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FEBRILE CONVULSIONS IN CHILDREN;
KNOWLEDGE, ATTITUDE AND PRACTICES OF PARENTS

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ABSTRACT... Objectives: (i) To know about the knowledge, attitude and practices of parents of children with febrile convulsions. (ii) To provide adequate information of relationship between fever and febrile convulsions and its usual good prognosis. **Design:** Descriptive study. **Setting:** It was conducted at Pediatric Department of Madina Teaching Hospital Sargodha Road Faisalabad. **Period:** Two years period from January 2007-2009. **MATERIAL AND METHODS**: 150 parents and their children with febrile convulsions were included in the study. Diagnosis was made on the basis of a history of a convulsion in the child with a febrile illness. Cases were excluded when there was doubt about the occurrence of convulsions, or if the child previously had convulsions due to any other cause, or if the physical examination or laboratory parameters suggested any other etiology for the convulsions. LP was done in case of first time febrile fits. A pretested questionnaire comprising of 12 questions was used for the study. Data was presented through frequency table. Statistical test of significance was Chi-square test. The data was analyzed with the help of SPSS computer program EQS 10 N. **Results:** in the study 83 parents (59.3%) could not recognize the convulsion; 127 parents (90.7%) did not carry out any intervention prior to getting the child to the hospital. 109 (77.9%) parents did not know the facts that the convulsion can occur due to fever. For 56 (40%) of the parents every subsequent episode of fever was like a nightmare. Only 21 parents (15%) had thermometer at home and 28 (20%) knew the normal range of body temperature. Correct preventive measures were known to only 41(29.2%). **Conclusions:** Parental fear of fever and febrile convulsion is a major problem with negative consequences affecting daily family life. The most common immediate effect of the convulsion on the parents was fear of death and insomnia and fear of brain damage.

Key words: Lumber puncture, fever, fear, phobia, febrile fit.

INTRODUCTION

Febrile convulsions are defined as seizures associated with fever in the absence of CNS infections[1]. They rarely develop into epilepsy and they spontaneously remit without specific therapy[2].

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They are the most common seizures disorders during childhood with a uniformly excellent prognosis[2]. Febrile convulsions are age related and are rare before nine months and after five years of age. The peak age of onset is approximately 14-18 months of age and incidence approaches 3-4% of young children [3]. A strong family history of febrile convulsions in siblings and parents suggests a genetic predisposition[4]. Linkage studies in several large families have mapped the febrile seizures gene to chromosome 19q and 8q13.2.An autosomal dominant inheritance pattern is demonstrated in some families[5]. Febrile seizure is a common cause of fits in childhood and about four percent in the age group of nine months to six years have at least one episode of febrile convulsion [6]. Of these up to 30% have recurrent seizures[7] , and may get admitted to hospital [3,7]. Febrile fits are of two types simple and complex fits. Recurrence risk of febrile convulsion is more in case of complex febrile seizures[8].

Febrile convulsions are twice as common in boys than in girls [9]. When parents witness their child convulsions they are understandably shocked and may think that the child may die [10]. Correct and adequate knowledge of relationship between fever and febrile convulsions and its usual good prognosis are important for lessening the parent's anxiety and apprehensions associated with febrile convulsions[11] . Many parents develop fever phobia and each febrile episode of child can be a nightmare for the parents [12].In one study 80% of parents thought fever between 40 and 41.1C° causes brain damage[13]. About 20% of parents thought that if they do not treat the fever it would getting higher. Because of these miss concepts many parents treat the low grade fever unnecessarily [14]. By teaching the parents about fever the physician can reduce the number of telephone calls and office visits[15]. The febrile convulsion itself is generally harmless but it does includes need to rule out a serious conditions especially meningitis[16]. The type of infections causing the fever may be important, most often the child has an upper respiratory tract infection, otitis media, pneumonia, influenza , gastroenteritis or urinary tract infection.[17] The parental fear of fever and febrile convulsions is a major problem with serious consequences affecting daily family life[18].

MATERIAL AND METHODS

150 parents and their children with febrile convulsions were included in the study. Diagnosis was made on the basis of a history of a convulsion in a child with a fever. Cases were excluded when there was doubt about the occurrence of convulsions, or if the child previously had convulsions due to any other cause, or if the physical examination or laboratory parameters suggested any other etiology for the convulsions. LP was done in case of first febrile fits. A pretested questionnarie comprising of 12 questions was used for the study. The information regarding the demographic details (age and sex of child, education qualification of parents, family size and income), age at the first febrile convulsion, previous history of convulsions, and medication were obtained and entered into the Proforma. Questions regarding what they recognize their child's first convulsion as and the measures undertaken at the time of the convulsions, their thoughts, concerns, and the effects on them.

