RESEARCH ARTICLE

A STUDY OF CLINICAL PROFILE, LABORATORY INVESTIGATION AND COMPLICATION OF DENGUE FEVER

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ARTICLE INFO	ABSTRACT
	Dengue is an important cause of morbidity and mortality in tropical countries where thousands of people get infected by dengue virus. This is an observational study done on 100 dengue patients to study the different clinical symptoms, laboratory investigations and its correlation with the worsening as well as complications.

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INTRODUCTION

Dengue is a self limiting acute mosquito transmitted disease characterized by fever, headache, muscle, joint pains, rash, nausea and vomiting. Dengue Fever (DF) is caused by an arbovirus and spread by Aedes mosquitoes. Sometimes dengue fever result in Dengue Hemorrhagic Fever (DHF) and in its severe form Dengue Shock Syndrome (DSS) can threaten the patient's life primarily through increased vascular permeability and shock .Over the past two decades, there has been global increase in the frequency of DF, DHF and its epidemics, with a concomitant increase in disease incidence. This study is done to know clinical presentation in Dengue infection, To study Haematological, Biochemical and Radiological profile in Dengue infection, To correlate complication and mortality in Dengue infection.

METHODOLOGY

The present study includes patients of confirmed dengue infection admitted in new civil hospital Surendranagar September 2017 onwards, total of 100 patients were taken.

Inclusion Criteria

- Patient > 14 year of age
- Dengue Ns1 Antigen Test positive case.

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Exclusion Criteria:

- Patient who are negative for dengue Ns1 Anigen test.
- Patient with P.Falciparum/ P.Vivax positive in peripheralsmear.
- Patient having Enteric fever with S.Widal Positve.

Platelete criteria for observation:

Platelet Count(/mm^3)	Severity
>20,000	Severe
20,000 – 50,000	Moderate
>50,000	Mild

WBC Count(/mm3)	Condition
4,000 -11,000	Normal
>4,000	Leucoponia
<11,000	Leukocytosis

OBSERVATION

Table 1. Gender distribution

SEX	NO.OF PATIENT	PERCENTAGE
Male	56	56%
Female	44	44%
Total	100	100%

Graph 2. Age distribution

Age Group (Year)	No. of patient	Percentage
15-25	30	30%
26-35	29	29%
36-45	21	21%
46-55	16	16%
>55	4	4%
TOTAL	100	100%

Table 3. Distribution of patients according to symptoms

Symptoms	Number	Percentage
Fever	100	100%
Myalgia	68	68%
Arthralgia	60	60%
Vomiting	22	22%
Headache	80	80%
Abdominal pain	40	40%
Diarrhea	18	18%
Rash	20	20%
Malena	8	8%
Altered sensorium	6	6%
Breathlessness	6	6%

Table 4. Distribution of cases according to signs

Signs	Number	Percentage
Tourniquet Test	12	12%
Pleural effusion	20	20%
Ascites	24	24%
Petechiae / Ecchymoses	8	8%
Hepatomegaly	15	15%
Spleenomegaly	5	5%
Subconjunctival hemorrhages	4	4%

Table 5. Grading of dengue virus infections

Grading of DV infection	No. of patients	Percentage
Classical DF	60	60%
DHF Grade – I	16	16%
DHF Grade – II	16	16%
DHF Grade – III	6	6%
DHF – IV	2	2%
Total	100	100%

Table 6. Distribution of cases according to Hematological Laboratory findings

Investigation		No. of patients	Percentage
Rise in haematocrit (%)	> 20%	16	16%
	< 20%	64	64%
	Normal	20	20%
Platelet count (/mm^3)	< 10,000	10	10%
	10,000 – 20,000	18	18%
	20,000 – 50,000	44	44%
	50,000 – 1,00,000	18	18%
	> 1,00,000	10	10%
Leucocyte count (/mm^3)	< 4,000	64	64%
	4,000 – 11,000	32	32%
	> 11,000	4	4%

Table 7. Distribution of patient according to liver function test

Liver function tests	No. of patients	Percentage
Normal	68	68%
Deranged	32	32%

Table No. 8. Distribution of patient according to Coagulation profile

Coagulation profile	No. of patients	Percentage
Normal	72	72%
Deranged	28	28%

CONCLUSION AND DISCUSSION

In our study 100 serologically confirmed cases of dengue viral infection, majority of the patients were in adult age group. Among 100 patients 60% of the patients had to classical dengue fever with other 32% of the patients had dengue hemorrhagic fever and only 8% cases had dengue shock syndrome. All the patients had fever and 60-80% patients had constitutional symptoms like arthralgia, headache, myalgia and 20-40% had abdominal pain, vomiting, diarrhoea etc. Evidence of plasma leakage in the form of ascites and pleural effusion was present in 48% cases and circulatory failure in 8% cases. 16% patients had petechiae / ecchymoses and 8% patients had evidence of spontaneous hemorrhagic manifestations with malena. Average time taken to raise platelet count to near normal was 5 to 6 days. Severity of deranged aPTT had significant correlation with severity of bleeding manifestations. Mortality in DHF was mainly related to the complications of the DHF, so early recognition of the disease and prevention rather than treatment of complications are most important for the favourable outcome of the disease.

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