



Clinical Features And Haematological Profile Of Dengue Fever

KEYWORDS

DF : dengue fever ,clinical features ,laboratory profile.

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ABSTRACT

It is retrospective analysis of clinical and laboratory features of dengue fever (DF) at S.K.N. medical college hospital, Narhe, Pune from Jan. 2010 to Dec. 2011. We found 20 patients of DF in our study. The common clinical features were fever (100%), myalgias (50%), headache (25%), vomiting (25%) and pain in Abdomen (15%). Haemorrhagic manifestations were absent in our study. Laboratory investigations revealed thrombocytopenia (75%) and leukopenia (50%) in our cases. The platelet count is not predictive of bleeding. The role of platelet transfusion is justified only in patients with active bleeding. At the most, it can be suggested that empirical transfusion may be administered in dengue patients without bleeding with a platelet count of less than 20,000-25,000/cmm.

Introduction

The incidence of dengue fever (DF) has increased manifold in last four decades. In developing nations like India, unplanned urbanisation and migration of population from rural to urban areas with complete lack of proper sanitation facilities are important factors resulting in this situation. The situation in India is reflected by the occurrence of major disease outbreaks in recent times.^{1,10} Dengue fever is caused by a flavivirus and transmitted by mosquitoes of genus *Aedes aegypti*. We have undertaken retrospective analysis of clinical and laboratory features of patients admitted at S.K.N. medical college hospital, Narhe, Pune from Jan. 2010 to Dec. 2011.

Material and Methods

Cases suspected of dengue fever who were admitted in medical wards, were classified according to the WHO guideline. The data regarding clinical and laboratory features were collected from Jan.2010 to Dec.2011. All pertinent laboratory investigations were carried out on the first day of admission and subsequently if required. The samples for dengue IgM (MAC ELISA) were sent.

Platelet count was done with automated 'coulter' machine and also manually cross-checked. Patients were managed on following lines Fluid and electrolytes to replenish the deficit. Platelets were transfused when count dropped below 20,000/cmm. Paracetamol was given for fever and no antimicrobials were routinely given unless there was concurrent bacterial infection.

Results

We found twenty patients in our study. Out of twenty patients, 13 were males & 7 were females. It was seen that maximum patients were in the age group of 21- 40 years as shown in table No.1. Age ranged from 14 to 65 years.

Table 1: Sex & Age Distribution of Patients

Age (Yr)	Male	Female	Total
< 20	4	1	5
21 – 40	7	2	9
41 – 60	2	3	5
> 60	0	1	1
Total	13	7	20

All patients had fever at that time of admission clinical features of the disease are tabulated in table No. 2.

Table 2: Clinical Features of Patients

Clinical Features	No. of Patient	Percentage %
Fever	20	100
Myalgia	10	50
Headache	5	25

Vomiting	5	25
Pain in abdomen	3	15
Arthralgia	3	15
Dry cough	3	15

Other common clinical features were myalgia (50%), headache (25%), vomiting (25%) & pain in abdomen (15%).

Details of laboratory finding are shown in table No.3.

Table 3: Laboratory Finding of Patients

Profile	No. of Patients(%)
Leukopenia	10(50%)
Thrombocytopenia	15(75%)
Anaemia	6(30%)
Dengue IgM +ve	20(100%)

Table 4: Platelet Counts of Patients.

Platelet Count	No. of Patients
< 20,000	3
>20,000-30,000	4
>30,000-50,000	3
>50,000-70,000	2
>70,000-1,00,000	3
>1,50,000	5

Average hospital stay of dengue patients was 7.9 days.

Discussion

Due to changing climate, urbanisation, poor living conditions and inadequate waste management, vector born diseases like dengue fever are becoming more common. Although vector control programs are launched in endemic countries every year yet dengue fever has become a serious problem worldwide. India being a tropical country provides suitable weather for *Aedes* mosquito to grow and an increase in the disease burden has been noticed in recent years.

We found 20 patients of dengue fever in our study. It is observed that males were more than female as is also reported in other studies.^{4,7}

The clinical profile of dengue patients in this study revealed that fever was present in all the patients. Similar studies ^{2,3,4,5} have also substantiated fever as being the most common presenting symptom though Ashwini³ found 83.9% patients presenting with fever. Other common symptoms observed in our study were myalgias (50%), headache (25%), vomiting (25%), pain in Abdomen (15%) and it is consistent with many other studies done in recent past.^{4,5} In our study arthralgia (15%) and dry cough (15%) were also seen and it is consistent with other studies done in India ² and Pakistan ⁵.

Haemorrhagic manifestations were absent in our study. This variation may indicate exposure status of studied populations.⁵ None of patient died in our study.

Laboratory investigations revealed thrombocytopenia in 15(75%) patients, leukopenia in 10(50%) patients. 5(25%) patients had normal platelet count. Out of 15 thrombocytopenic patients, 3 patients were having >70,000- 1,00,000 count. 2 patients >50,000- 70,000; 3 patients >30,000- 50,000; 4 patients >20,000- 30,000; and 3 patients were having <20,000/cmm platelet count. One patient of platelet count 5,000/cmm, received 6 units platelet transfusion. Another two patients received 4 units each platelet transfusion with platelet count less than 20,000/cmm. blood transfusion was not given to any patient as there was no overt bleeding.

It needs to be emphasised that we should not treat platelet count in dengue like 'sensex' of share market, viz., an increase

or decrease 'reflecting on the economy of the nation'⁸. In fact, the platelet count is not predictive of bleeding⁶. The crux in treatment of dengue patient is maintenance of good hydration, monitoring for any overt bleeding and not "panic" if the platelet count is more than 50,000/cmm and less than 1,50,000/cmm^{1,6}. The role of platelet transfusion is justified only in patients with active bleeding. At the most, it can be suggested that empirical transfusion may be administered in dengue patients without bleeding with a platelet count of less than 20,000-25,000/cmm^{1,6,10}. Dengue patients should preferably receive single-donor apheresis platelets (SDAP) as compared to random-donor platelets (RDP) to lower the risk of alloimmunisation.⁹

Conclusion

Significant number of patients showed listed clinical and haematological features can be used for early diagnosis and prevention of complication of dengue fever.

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