Questions were asked to elicit information about their awareness of complications of seizures, to know about their perception regarding the relationship between the occurrence of fever and that of febrile fits. They were questioned about their source of obtaining the knowledge, availability of a thermometer, knowledge of normal temperature and their ability to use a thermometer correctly and the future concerns about the child and their other offspring. At the end of questionnaire, the parents having deficient knowledge were explained about the febrile convulsions, the normal range of body temperature, how to take temperature, measures to be taken to prevent convulsions and those to be employed during a convulsion if prevention fails. The results will be analyzed using the help of SPSS computer program. Data was presented through frequency table. Results were analyzed with the help of SPSS (Statistical package for social science) computer program version.

DISCUSSION

While for a health care worker, febrile convulsion may be

a common experience devoid of worrisome implications, for the uninformed and inexperienced parents witnessing their child into a fit may be a nightmare and a frightening experience[19]. In the study, 90% of the parents thought that their child was dying during the convulsion. Significant parents had anorexia, insomnia and fever phobia (30-40%). These finding are comparable to those found in other studies. (7-9) Even in those who had seen a convulsion in their child previously, recurrence did have a negative impact on the mind and physical health of the parent. After the acute episode the recurrence and epilepsy were the major parental concerns[20] .

The study also demonstrates that the possibility of recurrence keeps most families in fear for years after the first febrile seizure event. Most parents, thus, show a severe psychological reaction to their child's convulsion. This contrasts with the doctor's consideration of febrile convulsion as a benign phenomenon. It is possible that these contrasting perceptions are responsible for the fever and febrile fits phobia in parents and lack of communication between the two being ineffective in imparting the right information and knowledge. It is essential that the treating physician know about the parental knowledge. It is essential that the treating physicians know about the parental concerns and anxieties so that they can establish a meaningful dialogue and allay these fears effectively[21]. The study has brought important facts to light. 77.9% of the parents were unaware of the entity of febrile convulsion. This degree of unawareness is higher than that quoted in other studies from the developing world (7,8). 90% did not carry out any intervention at home prior to taking the child to the hospital, an incidence much higher than that reported in other study, which varies from 37.3 – 60% (1, 7, 8). It is also distressing to note that many parents were not aware of the immediate measures that can be taken for prevention of convulsions or their complications.

Parents were also unaware of normal body temperature and an overwhelming majority of families did not even have a thermometer at home. These also included families whose children had febrile seizure on more than one occasion or had another affected offspring. Even amongst those who had thermometers many did not know how to use them and many parents felt that the first thing to do when a child convulses is to take the child to a doctor. These were the findings when the parents were interviewed on the day of discharge from the hospital I-e with in 24-48 hours of their child having suffered a convulsions or at the follow-up visit.

These findings speaks poorly of the communicative skills of the physician taking care of these children. But, more needs to be done. There is a need to impart additional skills. The correct way to use the thermometer should be demonstrated to the parents. This empowerment, by itself may make the parents feel more confident and undertake appropriate measures like tepid sponging and administrating an antipyretic agent when a child has fever. Of course, additional efforts will be required if parents are to be expected to do something after a convulsion occurs. At least, they should position the child properly to prevent aspiration. The parent will require much more support if they are to administer diazepam per rectally. The doctors should inquire about the actions taken by the parents after the convulsion. The harmful practices such as applying of onion over the nostrils with force full closure of mouth should be strongly discouraged. In addition, such maneuvers can increase the time period before appropriate medical help is sought. Huang[22] studied the effects of an educational program on knowledge, attitude, concerns, and first – aid measures among parents with febrile convulsive children. After education, although only a slight change in fever anxiety was found, the experimental group showed significant improvement in knowledge, attitude, concerns, and anticipatory practice. Significant improvement in knowledge, attitude, concerns and anticipatory practice of febrile convulsion compared with the control group.

