

Risk Factor Analysis of Imported Dengue Fever Cases at Taiwan Taoyuan International Airport, 2015–2017

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Abstract

The frequent international interactions stimulated and increased the number of passengers between Taiwan and adjacent Southeast Asian countries. Simultaneously, the challenge of imported dengue fever (DF) became serious and brought about domestic outbreaks on and off. To precisely evaluate the factors of inbound passengers who were infected with the dengue virus and prevent outbreaks through border quarantine has become a significant issue. In this study, we aimed to analyze the risk factors of DF-positive cases. We collected data from the inbound passengers at Taiwan Taoyuan International Airport who traveled from high-risk areas via the system of infectious disease surveillance between 2015 to 2017. Information collected included those who had a fever and were screened by blood tests as well as epidemiologic characteristics. Among 8,711 passengers tested, 448 were confirmed positive. The inbound travelers who came from Indonesia, Malaysia, Vietnam, the Philippines, and Thailand were more likely to have DF. Other risk factors of DF included being foreign workers and immigrants who went back for a reunion, business people, travelers who stayed in high-risk areas for more than 10 days, and having pyrexia and DF signs and symptoms. Focusing on high-risk groups and conducting rapid screening tests as well as educating the passengers pertaining to the protective approaches are essential to lower the risks of domestic outbreaks resulting from imported infection cases.

Keywords: Imported dengue cases, quarantine, risk factor

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