

SHORT COMMUNICATION

‘ANOTHER VECTOR BORNE CHALLENGE TO COMBAT- ZIKA VIRUS OUTBREAKS’

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Zika virus is a single-stranded RNA virus of the *Flaviviridae* family. It is known to transmit to humans primarily through the bite of an infected *Aedes* species mosquito which is also known to carry dengue, chikungunya & yellow fever virus. Transmission is anthroponotic (human-to-vector-to-human) during outbreaks, Perinatally in utero, sexually and via infected blood transfusion. It is mild and self-limiting infection lasting for several days to a week. However, it is suspected as a cause of Guillain Barre Syndrome. There is a teratogenic association of Zika virus causing congenital birth defects like microcephaly and neurologic abnormalities. Treatment is generally supportive and for symptomatic relief. No specific antiviral treatment or vaccine is yet available for Zika virus disease. It highlights importance of preventive public health measures at the community level and avoids travelling to the endemic areas.

Keywords: Zika Virus, *Aedes* species, Guillain Barre Syndrome, teratogen, Microcephaly, Vaccine unavailable, Preventive measures.

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This is the time to be alarmed about another Vector borne challenge being encountered globally. Zika virus is a single-stranded RNA virus of the *Flaviviridae* family. Infected *Aedes* species mosquito which is also known vector to dengue, chikungunya & yellow fever virus is known for its transmission. The mosquito usually breeds in stagnant water and indoor water containers. Human-to-vector-to-human transmission occurs during outbreaks, Perinatally in utero, possible sexual and via blood transfusion infectivity is also noted.¹

It is mild and self-limiting infection lasting for several days to a week, mostly it is asymptomatic, but if clinically apparent it shows up as sudden onset of fever with maculopapular rash, lymphadenopathy, arthralgia, conjunctivitis, myalgia and headache. Disease severity causing fatality is low. However, it is suspected as a cause of Guillain-Barre syndrome.²

Alarmingly there is a possible teratogenic association of Zika virus. Neonates and fetuses of women infected with Zika virus during any trimester of pregnancy should be evaluated for congenital birth defects like microcephaly and neurologic abnormalities, this makes Zika virus in league with Rubella and Cytomegalo virus (CMV) which were previously known to cause Congenital Birth Defects. Around 19 countries of the world have been declared endemic and unsafe to travel for pregnant women and also inhabitants there have been warned not to plan pregnancy till appropriate vaccination or eradication plan is available.^{3,5}

Diagnosis of Zika virus infection is based on patients' clinical symptoms and correlating them to history of travel and activities. After the onset of symptoms in infected patient, laboratory test of running reverse transcriptase-polymerase chain reaction (RT-PCR) on serum can help in definite diagnosis. Virus-specific IgM and neutralizing antibodies typically develop toward the end of the first week of illness which is difficult to discern due to cross reactivity with related flavi-viruses.^{2,3}

Treatment is generally supportive, including rest, IV Fluids and hydration, use of analgesics and antipyretics for symptoms. There should be concern of possible dengue or chikungunya virus infection in Zika suspected patient. Aspirin and other non-steroidal anti-inflammatory drugs (NSAIDs) should be avoided until dengue can be ruled out to reduce the risk of haemorrhage & Reye Syndrome amongst children. Infected people should be isolated for the first few days to prevent and reduce the risk of local transmission. No specific antiviral treatment or vaccine is yet available for Zika virus disease.^{2,4}

It highlights importance of preventive public health measures at the community level, Eradication of mosquito vectors and their larvae in sustainable way should be given primary importance, Educating general population for their personal protection by using bed nets, insecticides and repellents. Indoor water storage should be avoided. Safe travelling plans should be made for the endemic areas particularly for pregnant women, immune compromised and children.^{4,5}

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