ORIGINAL RESEARCH PAPER
Volume - 13 | Issue - 02 | February - 2024 | PRINT ISSN No. 2277 - 8179 | DOI : 10.36106/ijsr
INTERNATIONAL JOURNAL OF SCIENTIFIC RESEARCH

CLINICAL PROFILE AND OUTCOME IN DENGUE FEVER: A TERTIARY CARE BASED CROSS-SECTIONAL STUDY IN TRIPURA

Medicine

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ABSTRACT

Background: Tripura, one of state sporadic cases of Dengue fever were reported over the time. Many previous literatures have shown different clinical presentation and outcome. However, there is scarce of data Tripura collectively. The study aims at to analyze the clinical manifestations and treatment outcome of dengue fever reported during recent outbreak of dengue in Tripura. **Material & Methods:** A cross sectional study was conducted during in the month of June – August, 2023 among the dengue cases admitted in Medicine ward in AGMC & G.B.P. Hospital. A case record form was used to collect the data and was analyzed using Microsoft excel 21.0 version. Verbal consent from parents, assent and informed consent was obtained. Hospital record sheet also checked for data. Descriptive statistic was used to expressed the data. **Results:** Among 79 cases of dengue fever, the mean age 41 ± 5.6 years with male:female is 3:2 with 2 (3.0%) cases below 18 years of age. 92.5% cases were symptomatic. Fever is the commonest symptom (99%) followed by headache (78%), bodyache (65%), weakness (47%), pain abdomen (24%), vomiting (18%), throat pain (11%) and passing of black coloured stool (2.5%). Only 15 (19%) required blood transfusion. The average days of subside of signs and symptoms was 4.5 days and hospital stay days was 7 days. No case death was found. **Conclusion:** Study concluded that majority dengue fever was seen among male young adults where fever, headache, bodyache, weakness were the predominant presentation with good treatment outcome.

KEYWORDS

Dengue fever, DHF, clinical presentation, outcome

INTRODUCTION

Dengue fever is a mosquito-borne illness that occurs in tropical and subtropical areas of the world.[1] Dengue fever causes a high-grade fever- 104 F (40°C) and any of the following signs and symptoms: Headache, Muscle or bone or joint pain, Nausea, Vomiting, Pain behind the eyes, Swollen glands, Rash etc. Symptoms occasionally, it subsides by itself, but the severe form of dengue fever (also known as dengue haemorrhagic fever) can cause serious bleeding, a sudden drop in blood pressure (haemorrhagic shock) and death.[2,3],[4,5] The causative agent is Dengue Virus (Flavivirus), transmitted by vector - Aedes Aegypti mosquito, Aedes Albopictus mosquito.[6] As of now, sporadic cases are being reported in Tripura in different session. Many previous literatures have shown different clinical presentation and outcome of dengue cases. The collective data on clinical presentation of dengue in Tripura is scarce. The present study aimed to analyze the clinical manifestations and treatment outcome of dengue fever reported during recent outbreak in Tripura.

MATERIALS & METHODS

A cross sectional descriptive type conducted in the Dept of Medicine, AGMC & G.B.P. Hospital, Tripura during June –August, 2023 among the dengue cases admitted in the Medicine ward who were selected conveniently. All the cases admitted during that period were included in the study. A case record form was used to record all necessary information. All hospital record sheet were checked for dengue cases. Descriptive statistic like mean, SD, frequency and percentages were used to expressed the data. Data were analyzed using both SPSS 21.0 and Microsoft excel. Informed verbal consent and assent were taken from the participants.

RESULTS

Total 79 cases of dengue fever were reported. The mean age 41 ± 5.6 years with male:female is 3:2 with 2 (3.0%) cases below 18 years of age. Among the participants, 40% of the patients from BPL, 60% are from urban setting and 30% educated below class 5. Total 92.5% cases were found as symptomatic. Fever is the commonest symptom (99%) followed by headache (78%), bodyache (65%), weakness (47%), pain abdomen (24%), vomiting (18%), throat pain (11%) and passing of black coloured stool (2.5%) (Table 1).

