"Clinical aspects of febrile seizures, knowledge, attitude, practice and impactin admitted children and Socio-demographic characteristics of the parents: A Study in DhakaShishu (Children) Hospital, Dhaka, Bangladesh"

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Abstract: Febrile seizures are common and mostly benign. They are the most common cause of seizures in children less than five years of age. There are two categories of febrile seizures, simple and complex. Febrile seizures (FS) area unit a standard, worldwide benign condition with a wonderful prognosis. This case control study was conducted within the amount between March 2015 till June the same year in emergency, Observation & Referral Unitof DhakaShishu (Children) Hospital, Dhaka, Bangladesh, getting to discover some facts regarding FS in our community.116 Children's with FS were listed within the study WHO (World Health Origination) were aged matched to four controls to work out risk factors for a primary FS. The mean $(\pm SD)$ age of youngsters underneath the study was 22.4 ± 14.3 months. 63 (54.3%) of the Children's were aged 18 months and below, mean (\pm SD) age of onset of seizures was 16.1 \pm 9.6 months. Male to feminine ration was 1.5: 1.70 Children's (60.3%) of FS were simple seizures whereas 46 Children's (39.7%) were complicated. In Children's with perennial FS, 25 had complicated seizures representing 54.3% of total children with complicated seizures and seventeen children had a simple seizure. Risk factors for a primary FS were found to be highest with parental perception of slow development (OR: 11.59), case history of FS in an exceedingly second – degree relative (OR: 7.20) then case history of FS in an exceedingly first-degree relative (OR: 4.04). International studies have found case history in first-degree relatives, child discharge once 28 days and case history of FS in second-degree relatives to be necessary risk factors. 47.2% of youngsters with perennial FS had their 1st attack of seizure before one year elderly, and 19 of them had a positive case history in an exceedingly degree relative. 97 of the oldsters knew fever will cause convulsions. 6.9% connected the cause on to looking and another 6.9% to witch craft. 33.6% of oldsters thought of FS as a kind of brain disease. 26.7% of the oldsters recognized aspiration as associate acute complication of seizure. Injuries (19.8%) and cardiopulmonary arrest (2.6%) were recognized to a lesser degree. more investigations once associate attack of FS were requested by 32.8% and 49.1% requested more medicine follow-up. 28.5% thought of anticonvulsants a corner-stone of management and 4.3% thought of ancient medication because the solely treatment choice. Health institutes and personnel (12.9%) and media (9.5%) were weak sources of data. the bulk of data (77.6%) was gathered from neighbors and relatives. 62.1% of oldsters thought of associate attack of FS a serious grievous eventdysfunction was expected by 71.6% of oldsters, whereas brain harm and retardation were expected by 56.9%. Death was expected by 39.7% of oldsters. Ancient treatment was advocated by 30.2% of oldsters. Care to be applied throughout a seizure was renowned by few and performed by fewer. Non-recommended or perhaps harmful practices were thus prevalent (82%).

Keywords: anticonvulsants, antipyretics, epilepsy, febrileinfection-related epilepsy syndrome, febrile status epilepticus, meningitis.

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I. Introduction

Febrile seizures are common and mostly benign. They are the most common cause of seizures in children less than five years of age. There are two categories of febrile seizures, simple and complex. Both the International League against Epilepsy and the National Institute of Health has published definitions on the classification of febrile seizures. Febrile seizures area unit the foremost common and benign convulsive disorder in childhood and an often reason for emergency hospital admission (1). feverish seizures (FS) area unit age dependent and area unit rare before the age of 9 months and once 5 years archaic, the height age of onset is 14-18months(1). 2 to 5% of youngsters expertise a minimum of one FS before the age of 5 in Western Europe and also the us, and 6 to 9% of youngsters in Japan (2).Seizures were recognized as complications of feverish diseases from the time of the first Greeks(3). The robust dependence of FS on age for the expression was noted from medical man writings (3). Hippocratesdiscovered youngsters area unit seemingly to occur throughout the eruptions of the canines. Thomas Willis(3) in 1667 declared that youngsters area unit a lot of subject to convulsions inside the primary or second month once they're born and once more concerning the time of growth. A relationship between growth and convulsions was seeing in four of thirty medical man Aphorisms (3). Then again the events were thought of twobetimesassociate instead of mutually beneficial.



Source: Google

A positive case history of convulsions in folks was thought of a very important predisposing factors, Starsmare(3) in 1664 wrote 'signs of the approaching of it in youngsters square measure as a result of the kid is born of oldsters that have this Falling Sicknesse'.Greeks(3) thought of FS as a sacred malady. different predisposing factors square measure cold phlegms, obesity and arduous bellies, state of nutrition, humours and vapours, adverse prenatal events, influences of air, water and places, infectious disease variola major contagion and strait garments (over heating). Death, medicine sequelae and later brain disorder was thought of the foremost frequent outcomes of FS from the earliest times. Hippocrate(3) specially believed that permanent medicine sequelae protected the kid from an additional seizure attack which youngsters WHO (World Health Organization) recover utterly square measure a lot of to blame for recurrences. Since then they were thought of to be severe and fatal till within the Nineteen Seventies, once 2 population based mostly studies(4) shaped this read of FS; that they are: common, many recur, development outcome isn't altered and few youngsters later develop brain disorder.

II. Review Of The Literature

FSs generally occur between 3 months and 6 years suffered. They're associated with fever, but whereas not proof of intracranial infection, a defined cause or previous non-febrile seizures (Consensus Development Conference on febrile Seizures 1980). Most FSs area unit single generalized seizures of length however 15 minutes, but 10–30% area unit refined, i.e. prolonged (duration quite fifteen minutes), multiple (with a repeat among twenty four hours) or having focal choices (Nelson & Ellenberger 1978, Verity et al. 1985a, Knudsen 1990) [86]. FSs have AN honest prognosis and area unit to be distinguished from nervous disorder that's characterized by continual motiveless seizures (Consensus Development Conference on febrile Seizures 1980) [87]. Since fever can provoke seizures in epileptic patients at any age, associate initial seizure occurring throughout fever could also be the first manifestation of nervous disorder, but one seizure with or whereas not fever never justifies a designation of nervous disorder.

