

ASSESSMENT OF CLINICAL PROFILE OF DENGUE FEVER

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ABSTRACT

Background: World health organization also reported that as the high prevalence of dengue infection seen worldwide it requires immediate action and planning to combat the situation. It is reported that globally more than 2.5 billion of population living in the areas which are endemic for dengue viral infection. Approximately near about 50 million new dengue infections reported each year. **Material & Methods:** The present cross-sectional study includes 100 Patients who had dengue IgM antibody positive were enrolled from outdoor and from ward by simple random sampling. Clearance from Institutional Ethics Committee was taken before start of study. Written informed consent was taken from each study participant. **Results:** 92 % patients had myalgia which was followed by headache in 86% patients, 84% patients had retro-orbital pain and 83% patients had vomiting. Out of the total pain abdomen was present among 72% patients, bleeding tendencies were found among 21% patients, petechiae/purpura was present in 13% patients. Oliguria was found among 2% patients, 1% patient had altered sensorium and convulsions was present among 1% patient. **Conclusion:** The common presenting symptoms of dengue viral infections were fever, headache, myalgia, retro orbital pain, vomiting, pain abdomen, purpura and bleeding tendencies. The most common presenting sign was skin rash followed by ascites and splenomegaly. The most common presented complication was hepatic dysfunction.

Key words: Dengue fever, Clinical profile, Complications.

INTRODUCTION

The prevalence of dengue viral infection has tended to rise globally in the recent decades (1). According to the World Health Organization about forty percent of the world's population reported that in current scenario is at risk for encountering dengue viral infection (2). Dengue is an emerging epidemic disease and several outbreaks among every state of India is being reported from time to time (3). In India the burden and prevalence of dengue viral infection is increasing as trends reported globally. Hence, along with global pandemic concern dengue has become major public health concern in India.

The etiology behind dengue is reported as vector borne viral diseases which is transferred to humans by the bite of the infected Aedes mosquito. It was also reported that the number of dengue vector (Aedes mosquito) also increased which is also contributing in the high prevalence of dengue viral infections (4).

Due to its high incidence and prevalence rates of dengue viral infections in India, national vector borne diseases control program is initiated for integrated management of vector, surveillance and monitoring and diseases prevention along with

treatment (5). World health organization also reported that as the high prevalence of dengue infection seen worldwide it requires immediate action and planning to combat the situation. It is reported that globally more than 2.5 billion of population living in the areas which are endemic for dengue viral infection. Approximately near about 50 million new dengue infections reported each year with estimated mortality of more than 25000 globally (6). There were also reported of metastasize of dengue viral infection exponentially breaching the geographical borders (7). The estimated incidence rate of dengue infections are 1% of global population while estimated mortality among them is approximately 20% (1).

The classical signs and symptoms of dengue infections were fever, headache, myalgia and arthralgia sometimes bleeding manifestations and also shock was reported. The exact clinical picture is varying from subject to subject which depends on serotype of dengue virus, immunity status and sub type of dengue fever. Dengue viral infections were classified among dengue fever, undifferentiated fever and dengue hemorrhagic fever and dengue shock syndrome (8). The complete clinical profile should be evaluated before the treatment protocol to save the patient's life. Hence, present study was conducted to assess the clinical profile among patients of dengue fever.

MATERIALS & METHODS

The present cross-sectional study was conducted at department of general medicine of our tertiary care hospital. The study duration was of six months from February 2018 to July 2018. A sample size of 100 was calculated at 95% confidence interval at 10 % acceptable margin of error by epi info software version 7.2. Patients who had dengue IgM antibody positive were enrolled from outdoor and from ward by simple random sampling. Clearance from Institutional Ethics Committee was taken before start of study. Written informed consent was taken from each study participant.

The data were collected by detailed history, general physical and clinical examination from each patient (more than 15 years of age) after taking the written consent. Patients who had typhoid, malarial diseases, scrub typhus or patients with existing liver disease

were excluded from the present study. All study participants were subjected for routine blood investigation for complete blood count and liver function test and ELISA for dengue serology. Data analysis was carried out using SPSS v22. All tests were done at alpha (level significance) of 5%; means a significant association present if p value was less than 0.05.

