Journal Homepage: -www.journalijar.com
INTERNATIONAL JOURNAL OF ADVANCED RESEARCH (IJAR)
Article DOI:10.21474/IJAR01/7157
DOI URL: http://dx.doi.org/10.21474/IJAR01/7157

RESEARCH ARTICLE

PROFILE OF DENGUE FEVER CHILDREN IN OUR SET UP.

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Manuscript Info

Manuscript History

Received: 21 March 2018
Final Accepted: 23 April 2018
Published: May 2018

Abstract

Introduction:-

Dengue fever is caused by several Arthropods borne viruses and is characterized by phasic fever, myalgia or arthralgia, rash, leucopenia and may be lymphadenopathy.

Dengue hemorrhagic fever(DHF) is a severer often fatal febrile disease characterized by abnormal capillary permeability , thrombocytopenia , abnormality of homeostasis ,and in severe cases protein losing shock syndrome (Dengue shock syndrome), There are atleast four distinct antigenic types of dengue virus ;member of family Flavi viridae of arthropod borne virus (arbo viruses) which cause identical febrile disease with rash . The four virus types which are designated DEN 1 to DEN 4 are antigenically similar.Infection with one serotype confers immunity to that serotype(1,2) .Dengue viruses are transmitted by mosquito Aedes Eegypti and in certain parts by day time biting mosquito surviving on fresh stored water.

Severe dengue occurs where multiple types of dengue viruses are simultaneously affecting or second time infection with different serotype occurs (3).

Dengue viruse's strains circulating in South East Asia since 1983 and are associated with particularly severe clinical syndrome characterized by encephalopathy, hypoglycemia, markedly elevated liver enzymes and occasionally Jaundice . in recent years morbidity due to dengue has increased in pediatric population affecting school attendance and well being of child. Hence present study was conducted to analyse profile of dengue pediatric patients where paradigme is shifting from patient's requiring more of critical care(1,2,4).

Material and Methods:-

In present study 85 children admitted to Pediatric wards of Government Medical College and Rajindra Hospital Patiala with signs and symptoms of dengue fever with age ranging from <1 year to 15 years were chosen as subjects of study for inclusion in study. For the purpose of study children were subgrouped according to the gender and different age groups. Less than 1 year , more than 1 year to 5 years , more than 5 years to 10 years and more than 10 years to 15 years respectively.

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Name , age , gender , address , anthropometry , serial vitals record ,general physical examination , systemic examination , serial record of temperature ,serial record of blood pressure ,clinical presentation,treatment modalities as per guidelines , duration of treatment , Age Group , lab investigation for NS1.Dengue serology , complete blood count ,peripheral blood film , serial platelet counts , hepatic enzymes ,widal test ,blood and urine cultures , renal profile were recorded on pre tested , pre designed performa and data so obtained was analysed for the purpose of study.

All cases diagnosed with Malaria,Enteric Fever, PneumoniaorMeningitis after investigation were excluded from study.

This Cross-sectional and observational study was conducted for period of(April to September) 6 months.

Results and observation:-

85 children presenting to Pediatric wards with fever , body aches and rash were diagnosed with Dengue fever upon clinical examination and serology. out of 85 children 50 (59 %) were male and 35 (41%) were female.

Distribution of children as per age group – only one child (1.1%) presented in the age group of less than one year , 14 (16.4%) children presented in the age group of less than 5 years , 18 (21.3%) children presented in the age group of less than 10 years ,52 (61.1%) children presented in the age group of more than 10 years upto 15 years. As described in Table 1 & 2

Table no.1:-Distribution of children as per gender

Distribution of children as per age and gender	No. of children n=85	Percentage 100%
Gender		
Male	50	59 %
Female	35	41 %
Total	85	100%

Table no.2:-Distribution of children as per different age groups

Age group	No. of cases N=85	Percentage 100%
<1 year	1	1.1%
>1 yr-5 yr	14	16.4%
>5 yr-10 yr	18	21.3%
>10 yr-15 yr	52	61.2%

Table no.3:-Distribution OF Children as per signs and symptoms		
Pyrexia	No. of cases n=85	Percentage (100%)
Grade of pyrexia	Mean temp 102.5±1°F	
Duration of pyrexia	120±2 hrs	
Table no.-4		
Rash	No of cases	Percentage
Presence of rash	n=80	94%
upper and lower limbs	n=48	56.4%
Face	n=11	12.9%
Abdomen and chest	n=21	24.7%
Edema	number n=34	40%
Ascitis	Number n=12	14%
Pleural effusion	n=2	0.2%
Headache	n=75	88.2%
Myalgia and Arthralgia	n=76	89.4%

Table no.5:-Distribution of children as per systolic blood pressure on admission.		
Systolic Blood pressure	Total number n=85	Percentage 100%
<10th centile	n=4	7%
<25th centile	n=8	9%
<50th centile	n=10	11%

