

# Zika Virus Infection in East Asia: Present Situation

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## ABSTRACT

Zika virus infection is the new emerging public health problem. It mainly affects tropical Latin and South American countries causing thousand cases of infections. At present, it is accepted as the global emergence to manage. However, Zika virus infection can be seen in other regions. The current situation of Zika virus infection in East Asia is hereby summarized. This short article aims to provide an overview on the current situation in Southeast Asia. There are already some reports on Zika virus disease in East Asia. All cases are imported cases. The importance of travel medicine can be highlighted. In addition, due to the global warming, extension of habit areas for mosquito can be seen and this might be the problem leading to the local transmission and outbreak of Zika virus infection in East Asia in the future.

**Key Words:** Zika virus, infection, East Asia

## INTRODUCTION

Zika virus is the present problematic arbovirus. It was firstly reported in 1947 in Uganda. At present, it becomes a new interesting problem in medicine. (1,2) The infection has just been declared as important problem for a few years. In general, Zika virus infection is a mild infection and can be self-limiting. However, the series of present problems started when there was a big outbreak on the Yap Island, Micronesia and extended to the other Pacific regions during 2013 and 2014.(3,4) Then the very big outbreak occurred in tropical America and affected more than million locals.(5) The World Health Organization (WHO) declares for the urgent response to this emerging disease. (6) Fetal abnormalities following the infection in the pregnant is the most important consideration.(7)

It is accepted as the global emergence to manage. However, Zika virus infection can be seen in other regions. Focusing on East Asia, it is the area with the most number of world population. Any emerging disease attacking this area will be the important global problem. In this short article, the current situation of Zika virus infection in East Asia is hereby summarized.

### Zika Virus Infection in East Asia

East Asia is not a tropical region but it is next to Southeast Asia and Pacific region where there are many tropical diseases including Zika



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virus infection. Of interest, the mosquito vector that can carry Zika virus, *Aedes* species is already detectable in East Asia. The recent report from China is the good example.(8) The data on the present situation of disease in this area is very interesting. Here, the author discusses on the present situation of Zika virus infection in East Asia.

#### A. Situation in China

China is the country with the most number of people in the world. The existence of the mosquito vector in China is the great concern.(8) At present, Zika virus infection is already reported from China. The first case is the imported case reported by Deng et al.(9) According to this report, the patient is “a male patient was admitted with chief complaint of fever for 9 day (9)” and the history taking showed that “the patient was bitten by mosquitoes during his business trip in Venezuela since January 1st, where Zika virus disease was spreading.(9)” This is the first case report in East Asia. This case is also a case study of using Chinese Medicine for managing of the infection.(9) After the first cases, there are also some other imported cases including the infected children. Zheng et al. reported interesting infected children with history of traveling to endemic area. In this report, the infection is mild and self-limited.(10) The history of travelling to endemic American countries is the main clue for diagnosis of all imported cases in China.(11,12) The correspondence to the infection in China is very interesting, there are many attempts on disease investigation and controls. (13) This include the concern on mosquito vector. As noted by Gao et al., “strict measures should be taken to reduce the *Aedes albopictus* density for the effective control Zika virus spread.(14)”

#### B. Situation in South Korea

There is still no publication on Zika virus infection case in South Korea.

#### C. Situation in North Korea

There are usually limited reports on public health issue from North Korea. It is no doubt that there is still no official report of Zika virus infection from North Korea.

#### D.Situation in Taiwan

Taiwan is a small island in East Asia. Until now, there is already case report on Zika virus in Taiwan. The traveler from tropical endemic area already carried the disease to Taiwan and this becomes the big issue for local public health concern. The first imported case is a Thai patient who brought disease to Taiwan and was detected at the airport.(15) This can implies the need of strict screening at immigration port for the people coming from endemic area.

#### E. Situation in Japan

Japan is an island country in East Asia. The imported Zika virus case is already seen in Japan. Shinohara et al. reported a Japanese patient with Zika virus infection after returning from Thailand. (16) Kutsuna et al. reported similar cases with history of tourism trips to French Polynesia.(17) Since Southeast Asia and Pacific islands are famous tourist resorts and the Zika virus infection already exists there, hence, it is no doubt that the tourist might get infection and carry it back to be an imported case in their hometown.

#### F. Situation in the Mongolia

Mongolia is a landlocked country in East Asia. The weather is not humid at all and the location is extremely far from the tropical endemic areas of Zika virus. There is still no report on Zika virus infection from Mongolia.

## CONCLUSION

Although East Asia is a non-tropical zone, there are already some reports on Zika virus disease in East Asia. All cases are imported cases. Travelers from the endemic areas already brought the disease to East Asia. The importance of travel medicine can be highlighted. The strict infection control process at immigration port must be implemented. In addition, due to the global warming, extension of habit areas for mosquito can be seen and this might be the problem leading to the local transmission and outbreak of Zika virus infection in East Asia in the future.

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