ORIGINAL ARTICLE

Changing Pattern Of Dengue Syndrome Among The Cases Reported At HFRCMCH

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Abstract

At the 1st outbreak of Dengue in Bangladesh in 2000 the data of all the patients who were admitted in Holy Family Red Crescent Hospital were systematically collected in prescribed form. A total of 2154 Patients with dengue were studied up to December 2002. Only those patients were included who were proved dengue by clinically as well as serologically (either positive IgG or IgM or both) positive. The purpose was to evaluate the clinical as well as laboratory parameters of the disease in our country. After analyzing the results it was found some clinical presentation & laboratory parameters revealed that the disease was more dreaded in the out break (in 2000) and became less virulence in the subs sequent years.

Background

Before the year 2000, dengue fever was sporadically present in Bangladesh and our population was nearly in dark about this dreaded disease. During the alarming outbreak of Dengue and Dengue Haemorrhagic Fever in June 2000, our doctors had only paucity of knowledge about the disease. But due to the sustained epidemicity of the disease for the last consecutive three years our knowledge about the disease has advanced a lot. Day to day follow up of the disease pattern is undoubtedly helpful for the early diagnosis and improved management of the disease.

In this study we compared the clinical presentation, disease course and laboratory parameters of the patients admitted in the Holy Family Red Crescent Medical College Hospital the last three epidemics. We noticed that the disease was more dreaded in the very first year of outbreak and the presentation became less severe in subsequent years.

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Methodology

This prospective study was carried out in the Holy Family Red Crescent Medical College Hospital, Dhaka for last 3 years starting from June 2000 to December 2002. In this study we have taken only those patients who were confirmed Dengue by Positive serological test (either IgG or IgM or both)[1,2]. A total of 2154 patients were enrolled in this study in the three consecutive years. A detailed clinical history was taken including Pattern of rash, bodyache, headache, and bleeding manifestation. All laboratory investigations including leucocyte count, pcv, platelet count and serological test were observed. The fate of the disease including DSS and fatality were also considered.

Results

A total 2154 hospitalized patients of Dengue fever in the three successive years, 2000-2002 was included in this study to see the clinical pattern & laboratory parameters, either changing or static. All age group starting from young children to old aged (1 years to >50 years) patients were taken as consideration. Among them male group were slightly higher than female group (58% vs. 42%) considering the clinical parameter patients presented with

severe headache was 68% in 2000 and 42% in 2002, bleeding manifestation from multiple site was 32% in 2000 & 08% in 2002, nephrotic syndrome was not detected in 2000 & 2001 but 02% of patient were detected nephrotic changes and protienurea in 2002, severe form of gastro enteritis was 26% in 2000, 28% in 2001 but 39% in 2002. The rash pattern was also changed significantly including well-localized form in 2002, which was more widely distributed in 2000. Dengue shock Syndrome (DSS) were 08% in 2000, 06% in 2001, and 03% in 2002. Among laboratory parameters life threatening low platelet count (20,000) was 23.88% in 2000, 11.4% in 2001 & 7.17% in 2002. Last of all the entire casualty was 1.48% in 2000, .81% in 2001 but only 0.34% in 2002. The findings reveals that the disease was more dreaded in the very first year of out break & became less severe in sub sequent years.

Table – I Age distribution of the patient (n= 2154)

Age Group	Year 2000	Year 2001	Year 2002
1-10 years	27	38	44
11-20 years	78	97	123
21-30 years	246	347	367
31-40 years	88	132	212
41-50 years	55	71	74
> 50 years	46	51	58
	540	736	878

Table –II Sex distribution of the patient (2154)

Year	Sex	No. of Patients	Percentage
2000	Male	329	61
	Female	211	39
2001	Male	412	56
	Female	324	44
2002	Male	509	58
	Female	369	42

Table – III Symptoms presented by the patients (in percentage)

