A STUDY OF CLINICAL PROFILE OF DENGUE FEVER IN A GOVERNMENT GENERAL HOSPITAL, NIZAMABAD

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ABSTRACT

BACKGROUND

Dengue Fever is a major health problem worldwide. India is one of the seven countries in the South-East Asia region regularly reporting incidence of DF/DHF outbreaks due to its high incidence which constantly threatens the health care system. The first confirmed report of dengue infection in India dates back to 1940s, and since then more and more new states have been reporting the disease which mostly strikes in epidemic proportions often inflicting heavy morbidity and mortality.
Aim- To study the clinical profile of Dengue Fever.

MATERIALS AND METHODS

The study was undertaken as a hospital based descriptive study with prospective data collection at Government General Hospital, Nizamabad. The questionnaire was developed and based on a review of literature. The questionnaire was tested. The data was collected using a questionnaire. Hundred patients with confirmed dengue fever admitted to Government General Hospital during 5 months period from May 2016 to September 2016 were selected for this study. NS1 antigen and IgM dengue antibody-positive cases were included. These patients were admitted with fever, myalgia, headache, vomiting, abdominal pain or bleeding manifestations. NS1 antigen and IgM dengue antibody was estimated using capture ELISA. The diagnosis of dengue fever, dengue haemorrhagic fever and dengue shock syndrome was based on the WHO criteria.

RESULTS

A total of 100 cases admitted to the hospital in May 2016 to September 2016 were statistically analysed. Most of dengue cases occurred during the month of June to September depicts the role of rainy season on clustering of cases. Majority of the cases, 62% were male and 38% were female. Maximum number of cases (25%) were in the age group of 21–30 years as seen in Table 1. As seen in Table 2, fever was present in all cases and is the most common symptom followed by headache (93%), myalgia (90%), vomiting (62%), abdominal pain (39%), breathlessness (20%), skin rash (8%), and altered sensorium (13%). Haemorrhagic manifestations (5%) included petechiae, ecchymosis, gum bleeding, haematuria, melaena, hematemesis and epistaxis. (As seen in Table 3). In the study, 43 patients had complications of which most common were hepatic dysfunction 23%, renal failure 14%, multiorgan failure 2%, encephalopathy 2% and ARDS in 2%.

CONCLUSION

At present dengue infection is a major health problem in our country, especially in Telangana state. It presents as a highly unspecific illness and is hardly recognised as a clinical entity by primary health care physicians. This study supports further studies on applying interventional measures to improve the diagnostic accuracy and precision at the primary healthcare level in dengue endemic regions. This study highlights the importance of dengue fever to clinicians in the areas of epidemiology, manifestations, complications and outcome of the disease.

KEYWORDS

Dengue, Dengue Haemorrhagic Fever, Dengue Shock Syndrome.

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BACKGROUND

Dengue fever is a mosquito-borne tropical disease caused by the dengue virus.[1] Symptoms typically begin three to fourteen days after infection.[2] This may include a high fever, headache, vomiting, muscle and joint pains, and a characteristic skin rash.[1,2]

Recovery generally takes two to seven days.[1] In a small proportion of cases, the disease develops into the life-threatening dengue haemorrhagic fever, resulting in bleeding, low levels of blood platelets and blood plasma leakage, or into dengue shock syndrome, where dangerously low blood pressure occurs.[2] Dengue has become a global problem since the Second World War and is common in more than 110 countries.[3,4] Each year between 50 and 528 million people are infected and approximately 10,000 to 20,000 die.[5-8] The earliest descriptions of an outbreak date from 1779.[4] Its viral cause and spread were understood by the early 20th century.[9]

Dengue Fever is a majo r health problem in our country. India is one of the seven countries in the South-East Asia region regularly reporting incidence of DF/DHF outbreaks due to its high incidence which constantly threatens the

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health care system. The first confirmed report of dengue infection in India dates back to 1940s, and since then more and more new states have been reporting the disease which mostly strikes in epidemic proportions often inflicting heavy morbidity and mortality.[10] The common signs and symptoms observed were fever, headache, myalgia, arthralgia, and bleeding manifestations have also been observed. The exact clinical profile is important for patient management and thus crucial for saving life. The present study is an attempt to describe the salient clinical as well as laboratory findings of serologically confirmed hospitalised cases of dengue fever during the study period. The study group represented the adult population.

Nizamabad district is one of the endemic area for dengue fever in Telangana state. There are very less studies in this district, this makes me to take up this study.

MATERIALS AND METHODS

Methodology

The study was undertaken as a hospital based descriptive study with prospective data collection at Government General Hospital, Nizamabad. The questionnaire was developed and based on a review of literature. The questionnaire was tested. The data was collected using a questionnaire. Hundred patients with confirmed dengue fever admitted to Government General Hospital during 5 months period from May 2016 to September 2016 were selected for this study. NS1 antigen and IgM dengue antibody-positive cases were included. These patients were admitted with fever, myalgia, headache, vomiting, abdominal pain or bleeding manifestations. NS1 antigen and IgM dengue antibody was estimated using capture ELISA. The diagnosis of dengue fever, dengue haemorrhagic fever and dengue shock syndrome was based on the WHO criteria.[11] Patients who had malaria and enteric fever were excluded from the study. Patients who did not give their consent was excluded.

Study Design

Hospital based descriptive study.

Study Setting

Government General Hospital, Nizamabad.

Study Population

Adults above 15 years of age who are confirmed having dengue fever.

Sample Size

100 patients.

Study Period

May 2016 to September 2016.

Data Collection

By using a pre-designed, pretested questionnaire.

Data Analysis

By Using MS office 2003. Epi info 2007.

