CLINICAL PROFILE IN DENGUE − A STUDY AT UDAIPUR

Shehnaz Shaikh[1], Abdul Hameed Abdul Shikur Chaudhari[2]
[1] - Assistant Professor, Department of Physiology
[2] - Professor, Department of General Medicine
Pacific Institute of Medical Sciences, Udaipur, Rajasthan (India)

Medicine

Corresponding Author

Dr. Abdul Hameed Abdul Shikur Chaudhari,
Professor, Department of General Medicine, Pacific Institute of Medical Sciences, Udaipur, Rajasthan (India)
Email: hameed2020ac@gmail.com

Abstract:

Background: Dengue is one of the common life threatening viral fever due to Severe thrombocytopenia & Haemorrhagic complications. Every year 2-5 lakh cases of Dengue Haemorrhagic fever occurs. The objective of research was to Study clinical profile of Dengue at Pacific Institute of Medical Sciences, Udaipur, Rajasthan.

Methods: Present study was cross sectional study. Patients detail history and clinical examination done in their first visit to our OPD and later they were never followed which is similar to the cross-sectional study design. Present study was carried out in the PIMS Hospital, Udaipur, Rajasthan, in the department of General Medicine, during June 2019 to Oct 2019.

Results: In the present study, total number of patients 116, there were 94 males and 22 females. The sex ratio was 3.5:1. Maximum number of males (32.5%) was in the age group of 15-25. Among females, the maximum (38%) were in the age group of 26-35 years and 46-55 years (11%).The most common presenting symptom was fever in all cases followed by headache in 90%. Among bleeding manifestations, Epistaxis, Gum bleeding and Hamaturia (18%) were the common symptoms. 77 patients showed only hepatomegaly and 58 splenomegaly, and 30 patients showed hepato-splenomegaly. 90 showed leucopenia and 12 were anemic and 22 showed platelet count less than 1,50,000cells/cumm out of which 9 patients 1,00,000 − 1,50,000 cells/cumm, 3 patients 50,000 - 1,00,000 cells/cumm, 7 patients 25,000 - 50,000 cells/cumm and 3 patients < 25,000 cells/cumm.

Conclusion: Young males a of age 15-25 were commonly affected. Fever and headache were the most common presenting symptoms. Dengue epidemic has increased in recent past probably due to unplanned urbanization with rapid construction activities, unhygienic condition and poor sanitation facilities contributing fertile breeding soil for mosquitoes. Early diagnosis and management can decrease mortality and morbidity of illness. Platelet transfusions have little role in management of dengue patients except in Severe Thrombocytopenia with life threatening bleeding.

Keywords: Dengue, Udaipur, Clinical Profile.

Introduction

The epidemiology of dengue in India was first reported in Madras (now Chennai) in 1780, and the first outbreak occurred in Calcutta (now Kolkata) in 1963; subsequent outbreaks have been reported in different parts of India.[1,2] The total number of dengue cases has significantly increased in India since 2001. In the early 2000s, dengue was endemic in a few southern (Maharashtra, Karnataka, Tamil Nadu

and Pondicherry) and northern states (Delhi, Rajasthan, Haryana, Punjab and Chandigarh).

Dengue fever outbreak in India reported from June 1 to 28 October 1923. Laboratory confirmed cases of dengue fever have been reported in Delhi and surrounding areas. Four deaths among laboratory confirmed cases have been reported on 28th October 1923.

All four dengue virus serotypes (DENV-1, DENV-2 ,DENV-3 and DENV-4) can cause the disease which can present as a mild self-limiting illness, dengue fever (DF), or as the more severe forms of the disease, dengue hemorrhagic fever (DHF) or dengue shock syndrome (DSS).[3]

In 2009, the new World Health Organization (WHO) dengue case classification- dengue/severe dengue (D/SD) - was introduced, replacing the 1997 WHO dengue case classification: dengue fever/dengue hemorrhagic fever/ dengue shock syndrome (DF/DHF/DSS). Although current WHO classification is recommended for continuing use because the newly suggested WHO Tropical Disease Research (TDR) classification creates about two times the workload to health care personnel.[4]

The control of dengue infection presents challenges due to absence of specific treatment or vaccine; also difficulties in vector control. Hence the management of complications during the critical phase of dengue of resistance to insecticidal. Apart from haemorrhagic complications it affects various organs like cardiovascular, central nervous system, hepatic, respiratory, renal and muscular systems. It can cause asymptomatic bradycardia to life threatening myocarditis.[5,6]

Transmission of Virus occurs by vector Aedes Egypti with paek period in rainy & humid season, its because of plenty of mosquitoes breed

This study was carried out to study the profile of dengue patients & to understand, i) What are Clinical Features of Dengue? ii) How to suspect Dengue in out patient department? iii) How to detect it? iv) How to suspect it early?