Parents received information about diet, nutrition, immunization, care of common illness, prevention of accidents and poisoning from their pediatricians and family physicians. Would the additional information is retained by the parents? Wassermer and Hanlon have

shown in their study that such information is retained very well by the parents[23]. Hence, simple techniques of measurement of body temperature and treatment of fever should be told to the parents as a part of "parent-craft" teaching during the health contacts for immunization, nutritional advice and growth monitoring.

OBSERVATIONS AND RESULTS

One hundred and forty questionnaires were analyzed, following observations and results were obtained. The fathers answered seventeen (12.1%) questionnaires while mothers answered the rest 123 (87.9%).

Table-I. Distribution of cases according to socio-economic class.

Socio-economic status	No. of cases	%age
High	40	28.5%
Middle	52	37.2%
Lower	48	34.3%

Fifty seven (40.7%) of parents recognized the convulsions. The other interpreted the convulsions as alteration of sensorium (n=45, 32.1%), fainting spells (n=25, 17.9%), shivering (n=35, 25%), suffocation (n=35, 25%).

Table-II. Distribution of cases according to recognition of cases by parents.

Recognition	No. of cases	%age
Alternation of sensorium	45	32.1%
Fainting spells	25	17.9%
Shivering	35	25.0%
Suffocation	35	25.0%

One hundred and twenty seven patients (90.7%) did not carry out any intervention prior to getting the child to the hospital. Other took measured such as, shaking the child(n=82, 58.6%),tepid water sponging (n=10, 7.1%), left lateral position (n=8, 5.8%), anti pyretic (n=30, 21.4%) and anti convulsions (n=10, 7.1%).

Table-III. Distribution of cases according to measures taken during fits.

Measures taken	No. of cases	%age
Shaking the child	82	58.6%
Tepid water sponging	10	7.1%
Left lateral position	8	5.8%
Anti pyretic	30	21.4%
Anti convulsions	10	7.1%

Prior to the episodes of convulsions 109 (77.9%). Parents did not know that fever can give rise to the convulsion. Thirty one (22.7%) parents had prior awareness of thin only. Only 35% parents have knowledge. The knowledge was given through neighbour (n=8, 25.8%), health personnel (n=6, 19.4%), episodes of febrile convulsion in parents in their childhood (n=3, 9.7%) and relatives (n=3, 9.7%).

Table-IV. Distribution of cases according to awareness through different persons.

Having awareness through	No. of cases	%age
Through neighbour	8	25.8%
Health persons	6	19.4%
Through relatives	3	9.7%
Parents having febrile fits in other children	3	9.7%
Previously effected child	11	35.0%

Previously affected child (n=11, 35.5%).

Of the 140 parents interviewed, 119 (85%) did not have thermometer at home. Of the 21 (15%) who had thermometer at home, 5 (23.8%) did not know how to use it, as the male parents were responsible for

measuring the temperature.

Table-V. Distribution of cases according to availability of thermometer.		
Availability of thermometer	**No. of cases**	**%age**
Do not have thermometer	119	85%
Having thermometer	21	15%

Only 15 of those who had thermometer at home could demonstrate the current use of thermometer. Only 21 have thermometers. Out of them some knows correct use or other do not knows.

Table -VI. Distribution of cases according to knowledge of thermometer.		
Knowledge of thermometer	**No. of cases**	**%age**
Did not know how to use it	5	23.8%
Having correct knowledge of its use	16	76.21%

Eight parents of children with recurrent convulsions and 13 of those with single febrile convulsion had thermometer. Only 28 parents (20%) knew the normal range of body temperature. Correct preventive measures were known only to 41 parents (29.2%).

As regards to different socio-economic classes in the study group, prior awareness of febrile convulsion was higher in grade II and II. The availability of thermometer at home and parental concerns did no differ in different groups.

CONCLUSION

Parental fear of fever and febrile convulsion is a major problem with negative consequences affecting daily family life. The commonest immediate effect of the convulsion on the parents was fear of death (n=126 , 90%) followed by insomnia (n=48, 34.3%), anorexia (n=46), 32.9%), crying (n=28, 20%) and fear of epilepsy (n=28, 20%). Fear of brain damage , fear of recurrence and dyspepsia were voiced by the fathers alone (n=20, 14.3%).

Parental anxieties can be reduced by giving them adequate knowledge regarding the prognosis of febrile fits. Complications regarding the fits such as risk of aspiration pneumonia can be prevented by giving them knowledge regarding preventive measures. Their fear can be reduced by telling them about prophylaxis of febrile fits to prevent recurrence.

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