III. Justification

Febrile seizures (FS) is a common paediatric problem, which causes severe psychological reaction in the parents. Besides, there are many wrong traditional and local methods of management as a result of lack of proper knowledge of FS by the parents. Only one study has been conducted on FS in Sudan investigating the

clinical pattern of FS, but no study on parent's knowledge, attitude, practice and psychological impact of FS on the parents has been done before.

IV. Objectives

- a) To study the clinical types and relative risk factors in children presenting with febrile seizures (FS).
- b) To study the knowledge, attitude and practice of parents toward their children with FS.
- c) To investigate the effect of FS on the behavior and emotional situation of the parents.

V. Methods and Materials

Study design: Is a hospital based case control study.

Study area: The study was conducted inemergency, Observation & Referral Unit in Dhaka Shishu (Children) Hospital, Dhaka, Bangladesh.

Study duration: The data was collected in the period between the 1st of March 2015 and the 5th of July the same year.

Study population: Children admitted in the above mentioned hospitals with a confirmed diagnosis of febrile seizures were the subject of the study.

Inclusion criteria: A febrile seizure child was outlined as an antecedently traditional kid, aging between halfdozen months and half-dozen years presenting with a fever associated seizure with exclusion of any acute medicine sicknesses or metabolic abnormalities. Any Children presenting with a fever-associated seizure below the age of eighteen month has undergone a spinal puncture to exclude infectious disease. If the seizure was a return, a radical physical examination was done to exclude any abnormal medicine signs and establish the underlying explanation for fever then applicable laboratory investigations were done. Youngsters with ages higher than eighteen months were examined for abnormal medicine signs (including signs of tissue layer irritation) associate degreed for an underlying explanation for fever then investigated. Youngsters were ascertained for a minimum of twenty four hours in hospital with treatment of the doable underlying explanation for fever.

Controls: every case was age-matched to inside 6 months to twofebrile and two afebrile controls that-had ne'er had a seizure. Controls given to the emergency department inside 10 days of 2 Units the presentation of the febrile seizure child.Exclusion criteria:

Children with any of the following were excluded from the study:

- a) Children with fever associated seizures age less than 6 month or more than 6 years (72months).
- b) Previous afebrile seizure.
- c) Known neurologic abnormality (e.g. cerebral palsy).
- d) Meningitis or encephalitis; by examining the CSF.
- e) Suspicious neurological findings after the seizure: loss of consciousness, weakness and others.

f) Refusal of parents or guardians to participate in the study.

Controls were not included if they had a past history of afebrile or febrile seizures, were neurologically abnormal or parents refuse to participate in the study.

Sample size:

Sample size calculation was supported a pair of sided significance check. The calculated sample size was 116 cases Associate in Nursing 464 controls (ratio of 1:4) and this could notice an odds magnitude relation of 3.86 or additional at a population prevalence of the danger factors of 2.7% with an influence of eightieth and sort I error of 0.5. The calculation was performed mistreatment EPI data 2000 - Statically routine and used estimates of odds magnitude relation and management prevalence of risk factors from a previous study (10). The first half obtained personal knowledge of the child and his oldsters. The second half obtained knowledge considering the feverish seizure; whether or not it absolutely was 1st or repeated, its clinical sort, risk factors for a primary feverish seizure and, in cases of return, risk factors for a repeated FS. The third a part of the form was for assessing the information of the fogeys toward feverish seizure. The information was concerning the character of feverish seizure, explanation, attainable imitative factors, complications throughout the seizure and management. The quarter was composed of inquiries to assess the final angle of the fogeys toward FS and inquiries to establish the attainable role of ancient drugs in FS management. The common fraction was accustomed get knowledge concerning practices throughout the present seizure: counseled attention practices and non-recommended practices. It conjointly enclosed questions on recognition of the seizure, thoughts at that point and immediate effects of the seizure on the fogeys. For assessing the psychological impact of the seizure on the witnessing parent, the sixth a part of the form enclosed the Arabic translation of the State-Trait Anxiety Inventory (STAI)(93). The inventory may be an analysis instrument for the study of tension in adults and a selfreported assessment device, which incorporates separate measures of state, and attribute anxiety. In line with the

author, state anxiety reflects and fugacious emotion or condition of the human organism, that's characterized by subjective consciously perceived feelings of tension and apprehension and heightened involuntary system activity. Scores on the STAI have an instantaneous interpretation, high scores on their various scales means that additional attribute or state anxiety and low scores mean less. The information obtained from the form was entered into the pc and analyzed mistreatment applied math package of social sciences (SPSS). Descriptive and comparative statistics were performed. Chi-square check was employed in assessing the result of general characteristics on attaining the desired information. Student-t check was accustomed compare between means that. Epi-Info 2000 Statcalc routine program was accustomed calculate relationships between the danger factors and therefore the development of FS and Odd Ratios and relative risks (RR) obtained.

