



Epidemiology Unit

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All PDHS, RDHS,

All Directors/Medical Superintendents of Teaching, General and Base hospitals,

All Regional Epidemiologists,

All Medical Officer of Health,

Guidelines for Clinical Management, Laboratory Investigation and Surveillance of Patients with Zika Virus Infection

Zika virus disease is an emerging mosquito-borne viral disease that was first identified in Uganda in 1947. Since then outbreaks of Zika virus disease had been reported in Africa, South and Central America and in few countries of Asia and Pacific region. Zika virus is a member of family Flaviviridae and it is transmitted by mosquitoes of genus Aedes. It causes a mild illness known as Zika fever, Zika or Zika disease. Current outbreaks indicate the possibility of rapid global expansion of Zika virus disease.

Currently Affected Countries

Some countries of South America (Brazil, Colombia, Paraguay, Venezuela, Suriname, French Guiana, Ecuador, Guyana, Bolivia); Central America (El Salvador, Guatemala, Mexico, Panama, Honduras); Caribbean (Martinique, Saint Martin, Puerto Rico, Haiti, Barbados, Guadeloupe) and Africa (Cape Verde) had reported local transmission of Zika virus in year 2015 and 2016.

Transmission

Zika virus is transmitted to humans primarily by mosquitoes of Genus Aedes (*Aedes aegypti*, *Aedes albopictus* etc.). These are the same mosquitoes that spread dengue, chikungunya and yellow fever. Aedes mosquitoes are daytime biters who prefer to bite humans (Anthropophilic) and live both indoors and outdoors near people.

Incubation Period

Incubation period of Zika virus is not clear, but is likely to be few days to a week. Zika virus usually remains in blood of an infected person for few days but it can be found longer in some people.

Symptoms

Only about 20% of people infected with Zika virus will develop the clinical disease. The most common symptoms are acute onset of fever, maculo-papular rash, arthralgia and non purulent conjunctivitis. Other common symptoms include headache, myalgia and retro-orbital pain. The symptomatic disease is generally mild and lasting for 2-7 days. Severe illness requiring hospitalization is uncommon and deaths are very rare.

Pregnancy

Pregnant women can be infected with Zika virus in any trimester. There is no evidence exists to suggest that the pregnant women are more susceptible to Zika virus infection or experience more severe disease. Some countries have reported increase incidence of microcephaly and Guillain-Barre Syndrome during outbreaks. Health authorities are currently investigating possible potential link between Zika virus in pregnant women and microcephaly in their babies. However more investigation and research is needed to confirm the possible association.

Laboratory Diagnosis and Conformation

Zika virus can be diagnosed by RT- PCR test (Real Time- Polymerase Chain Reaction) and virus isolation from blood samples. There is no widely available test to detect Zika infection. Because it is closely related to dengue and yellow fever, it may cross-react with antibody tests for those viruses. Ministry of Health has established diagnostic facilities (PCR test) for Zika virus at MRI.

Following should be considered when sending sample to MRI.

1. Request: Very brief history is mandatory highlighting followings;

- Clinical features of the patient.
- **Travel history within previous 2 weeks**
- **Date and the Day of the illness when blood was collected**
- Any other investigations done to detect other viral infections such as dengue or chickungunya

2. Sample collection, storage and transport,

- **Sample should be collected within the first five days of illness** (early sample).
- **Blood should be collected into EDTA tube or plain red top tube.**
- **Minimum blood volume is 2ml.**
- **Heparinized or very low volume samples (less than 2 ml) may not be accepted for testing.**
- Specimen should be transported to the laboratory **at 2 to 8°C as soon as possible.**
- **In a delay may be stored in the refrigerator at 2 to 8°C up to 2 days.**
- **Late samples** (after day 7 of illness) may **not be accepted** for the zika virus PCR test.
- Fill all the other fields in the request form very clearly and container should be properly labeled.
- Please contact **Virology department of MRI to clarify** any matter in sample collection, storage and transportation.

[Source: Zika virus Real Time PCR Test (qualitative assay); Brief guideline for sent out samples; MRI]

Treatment

Zika virus disease is usually mild and does not require any specific treatment. There is no vaccine or anti viral medication currently available to treat the Zika virus disease.

Treatment is generally supportive and based on symptomatic management;

- Get adequate rest
- Drink adequate fluid to prevent dehydration
- Take Paracetamol to relive fever and pain
- Taking aspirin and other non-steroidal anti-inflammatory drugs (NSAIDs) is not recommended.

Patients with mild illness can be managed at OPD or at home according to the decision of the physician who is attending for care of the patient and should be provide supportive symptomatic treatment and advice. Patients with severe illness should be admitted for inward care only after considering the severity of the clinical situation of individual patient.

Necessary investigations should be done to rule out the possibility of Dengue because of both conditions shares some similar clinical manifestations.

Prevention

Zika virus can be found in blood during the first week of infection. Prevention and control of disease relies on reducing mosquitoes through source reduction and avoiding contact between mosquitoes and people. All measures should be taken to keep environment clean to avoid breeding of Aedes mosquitoes.

All travellers to affected areas, showing symptoms compatible with Zika virus disease within 2 weeks of returning from an affected area should consult their medical practitioner for evaluation of the condition. Medical practitioners should inquire the travel history of the suspected cases of Zika viral disease.

People should take personal protective measures to avoid mosquito bites such as usage of mosquito repellants; wearing clothes that cover as much of the body; using physical barriers such as screens, closed doors and windows and sleeping under mosquito nets.

Pregnant women who are planning to travel affected areas should consider postponing their visit, considering risk and benefit.

Patients should be advised to use bed nets in order to prevent the spread of disease among inpatient patients. Hospital premises should be kept clean and fogged in regular basis (at least once in a week) where the suspected or diagnosed Zika patients being treated.

Surveillance

The surveillance case definition of suspected Zika virus disease is “A patients with a history of travel to an area with ongoing transmission of Zika disease within the previous two weeks and having two or more of the following symptoms; acute onset of fever, rash, myalgia, arthralgia and conjunctivitis.

All suspected Zika virus disease patients should be notified to the respective Medical Officer of Health (MOH). All notified cases should be investigated timely and necessary preventive and control measures should be deployed. All Regional Epidemiologists and all Medical Officers of Health should give special attention to the current situation in their areas and should educate all public health staff and be prepared to take preventive actions when necessary.

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Chief Epidemiologist