RESULTS

In the present study we enrolled 50 patients who were aged from 18 to 71 years. The mean age of the enrolled patient was 42.36 ± 5.19 years. There was no patient in the present study who aged less than 15 years of age. Out of total patients diagnosed dengue IgM antibody positive 58% were male and 42% were females. All of these patients with dengue viral fever were subjected for routine blood investigation for complete blood count and liver function test and ELISA for dengue serology. Out of the total study participants, all of them were presented with fever. 92 % patients had myalgia which was followed by headache in 86% patients, 84% patients had retro-orbital pain and 83% patients had vomiting. Out of the total pain abdomen was present among 72% patients, bleeding tendencies were found among 21% patients, petechiae/purpura was present in 13% patients. Oliguria was found among 2% patients, 1% patient had altered sensorium and convulsions was present among 1% patient. (Table 1)

Table 1: symptoms wise distribution of study subjects

Symptoms	No. of patients
Fever	100%
Myalgia	92%
Retroorbital pain	84%
Vomiting	83%
Headache	86%
Pain abdomen	72%
Bleeding tendencies	21%
Petechiae/Purpura	13%
Oliguria	2%
Altered sensorium	1%
Convulsions	1%

In the present study, out of total 100 study participants, on the assessment of signs of dengue fever it was found that, skin rash was the most common presenting sign reported among 56%

patients which was followed by ascites among 28% patients. Hepatomegaly was found among 24% patients and splenomegaly was found among 9% patients. Positive tourniquet test was reported among 13% patients. (Table 2)

Table 2: distribution of study subjects based on signs

Signs	Number of Patients
Skin rash	56%
Ascites	28%
Hepatomegaly	24%
Tourniquet test (positive)	13%
Splenomegaly	9%

In the present study, out of total 100 study participants, on the assessment of complications of dengue fever it was found that, hepatic dysfunction was the most common presented complication which was present among 36% patients which was followed by shock reported among 3% of patients. pleural effusion was reported among 2% patients and acute renal failure was reported among 2% cases. Severe hemorrhage and encephalitis were present among 1% patients respectively. (Table 3)

Table 3: distribution of study subjects based on complications of dengue fever.

Complications	Number of patients
Hepatic dysfunction	36%
Shock	3%
Pleural effusion	2%
Renal failure	2%
Severe hemorrhage	1%
Encephalitis	1%

DISCUSSION

Dengue is an emerging epidemic disease and several outbreaks among every state of India is being reported from time to time (3). In India the burden and prevalence of dengue viral infection is increasing as trends reported globally. Hence, along with global pandemic concern dengue has become major public health concern in India. The etiology behind dengue is reported as vector borne viral

diseases which is transferred to humans by the bite of the infected Aedes mosquito. It was also reported that the number of dengue vector (Aedes mosquito) also increased which is also contributing in the high prevalence of dengue viral infections (4). In the present study we enrolled 50 patients who were aged from 18 to 71 years. The mean age of the enrolled patient was 42.36 ± 5.19 years. There was no patient in the present study who aged less than 15 years of age. Out of total patients diagnosed dengue IgM antibody positive 58% were male and 42% were females. All of these patients with dengue viral fever were subjected for routine blood investigation for complete blood count and liver function test and ELISA for dengue serology. Similar results were obtained in a study conducted by Aggarwal A et al among patients of dengue viral fever and found similar results with present study (9).

Out of the total study participants, all of them were presented with fever. 92 % patients had myalgia which was followed by headache in 86% patients, 84% patients had retro-orbital pain and 83% patients had vomiting. Out of the total pain abdomen was present among 72% patients, bleeding tendencies were found among 21% patients, petechiae/purpura was present in 13% patients. Oliguria was found among 2% patients, 1% patient had altered sensorium and convulsions was present among 1% patient. Similar results were obtained in a study conducted by Chandralekha et al among patients of dengue viral fever and found similar clinical profile patterns among study participants (10). Similar results were obtained in a study conducted by Selvan T et al among patients of dengue viral fever and found fever was the most common symptom which was followed by myalgia and retroorbital pain, vomiting and convulsions and altered sensorium (11).

In the present study, out of total 100 study participants, on the assessment of signs of dengue fever it was found that, skin rash was the most common presenting sign reported among 56% patients which was followed by ascites among 28% patients. Hepatomegaly was found among 24% patients and splenomegaly was found among 9% patients. Positive tourniquet test was reported among

13% patients. Similar results were obtained in a study conducted by Horvath R et al among patients of dengue viral fever and found the most common presenting sign was skin rash followed by ascites and splenomegaly (12).

In the present study, out of total 100 study participants, on the assessment of complications of dengue fever it was found that, hepatic dysfunction was the most common presented complication which was present among 36% patients which was followed by shock reported among 3% of patients. pleural effusion was reported among 2% patients and acute renal failure was reported among 2% cases. Severe hemorrhage and encephalitis was present among 1% patients respectively. Similar results were obtained in a study conducted by Sharma S et al among patients of dengue viral fever and found the most common presented complication was hepatic dysfunction followed by shock and pleural effusion (13).

CONCLUSION

We concluded from the present study that the common presenting symptoms of dengue viral infections were fever, headache, myalgia, retro orbital pain, vomiting, pain abdomen, purpura and bleeding tendencies. The most common presenting sign was skin rash followed by ascites and splenomegaly. The most common presented complication was hepatic dysfunction followed by shock and pleural effusion.

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