VI. Results

A total of 116 children with a confirmed designation of FS were enclosed during this study. The witnessing parent was interviewed exploitation the form and information obtained. The age of the children beneath the study ranged between 6 and 72 months with a mean age 22.4 month \pm 14.3 (mean \pm SD). 60.3% of them were males and also the remainder (39.7%) was females, male to feminine quantitative relation was 1.5: 1(Figure 1). Within the sample mean age of the mothers was twenty nine.8 \pm 5.6 years (mean \pm SD) as shown in table one and mean age of fathers was 38.9 ± 6.8 years (mean \pm SD). twenty nine of the mothers (25%) were illiterate, 43 (37.1%) received Khalwa or solely grammar school education, 32 (27.6%) received middle school education and solely twelve (10.3%) had university or higher-grade education (Figure 3).14 of the fathers (12.1%) were illiterate, 49 (42.2%) received Khalwa or grammar school education, 38 (32.8%) had middle school education and fifteen (12.9%) had university and higher-grade education (Figure 2). The majority of the mothers were housewives with a share of eighty four.5%, 4 (3.4%) were laborers, 13 (11.2%) were worker and only 1 mother (0.9%) was an expert (Figure 3). In seventy four of the children (64.7%) it absolutely was their 1st attack and within the remainder, 42 (35.3%) the FS was a return (Figure 4). easy FS occurred in seventy (60.3%) of study cluster. the rest forty six (39.7%) had a posh seizure (Figure 5). Of the children WHO(World Health Origination) had complicated options, half-dozen had a seizure, in fourteen the seizure lasted over quarter-hour and thirty four had over one attack of seizure at intervals twenty four hours (Figure 6). Some having two options of quality. In children with recurrences twenty five had a posh seizure, presenting 54.3% of total children with complicated seizures. 63 (54.3%) of the children beneath the study were aged 18 months and below, 32 (27.6%) were over eighteen months and up to thirty six months older, 21 (18.1%) were aged over 36 and up to 72 month (Table 2). In cases of recurrences, 25 (58.5%) had their 1st attack of FS once aged one year and below, 34 (80.4%) once aged 18 months and below and most thirty eight (90.2%) after they reached 2 years older (Table 3).children presenting with their 1st FS had a mean age of onset of eighteen. 3 ± 11.4 month (mean \pm SD), mean age of youngsters with return for a primary attack of seizure was thirteen.9 \pm 7.8 months (mean \pm SD) and mean age for a primary feverish seizure within the study cluster was sixteen 1 ± 9.6 months (mean \pm SD) as shown in table four. There was a statistically vital distinction in age of {the 1st|the primary} presentation between children presenting with their first and repeated FS (P Value=.0001). There was no distinction between the study and management teams concerning age, mean age of controls was twenty three.7 \pm 15.9 months (mean \pm SD). A positive case history for a FS in a very degree relative was found in twenty six (22.4%) of the study cluster compared to 31(6.7%) of the four64 controls with AN odd quantitative relation of 4.04 and a relative risk of two.65 (Table 5). A positive case history of FS in a very second degree relative was found in ten (8.6%) of the study cluster compared to six (1.3%) of the management cluster with AN OR of seven.20 and a relative risk of three.33 (Table 5). Parental perception of slow development was explicit by the fogeys of thirteen (11.2%) children from the study cluster compared to five (1.1%) of the management group; with AN OR of eleven.59 and a relative risk of three.94 (Table 5).None of the children within the study cluster were discharged from the nursery when twenty eight days or admitted to the babe ward in any respect. Compared to at least one kid (0.2%) within the management cluster (Table 5).62 (53.4%) of the study cluster had none of the chance factors. In children with a return, the primary seizure occurred before one year previous in twenty (47.6%) of the forty two children and a positive case history of FS in a very first-degree relative was found in eight (Table 6). numerous FS data aspects of the witnessing parent were assessed exploitation the third a part of the form.97% of the interviewed oldsters knew before that fever will cause convulsion and in exactly three it absolutely was the primary time to check or hear regarding it.86.2% connected the cause on to fever. 6.9% mentioned that the sole attainable cause is witchery and another half-dozen.9% connected it on to AN evil-eye, however fever are often a agitate issue. None connected the cause to AN underlying brain abnormality or prenatal events (Figure 7).Easy FS occurred in seventy (60.3%) of study cluster. the rest forty six (39.7%) had a posh seizure (Figure 7). Of the children WHO had complicated options, half-dozen had a seizure, in fourteen the seizure lasted over quarter-hour and thirty four had over one attack of seizure at intervals twenty four hours (Figure 8).Some having 2 options of quality. 63 (54.3%) of the children beneath the study were aged eighteen months and below, 32 (27.6%) were over eighteen months and up to thirty six months older, 21 (18.1%) were aged over thirty six

and up to seventy two month (Table 2). In cases of recurrences, 25 (58.5%) had their 1st attack of FS once aged one year and below, 34 (80.4%) once aged eighteen months and below and most thirty eight (90.2%) after they reached 2 years older (Table 3). children presenting with their 1st FS had a mean age of onset of 18.3 ± 11.4 month (mean \pm SD), mean age of youngsters with return for a primary attack of seizure was 13.9 ± 7.8 months (mean \pm SD) and mean age for a primary feverish seizure within the study cluster was 16.1 ± 9.6 months (mean \pm SD) as shown in table four. There was a statistically vital distinction in age of the 1s the primary presentation between children presenting with their first and repeated FS (P Value=.0001). There was no distinction between the study and management teams concerning age mean age of controls was twenty three.7 \pm 15.9 months (mean \pm SD). A positive case history for a FS in a very degree relative was found in 26 (22.4%) of the study cluster compared to thirty one (6.7%) of the four64 controls with AN odd quantitative relation of 4.04 and a relative risk of 2.65 (Table5). A positive case history of FS in a very second degree relative was found in ten (8.6%) of the study cluster compared to six (1.3%) of the management cluster with AN OR of 7.20 and a relative risk of 3.33 (Table 5).Parental perception of slow development was expressed by the fogeys of thirteen (11.2%) youngsters from the study cluster compared to five (1.1%) of the management group; with Associate in Nursing OR of eleven.59 and a relative risk of three.94 (Table 5). None of the children within the study cluster were discharged from the nursery when twenty eight days or admitted to the infant ward in the least. Compared to 1 child (0.2%) within the management cluster (Table 5). 62 (53.4%) of the study cluster had none of the danger factors. In youngsters with a repetition, the primary seizure occurred before one year recent in twenty (47.6%) of the forty two youngsters and a positive case history of FS in a very first-degree relative was found in eight (Table 6).