Methods

Present study was cross sectional study. The patients were interviewed and examined at one point of time and later they were never followed which is similar to the cross-sectional study design. Present study was carried out in the PIMS Medical College, Udaipur. Study duration was June 2019 to Oct 2019, which is correlating with the peak transmission period of Dengue.

Patients were explained the nature of the study and their acceptance of the willingness is confirmed before including in the present study. Only dengue cases confirmed by the physician were included. Classical dengue fever, dengue hemorrhagic fever and dengue shock syndrome cases were also included in the present study.

Doubtful cases of dengue were excluded from the present study.

History included Age and Sex, Fever, Headache, Nausea, Vomiting, Myalgia, Arthralgia, Retro-orbital Pain, Epistaxis, Haematemesis, Bleeding from gum, Blood in stools, Hamaturia, Haeomoptysis, Jaundice, Breathlessness, Sore throat etc

The patient was examined in detail for various clinical signs like pallor, icterus, cyanosis, lymphadenopathy, petichiae, and signs of dehydration, conjunctival congestion, and detailed examination of pharynx, toxic look, and presence of rashes over the body.

Detailed examination was also done for search of signs of bleeding manifestations like purpura, petechiae, ecchymoses, low blood pressure i.e. hypotension, cold and clammy peripherals, etc. other clinical examination included looking for hepatomegaly, splenomegaly, pleural effusion and presence or absence of acute respiratory distress syndrome.

Complete blood picture,NS1 Antigen Test, Dengue Aantibody Test was done for all included patients. Hemoglobin less than 12gm/dl was taken as cut off for anemia.

White blood cell count and platelet count was also done. All this data was recorded and entered in the pre- designed, pre tested, and semi structured questionnaire.

Results

In the present study, there were total 116 patients of which 94 males and 22 females. The sex ratio was 3.5:1. It can be observed that maximum number of males (39.36%) were in the age group of 15-25 years followed by in the age group of 26-35 years (25.53%)and minimum were in the age group of 65 years and above (4.26%). Among females, the maximum (36.21%) were in the age group of 15-25 years and minimum >65 years (5.17%).

Table 1: Age wise patient distribution

Age (Yrs)	Male	%	Female	%	Total	%
15-25	37	39.36	5	22.73	42	36.21
26-35	24	25.53	7	31.82	31	26.72
36-45	14	14.89	4	18.18	18	15.52
46-55	10	10.64	3	13.64	13	11.21
56-65	4	5.32	1	4.55	6	5.17
65 and above	5	4.26	2	9.09	6	5.17
Total	94	100.00	22	100.00	116	100.00

The jaundice and dyspnoea were the least recorded symptoms.

Among bleeding manifestations, epistaxis & gum bleeding (17.24%) were the common symptoms followed by malena and hematemesis in 12.07% of the cases. There was no hemoptysis observed in any of In the present study, the most patients presented with generalized lymphadenopathy in 54% with signs of dehydration inn 52%, conjunctival congestion in 31% and infected pharynx in 76% with hemorrhagic skin manifestation such as maculo popular rashes in 36%,the cases in the present study.

Only 9 patients showed free fluid, 8 patients showed signs of pleural effusion and 5 with signs of ARDS among them 4 patients died despite of all possible treatment as shown in Table 3. In the present study, out of 116 patients, 90 showed leucopenia and 12 were anemic and 22 showed platelet count less than 1,50,000cells/cumm out of which 9 patients 1,00,000 – 1,50,000 cells/cumm, 3 patients 50,000 - 1,00,000 cells/cumm, 7 patients 25,000 - 50,000 cells/cumm and 3 patients < 25,000 cells/cumm, as shown in Table 4.

Table 2: Clinical features distribution

Symptoms	Total	%
Fever	116	100.00
Headache	104	89.66
Myalgia	70	60.34
Arthralgia	71	61.21
Epistaxis and gum bleeding	20	17.24
Nausea and vomiting	52	44.83
Breathlessness	14	12.07
Sore throat	81	69.83
Hematuria	0	0.00
Malena and hematemesis	14	12.07
Retrobulbar pain	60	51.72

Table 3: Clinical signs distribution

Signs	Total	%
Pallor	12	10.34
Lymphadenopathy	63	54.31
Conjunctival congestion	36	31.03
Infected pharynx	88	75.86
Rashes	42	36.21
Purpura	42	36.21
Petechiae	24	20.69
Ecchymoses	17	14.66
Free fluid	9	7.76
Signs of dehydration	63	54.31
Hepatomegaly	77	66.38
Splenomegaly	58	50.00
Hepato splenomegaly	30	25.86
Pleural effusion	8	6.90
ARDS	5	4.31
Hypotension	8	6.90
Conjunctival congestion	36	31.03
Maculo-papular rash	42	36.21

Fourteen patients had developed breathlessness. Among them, 5 patients showed features of acute respiratory distress syndrome (ARDS) and four were on ventilators and ultimately died despite optimum therapy.

