

Serodiagnosis of Dengue Fever in Western Odisha at a Tertiary Care Hospital, Vimsar, Burla, Sambalpur

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Submitted: 01-08-2022

Accepted: 07-08-2022

ABSTRACT: Dengue is an acute infectious disease of viral etiology. It is probably one of the most important arthropod borne viral disease in terms of human morbidity and mortality. The spectrum of disease ranges from self-limited dengue fever to more severe form of dengue haemorrhagic fever (DHF) and dengue shock syndrome (DSS). Laboratory diagnosis of dengue virus infection mainly depends on the detection of specific antigens and specific antibodies. The aim of the study to correlate the serological test with clinical presentation in patients with diagnosis of dengue.

KEYWORDS: dengue haemorrhagic fever, dengue shock syndrome.

I. INTRODUCTION

Dengue also called classic dengue or breakbone fever is a flavivirus infection found in large area of tropical and subtropical region. Dengue is a mosquito borne viral infection and is transmitted by *Aedes aegypti* and *Aedes albopictus*. Five distinct type of serotypes of DEN-1, DEN-2, DEN-3, DEN-4 and DEN-5 causes dengue. Human are the main amplifying host of the virus. Dengue may be asymptomatic or may lead to undifferentiated fever, dengue fever (DF) or dengue

II. RESULTS

Among 59 seropositive cases 27(45%) are NS1 antigen positive and 32(55%) are IgM MAC ELISA positive. Of the 59 seropositive cases belonged to 21-30 years of age group, and most of the cases belong to Bolangir district (33%). Among the seropositive cases 100% were having mild febrile syndrome and thrombocytopenia, 40(67.79%) were having headache and 30(50.84%) were having rashes.

III. DISCUSSION

The epidemiology of dengue in the western Odisha shows that most of the reported cases occurred in young adults. Among the clinical signs we noticed a higher proportion of febrile. The epidemiology of dengue in the western Odisha shows that most of the

haemorrhagic fever (DHF) and dengue shock syndrome (DSS) are leading cause of hospitalization and death especially among children. The environmental risk factors for DHF are infestation with *Aedes* mosquito, hot humid climate enhance enhancing breeding of mosquito. Early diagnosis of dengue is important and can be established with commercial available serological assays. Early case detection and management reduces morbidity and mortality due to DHF or DSS.

Objective

The main objective of this study is to evaluate the utility of serodiagnosis of dengue virus infection and correlate the result with demographic, clinical, and laboratory profile in patients clinically diagnosed to be suffering from dengue at a tertiary care hospital in Sambalpur, Odisha, Eastern India.

Materials and Methods

It is a prospective study done at VIMSAR, Burla from Jan 2022 to July 2022. Three hundred and eight serum samples collected from clinically diagnosed dengue patients reporting to VIMSAR, BURLA were processed by NS1 ANTIGEN AND IgM MAC ELISA in Department of microbiology, VIMSAR, BURLA

reported cases occurred in young adults. Among the clinical signs we noticed a higher proportion of febrile syndrome, thrombocytopenia, severe headache, nausea, vomiting, myalgia, and rash in patients with DF. DHF is a biphasic febrile illness with hemorrhagic tendencies due to plasma leakage and vascular permeability.

IV. CONCLUSION

In our study early serodiagnosis and admission of suspected dengue case and prompt administration of IV fluids can reduce morbidity and mortality due to DHF and DSS.

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