Symptoms	Year 2000	Year 2001	Year 2002
Fever	100	100	100
Headache	87	93	82
Severe Headache	68	61	42
Generalized Bodyache	52	43	36
Bleeding Manifestation	31	24	22
One Site	68	83	92
Multiple Site	32	17	08
Skin Rash	69	66	62
Gastroenteritis	26	28	39
Nephrotic Syndrome	Nil	Nil	02
Dengue Shock Syndrome	08	06	03

Table – IV Pattern of rash presented by the patients

Pattern of rash	Year 2000	Year 2001	Year 2002
Generalized Rash with subconjunctival haemorrhage	263	57	107
Generalized but marked in lower limbs	120	425	135
Marked in the chest only	78	85	440
No rash	79	169	201

Table – V Laboratory data of patients in different years

Year	2000	2001	2002
Platelet Count/cmm			
>100000	93	111	133
100000- 50000	180	381	524
49000 - 20000	138	162	158
< 20000	129	84	63
Serology (+ve)			
IgG	432	590	702
IgM	81	109	131
Both	27	39	45
Leukopenia <4000/cmm			
	426	562	581

Table – VI Comparison of major manifestations in different years

Year	Extensive rash	Threatened low platelet count	Severe Haemorrhage	DSS
2000	12%	21%	8%	8%
2001	10%	19%	5%	6%
2002	11%	12%	3%	5%

Table – VII Comparison of Mortality rate in different years

Year	Number of patient died	Percentage
2000	08	1.48%
2001	06	0.81%
2002	03	0.34%

Discussion:

Among the total number of Patients (2154) the peak age incidence was in 21-30 years age group (44.56%) next common was 31-40 Years age group (20.05%). Male Patients were 1249 (58%) and female were 905(42%). The age and sex distribution was almost same in each year.

In this study all patients presented with fever. Headache, bleeding manifestation and skin rash were the other major presentations every year. Severe headache was present in 68% patients in 2000 and only 42% in the year 2002, which significantly decreased and like this major bleeding manifestation from multiple sites were 32% in the year 2000 and 08% in the year 2002. Nephrotic syndrome was not detected in the year 2000 and 2001, but we got 02% of patients presented with this syndrome in 2002[3,4]. The incidence of gastrointestinal presentation increased gradually. Severe form of gastroenteritis was present in 26% of patients in the year 2000, 28% of patients in 2001, and the figure rose up to 39% in 2002. The rash pattern of the patients also changed significantly which was initially more marked as generalized distribution in the whole body in the year 2000 has changed to be more marked only in the chest wall in the year 2002. Last of all the major complication of dengue fever, The Dengue Shock Syndrome (DSS) was found to be reduced in incidence in the following years after the outbreak and was evident by the number 08% of patients in the year 2000, 06% of patients in the year 2001 and only 03% of patients in the year 2002.

All our study patients were seropositive. But in other laboratory test we noticed that the incidence of life threatening low platelet count (<20000/cmm) has also reduced. It was 23.88% in the year 2000, 11.4% in the year 2001 and in7.17% in the year 2002.

In our study we also noticed less casualty in the successive years. It was 1.48% in 2000, 0.81% in 2001 but only 0.34% in 2002.

Conclusion:

After the emergence of epidemic Dengue syndrome in the year 2000 we studied 2154 seropositive Dengue patients for consecutive three years up to 2002. Though we observed that the basic symptoms of Dengue Syndrome remain same, there were some variations in the presentations and severity of the disease along with some changes in the laboratory parameters[5]. We noticed that the number of severe haemorrhagic manifestation & Dengue Shock Syndrome was gradually decreasing in successive two years after the onset of the disease in the year 2000. At the same time we also noticed that more patients presented with acute gastroenteritis & nephrotic syndrome in the following years. Mortality rate reduced significantly in the same way. Though this changing pattern of DS is not very significant and is not creating any major changes in the diagnosis and management modalities still we can say that DS is becoming less virulent & for

final comment we have to wait for the coming years.

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