Table (1): Showing age of mothers(n=116).								
	Mothers age	Fre	equency			%		
	15 - <20		2			1.7		
	20 - <30		4'	7	40.5			
	30 - <40		5	8	50			
	$40 \leq$		9		7.8			
	Total		11	.6	100			
	Table (Age (months)	2): Distributi	on of the stud	y group accordir	ng to age(n:	=116).		
	C 10			(2)		54.2		
	0-18			03		54.5		
	19-30			32		27.0		
	5/-/2 Total			116		10.1		
	10081			110		100		
	Table (3): Age at 1st Age at 1st presentation 6-12 13-18 19-24 25-30 31-36 Total Table (5): Rt		25 9 4 2 42 42 42	children with re % 58.5 21.4 9.8 4.9 100	ure(n=116)			
	Risk factor		Study	Control group		OR	Relative	
							risk	
Posit	ive family history	No.	%	No.	%	4.04	2.65	
in 1	st dograa ralativa	20	22.4	51	0./	4.04	2.03	
III I Do=i4	ive femily history	10	96	6	12	7 20	2.22	
rosit	nd dogroo rolotivo	10	0.0	0	1.5	1.20	3.33	
In 2	uegree relative			1	0.2			
INC	often 28 deve	-	-	1	0.2	-	-	
Pare	ntal nercention of	13	11.2	5	1.1	11.59	3.94	

slow development DOI: 10.9790/0853-1805061728 None

53.4

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Tabla ((A).	Moon	ago of	childron	fora	first	ES /	(n-116)	
Ladie ((4):	Mean	age or	children	for a	IIIrst	FS (n=110)	

	Mean age \pm SD (month)
Children presenting with a first FS	18.3 ± 11.4
Children presenting with a	13.9 ± 7.8
recurrent seizure	
All children in the study	16.1 ± 9.6
P. Value : .0001	

Table (6):	Risk	factors	of a	recurrent	seizure	(n=116)
I abic (U).	IVIOU	racions	UI a	iccurrent	SCIZUIC	(11-110)

Risk factor	No.	%	
1 st seizure occurring before 1 year old	20	48.7	
Positive family history in 1 st degree relative	8	19.5	

Table (7): Types of traditional management of FS as	s stated by some parents	(n=35).
Type of management	No.	%
Cauterizing the child's forehead with a	11	31.4
burned straw 3 times by a left hander person		
Visiting Al-Sheikh	10	28.5
Higab – Mahaya	3	8.6
Bakhour&Azaaim	3	8.6
Fogaraa&Aroog	2	5.7
Cutting a rosary on the convulsing child &	2	5.7
Opening a Houg		
Drawing a line on the child's forehead by	2	5.7
Sultan's charchot powder & rubbing the body		
with aster		
Soaking millets in water (millets take the	1	2.9
disease)		
Bathing the child 7 times in the place where	1	2.9
the seizure occurred		
Total	35	100



Figure (1): Distribution of the study group according to gender.



Figure (2): Mothers and Fathers Education.

IlliterateQuatrain& Primary Secondary SchoolLevel University& Postgraduate School Education



Figure (3): Mothers occupation.

Figure (4): First and Recurrent Seizures.





Figure (5): Type of seizure in recurrent seizure.

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Simple Complex
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Туре

Figure (7): Possible causes of febrile seizures.



VII. Discussion

Febrile seizures area unit harmless conditions with a superb outcome, however is related to an excellent deal of tension and apprehension by the oldsters. It has been extensively studied in different countries relating to risk factors, clinical aspects and psychological impact however just the once in our country. The mean age of youngsters within the study was twenty two.4months that was corresponding to that found by Nelson(6) in his

