

REVIEW ARTICLE**A REVIEW ON ZIKA FEVER**

Bramham Peddapothula *, Ramesh Y, Gobinath M

Ratnam Institute of Pharmacy, Pidhapolur (V), Muthkur (M), Nellore-524346, Andhra Pradesh, India

Date Received: 24th May 2016; Date accepted: 8th June 2016;
Date Published: 11th June 2016E-mail: bramhampharma14@gmail.com**Abstract**

Zika fever is mainly caused by zika virus is a mainly *Aedes aegypti* -flavivirus it is closely related to the dengue virus, because of zika virus is mostly obtained in African countries are effected very much. This virus is easily spreading through the mosquitoes and sexual interactions and sometimes blood changing from any person effected by this fever immediately they are got some rashes on the surface of the body and may chances to get Redness of eye and fever etc., any pregnant women affected by the zika it may chance to effected to the foetus also because of the baby head will be going to abnormally decreased the baby peritoneal. For this zika virus there is no medicine are available just now. so must be take some precautions used in zika fever its one of the present dangers disease in the world

Keywords: Zika virus, Flavi virus, *Aedes aegypti* mosquitoes

INTRODUCTION

Zika virus is obtained from mosquito- borne in flavi virus closely related to the dengue virus is one of the family member of *Flaviviridae* it was first isolated in the year 1947 in zika forest of Uganda. This virus is totally related to the dengue. The Yellow fever was found in Japanese encephalitis and west Nile viruses. The virus is mainly spread across the Pacific Ocean in between the duration of years 2013 and 2014 to French Polynesia & New Caledonia¹. The Cook Islands and Easter islands and in 2015 it spread to Mexico and Central America. The Caribbean and South America the infection was known as zika fever that often caused only by mild symptoms similar to a dengue fever it is totally treated by rest since the 1950 it has been known to occur within a narrow equatorial belt from Africa to Asia. The decease cannot be prevented by drugs or vaccines as of February 2016. Because of zika virus in

pregnant women can cause abnormal brain development in the foetuses by mother to child transmission in some times may result in miscarriage (or) microcephaly. It is not at known whether zika virus causes microcephaly in January 2016 the united states centre for disease control and prevention it may issue travel guidance to particular effected countries including the use of enhanced precautions and guidelines for particular pregnant women ostponing the travel to mainly effected countries such as some countries like a Colombia yegoslovya the pregnant women postpone their travel to the particular countries after the baby birth ².

virology: The zika virus mainly belonging to the flaviviridae family and the genus of flavivirus and it is mainly related to the dengue virus and yellow fever and Japanese encephalitis and west nail viruses ³.

Structure of zika virus: Zika virus is mainly enveloped virus and icosahedral and has a non-segmented single stranded positive sense RNA genome it is mainly related to the spooned weni virus and is one of the two different viruses in the spooned weni virus family if any positive sense RNA genome my get a chance to translated into viral proteins in other falviviruses such as the same physical factors comparing to the west Nile virus. The RNA genome is mainly have seven encode of non-structural proteins and three structural proteins. Mainly the zika structural proteins encapsulated the virus is replicated RNA strand is held with in a nucleocapsid formed from 12 kda proteins blocks ⁴. The capsid is mainly contains the a host derived membranes modified with the two viral glycoproteins, replications of the viral genome would first require creation of anti- sense nucleotide strand. Zika virus is mainly contains the two lineages these are

1. African lineage
2. Asian lineage

According to the phytogenic studies the American strains are closely relo the Asian strains, In 2013 the zika virus will be spread to the French Polynesia.

Causes: Main cause of the zika fever is Zika virusitis a mosquito-borne flavi virus it is closely related to the dengue virus. While mosquitoes are the vectors and reservoirs of the zika virus. This zika virus is mainly finding in African monkeys and its rodents. so these are the main causes of the zika virus ⁵. There have been reports of two cases of possible sexual transmission and cases of vertical prenatal transmission. Flavi viruses it could potentially be transmitted by blood transfusion.

Transmission: Mainly the zika virus is spreading to one person to other because of the mosquito bite, primarily *Aedes aegyptis* in tropical regions. The zika virus is isolated from *Aedes Africanus*, *Aedes Apicoargenteus*, *Aedasuteocephalus*. In the year of 2007 outbreak on Yap Island in the South Pacific, *Aedes hensilli* was the vector, while *Aedes polynesiensis* spread the virus in French Polynesia in 2013. The zika virus is always mainly spread by sexual transmission and peritoneal transmission and blood transfusion. The vertebrate hosts of the virus were primary monkeys so this total cycle was called as enzootic-mosquito-monkey- mosquito cycle ⁶.

Vector: The zika virus is mainly transmitted by day-time active mosquitos as its vector. It is primarily transmitted by the female *Aedes aegypti* in order to lay eggs but has been isolated from a number of arboreal mosquito species in the *Aedes* genus such as *Aedes Africanus*, *A. apicoargente* as the extrinsic incubation period in mosquitos of about 10 days. The time extent of the vectors is still unknown the zika virus has been detected in many more species of *Aedes* along with *Anopheles coustani*, *Anopheles uniformis*. In 2007 zika virus is mainly transmission by *A. albopictus* and the tiger mosquitos was reported in the urban countries ⁷. There is concern for autochthonous infections in urban areas of European countries infested by *A. albopictus*. Because of the first two cases are confirmed in the passengers who are travelled from French Polynesia to Italy, Since 2015 only the newspaper are given attention to the spread in zika mainly in the Latin America and Caribbean, Barbados and Bolivia and Brazil and Colombia and Venezuela these are the mainly zika transmitter countries it is identified by the pan American health organisation.

