



ORIGINAL RESEARCH PAPER

General Medicine

A STUDY OF CLINICAL PROFILE AND PROGNOSTIC FACTORS IN DENGUE FEVER IN TERTIARY CARE HOSPITAL

KEY WORDS: Dengue fever, Dengue hemorrhagic fever; Dengue shock syndrome

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ABSTRACT

Dengue is a significant health problem in many parts of India and Kurnool, Andhra Pradesh is one of the endemic areas for dengue. Several factors have been attributed to increased morbidity and mortality in dengue with altered hematological and coagulation parameters playing an important role. Infection with the dengue virus can cause a spectrum of three clinical syndromes, classic dengue fever, dengue hemorrhagic fever, and dengue shock syndrome. The present study was undertaken to determine the disease profile of dengue virus Infection and to identify factors affecting prognosis in dengue fever. **Methods And Material:** Fifty patients admitted in Kurnool Government General Hospital, Kurnool with fever more than 38.5°C and IgM dengue or NS1Ag positive were selected. They were followed from the onset of fever to twelve days or till they are recovered according to WHO discharge criteria whichever is earlier. **Results:** Out of total 50 patients, 26% belong to the DF group, 14% belong to the DHF-1 group, 48% belong to the DHF-2 group, 6% belong to DHF-3, and the remaining 6% belong to DHF-4 group. In present study fever is seen in 100%, arthralgias in 50%, myalgias in 50%, headache in 62%, bleeding manifestations in 28% cases, abdominal pain in 24% cases and vomiting in 56% cases. Among the total of 50 members, 12% of the cases are in shock, among which 6% belong to dengue hemorrhagic fever type-3, and 6% belong to dengue hemorrhagic fever-type-4. Leucopenia is seen in 36% of cases, whereas 12 % of cases showed leucocytosis. Thrombocytopenia is seen in 100% of cases. AST levels are elevated when compared to other liver enzymes **Conclusion:** Dengue fever was a more common manifestation than DHF or DSS. During an epidemic, dengue should be strongly considered on the differential diagnosis of any patient with fever. The treatment of dengue is mainly fluid management and support.

INTRODUCTION

Dengue fever is a mosquito born viral infection occurred commonly in tropical and sub tropical areas. It is caused by Dengue virus which is having four sero types. Vector being aedes aegypti mosquito. Dengue fever is categorised into mild dengue fever characterized by fever and flu like symptoms. Severe form also called dengue hemorrhagic fever associated with fever, shock, bleeding manifestations. Another form of severe dengue fever presented dengue shock syndrome.

Warning signs include severe abdominal pain, vomiting, breathlessness (Respiratory Distress), bleeding per nose, gums, petechial hemorrhages, hematemeses melaena. Severe dengue fever is a life threatening medical emergency which requires immediate medical care.

AIMS AND OBJECTIVES

1. To identify the clinical profile in dengue fever.
2. To identify the factors affecting prognosis in dengue fever.

MATERIALS AND METHODS

The present study is conducted in Kurnool Medical College, Kurnool from the period of July 2017 to July 2019. Informed consent is taken from all the patients during the study.

Study Design-

It is a prospective cohort study over two years through sample and sampling techniques. A total of 50 patients admitted to the hospital with a history of fever of more than 38.5°C and eight IgM dengue positive or NS1Ag positive will be selected using purposive sampling techniques. They are followed from the onset of fever to time of recovery or discharge according to WHO discharge criteria, whichever is

earlier. The following investigations will be done- blood counts, IgM dengue. Clinically patients are monitored, and platelets, LFT, ultrasound abdomen, and chest x-ray are done.

Inclusion Criteria:

1. patients with clinical suspicion of dengue with acute febrile illness of 2-7 days with any one or more of the following -myalgia, headaches, retro-orbital pain, vomiting, abdominal pain, hepatomegaly, spontaneous bleeding manifestations (skin petechiae, ecchymoses or purpura, gums-gingival bleeding, epistaxis, gastrointestinal-disseminated intravascular coagulation, hematemeses, Melaena)
2. All subjects who are seropositive cases for any one or all of the following NS1Ag, IgM, IgG Antibodies for dengue.

Exclusion Criteria:

1. Patients with fever due to other causes.
2. Patients with bleeding manifestations due to other causes
3. Patients below 14years.
4. Data collected will be analyzed by frequency, percentage, mean, standard
5. Deviation (S.D). The data of all the patients will be entered into Microsoft Excel and analyzed using Graph pad prism version 6. Data cleaning and editing will be performed on a timely basis. To ensure adequate accuracy and reliability of the data, stringent quality assurance measures will be followed at various stages of data handling. Statistical analysis will be done using Fischer's test for qualitative data and unpaired t- test for quantitative data. $P < 0.05$ considered as significant. Percentages and proportions will be calculated wherever appropriate.