cohort (23.25 months) however under that reportable by Parmar(86) (27.6 months) and Abdallah(92) (30.3 months). Male to feminine quantitative relation one.5: one that was the same as that reportable antecedently by Abdallah(92) (1.6 : 1) however above reportable between the Indian population by Parmar (86) and yankee population by Bethune(10) and Swiss population by Flury(84). Our findings, suggests FS may need a small male preponderance in Sudanese youngsters. Mean age of mothers in our study was corresponding to the mean age of mothers in Huangsstudy (1) however lower thereto reportable by Verity(61) and Van Suijvenberg(79). Mean age of fathers were comparable between them. One quarter of the mothers of youngsters within the study were illiterate, that may be a high share, however far higher than antecedently mentioned by Abdallah(92) twenty two years agone that seventy seven.2% of the mothers were illiterate. Only 12.1% of the fathers were illiterate. Parmar (86) found that thirty two.8% of his interviewed folks were illiterate. 37.7% of our mothers and 45.7% of our father's received high education (secondary college or higher education) compared to solely 12.9% of the Indian folks (86). This finding would possibly counsel that Sudanese population may need higher education than Indian. 2 thirds of our study cluster conferred with a primary FS that was the same as international studies (6.86), and slightly under antecedently reportable by Abdallah (92) in Sudanese youngsters (72.9%).In comparison to Abdallah's (92) study we tend to found a lower share of youngsters presenting with an easy seizure (97.1 vs 60.3%), however corresponding to that found by Verity(61). 28.4% of youngsters presenting with their 1st FS had a fancy seizure that is adequate to the figure reportable by the National cooperative prenatal Project study(4,6), however slightly above that found by Bethune(10). More than 0.5 (54.3%) of the complicated seizures were recurrences that is under that found by Admiral Nelson (6) UN agency reportable that 3 quarters of complicated seizures occurred as 1st seizures and also the risk for a fancy seizure was roughly constant for the primary FS.We found that over 1/2 youngsters UN agency conferred with recurrences had their seizure among the primary year of life. This finding is supported by Berg (62) UN agency found age of onset is one amongst the necessary risks for recurrences. Nelson (6) in his cohort has found constant share. We tend to found conjointly that just about all youngsters with perennial seizure had their 1st attack before a pair of years aged. Our share is way above Flury(84) has found in his study, 62 of youngsters whom he studied had their 1st FS once below two years aged. A lower mean age of onset for a FS was found in our study cluster sixteen.1 month when put next to the means that reportable by Nelson(6) (23.25 months) Parmar(86) (27.7 months), Van Esch(75) (20.4 months) and Flury(84) (21.9 months). In our study mistreatment statistical method of risk factors for a primary FS and matched case management statistics we tend to found that parental perception of slow development was related to the very best risk for developing a FS (OR: 7.59, RR 3.94). This can be followed by a positive case history of FS in a very second degree relative (OR: 7.20, RR 3.33), then a positive case history of FS in a very degree relative (OR 4.04, RR 2.65). Our findings weren't the same as those found in Bethune's study (10) assessing risk factors for a primary FS. Bethune's found that the best risk was related to a positive case history in a very first-degree relative (OR : 5.08), followed by infant discharge when twenty eight days (OR : 4.8), then parental perception of slow development (OR : 4.33), then FS in a very second degree relative (OR : 3.86) and last day care group action (OR : 3.13). None of our youngsters were attending on a daily basis care group action nor were discharged from the nursery when twenty 8 days, therefore these 2 risk factors couldn't be assessed. A positive case history in a very second-degree relative and parental perception of slow development appeared to be necessary risk factors for agitating FS in Sudanese youngsters. Berg (11) found height of temperature and history of FS in 1st or second degree relatives to be necessary risk factors. Huang (59) found FS within the siblings and variety of symptom episodes to be necessary predictors.One of our findings, that need to be mentioned, is that 47.9% of youngsters with perennial FS had that 1st seizure before one year aged, this can be in agreement thereto discovered by Nelson(6) that 1/2youngsters UN agency have their 1st FS throughout the primary year of life would have a return and Berg(62) in her meta-analytic review found the strongest predictor of perennial FS is early age of onset. Fever associated seizures was famous to most (97%) of fogeys interviewed. Our folks data of FS is way higher than Flury(84) (66%) and Parmar(86) (77.9%) findings in their studies. Misconceptions concerning the causes of convulsion weren't therefore current between our study clusters. 86.2% of the oldsters connected the reason behind convulsion on to fever and solely 6.9% directed the cause to looking and another 6.9% to black magic UN agency attributed the cause to fever. 90.5% of the oldsters couldn't differentiate straightforward FS from cerebral protozoal infection (fever, convulsions and loss of consciousness) as they mentioned once protozoa infection ascends to the pinnacle it will cause FS as the other infection. We tend to conjointly found that 10.3% of the oldsters couldn't differentiate between FS and cephalitis and infectious disease. 25.8% of the oldsters believed that maturation causes fever and therefore seizures and once the child erupts all his teeth he wouldn't be prone to any convulsing episode related to fever. This may be explained by the height age for FS coincides to the age of maturation and youngster's area unit sometimes vulnerable to infection throughout this age amount.33.6% of our folks thought-about FS a sort of brain disease. Only 52.6% mentioned its age dependent and 48.3% believed that the kid will surely have another seizure. Our finding was the same as those of Huang study(83) among Taiwan folks as he found. 38.4% of fogeys basic cognitive process it a sort of brain disease,

71.4% of fogeys for age dependent and 69.4% for definitely of getting another seizure. Risks throughout a seizure, as aspiration of physiological reaction was famous by solely 26.7%. We tend to were lucky to own solely twelve-tone system of our folks considering AN attack of FS a reason to delay the immunization schedule. Our results area unit far more higher than Huang(83) UN agency found in his study among Taiwan population that seventy.7% of the oldsters would interrupt the immunization schedule because of FS. This finding reflects the success the immunization program has achieved to illuminate the importance of vaccination. We discovered in our study the terribly weak role that health institutes, medical personnel and media play to produce health education. The supply of knowledge that was gathered from the oldsters were chiefly from neighbors and relatives (77.6%). These results were distant from Van Suijvenberg(79) study, among Netherlanders, in whom the most supply of knowledge were from health institutes and medical personnel. Others were the supply in exactly twenty sixth.FS was thought-about a serious critical event in most of our interviewed parents; solely 22.4% mentioned it may pass quiet. Van Suijvenberg(79) study found that four hundred and forty yards of fogeys mentioned FS may be a harmless condition.

VIII. Limitation of the Study

The limitation of the study was that a number of samples could not be analyzed due to the inadequate quality of the specimen. Overall this study resulted in giving an updated result of prevalence of febrile Seizure and the clinical finding in the Dhaka Shishu(Children) Hospital; it will help to estimate the disease burden of febrile diseases caused by Observation between two Units Clinical findings of Febrile Seizures. This will also help in characterization of the Seizure pathogens and thus lead to planning for vaccine intervention. The designing and proper choice of vaccine for the people particularly for Dhaka Shishu (Children) Hospital and other Febrile Seizures endemic to minimize the prevalence of disease.

IX. Conclusion

There was a small male preponderance, male to feminine magnitude relation of 1.5:1 and a lower mean age of onset and prevalence for FS among Sudanese youngsters. The magnitude relation between youngsters presenting easy advanced and sophisticated complicated seizures were as international studies however not like international studies 2 thirds of complex seizures were recurrences.Family history of FS in a very second degree relative and parental perception of slow development was found to be the foremost necessary predictors for a primary FS in Sudanese youngsters. Low age at onset for FS has appeared a crucial predictor for a repeated FS.Although fever associated seizures were noted to most of oldsters, poor data concerning the character of FS was current.Health education is lacking between our communities as easy risks of associate degree acute attack of seizure and aid to be applied throughout the seizure weren't noted.Health institutes and employees play an awfully weak role in providing health education to the community and most of the data were obtained from neighbors and relatives. Negative attitudes and high issues concerning FS were current and though concerning one quarter of the fogeys mentioned ancient treatment. FS was related to an excellent deal of tension within the oldsters that was found to be relieved by data concerning FS however not by the other issue like: repeat, case history of FS or academic level of the parent. We tend to found no association between earned data concerning FS and repeat, academic level of the parent or case history of FS.