685

Table 4: Hematological observation among the patients

Hematological observations	Total	%
Anemia	12	10.34
Leucopenia	90	77.59
Thrombocytopenia (<1,50,000)	22	18.97
Thrombocytopenia (1,00,000 - 1.50,000)	9	7.76
Thrombocytopenia (50,000 - 1,00,000)	3	2.59
Thrombocytopenia (25,000 - 50,000)	7	6.03
Thrombocytopenia (<25,000)	3	2.59

Discussion

In the present study, there were 94 males and 22 females. The sex ratio was 3.5:1. It can be observed that maximum number of males (39.36%) were in the age group of 15- 25years followed by in the age group of 26-35years (25.53%) and minimum were in the age group of 65 years and above (4.26%). The most common presenting symptom was fever in all cases followed by headache in 89.66%, sore throat in 69.83%, myalgia in 60.34%, arthralgia in 61.21%, retro-orbital pain in 51.72% of the cases. The jaundice and dyspnoea were the least recorded symptoms. Among bleeding manifestations, epistaxis, gum bleeding (17.24%) were the common symptoms followed by malena and hematemesis in 12.07% of the cases.

There was no hemoptysis observed in any of the cases in the present study. 14 patients had developed breathlessness.

Among them, 5 patients showed features of acute respiratory distress syndrome (ARDS) and 4 out of 5 were on ventilators and ultimately died despite optimum therapy.

In the present study, the most patients presented with generalized lymphadenopathy in 54.31% with signs of dehydration in 52%, conjunctival congestion in 31.03% and infected pharynx in 75.86% with hemorrhagic skin manifestation such as maculo popular rashes in 36.21%, purpura in 36.21%, Petechiae in 20.69% and ecchymoses in 14.66% of the cases. Among 116 cases, 8 patients presented with hypotension with narrow pulse pressure (<20 mmHg) with cold and clammy peripherals. Among 116 cases, 77 (66.38%) patients showed only hepatomegaly and 58 (50%) splenomegaly and 30 (25.86%) patients showed hepato splenomegaly. Only 9 patients showed free fluid, 8 (6.9%)patients showed signs of pleural effusion and 5 with signs of ARDS among them 4 patients died despite of all possible treatment.

In the present study, out of 116 patients, 90 (77.59%) showed leucopenia and 12 (10.34%) were anemic and 22 showed platelet count less than 1,50,000cells/cumm out of which 9 patients 1,00,000 – 1,50,000 cells/cumm, 3 patients 50,000 - 1,00,000 cells/cumm, 7 patients 25,000 - 50,000 cells/cumm and 3 patients < 25,000 cells/cumm. Mishra S et al carried out a study among 97 dengue cases. Among them majority were found to be mild illness cases[7] They found that 11 years and above was the most commonly affected age group. We also observed that the dengue was more common in the 15-25years of age. The author found that all cases presented with fever. This is in agreement with the findings of the present study.

We found that 77% of the cases were having hepatomegaly. The author also found hepatomegaly in 43.8% of the cases. They noted that thrombocytopenia was seen in 27.5% of the cases and we observed in 18.96%. Pothapregada S et al observed that males were more than females which is similar to the findings of the present study.[6] They found fever in 94.6% of the cases and we found in 100% of the cases. They found myalgia in more proportion than the finding of the present study.

Their finding of headache was less compared to the finding of the present study. In relation to retro orbital pain, their finding and our finding was similar i.e. present in 51.72% of the cases. They observed hepatomegaly in 60% of the cases while we observed it in 66.38% of the cases.

Hasan SR et al found that mostly 13 years and above were affected by dengue in their study and we also had similar observation.[7] This study and the present study both reported fever in all cases. Both the studies noted vomiting in 50% of the cases. Myalgia was seen in 34.4% of the cases by the author compared to 60.34% in the present study.

Sharma SK et al studied five patients with dengue who were already having some hematological disease.[8] The author did not observe any deaths in these cases. In their study recovery was 100% with excellent results. And the already present hematological disease status was not affected.

Conclusion

Males were commonly affected. Younger age group of 15-25 was most commonly affected and fever and headache were the most common presenting symptoms. Lymphadenopathy, Phayngitis, Hepatomegaly, Splenomegaly & Hepato-

splenomegaly is noted in a significant number of patients.

These findings help physicians in early diagnosis of dengue by suspecting these features as of dengue and can prevent morbidity and mortality associated with dengue by predicting the complications related with it

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