RESULTS

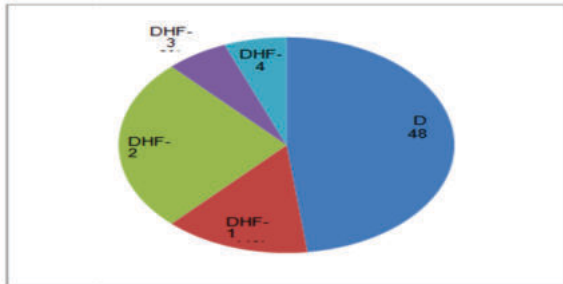
1. Age Distribution In Dengue Fever

Among the total 50 patients majority belong to 14-30 years age group in both males and females.

2. Sex Distribution Indengue

SEVERITY OF DENGUE FEVER	FEMALES	MALES
DF	9	15
DHF-1	3	4
DHF-2	3	10
DHF-3	0	3
DHF-4	1	2

P-Value = 0.626, Not Significant



4. Distribution Of Dengue Cases According To severity

4. Clinical spectrum of dengue fever

CLINICAL FEATURE	DF(24)	DHF-1(7)	DHF-2(13)	DHF-3(3)	DHF-4(3)	TOTAL(50)
FEVER	24	7	13	3	3	50
BODY PAINS	13	4	5	1	2	25
HEADACHE	19	6	3	2	1	31
RETRO ORBITAL PAIN	9	1	3	0	1	14
VOMITINGS	13	5	8	1	1	28
ABDOMINAL PAIN	6	2	3	0	1	12
BLEEDING MANIFESTATIONS	0	3	9	2	0	14

3. Platelet count in dengue fever

GRADING	OF DF(% OF THROMBOCYTOPENIA CASES)	DHF-1	DHF-2	DHF-3	DHF-4
1	25	28.57	23.07	33.33	33.33
2	16.66	14.28	7.69	33.33	0
3	25	14.28	30.76	33.33	0
4	33.33	42.8	38.46	0	66.66

4. X-ray changes in dengue fever In the present study

X-RAY CHANGES	N	%
NORMAL CHEST X-RAY	40	80%
EFFUSIONS	8	16%
ARDS	2	4%

5. Ultrasound changes in dengue fever in the present study

DENGUE SEVERITY GROUP	N	% OF CASES	
		WITH EDEMA	GB WITH ASCITIS
DF	24	20.83%	8.33
DHF-1	7	28.57%	42.85%
DHF-2	13	15.38%	15.38%
DHF-3	3	0	0
DHF-4	3	66.66%	0

6. Shock in dengue fever

Among 50 cases included in the study, 6 cases were in shock, and all these 6 cases have narrow pulse pressure <30mm Hg.

DISCUSSION

1. A total of 50 patients are included in the study who has a fever and positive for either dengue IgM or NS1Ag positive.
2. Out of the total of 50 patients, 26% belong to the DF group, 14% belong to the DHF-1 group, 48% belong to the DHF-2 group, 6% belong to DHF-3, and remaining 6% belong to DHF-4 group.
3. Male:female ratio is 2.125:1
4. Majority of patients belong to 14-30 years of age group.
5. In present study fever is seen in 100%, arthralgias in 50%, myalgias in 50%, headache in 62%, bleeding manifestations in 28% cases, abdominal pain in 24% cases and vomiting in 56% cases.

S.No	Author	Fever(%)	Arthralgias	Myalgias	Headache	Bleeding Manifestation	Abdominal Pain	Vomiting
1	Agarwal et al(4)	100	46	80	20	28	10	22
2	Paban Kumar(7) Dash et al	75	--	66	75	38	--	42
3	Neeraj M et al	100	15	53	74	7	22	62
4	Khan et al(5)	98.3	--	23.8	7.6	37.8	29.1	64
5	Present study	100	50	50	62	28	24	56

Among a total of 50 members, 12% of the cases are in shock, among which 6% belong to dengue hemorrhagic fever type-3, and 6% belong to dengue hemorrhagic fever type-4.

S.no	Author	year	place	Result
1	Pancharoen et al. (32)	1995	THAILAND	DF: 22.3% DHF: 60.4% DSS: 17.3%
2	Neeraj M et al. (36)	2004	HYDERABAD	DF: 85% DHF: 5% DSS: 10%
3	Present study	2018-2019	KURNOOL	DF: 48% DHF: 40% DSS: 12%

6. Leucopenia is seen in 36% of cases, where 12 % of cases showed leucocytosis.
7. Thrombocytopenia is seen in 100% of cases.
9. AST levels are elevated when compared to other liver enzyme

CONCLUSION

1. The present study had an objective of studying clinical manifestations and factors affecting prognosis in dengue

fever.

2. Bleeding tendencies should be closely watched. When features of plasma leakage such as pedal edema, pleural effusion, ascites, are present, the patient should be closely watched for and should be immediately managed.
3. The treatment of dengue is mainly supportive. However, appropriate fluid management plays a significant role in the outcome of the disease.
4. Dengue serosurveillance studies may give some idea about advent, intensity, transmission season, seasonal incidence, waxing and waning, and an impending epidemic of dengue and DHF. A large-scale active longitudinal serosurvey, along with the study of vector capacity and vector competence, would provide correct information.

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