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References

- Huaug MC, Liu CC, Huaug CC, Thomas U. Parental responses to first and recurrent febrile convulsions ActaNeutrolScand 2002; 105: 293-299.
- Kjeldson MJ, Kyvik KO, Friis ML, Christensen K. Genetic and environmental factors in febrile seizures: A Danish populationbased twin study. Epilepsy Res 2002; 51: 167 – 177.
- [3]. Sheila J Wallace. The child with febrile seizures. Butterworth 1988
- [4]. Camfield CS, Camfield PR. Febrile Seizures. Review Article Internet 2002
- [5]. American Academy of Pediatrics, Committee on Quality Improvement, Subcommittee on Febrile Seizures. Practice Parameter, The neurodiagnostic evaluation of the child with a first simple febrile seizure. Pediatr 1996; 97: 769-772
- [6]. Nelson KB, Ellenberg JH. Prognosis in children with febrile seizures. Pediatric 1978; 61: 720-727
- [7]. Verity CM, Golding J. Risk of epilepsy after febrile convulsion: a national cohort study. BMJ 1991; 303(6814):1373-1376
- [8]. Tarkka R. Pathogenesis, prevention of recurrences and outcome of febrile seizures. M.D Thesis. Oulu University 2003

[10]. Bethune P, Gordon K, Dooley J, Camfield C, Camfield P. which child will have febrile seizures. AJDC 1993; 147: 35-39

 ^{[9].} Rantala H, Tarkka R, Uharri M. Systematic review of the role of prostaglandins and their synthetase inhibitors with respect to febrile seizures. Epilepsy Res 2001;46: 251-257

