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ZIKA VIRUS AN EMERGING CHALLENGE TO PUBLIC HEALTH

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ABSTRACT

Zika virus belongs to the family of Flaviviridae mostly spread by day time active Aedes mosquitoes such as A. aegypti and A. albopictus. Historically, symptomatic Zika virus infections were limited to sporadic cases or small clusters of patients. This pattern changed in 2007, when the first major outbreak of Zika virus infection occurred in Yap. Infection is likely asymptomatic in 80% of cases. No specific treatment or vaccine is available for Zika virus infection. Management includes rest, fluids, antipyretics, and analgesics. Zika virus has been declared as a public health emergency.

Keywords: zika, virus, emerging, infectious, disease

INTRODUCTION

Zika virus disease (ZVD) is a mosquito borne disease transmitted by Aedes mosquito which also transmits other vector- borne diseases like dengue, chikungunya and yellow fever. During the day time, the mosquito usually bites.

The clinical manifestations are mild fever, rashes on the skin, headache, pain in the muscles and joints, and inflammation under eyelids, symptoms lasting for 2-7 days. It's a mild disease and requires no specific treatment.

Prevention is better than cure, protection against the mosquito bite is the only measure that prevents the disease. Measures includes use of insect repellents, long sleeved clothes, use of mesh on doors and windows, maintaining environmental sanitation by avoiding breeding of mosquitoes in open containers.

About the virus

Zika virus is a flavivirus that was first isolated in 1947 from a febrile rhesus macaque monkey in the Zika Forest of Uganda and later identified in *Aedes africanus* mosquitoes from the same forest. Zika virus shares a genus with dengue, yellow fever, Japanese encephalitis and West Nile viruses.

Epidemiology

The virus was first isolated in 1947 from a rhesus macaque in the Zika Forest of Uganda.

It was later identified in humans in 1968 for the first time in Nigeria

The first major outbreak, with 185 confirmed cases, was reported in 2007 in the Yap Islands.

The first cases confirmed in Brazil was in May 2015

3174 cases and 38 deaths from microcephaly reported in Brazil as of 21 October 2015.

There has been total death of 152 as of 21 October 2015 in the world.

From April 2022, no countries in the world reported Zika virus outbreak. India did experience a significant Zika virus outbreak in November 2021 and 2023

Mode of Transmission

Zika is spread mostly by the bite of an infected *Aedes* species mosquito (*Ae. aegypti* and *Ae. albopictus*).

The disease can be transmitted from mother to foetus during pregnancy causing birth defects.

The infection can also be transmitted through sexual intercourse from an partner infected with Zika disease.

Incubation period: 3 – 12 days

Signs & Symptoms

Fever

Rashes

Headache

Joint pain

Conjunctivitis (red eyes)

Muscle pain

The manifestations of Zika are similar to other viruses spread through the bite of mosquitoes such as dengue and chikungunya.

Confirmatory Diagnosis

Zika can be confirmed by testing blood, body fluids such as urine, saliva or semen.

Severity of the disease

Zika virus disease is generally mild.

Zika infection during pregnancy can cause serious birth defects.

In rare cases, Zika may cause Guillain-Barré syndrome affecting the nervous system in which a person's own immune system damages the nerve cells, causing muscle weakness, and paralysis.

Zika may also cause affect the brain, spinal cord and blood factors resulting in bleeding, bruising or delayed blood clotting.

Treatment

The disease is usually mild and requires no specific treatment.

Symptomatic treatment to treat pain, fever

Complete bed rest with plenty of fluid intake is recommended

In case of severity, medical attention is required.

WHO advice on its prevention and Control

Mosquito control plans are performed to control larvae and adult mosquitoes.

Elimination of stagnant pools of water that can cause breeding of mosquitoes which can be prevented by covering water storage containers, clearing the flower pots, cleaning up trashes and used tyres.

Use of larvicides, insecticides to control mosquitoes

Use of mosquito repellents, wearing light colour long sleeved clothing, installing net on the doors and windows

Use of appropriate contraceptives can prevent the spread of infection through sexual intercourse

For regions with no active transmission of Zika virus, WHO recommends practicing safer sex or abstinence for a period of six months for men and two months for women who are returning from areas of active Zika virus transmission to prevent infection of their sex partners.

Sexual partners of pregnant women, living in or returning from areas where local transmission of ZIKV occurs, should practice safer sex or abstain from sexual activity throughout pregnancy.

CONCLUSION

Zika virus is spreading slowly in India. "Be it any illness, the first defence is prevention". To detect the impact of Zika virus in our country, a long-term support and participation of our public health authorities at the local, regional, State and at the central level is a matter of concern.

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