

HOW TRAVELERS CAN CONTRIBUTE TO THE UNDERSTANDING OF ZIKA INFECTION

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Parallel to the spread of this epidemic, there are reported cases of Zika among returning travelers from endemic regions. The role of travel-medicine in better understanding the disease is extremely important yet less recognized. Their pertinent contributions to understanding Zika infection are in the realms of epidemiology, transmission, and several clinical aspects.

Epidemiology: The disease, which was originally discovered in Uganda, moved to Asia then to the Pacific islands and from there probably to Brazil by people attending international games in 2014. It is clear that the enormous numbers of international travelers are a major contributing factor for the easy and rapid spread of diseases around the globe. In addition to the contribution of travelers to the spread of the disease itself, travelers can also serve as sentinels, unveiling new foci of the infection.

Transmission: The most common non-mosquito transmission is sexual transmission. This new mode of transmission cannot be detected in endemic setting where the population is continuously exposed to the infected mosquitos, thus making it impossible to assess if cases were sexually transmitted. Among 591 confirmed U.S. travel-associated cases of Zika virus infection, 11 were sexually transmitted, while the magnitude of sexually spread disease in endemic areas cannot be assessed at all.

Clinical aspects: *Incubation period:* It is commonly stated that the incubation period is few days. This piece of information cannot be measured in endemic settings where patients are continuously exposed to the pathogen. Recalling the time of the culprit mosquito bite is impossible. On the other hand, symptomatic travelers who were exposed during a very short stay in endemic regions and then returning to non-endemic areas, can serve as a source of better understanding the incubation time. Among travel cases of sexually-transmitted zika, determination of incubation time has been assessed in a few cases and found to be 7-14 days, however it might be different via a mosquito bite. Until now, I am not aware of any published information about incubation times post mosquito transmission.

Symptomatic vs. asymptomatic infection; It is commonly cited that 80% of zika infections are asymptomatic. This is based on a single study performed during outbreak on Yap island. Traveler populations, who could be screened before and after their trip to endemic areas, would be a better population to determine the percentage of symptomatic cases. Among 450 asymptomatic Israeli-travelers who were checked for Zika only one was found to be positive.

Clinical symptoms; might be also different and will be discussed.

In conclusion, returning travelers provide a unique opportunity to study several aspects of ZIKV-infection. Zika is only one example in which observing the morbidity among travelers facilitates the understanding of tropical diseases.