- Berg AT, Shinnar S, Shapiro ED, Salomon ME, Crain EF, Hauser WA. Risk factors for a first febrile seizures. Epilepsia. 1995; 36 (4) 334-41
- [12]. Kuglar SL, Johnson WG. Genetics of the febrile seizures susceptibility trait. Brain Dev 1998; 20:265-274.
- [13]. Rich SS, Annergers JF. Complex segregation analysis of febrile seizures. Am J Hum Genet 1987; 41: 249-257?
- [14]. Racacho LJ, McLachlan RS, Ebers GC, Maherd, Bulman DE. Evidence favouring genetic heterogeneity for febrile convulsions epilepsia 2000; 41: 132-139.
- [15]. Wallance RH, Berkovie SF, Howell RA, Sutherland GR, Mullay JC. Suggestion of a major gene for familial febrile convulsion mapping to 8q13-21. Med Genet 1996; 33: 308-312.
- [16]. Johnson EW, Dubovsky D, Rich SS, O'Donovan CA, Orr HT, Anderson VE, Gil NA, Ahmann P, Donnen CG, Scheider DT, Weber JL. Evidence for a novel gene for familial febrile convulsion, FE
- [17]. Peiffer A, Thompson J, Charlier C, Otterud B, Varvil T, Pappas C, Barnitz C, Gruenthal K, Kuhn R, Leppert M. A locus for febrile seizres (FEB3) maps to chromosome 2q 23-24. Ann Neurol 1999; 46: 671-678.
- [18]. Nakayama J, Hamano K, Iwasaki N, Nakahara S, Horigome Y, Saitoh H, Aoki T, Maki T, Kikuchi M, Migita T, Ohto T, Yohouchi Y, Tanaka R, Hasegawa M, Matsui A, Hamaguchi H Arirami T. Significant evidence for linkage of febrile seizures to chromosome 5q14-q15. Hum Mol Genet 2000; 9:87-91
- [19]. Berkovic SF, Scheffer IE. Febrile seizures: genetics and relationship to other epilepsy syndromes CurrOpinNeurol 1998; 11: 129-134
- [20]. Wallance RH, Wang DW, Singh. Febrile seizures and generalized epilepsy associated with a mutation in the Na + channel beta 1 subunit SCN1B. Nat Genet 1998; 19: 366-370
- [21]. Wallance RH, Scheffer IE. Generalized epilepsy with febrile seizure plus: mutation of the sodium channel subunit SCN1B. Neurol 2002; 58: 1426-1429
- [22]. Baulas S, Gourfinkeland I. A second locus for familial generalized epilepsy with febrile seizure plus maps to chromosome 2q21q33. Am J Hum Genet 1999; 65: 1078-1085
- [23]. Moulard B, Guipponi M, Chaigne D. Identification of a new locus for generalized epilepsy with febrile seizure plus (GEFS +) on chromosome 2q24-q33. Am J Hum Genet 1999; 65:1396-1400?
- [24]. Lopes- Cendes I, Scheffer IE, Berkovic SF. A new locus for generalizes epilepsy with febrile seizure plus maps to chromosome 2. Am J Hum Genet 2000; 66: 698-701?
- [25]. Escayg A, MacDonald BT, Meisler MH. Mutation of SCN1A encoding a neuronal sodium channel in two families with GEFS +. Nat Genet 2000; 24: 343-345
- [26]. Escayg A, Heils A, MacDonald BT. A novel SCN1A mutation associated with generalized epilepsy with febrile seizure plus and prevalence in patients with epilepsy. Am J Hum Genet 2001; 68: 866-873?
- [27]. Wallance RH, Scheffer IE, Barnett S. Neuronal sodium channel alpha- subunit mutation in generalized epilepsy with febrile seizure Am J Hum Genet 2001b; 68: 859-865
- [28]. Sugawara T, Tsurubuchi Y, Agarwala KL. A missense mutation of the Na+ channel alpha II subunit gene sodium (V) 1.2 in a patient with febrile and afebrile seizures causes channel dysfunction. ProcNatlAcadSci USA 2001; 98:6384-6389.
- [29]. Baulac S, Huberfeld G, Gourfinkeland I. First genetic evidence of GABA (A) receptor dysfunction in epilepsy: mutation in the gamma 2-subunit gene. Nat Genet 2001; 28: 46-48.
- [30]. Wallance RH, Marini C, Petrou S. Mutant GABA (A) receptor gamma 2-subunit in childhood absence epilepsy and febrile seizure. Nat Genet 2001a; 28: 49-52.
- [31]. Berg AT. Are febrile seizures provoked by a rapid rise in temperature? AJDC 1993; 147: 1101-1103.
- [32]. Millichap JG. Studies in febrile seizures 1: height of body temperature as a measure of the febrile seizure threshold. Pediatr 1959; 23: 76-85.
- [33]. Uhari M, Rantala H, Vainionpa'a' L and Kurttila R. effect of acetaminophen and low intermittent doses of diazepam on prevention of recurrences of febrile seizures. J Pediatr 1995; 126:991-995.
- [34]. Barone SR, Kaplan MH, Krilov LR. Human herpes virus 6 infections in children with first febrile seizure J. Pediatr 1995; 127: 95-97.
- [35]. Kondo K, Naafuji H, Hata A, Tomomori C and Yamanishi K. association of human herpes virus 6 infections of the central nervous system with recurrence of febrile convulsion. J Infect Dis 1993; 167: 1197-1200.
- [36]. Hukin J, Farrell K, MacWilliam LM, Colbourne M, Waida E, Tan R, Monrz L and Thomas E. Case control study of primary human herpes virus -6 infections in with febrile seizure. Pediatr 1998; 101(2): E3.
- [37]. Jee SH, Long CE, Schnabel KC, Seghal N, Epstein LG, Hall CB. Risk of recurrent seizure after primary human herpes virus -6 induced febrile seizure Pediatr Infect Dis J 1998; 17: 43-48.
- [38]. Hirtz DG, Nelson KB, Ellenberg JH. Seizures following childhood immunization. J Pediatr 1983; 120: 14-18.
- [39]. Barlow WE, Davis RL, Glasser J W et al. the risk of seizures after receipt of whole cell pertussis or measles, mumps and rubella vaccine. N Engl J Med 2001; 345: 656-661.
- [40]. Seregi A, Forstermann U, Hertting G. the formation and regional distribution of prostaglandins D2 and F2 alpha in the brain of spontaneously convulsing gerbils. Brain Res 1985; 337: 171-174.
- [41]. Seregi A, Forstermann U, Hertting G. the formation and regional distribution of prostaglandins D2 and F2 alpha in the brain of spontaneously convulsing gerbils. Brain Res 1985; 337: 171-174.
- [42]. Wolfe LS, Mamer OA. Measurement of prostaglandin F2 alpha levels in human cerebrospinal fluid in normal and pathologic condition. Prostaglandins 1975; 9: 183-192
- [43]. Tamai I, Takei T, Maekawa K, Ohta H. Prostaglandin F2 alpha concentration in the cerebrospinal fluid of children with febrile convulsions, epilepsy and meningitis. Brain Dev 1983; 5: 357-362.
- [44]. Loscher W, Siemes H. Increased concentration of prostaglandin
- [45]. Ichyama T, Nishikawa M, Yoshitomi T, Hayashi T and Furukawa S. Tumor necrosis factors alpha, interleukin 1 beta and interleukin -6 in cerebrospinal fluid from children with prolonged febrile seizures. Neurol 1998; 50: 407-411.
- [46]. Tuntuncouglu S, Kutukeuler N, Kepe L, Coker C, Berdeli A and Tekgul H. proinflammatory cytokines, prostaglandins and zinc in febrile convulsion. Pediatr International 2001; 43: 235-239.
- [47]. Heminen M and Vesikari T. increase interleukin -1 production from LPS stimulated peripheral blood monocytes in children with febrile convulsions. ActaPaediatrScand 1990; 79: 810-816.
- [48]. Licinio J, Wong ML. Interleukin -1 beta and fever. Nat and Med 1996; 2: 1314-1315
- [49]. Blatteis CM, Schic E. circulating pyrogen signaling of the brain. Annals New York Academy of Science 1997; 813: 445-447.
- [50]. Marvin A Fishman. Febrile convulsions. Oski Pediatrics. Principles and practice textbook. 3rd edition. McMillan, DeAngelis, Feigin, Warshaw, editors. Lippincott- William and Wikins 1999: 1949-1952.

