

# Prevalence of dengue fever and its outcome at Pediatric inpatient department: A hospital based study

R N Patil<sup>1\*</sup>, V R Chaudhari<sup>2</sup>

<sup>1,2</sup>Associate Professor, Department of Pediatrics, Dr Ulhas Patil Medical College and Hospital, Jalgaon, Maharashtra, INDIA.

Email: [chaitanya\\_care@yahoo.co.in](mailto:chaitanya_care@yahoo.co.in)

## Abstract

**Introduction:** Dengue infections are caused by four antigenic ally distinct dengue virus serotypes (DENV-1,2,3,4) and transmitted by the bite of an infected female mosquito- *Aedes aegypti*. Clinical spectrum of infection with dengue virus ranges from asymptomatic through Dengue is one of the most serious mosquito borne arboviral infections. **Aims and Objective:** To study the Prevalence of various symptoms in Confirmed cases of Dengue patients and their outcome. **Methodology:** This was Prospective study. Of all patients admitted to Pediatrics department with suspected dengue fever, all the patients were diagnosed and confirmed by ELISA NS-1 Antigen technique. Total 150 fever patient were suspected during one year period, out of that 80 were confirmed of dengue fever. **Result:** Complicated dengue was more common in 5 to 9 yrs age group 8 (40.00%). Also complicated Dengue was more common in Females as compared to Males. Duration of symptoms at admission were, Median 3 days, Mean 2.89 days for Uncomplicated Dengue, For Complicated dengue the median was 4 days, and 3.9 days mean. the most commonly reported symptom were Fever(100.00%), Headache (47.50%), Runny Nose (31.25%) and least common symptoms were Symptoms of Heart failure (2.5%), Upper GI bleed (2.5%). **Conclusion:** The median and average days of illness should be considered while treatment and the most common and least common symptoms should alarm the complications of disease.

**Keyword:** Dengue Fever, Dengue Hemorrhagic fever, Classical Dengue Fever.

## \*Address for Correspondence:

Dr. R N Patil, Associate Professor, Department of Pediatrics, Dr Ulhas Patil Medical College and Hospital, Jalgaon, Maharashtra, INDIA.

Email: [chaitanya\\_care@yahoo.co.in](mailto:chaitanya_care@yahoo.co.in)

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## INTRODUCTION

Dengue infections are caused by four antigenic ally distinct dengue virus serotypes (DENV-1, 2, 3, 4) and transmitted by the bite of an infected female mosquito- *Aedes aegypti*. Clinical spectrum of infection with dengue virus ranges from asymptomatic through Dengue is one of the most serious mosquito borne arboviral infections<sup>1,2</sup>. The WHO estimates 50 million dengue infections occur annually and almost half the world's population lives in countries where Dengue infection is endemic<sup>3</sup>. Over the

last 10 15years Dengue Hemorrhagic Fever has become a leading cause of hospitalization and death among children in SEAR countries following Diarrheal and acute respiratory infections<sup>4</sup>. According to WHO, 2/5th of world's population are now at risk for dengue<sup>5</sup>. It is endemic in many parts of India and several epidemics too have occurred throughout the country. According to the National vector borne disease control programme, Directorate general of health services Ministry of Health and Family Welfare, India, an estimated 75,454 dengue cases and 167 deaths from India and 910 cases and 1 death from Andhra-Pradesh have been documented in 2013.<sup>6</sup> There is a consensus from studies in Southeast Asian and Latin American countries that children are particularly at risk of developing severe diseases and carry a higher mortality rate<sup>7,8,9,10</sup>. Several community-based epidemiological studies, mostly from Southeast Asia and some from the Americas, have alluded to changing demographics and clinical patterns of the disease, including the modal age of infection<sup>7,8,11,12,13,14,15</sup>.

## AIMS AND OBJECTIVE

To study the Prevalence of various symptoms in Confirmed cases of Dengue patients and their outcome.