Statistical Test

Rates, Ratios, Proportions and Chi-square tests.

Inclusion Criteria

Above 15 years age group who are confirmed having dengue fever.

Exclusion Criteria

Patients who had malaria and enteric fever and persons who are not willing to give consent.

RESULTS

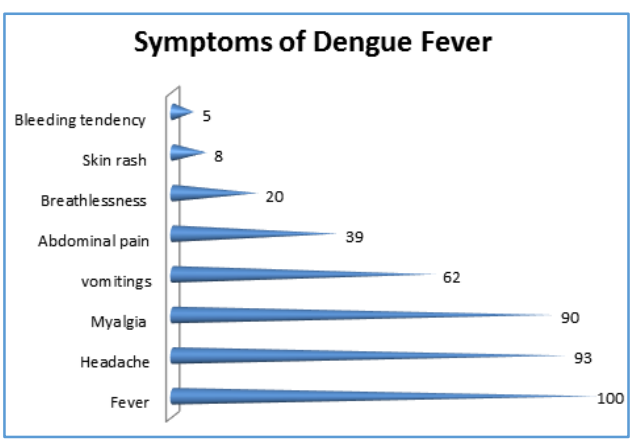
A total of 100 cases admitted to the hospital in May 2016 to September 2016 were statistically analysed. Most of dengue cases occurred during the month of June to September which depicts the role of rainy season on clustering of cases. Majority of the cases, 62% were male and 38% were female. Maximum number of cases (25%) were in the age group of 21–30 years (as seen in Table 1). As seen in Table 2, fever was present in all cases and is the most common symptom followed by headache (93%), myalgia (90%), vomiting (62%), abdominal pain (39%). breathlessness (20%), skin rash (8%), and altered sensorium (13%). Haemorrhagic manifestations (5%) included petechiae, ecchymosis, gum bleeding, haematuria, melaena, hematemesis and epistaxis (as seen in Table 3). In the study, 43 patients had complications of which most common were hepatic dysfunction 23%, renal failure 14%, multiorgan failure 2%, encephalopathy 2% and ARDS in 2%.

Age (Years)	Male (N=62)	Female (N=38)	Total (N=100)
16-20	14	6	20
21-30	18	7	25
31-40	12	8	20
41-50	9	9	18
51-60	6	7	13
>60	3	1	4

Table 1. Age Characteristics of Patients with Dengue Fever

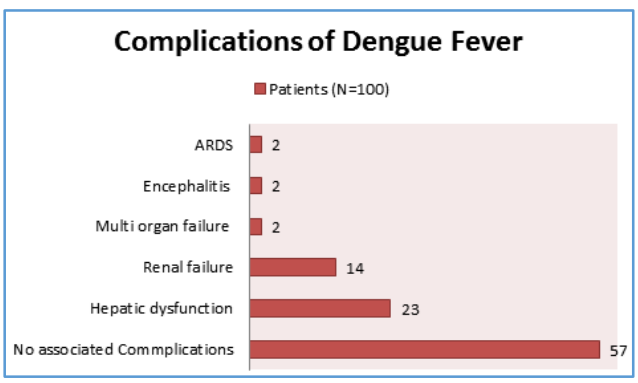
Symptoms	Patients (N=100)
Fever	100
Headache	93
Myalgia	90
Vomitings	62
Abdominal pain	39
Breathlessness	20
Skin rash	8
Bleeding tendency	5

Table 2. Symptoms of Dengue Fever



Complications	Patients (N=100)
No associated Complications	57
Hepatic dysfunction	23
Renal failure	14
Multiorgan failure	2
Encephalitis	2
ARDS	2

Table 3. Complications of Dengue Fever



DISCUSSION

Present study describes the clinical profile, laboratory features and outcome of DF/DHF/DSS in adult patients. Since the first confirmed case of dengue in India, during the 1940s, intermittent reports from Delhi,[12,13] Ludhiana,[14] Mangalore,[15] Vellore[16] and from other states have been published. The identification is by clinical features but they can present with varied manifestation.[12-13] There is a steady increase in the number of dengue patients over the past few years. This is due to the rapid urbanisation with unplanned construction activities and poor sanitation facilities contributing fertile breeding grounds for mosquitoes. A gradual increase in cases was noticed from June with a peak in September, during all the seven years of the study. These findings highlight that preventive measures against dengue infection should be taken during water stagnation periods after the initial bouts of rainfall and at the end of monsoon. The study revealed that majority of the cases were in the age group of 15–40 years. 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. Abdominal pain and vomiting were due to the liver injury caused by the dengue virus. An exclusive study on dengue shock syndrome conducted in Mumbai in 2003 reported hepatomegaly (97.4%), altered sensorium (58%), diarrhoea (50%), rash (42%), and cough (38%) in a significant number of cases. Headache was also seen less frequently compared to other studies. This has also been documented in our study. Retro-orbital pain as a cardinal feature of dengue fever was seen in few of our patients. Haemorrhagic manifestations (5%) included petechiae, ecchymosis, gum bleeding, haematuria, melaena, hematemesis and epistaxis. In the study, 47 patients had complications of which most common were hepatic dysfunction 23%, renal failure 14%, multiorgan failure 2%, encephalopathy 2% and ARDS in 2%.

CONCLUSION

At present dengue infection is a major health problem in our country, especially in Telangana state. This study supports further studies on applying interventional measures to improve the diagnostic accuracy and precision at the primary healthcare level in dengue endemic regions. This study highlights the importance of dengue fever to the clinicians in the areas of epidemiology, manifestations, complications and outcome of the disease. This study may be helpful to conduct further studies.

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