Table 1: Distribution of Clinical presentation of the dengue cases (N=79)	
Clinical features	N (%)
High grade fever	73 (92.5)
Mild fever	6 (7.5)
Headache	62 (78.4)
Bodyache	52 (65.8)
Weakness	37 (47.1)
Pain abdomen	19 (24.0)
Vomiting	14 (17.7)
Black stool	3 (3.7)

Out of 79 cases of dengue, majority (85%) treated conservatively i.e symptomatic management and few cases (15%) were required crystalloid transfusion along with blood components as few were developed complications (Figure 1).

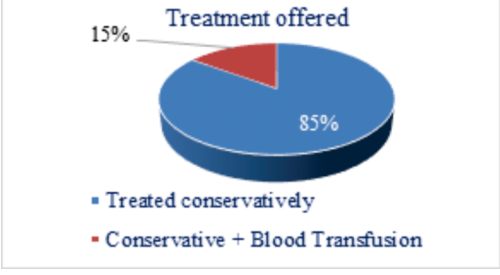

Fig 1: Distribution of Treatment offered to dengue cases (N = 79)

Average days for symptoms to subside was 4.5 ± 2.1 days. Average days of hospital stay was 7 ± 3 days. No mortality was reported.

Table 2: Distribution of Complications (N=79)	
Complications	N (%)
Bleeding Diathesis	3 out of 79 (3.7)
Dengue hemorrhagic shock syndrome	2 out of 79 (2.5)
Secondary bacterial infection	2 out of 79 (2.5)

Above table depicted that the distribution of complications arises among the participants during the course the treatment. Total 7 (8.8%) out of 79 cases were developed complications. 3 cases found as having bleeding diathesis. Dengue haemorrhagic shock and secondary bacterial infection was seen in 2 each case respectively (Table 2).

DISCUSSION

Dengue is a viral infection caused by the dengue virus (DENV),

transmitted to humans through the bite of infected mosquitoes. While many DENV infections are asymptomatic or produce only mild illness, DENV can occasionally cause more severe cases, and even death. Prevention and control of dengue depend on vector control. There is no specific treatment for dengue/severe dengue, and early detection and access to proper medical care greatly lower fatality rates of severe dengue.[6]

In present study, fever was the most common presenting feature of Dengue followed by headache, myalgia and these findings are incorporated with previous literature by Padmaprakash KV et al1 (fever - 99%), Dhingra et al (fever -100%), Prattay KM et al5 (fever - 98%). In present study, 1/5th of the cases was managed with both conservatively and blood product transfusion, these findings are similar to the study conducted by Dhingra H et al4 (19%). In the present study, Avg. days of hospitalization was 1 week, but as per Singh SP et al2 (3.08 days), Prattay KM et al5 (4.9 days), Padmaprakash KV et al1 (5.73 days). The study show minimal complications (1/10th) but in previous literatures, the complication ranges from 20-40% (Padyana M et al3 - 35%, Prattay KM et al5 - 25%, Dhingra et al4 - 17.5%) Hasan SR et al found that mostly 13 years and above were affected by dengue in their study and we also had similar observation. 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 65.8% in the present study. The author reported headache in only 10% of the cases while the present reported in 78.4% of the cases.[7] Laul A et al[8] noted that fever was present in all cases which is similar to the finding of the present study. Headache was seen in 87% of the cases which matches the 78.4% figure of the present study. Bodyache was seen in 86% of the cases which is higher than that reported in the present study. Bleeding manifestations contributed to 21% of the cases which is much higher than that we reported in the present study (3 out of 79 cases).[8] Sharma SK et al studied five patients with dengue who were already having some hematological disease. The author did not observe any deaths in these cases. In their study recovery was 100% with excellent results. These findings are similar to the present study. [10]

The present study has some limitations. Dengue virus isolation and typing for the commonest circulating strain was not done during the study as the test was not available. Primary and secondary infections were not differentiated with the laboratory evidence.

CONCLUSION:

Study concluded that majority of the dengue fever was seen among male young adults where fever, headache, body-ache, weakness was the predominant presentation with good treatment outcome. Only 1/10th shows complication such as bleeding diathesis and shock. Majority cases were managed conservatively. Timely referral and good clinical management help in early recovery.

Funding: No funding sources.
Conflict of interest: None declared.

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