SEXUAL TRANSMISSION: In the year of 2016 bravely three reported cases are mainly indicated that zika virus would possibly be sexually transmitted But not confirmed that the sexual transmission of zika whose play a key role wheatear the woman or men and also mainly the zika virus is spreading through the pregnant woman ⁸.

Transmission in pregnancy period: In 2015-zikv RNA was detected in the amniotic fluid of two pregnant woman whose foetuses head microcephaly indicating virus had crossed the placenta and could have caused a mother to child infection. Brain tissue from two new borns with microcephaly who died within 20 hours of birth and placenta and other tissue of two miscarriages from rogrande do north in Brazil tested positive for zika virus ⁹.

Signs and symptoms: The zika virus symptoms like Rash, Conjunctivitis (red eyes), Muscles and joint pains, Headache, similar to dengue & chikungunya fever, Bleeding

has been documented in only one case, Microcephaly ¹⁰.

Guillain-barre syndrome: Zika virus infection has been linked with GBS. In this condition mainly having the rapid onset of muscle weakness, it leads to paralysis. Sometimes it's may causes the muscle pain & paralysis). It is one of the difficult condition to determine the zika virus is causes the GBS or not but most of the countries are have report increased in the rate of GBS. In Colombia 3 deaths happened due to related zika virus with GBS ¹¹.

Microcephaly: It is mainly disease caused by in the pregnancy woman through the mother to child in the womb but surely not yet conformed but some well reports are documented about the microcephaly. In the November 2015 reports from the Brazilian health ministry found two cases in whom amniocentesis confirmed the presence of the zika virus in the amniotic fluid ¹². The ultra sounds finding showed that both babies had a small head circumferences due to the foetus was also found to have calcification in their eye & microcephaly another study in an autopsy of the microcephaly foetus found zika virus DNA as well as pathological damage in the brain & no other organ suggesting that the virus is neurotropic.

Treatment of zika virus: For the treatment of zika virus no vaccines are available present the treatment reliving pain fever any other symptoms causing the patient discomfort Development is a priority of the US National Institutes of Health (NIH), but officials warn that development of a vaccine could take years ¹³. The symptoms of zika fever can be treated by Drinks fluids to preventing dehydration & Take medicine such as acetaminophen or paracetamol to relive fever & pain.

Prevention of zika virus: Mainly travellers can protect themselves from disease by taking steps to preventing mosquito bites when travelling to countries ¹⁴. Where zika virus or other viruses' spreads by mosquitos have been reported use insect repellent were a long sleeves and pants and stay in places with air conditioning or that use window and door screens.

Epidemiology: The very first known case of Zika fever was in a sentinel rhesus monkey stationed on a tree platform in the Zika Forest in Uganda in 1947. Population surveys at the time in Uganda found a 6.1% prevalence. The first human cases were reported in Nigeria in 1954. A few outbreaks have been reported in tropical Africa and in some areas in Southeast Asia. There have been no documented cases of Zika virus in the Indian subcontinent ¹⁵. Surveys have found antibodies to Zika in healthy people in India which could indicate past exposure, Though it could also be due to cross-reaction with other flavivirus

es. By using phylogenetic analysis of Asian strains, it was estimated that Zika virus had moved to Southeast Asia by 1945. In 1977-1978, Zika virus infection was described as a cause of fever in Indonesia. Prior to 2007, reported cases of Zika virus infection were of a sporadic mild viral illness that got better on its own and it was not considered an emerging pathogen¹⁶. The first major outbreak, with 185 confirmed cases, was reported in 2007 in the Yap Islands of the Federated States of Micronesia. A total of 108 cases were confirmed by PCR or serology and 72 additional cases were suspected. The most common symptoms were rash, fever, arthralgia, and conjunctivitis, and no deaths were reported¹⁷. The mosquito *Aedes hensilli* which was the predominant species identified in Yap during the outbreak, was probably the main vector of transmission. While the way of introduction of the virus on Yap Island remains uncertain, it is likely to have happened through introduction of infected mosquitoes or a viraemic human with a strain related to those in Southeast Asia. This was also the first time Zika fever had been reported outside Africa and Asia. Before the Yap Island outbreak, only 14 human cases had ever been reported.

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Conclusion: Zika virus is obtained from mosquito-borne flavivirus closely related to the dengue virus is one of the family member of *Flaviviridae* it was first isolated in the year 1947 in zika forest of Uganda. While mosquitoes are the vectors and reservoirs of the zika virus. This zika virus is mainly finding in African monkeys and its rodents. so these are the main causes of the zika virus. Brain tissue from two new borns with microcephaly who died within 20 hours of birth and placenta and other tissue of two miscarriages from rogrande do north in Brazil tested positive for zika virus. zika virus or other viruses' spreads by mosquitos have been reported use insect repellent were a long sleeves and pants and stay in places with air conditioning or that use window and door screens.

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