

## ORIGINAL ARTICLE

## PROFILE OF DENGUE CASES ADMITTED TO A MEDICAL COLLEGE HOSPITAL IN WESTERN INDIA

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## ABSTRACT

**Objective:** The aim of this retrospective study was to determine the epidemiological determinants of dengue cases admitted to Medical college hospital in year 2012.**Methods:** The reported data on dengue cases from January 2012 to December 2012 was collected from medical record section.**Result:** A Total no of 797 patients were admitted during 2012. Maximum (27.60 %) no of cases were observed in October. Age group which was most affected (41.65%) was 15-24 years. Males (64.24%) were more affected than Females. Among admitted patients most of them (70.76%) were from Ahmedabad. Case fatality rate was highest (20%) in the more than 64 years age group. Out of total patients admitted 95.48% were cured, 1.76% died.**Conclusion:** Community awareness, early diagnosis and management and vector control measures should be in full swing at the very onset of monsoon in order to curb the increasing no of dengue cases.**Keyword:** Dengue, Profile, Seasonality, Medical college Hospital.

## INTRODUCTION

Dengue is a mosquito borne infection which in recent years has become a major international public health concern found in tropical and subtropical regions around the world, predominantly in urban and periurban areas. The dengue viruses are members of the genus *Flavivirus* and family *Flaviviridae*. There are four virus serotypes which are designated as DEN-1, DEN-2, DEN-3 DEN-4. Dengue viruses are transmitted by *Aedes* mosquitoes, *Aedes aegypti* is the most important epidemic vector. Factors responsible for increase in dengue include explosive population growth, unplanned urban growth, poor mosquito control measures. According to World Health Organization (WHO), two fifth of the world's population are at risk from dengue disease and every year 50 million DENV infections are suspected worldwide<sup>1</sup>. In India, the disease is prevalent and all four serotypes are known to be circulating either singly or in combination resulting in several outbreaks over the years<sup>2,3</sup>.

## OBJECTIVES

The objectives of this study were to know the demographic characteristics of cases; to understand the seasonal trend and pattern of disease; to know geographical

distribution of cases; and to study disease outcome in dengue.

## METHODS

A Record based retrospective study was undertaken to determine the epidemiological determinants and outcome of all patients admitted to Medical college hospital, Ahmedabad with Clinically and Laboratory diagnosed dengue cases from January 2012 to December 2012. The reported data on dengue cases from January 2012 to December 2012 was collected from medical record section with 797 cases. Line lists on dengue cases were analysed to ascertain age, sex, seasonal & geographical distribution. Data was compiled and analysed in Microsoft Excel.

## RESULTS

Total 797 patients were admitted during January 2012 to December 2012. Maximum (27.60 %) no of cases were observed in October. (figure 1)

Age group which was most affected (41.65%) was 15-24 years. Case fatality rate was highest (20%) in the more than 64 years age group. Mean age was 23.95 with SD 13.60. (Table 1)

**Figure 1: Month Wise Distribution of Dengue Cases****Table 1: Age and gender wise distribution of patients**

	Frequency	Death	CFR
<b>Age(Years)</b>			
<15	159(19.94%)	6	3.17%
15-24	332(41.66%)	2	0.60%
25-34	174(21.83%)	1	0.57%
35-44	57(07.16%)	0	0.00%
45-54	41(22.15%)	2	4.87%
55-64	19(02.38%)	0	0.00%
>64	15(01.88%)	3	20%
<b>Gender</b>			
Male	512(64.24%)	8	1.56%
Female	285(35.75%)	6	2.10%
<b>Total</b>	<b>797(100%)</b>	<b>14</b>	<b>1.75%</b>

Mean Age: 23.95, SD: 13.60

**Figure 2: Geographical Distribution of Dengue cases**

Among admitted patients most of them (70.76%) were from Ahmedabad. ( Figure 2)

Out of total patients admitted 95.48% were cured, 2.76% were absconded and DAMA and 1.76% died. (Table 2)

**Table 2: Outcome of Dengue Cases**

Outcome of Dengue cases	Cases (n=797)
Cured	761 (95.48%)
Death	14 (1.76%)
Other*	22 (2.76%)

\* Discharged against medical advice

## DISCUSSION

Present study was carried out to determine the epidemiological determinants of dengue cases admitted to Medical college hospital Ahmedabad. Total 797 patients were admitted during January 2012 to December 2012. Maximum (27.60 %) no of cases were observed in October. Ashwini kumar et al<sup>4</sup> mentioned in their study that maximum no of cases (19.1 %) were seen in month of September and in I Jamiaah et al<sup>5</sup> study 22 % of cases were in month of January.

Dengue is an important emerging disease of tropical and sub tropical regions. Since first confirmed case of dengue in India, during the 1940, intermittent reports of infection and its sequelae have come from various parts of country. These include reports from Lucknow<sup>6</sup>, Ludhiana<sup>7</sup>, Delhi<sup>8-10</sup>, Kolkata<sup>11,12</sup>, Chennai<sup>13</sup>, Manglore<sup>14</sup> and Assam<sup>15</sup>. In present study maximum (70.76%) no of cases were found from Ahmedabad in Gujarat.

In present study revealed that majority (41.65 %) of cases were in age group of 15- 24 years. Ashwini kumar et al mentioned in their study that majority no of cases (57.3 %) were in age group of 15- 44 years. In this study mean age was 23.95 with SD 13.60. Case fatality rate was highest (20%) in the more than 64 years age group. Out of total patients admitted, 1.76 % were died while in Ashwini kumar et al study 2.4 % death were reported.

## CONCLUSION

The present study highlights the importance of dengue fever to clinician in area of epidemiology and outcome of disease. Total no of 797 patients were admitted during January 2012 to December 2012. Majority of cases were observed in October. Age group which was most affected was 15-24 years. Case fatality rate was highest in the more than 64 years age group. Majority of patients were from Ahmedabad. Out of total patients admitted 95.48% were cured, 2.76% were absconded and DAMA and 1.76% died.

## RECOMMENDATION

Efforts have to be made through Community awareness and early diagnosis and management. Vector control measures should be in full swing at the very onset of monsoon. Strict implementation of the civic bye laws should be there.

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