



## ZIKA VIRUS (ZIKA FEVER)

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### ABSTRACT

India has gifted the entire world with precious treasure of Ayurveda since 6000 B.C. In Ayurveda there is always a challenge to provide answer and remedies for the newly originating disease like Zika virus infection. Zika fever, also known as Zika virus disease. Africa, where it was first identified in Rhesus monkeys in 1947. It was reported in humans in the year 1952 but was unknown to India till last year. Zika virus is a mosquito-borne disease. The virus is transmitted by the *Aedes aegypti* mosquito, it can correlated with the Agantuja Sannipataja jwara described in ancient ayurvedic texts. Our ancient ayurvedic texts describe various diseases in details, along with their effective treatment. These ayurvedic remedies do not cause damage or other long term adverse effect to the body. Many remedies are described in Ayurveda in various text for "Agantuja Sannipataja jwara".

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## INTRODUCTION

Zika virus is a member of the virus family, Flaviviridae. It is spread by the daytime active Aedes mosquito, such as *Aedes aegypti* and *Aedes albopictus*. Its name comes from the Zika Forest of Uganda, where the virus was first isolated in the year 1947. Zika virus is related to the Dengue, yellow fever, Japanese encephalitis, and Chikungunya viruses. Since the 1950s, it has been known to occur within a narrow equatorial belt from Africa to Asia. Zika, the mosquito-borne disease, broke out as an epidemic in Brazil in the year 2015 and spread to 70 countries in the world including Latin America, Barbados, Bolivia, Brazil, Colombia, the Dominican Republic, Ecuador, El Salvador, French Guiana, Guadeloupe, Guatemala, Guyana, Haiti, Honduras, Martinique, Mexico, Panama, Paraguay, Puerto Rico, Saint Martin, Suriname, and Venezuela. By August 2016, more than 50 countries had experienced the active (local) transmission of Zikavirus.

However, with the World Health Organisation (WHO) confirming the first three cases of Zika virus in India at Bapunagar area of Ahmedabad which includes a pregnant lady who was tested positive in January 2017. It seems that the mosquito-borne disease is slowly spreading its wings in India. So, I would like to present that disease by article.

### Causative factor

The vertebrate hosts of the virus were primarily monkeys in a so-called enzootic mosquito-monkey-mosquito cycle, with only occasional transmission to human being and spread in a mosquito-human-mosquito cycle, like the yellow fever virus and the dengue fever virus (both flaviviruses), and the chikungunya virus.

1. In Mosquito:- Zika is primarily spread by the female *Aedes aegypti* mosquito, The mosquitos must feed on blood in order to lay eggs.
2. Sex:- Zika can be transmitted from men and women to their sexual partners; most known cases involve transmission from symptomatic men to women.
3. Pregnancy:- The Zika virus can spread by vertical (or "mother-to-child") transmission, during pregnancy or at delivery.
4. Blood transfusion:- Zika can be transmission through blood transfusions have been reported globally.

### Pathogenesis

Zika virus replicates in the mosquito's midgut epithelial cells and then its salivary gland cells. After 5–10 days, the virus can be found in the mosquito's saliva. If the mosquito's saliva is inoculated into human skin, the virus can infect epidermal keratinocytes, skin fibroblasts in the skin and the Langerhans cells. The pathogenesis of the virus is hypothesized to continue with a spread to lymph nodes and the bloodstream.

### According to Ayurveda

In Agantuja jwara, Abhishanga" (contact with source of infection) is one of the important cause of disease which causes imbalance of Doshas Vata, Pitta and Kapha leading to Agnimandya, Dhatudushti and later Jwara. There is important role of „ Ama " in the pathogenesis Jwara. When Ama lodges in Dhatus like Rasa, Rakta, Mamsa, Asthi and Majja it causes serious manifestation and complication of Jwara.

### Symptoms

Most cases have no symptoms, but when present they are usually mild and can resemble dengue fever. Symptoms may include fever, red eyes, joint pain, headache, and a maculopapular rash. Symptoms generally last less than seven days. It has not caused any reported deaths during the initial

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infection. Infection during pregnancy causes microcephaly and other brain malformations in some babies. Infection in adults has been linked to Guillain-Barré syndrome (GBS).

#### According to Ayurveda

The condition can be understood as “Agantuja Sannipataja jwara”. Symptoms of the Sannipatja jwara (caused by all the three dosas with equal severity) such as momentary sensations of heat and cold, pain in bone joints and head; tearful, dirty, red and crooked eyes, with tinnitus and pain, drowsiness, fainting, delirium, cough, dyspnoea, anorexia, giddiness; tongue as if charred and roughened excessive laxity in organs, haemoptysis, turning of head, thirst, insomnia, cardiac pain, delayed and little elimination of sweat, urine and faeces, limbs not much emaciated continuous groaning, appearance of rashes and blackish and reddish patches, muteness, inflammation in channels, heaviness in abdomen delayed digestion and dosas.

#### Investigation

Diagnosis is by testing the blood, urine, or saliva for the presence of Zika virus RNA when the person is sick.

#### Precaution

Prevention involves decreasing mosquito bites in areas where the disease occurs, and proper use of condoms. Efforts to prevent bites include the use of insect repellent, covering much of the body with clothing, mosquito nets, and getting rid of standing water where mosquitoes reproduce. There is no effective vaccine. Health officials recommended that women in areas affected by the 2015-16 Zika outbreak consider putting off pregnancy and that pregnant women not travel to these areas.

#### According to Ayurveda

1. Fighting Mosquito the Natural Way by Essential Oils and Dhoops: Very good quality of citronella oil/neem seed oil, Cinnamon, Clove, Peppermint, Lemongrass, Castor & coconut oil and Lemon eucalyptus can also be applied on skin as a mosquito repellent.
2. Plants that Mosqis hate: Add these plants at your doorstep garden and keep the mosquitos away  
1. Marigold 2. Catnip 3. Citronella 4. Basil 5. Lemongrass 6. Rosemary 7. Catnips

#### Treatment

While there is no specific treatment, paracetamol (acetaminophen) and rest may help with the symptomatic. Admission to hospital is rarely necessary as like Guillain-Barré syndrome (GBS).

#### According to Ayurveda

Ayurveda principles of Jwara chikitsa like Agnideepana, Amapachna, Srotoshodhana, Pitta shamaka are useful management. Samshodhana (Virechana) is helpful in patients which eliminate Ama and toxins from the body.

1. Champakadi-agad in 3gr two time day.

2. Tribhuvankirti-ras 02 tablet three time day with Tulasi (ocimum tenuiflorum) Adrak (zingiber officinale), Bael ( aegle marmelos), Honey.
3. Suvarnasuthshekhar-ras 01 tablet two time day.
4. mahaSudarshan kada 20ml two time day.

#### Vaccine development

The World Health Organization (WHO) has suggested that priority should be to develop inactivated vaccines and other non-live vaccines, which are safe to use in pregnant women. As of March 2016, 18 companies and institutions were developing vaccines against Zika but they state a vaccine is unlikely to be widely available for about ten years.

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