

Clinical Profile of Adult Patients with Dengue

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Abstract

Original Research Article

Background: Dengue is an important cause of mortality and morbidity in India. Many recent studies have shown varied clinical manifestations from different geographical locations. There is paucity of data on this topic from this region. The present study was conducted to find out the clinical presentation of patients suffering from dengue in Bilaspur, Himachal Pradesh, India. **Methods:** The study was performed at Regional Hospital from May 2018 to October 2018. Inpatients of age >18 years and ELISA positive for dengue were included in the study. **Results:** Dengue infection was identified in 48 patients. Thrombocytopenia was the commonest hematological abnormality. Fever and severe myalgia were the most common symptom in 100% and 91.67% patients respectively. **Conclusion:** Dengue fever can have different clinical manifestations.

Keywords: Dengue, mortality and morbidity, Thrombocytopenia.

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INTRODUCTION

Dengue is the most common arthropod-borne viral (belonging to the family flaviviridae) illness in humans. Annually, approximately 50-100 million individuals are infected with dengue [1]. Dengue is an acute self-limited systemic viral infection and its incidence is on the rise for past few years and dengue has become a global problem in recent times [2]. Dengue has emerged as important public health threat in urban areas due to population migration to cities resulting in urban overcrowding and infrastructure construction in these areas providing unhindered opportunities for breeding of the vector [3].

Dengue fever infection is characterized by high fever, headache, myalgia, vomiting, joint pain, rash and mild bleeding manifestations in early phase. In the next critical phase, there is a heightened risk of progression of the patient to severe dengue/dengue shock [4].

There is a seasonal rise in the number of cases especially during the months of May to September presenting to the emergency and outpatient departments which imposes an additional load to an already overburdened system especially for staffing, laboratory and ward admission.

The disease is also endemic in many parts of India, especially the metropolitan cities and towns. Outbreaks are now reported quite frequently from different parts of the country. At present, information on adult dengue infections in Himachal Pradesh is quite limited. Hence, this study was conducted to assess the clinical picture, laboratory profile and outcome of dengue fever in Bilaspur, Himachal Pradesh.

PATIENTS AND METHODS

A total of 48 inpatients were enrolled over duration of 6 months (May 2018 to October 2018) in this prospective study at Regional Hospital, Bilaspur. Inclusion criteria were, age >18 years and presentation with an acute febrile illness of 2-7 days duration with 2 or more symptoms such as headache, retro-orbital pain, myalgia, arthralgia, rash, haemorrhagic manifestations, thrombocytopenia as per WHO IDSP criteria, and confirmed by dengue ELISA test. The patients with concomitant malaria, typhoid, scrub typhus etc. were excluded from the study.

All necessary information like demographic data (age, gender, residence etc.) and clinical data (history of illness, symptoms and signs, etc) were collected. Psychiatric comorbidities in these patients were also assessed using the MINI 6.0 scale.

Data Analysis

Data were expressed as frequency, percentage, and mean.

RESULTS

Socio-Demographic Characteristics

Table-1 shows demographic characteristics of the patients. Mean age of the patients was 38.73 years ranging from 19 years to 71 years. 54% of the patients aged <30 years followed by 25% patients age between 31 and 40 years. 10% patients were of age >60 years. 56% of the patients were males while 48% of the patients were living in rural areas. Among 21 females, 2 females were pregnant.

Symptoms

All the patients had fever. The most common other symptoms were severe myalgia in 91.7% patients, headache in 87.5% patients, and joint pain in 54% patients. Flushing was the least common in 25% patients (Figure-1).

Laboratory Parameters

Table-2 shows laboratory parameters of the patients. 73% of the patients had thrombocytopenia and 48% patients had leucopenia. 37.5% and 40% patients had elevated SGOT and SGPT levels respectively.

Psychiatric Comorbidities

There was insignificant number of psychiatric comorbidities in these patients. 8% (n=4) patients had depression while 2% (n=1) patients had anxiety. Remaining 43 patients had no psychiatric comorbidities.