Table no.6:-Profile of hepatic enzymes and platelet count

Elevated Hepatic enzymes	Total n=85	Percentage
	n=22	25.8%
Platelet count <50,000	n=20	23.5%
50,000-75,000	n=22	25.8%
75,000-100000	n=23	27%
100000-1,50000	n=20	23%

Table no.7:-Distribution of children as per response to treatment

Duration of fluid therapy = 72 hrs	Number of children, n=40	Percentage 47%
96hrs	n=32	37.6%
120 hrs	n=13	15.2%
Colloid dextrantherapy	n=11	13%
Platelet transfusion	n=80	94%

As depicted in table no. 3,4,5,6. Average elevation of temperature was 102.5±1°F and mean hours of duration of fever was 120±2 hrs Rash was observed in 80 (94%) children, on upper and lower limbs in 48 (56.4%) children, on face in 11 (12.9%) children,on abdomen & chest in 21 (24.7%) children.

Edema was observed in 34 (40%) children , Ascitis in 12 (14%) children ,pleural effusion in 2 (0.2%) children.
Systolic bp measured on admission for <10th centile in 4(7%) children,for<25th centile in 8(9%)children,for <50th centile in 10(11%) children.

Elevated hepatic enzyme was seen in 22(25.8%) children.

Thrombocytopenia was seen in 100% of cases out of which platelet count <50,000 in 20(23.5%) children ,50,000-75,000 in 22(25.8%)children,75,000-100000 in 23(27%) children,1,00000-1,50000 in 20(23%) children.

children were observed 4 hourly for vitals , blood pressure , thereafter 8 hourly daily observation for new appearance of rash or petechiae.

All the children were prescribed the fluid therapy, sponging , paracetamol , colloid dextran administration and platelets transfusion in babies who did not respond to fluid therapy alone or thrombocytopenia was below critical level.

Children were discharged upon achieving normothermia for 48 hrs .platelets > 1.5 lacs and normtension. Average loss of school absence as calculated on discharge as ten days.Follow up revealed absence from school for another five days in fifty percent of children

Discussion---Global burden of dengue fever has increased in the recent decade(5) hence the relevance of our study.Total 85 cases were analysed for purpose of study.58.8% 0f children were males while 41.1% were females which is almost consistent with other studies(6) slightly increased number of reporting of male children could be due to gender preference .Study was conducted in breeding season of mosquitoes similar to other studies(7).In our study fever was present in all children while Headache with Myalgia&Arthralgia were the most common complaints in accordance with previous study(7).Bleeding in dengue is multifactorial .Subcutaneous bleed in form of purpuric rash was present as common presentation and involvement of larger did not correlate well with decreasing platlet count(8) as other factors which lead to bleeding are thromboasthenia ,fibrinogen consumption and

vasculopathy(9).Tourniqet test was found to be negative in almost all the children which is in contrast to other studies(8).Negative tourniquet test may be due to darker skin colour of Indian children.other critical clinical findingsof hypotension, pleural effusion, respiratory distress were consistent with other studies(7,8).In our study severity of thrombocytopenia was observed in severe dengue in our study(10). Hepatic enzymes were raised in one third of cases (7,8).There was no mortality due to disease as compared to previous studies which may be attributed to seeking early treatment and early intervention.

Conclusion:-

Dengue fever is cause of significant morbidity. Early recognition and intervention prevents mortality.

References:-

1. National guidelines for clinical management of degue fever NVBDCP 2008 updated 2o17
2. Indian National guidelines for clinical management of Dengue fever 2015
3. Ashutosh Biswas,Ghanshyam Pangtey,Veena Devgan,Paras singla,PranaMurthy,AC Dharivel,PK Sen,Kalpana Baruah Mizumoto K,Ejima K,Yamamoto T,NishiveraH on the risk of severe dengue during second infection a systematic review coupled with mathematical modality ,j vector borne dis 2014;51:153
4. WHO Guidelines for Dengue Hemorrhagic fever 2017
5. World health organization WHO report on global surveillance of epdemic prone infectious diseases
6. Pathi S,Budriyanto,Puspitasri D etal application of revised dengue classification in Indonesia south east asian journal of tropical dis and public health 2010;41(5):1088-1094
7. Ahmed S ,Arif F,Yahja y etal Dengue fever outbreak in Karachi 2006 a study of profile & outcome children under 15 years of age .Journal of Pakistan Medical Association 2008 ,58(1):4-8
8. Joshi R,Baid vProfile of dengue patients admitted to a tertiary care hospital in mumbai,The Turkish journal of Paediatrics 2011;53(6)626-663
9. Mittal M,Faridi MMA,Arora S.K Haematological profile &platlet trends in children with dengue during 2010 epidemic in north india.Indian journal of paediatrics 2012;79(4) 467-471
10. Rataferi VH,Sheper T.A,Wari P.K etal outcome of dengue fever cases Indian journal of paediatrics 2005 72(8) 705-706