## METHODOLOGY

This was Prospective study of all patients admitted to...Pediatrics department with suspected dengue fever all the patients were diagnosed and confirmed by ELISA NS-1 Antigen technique. Total 150 fever patient were suspected during one year period, out of that 80 were confirmed of dengue fever.

## RESULTS

Of the Total one year period out of total 150 suspected patients with Dengue fever cases the total confirmed cases were 80.

**Table1:** Distribution of Dengue cases as per Clinico-demographic Characteristics

Age groups	Uncomplicated Dengue Cases(n=60)	Complicated Dengue Cases(n=20)
0-4	22(36.00%)	6(20.00%)
5-9	10(19.00%)	8(40.00%)
10-14	28(45.00%)	6(30.00%)
<b>Gender</b>		
Male	29(49.50%)	7(35.00%)
Female	31(50.50%)	13(65.00%)
<b>Duration of Symptoms at Admission</b>		
Median	3 (range 1-9)	4(2-12)
Mean	2.89 (range 1-6)	3.9(1-10)
<b>Duration of Hospitalization</b>		
Median	2(range 1-7)	5(range 2-8)
Mean	3.1(range 1-6.8)	4.3(range 2-9)

From **Table1:** It is clear that complicated dengue was more common in 5 to 9 yrs age group 8(40.00%). Also complicated Dengue was more common in Females as compared to Males. Duration of symptoms at admission were, Median 3 days, Mean 2.89 days for Uncomplicated Dengue, For Complicated dengue the median was 4 days, and 3.9 days mean.

**Table 2:** Various Clinical Manifestations among Confirmed Dengue Cases

Clinical Feature	No of Patients (n*=313)	Percentage
Fever	80	100%
Headache	38	47.5%
Runny nose	25	31.25%
Cough	22	27.50%
Dehydration	21	26.25%
Diarrhea	20	25.00%
Myalgia	17	21.25%
Respiratory distress	10	12.50%
Abdominal pain	9	11.25%
Shock	9	11.25%

Rash	9	11.25%
Seizures	8	10.00%
Retro orbital Pain	8	10.00%
Sore throat	7	8.75%
Crepitation or decreased air entry	5	6.25%
Petechial rash	5	6.25%
Bradycardia ( heart block)	5	6.25%
Enlarged liver	3	3.75%
Symptoms of heart failure	2	2.5%
Hematuria	2	2.5%
Upper GI bleed	2	2.5

(n\*.May increases as multiple response questions were asked )

From **Table2:** the most commonly reported symptom were Fever (100.00%), Headache (47.50%), Runny Nose (31.25%) and least common symptoms were Symptoms of Heart failure (2.5%), Upper GI bleed (2.5%).

## DISCUSSION

From Table 1: It is clear that complicated dengue was more common in 5 to 9 yrs age group 8 (40.00%).Also complicated Dengue was more common in Females as compared to Males. Duration of symptoms at admission was, Median 3 days, Mean 2.89 days for Uncomplicated Dengue, For Complicated dengue the median was 4 days, and 3.9 days mean. The complicated form was common in 5-9 yrs age group , this could be due the reason that malnutrition may be prevalent in higher grade contributing to the severity of the disease, again the cross infections of the disease is responsible for the severe forms of disease like Dengue hemorrhagic fever .These findings are similar to Alok Kumar (2015)<sup>16</sup>, From Table2: the most commonly reported symptom were Fever (100.00%), Headache (47.50%), Runny Nose (31.25%) and least common symptoms were Symptoms of Heart failure (2.5%), Upper GI n bleeding etc. These presentations could be due to the fact that Dengue classically presents with Fever, headache, Runny nose, and as far the proper treatment is taken for the seven day i.e. median recovery time less chances of complications like symptoms of Heart Failure, Upper GI n bleeding etc. These findings are similar to Alok Kumar (2015)<sup>16</sup>

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