Table-1: Socio-demographic characteristics of the patients

Socio-demographic characteristics	n (%)
Age (Years)	
18-30	26 (54.17%)
31-40	12 (25%)
41-50	3 (6.25%)
51-60	2 (4.17%)
>60	5 (10.42%)
Sex	
Male	27 (56.25%)
Female	21 (43.75%)
Residence	
Rural	23 (47.92%)
Urban	25 (52.08%)

Table-2: Laboratory parameters

Laboratory parameters	n (%)
Thrombocytopenia (<50,000/mm ³)	35(73%)
Leucopenia (<4000/mm ³)	23(48%)
SGOT >55 IU/l	18(37.5%)
SGPT >55 IU/l	19(40%)

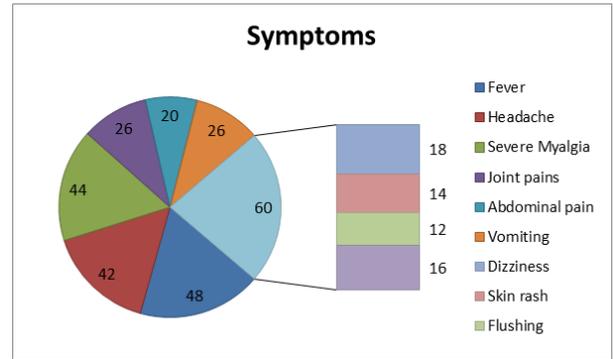


Fig-1: Symptoms

DISCUSSION

There is a steady increase in the number of dengue patients over the past few years. India is one of the countries in the South-East Asia region regularly reporting incidence of dengue fever which constantly threatens the health care system in India. Due to changing climate, urbanization, poor living conditions and inadequate waste management, vector borne diseases like dengue fever are becoming more common especially in countries like India. Although vector Control programmes are launched in endemic countries, yet dengue fever has become a serious problem worldwide.

This study describes the clinical profile, laboratory features, and psychiatric comorbidities in adult dengue patients. The identification of dengue fever is usually by clinical features and they can present with varied manifestation.

In our study, 54% patients were in age group of 19-30 years. The findings are in concordance with Shah and Jain who reported that 71% of the patients with dengue were in age group of 18-30 years.⁵ Male preponderance in our study has been reported earlier by Chandralekha *et al.*, [6] and Kashinkunti *et al.*, [7].

The patients with dengue fever typically present with the sudden onset of fever, frontal headache, retro-orbital pain, and back pain along with severe myalgias. The clinical profile of dengue revealed that fever was the most common presenting symptom (100%). Similar studies in and around India have also substantiated fever as being the most common presenting symptom.⁵ Severe myalgia was the 2nd most common symptom in our study followed by Headache. Incidence of myalgia has been reported to be 90.67% patients with dengue in an Indian study [1]. A Japanese study reported incidence of headache in 90% of the patients with dengue [8]. Indian studies have reported incidence of headache from 9% to 85% [9, 10]. A study from Mumbai in 2003 reported hepatomegaly (97.4%), altered sensorium (58%), diarrhoea (50%), rash (42%), and cough (38%) in a significant number of cases of dengue [7].

Elevation of transaminases is a common feature of dengue, which was also observed in our study. In our study, 73% of the patients had thrombocytopenia was presented in 73% patients which is higher than reported by Shah and Jain [5] while lower than reported by Vanamali *et al.*, [10].

10% of the patients in our study had psychiatric comorbidities. It has been suggested that presence of myalgias and family history of dengue fever is associated with depression. Furthermore, it also has been reported that among adult patients with dengue fever, being male tend to have increased depression, whereas dengue fever with warning signs and retro-/peri-orbital pain is associated with depression. Fever in these patients is associated with anxiety [11].

CONCLUSION

This study observed a varied clinical profile of dengue fever. Continuous seroepidemiological surveillance and timely interventions are needed to identify the cases to minimize the risk of complications and mortality.

Conflict of Interest: All authors declare that they have no conflict of interest.

Financial Disclosure: None

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