- [51]. Gerber MA, Berliner BC. The child with a simple febrile seizure. Appropriate diagnostic evaluation. Am J Dis Child 1981; 135: 431-433?
- [52]. Carrol W and Brookfield D. Lumbar puncture following febrile convulsion. Arch Dis Child 2002; 87:238-240.
- [53]. Lorber J, Sunderland R. Lumbar puncture in children with convulsions associated with fever. Lancet 1980; 1: 785-786.
- [54]. Joffe A, McCormick M, DeAngelis C. Which child with febrile seizures needs lumbar puncture? Am J Dis Child 1983; 137:1153-1156?
- [55]. Joint working group of the research unit of the Royal College of physicians and the British Pediatric Association. Guideline for the management of convulsions with fever. BMJ 1991; 303: 634-636.
- [56]. Hugen CA, Ondesluys-Murphy AM, Hopp WC. Serum sodium levels and probability of recurrent febrile seizures. Eur J Pediatr 1995; 154: 403-405.
- [57]. Nelson K, Ellenberg J. prenatal and perinatal antecedents of febrile seizures. Ann Neurol 1990; 27: 127-131.
- [58]. Forsgren L, Sidenvall R, K: son Blomquist H, Heijbel J, Nystrom L. An incident case referent study of febrile convulsions in children: genetical and social aspects. Neuropediatr 1990; 21: 153-159.
- [59]. Huang CC, Wang ST, Chang YC, Huang MC, Chi YC, Tsai JJ. Risk factors for a first febrile convulsion in children: a population based study in Southern Taiwan. Epilepsia 1999; 40(6): 719-725.
- [60]. Freeman JM. Febrile seizures: long-term management of children with fever associated seizures. Pediatr 1980; 66:1009-1012.
- [61]. Verity CM, Greenwood R, Golding J. long-term intellectual and behavioral outcomes of children with febrile convulsions. NEJM 1998; 338: 1723-1728.
- [62]. Berg AT, Shnnar S, Hauser A, Leventhal JM. Predictors of recurrent febrile seizures: A meta-analytic review. J Pediatr 1990; 116: 329-337.
- [63]. Esh A, Steyerberg EW, Berger MY, Offringa M, Derksen-Lubsen G, Habbema JDF. Family history and recurrence of febrile seizures. Arch Dis child 1994; 70: 395-399.
- [64]. El-Rahdi AS, Banajeh S. Effects of fever on recurrence rate of febrile convulsions. Arch Dis Child 1989; 64: 869-870.
- [65]. Verity CM, Butter NR, Golding J. febrile convulsion in a national cohort followed up from birth. I. Prevalence and recurrence in the first five years of life. Br Med J, 1985 b; 290: 1311-1315.
- [66]. Annergers JF, Hauser WA, Shirts SB, Kurland LT. Factors prognostic of unprovoked seizures after febrile convulsions. N Engl J Med 1987; 316: 494-498.
- [67]. MacDonald BK, Johnson AL, Saunder JW, Shorvon SD. Febrile convulsions in 220 children neurological sequelae at 12 years follow –up. Eur- Neurol 1999; 41(4): 179-186.
- [68]. Camfield PR, Camfield CS, Gordon K, Dooley JM. What types of epilepsy are preceded by febrile seizures? A population based study of children. Dev Med Child Neurol 1994; 36: 887-892.
- [69]. Rocca WA, Sharbrough FW, Hauser WA, Annergers JF, Schoenberg BS. Risk factors for generalized tonic clonic seizures: a population based case control study in Rochester, Minnesota. Neurol 1987; 37: 1315-1322.
- [70]. Ellenberg JH, Nelson KB. Febrile seizures and later intellectual performance. Arch Neurol 1978; 35: 17-21.
- [71]. Chang YC, Guo NW, Wang ST, Huang CC, Tsai JJ. Working memory of school aged children with a history of febrile convulsions: a population study. Neurol 2001; 57: 37-42.
- [72]. Chang YC, Gou NW, Huang CC, Wang ST, Tsai JJ. Neuro-cognitive attention and behavior outcome of school aged children with a history of febrile convulsions: a population study. Epilepsia 2000; 41: 412-420.
- [73]. Newman J. Evaluation of sponging to reduce body temperature in febrile children. Can Med Assoc J 1985; 132: 641-642.
- [74]. Rang HP, Dale MM. Pharmacology Second edition. Churchill Livingstone 1991.
- [75]. Van Esch A, Van. Steensel-Moll HA, Steyerberg EW, Offringa M, Habbema JD, Derksen-Lubsen G. Antipyretic efficiency of Ibuprofen and acetaminophen in children with febrile seizures. Arch pediatrAdolese Med 1995; 147(6): 632-637.
- [76]. Kauffman RE, Sawyer LA, Scheinbaum ML. Antipyretic efficiency of Ibuprofen vs acetaminophen. Med J Dis Child 1992; 146: 622-625.
- [77]. Perrott DA, Piira T, Goodenough B, Champion GB. Efficacy and safety of acetaminophen vs Ibuprofen for treating children pain or fever: a meta-analysis. Arch pediatrAdolesc Med 2004; 158: 521-526.
- [78]. Camfield PR, Camfield CS Shapiro SH, Cummings C. the first febrile seizure, antipyretic instruction plus either phenobarbitone or placebo to prevent a recurrence. J pediatr 1980; 97(1): 16-21.
- [79]. Van Stuijvenberg M, Derksen-Lubsen G, Steyerberg EW, Habbema JD, Moll HA. Randomized control trial of Ibuprofen Syrup administered during febrile illnesses to prevent febrile seizures recurrences. Pediatr 1998; 102(5): E51.
- [80]. Roseman NP, Colton T, Labbazzo J et al. A controlled trial of diazepam administered during febrile illnesses to prevent recurrence of febrile seizures. N Engl J Med 1993; 329: 79-84
- [81]. Farwell JR, Lee YJ, Hirtz DJ, Sulzbacher SI, Ellenberg JH, Nelson KB. Phenobarbitone for febrile seizures effects on intelligence and on seizure recurrence. N Engl J Med 1990; 322: 364-369.
- [82]. Baumer JH, David TJ, Valetine SJ, Roberts JE, Hughes BR. Many parents think their child is dying when having a first febrile convulsion. Dev Med Child Neurol 1981; 23: 482-484.
- [83]. Huang MC, Liu CC, Huang CC. Effects of an education program on parents with febrile convulsive children. PediatrNeurol 1998; 18: 150-155.
- [84]. Flury T, Aebi C, Donali F. febrile seizures and parental anxiety, does information help? Swiss MED WKLY 2001; 131: 556-560.
- [85]. Stuijvenberg MV, Vos SD, Tjiang GCH, Steyerberg EW, Derksen-Lubsen G and Moll HA. Parents fear regarding fever and febrile convulsions. ActaPaediatr 1999; 88: 618-22.

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