59–0.84) or community medicine distributors (CMDs) (OR 0.33; 95% CI 0.15–0.74), had presented with fast breathing (OR 0.75; 95% CI 0.60–0.87), used tepid sponging at home (OR 0.43; 95% CI 0.27–0.68), or perceived the distance to the provider to be short (OR 0.72; 95% CI 0.60–0.87). This finding support second objectives of this present study [8].

## Conclusion

The study shows that 40% were practiced to shake and arouse the convulsing child and (33.3%) were used to slap the baby while convulsions occurs. Sucking the discharge from the child's mouth and nose and keeping the baby in prone position during the course of the convulsion is practiced equally by 20% of samples and this found to be good practice. Even though some traditional practice are having scientific reason but few don't have empirical evident that put the child under risk. Lack of awareness, knowledge, transportation facility and poverty is the leading cause for this risk behavior, Mass enlightenment campaign for the community,

especially the rural, against use of harmful traditional remedies to treat febrile convulsion at home is strongly advised to prevent delayed treatment and associated complications.

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