



Zika virus infection in Asian island countries in Indian Ocean: Present situation

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ABSTRACT

Zika virus infection is the present global problem. The infection is widely seen in tropical Latin and South American countries and results in several problems in that area. In addition, the previous big outbreak in many island countries in Pacific region brings attention to the further expansion of the infection worldwide. The specific situation of the infection in island countries is very interesting. Here, the current situation (in 2016) of Zika virus infection in Asian island countries in Indian Ocean is summarized and presented. Although there is still no current problem in the Asian island countries in Indian Ocean, the appearance of infection in the sea resorts of countries lining Indian Ocean is a big concern. Due to the high volume of traveler to sea resorts, emergence of the new disease in Asian island countries in Indian Ocean can be expected.

1. Introduction

Zika virus is a kind of mosquito borne infection that was firstly reported in 1947 in Uganda. At present, it becomes the big global health threat[1,2]. In general, Zika virus infection manifests as an asymptomatic infection or causes mild symptoms that can be self-limited. However, the problems start where there was a big outbreak in islands in Pacific Ocean in 2013 and 2014[3,4]. Extension of disease to tropical America leads to the present concern[5] and World Health Organization (WHO) already noted for the urgent need to manage this emerging infection[6]. The serious concern is that the infection can cause fetal abnormalities if the pregnant woman gets infection[7].

Indeed, the specific situation of the infection in island countries is very interesting. The tropical Asian island countries are usually isolated lands and the tropical diseases are common but confined within the islands. However, the expansion of disease to

other regions is the great concern.

Here, the current situation (in 2016) of Zika virus infection in Asian island countries in Indian Ocean is summarized and presented.

2. Zika virus infection in East Asia

Asian island countries in Indian Ocean are usually beautiful tropical islands but there are many tropical diseases to be considered in those islands. Besides, the mosquito vector that can carry Zika virus, such as *Aedes* species, is already detectable in Asian island countries in Indian Ocean.

The data on the present situation of disease in this area are limited and the authors hereby summarize and discuss on the present situation of Zika virus infection in Asian island countries in Indian Ocean.

2.1. Situation in Sri Lanka

Sri Lanka is an island country southern to India. This island is

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a tropical country. However, until present, there is still no report on Zika virus from Sri Lanka, and it should be noted that dengue exists in Sri Lanka[8] and it is no doubt that the mosquito vector in Sri Lanka can be the vector for Zika virus if it comes to Sri Lanka.

2.2. Situation in Maldives

Maldives consists of many small islands. This tropical country is one of the smallest countries in the world. There are many tourists visiting this island country and the risk of importing Zika virus to Maldives is proposed[9]. However, until present, there is still no report on Zika virus from Maldives. Also, there is no report on the mosquito vector, *Aedes* spp. from Maldives.

2.3. Situation in Singapore

Singapore is a very small island country lining in the area that Indian Ocean connects to Pacific Ocean. It lines next to Malaysia and Thailand where the Zika virus infection is already seen[10]. However, until present, the problem does still not emerge in Singapore. Nevertheless, the mosquito vector exists in Singapore and it has ability to transmit disease[11,12].

2.4. Situation in Seychelles

Seychelles is another island country lining between Asia and Africa. There is still no report on Zika virus infection from this island country. Similar to the case of Maldives, as a hot tourist spot, the risk of importing Zika virus by tourists is proposed[9].

3. Present international public health policies on the problem in Asian island countries in Indian Ocean

In fact, when the Zika virus infection has already emerged, several responses from countries around the world can be seen. WHO already claims that the infection is an emergency situation to be managed[13]. Focusing on the situation on the problem in Asian island countries in Indian Ocean, specific measures and methods proposed by WHO or the health ministries from Indian and Pacific Ocean island countries to cope with emerging diseases such as Zika virus, are interesting issues for discussion. This is a useful application that could be obtained for people related to public health issues. In Asian island countries in Indian Ocean, there is still not a group of endemic countries declared by WHO and warning on Zika virus infection for traveling to these countries. However, the routine suggestions are given to the travelers from these countries to the endemic areas (especially for South America) and most suggestions are mosquito prevention and safe sex[14,15]. Focusing on the local recommendations from each Asian island countries in Indian Ocean, there is no specific suggestion and the standard immigration control applied.

4. Conclusion

Although there is still no current problem in the Asian island countries in Indian Ocean, the appearance of infection in the sea resorts of countries lining Indian Ocean is a big concern[9]. Due to the high volume of traveler to sea resorts, emergence of the new disease in Asian island countries in Indian Ocean can be expected.

Conflict of interest statement

We declare that we have no conflict of interest.

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