Inapparent dengue in a community living among dengue-positive Aedes mosquitoes and in a hospital in Klang Valley, Malaysia

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ABSTRACT

The public health burden of dengue is most likely underreported. Current disease control measures rely on asymptomatic dengue transmission. Hence, there is a paucity of information on the epidemiology of inapparent dengue. This study reports for the first time inapparent dengue infection in a community, where almost 90% and 75% of individuals without any history of dengue infection and living in a dengue-breeding site, in Klang Valley, Malaysia, were dengue (dFTA and dTFA positive respectively). When dengue-positive dengue infection was confirmed, they had no symptom, and no history of fever, arthritis, rash or headache. Inapparent dengue in a hospital in Klang Valley, Malaysia, was confirmed by dFTA and dTFA positivity. It was noted that inapparent dengue cases were asymptomatic. Hence, most dengue patients have been reported as dengue, whether symptomatic or asymptomatic. They could either have clinical and/or hospital presentation, or severe disease, or dengue may be already too late. The current study also revealed dengue patients in Klang Valley who were inapparently infected. There is no one disease control measure for all dengue cases. Dengue disease needs to be monitored and reported in different settings. ECoV dengue surveillance in the monoclonal setting and nucleosidase-VN

1. Introduction

Dengue fever is a growing public health problem worldwide, with an estimated 390 million infections per year (World Health Organization, 2013). Likewise, the occurrence of dengue in Malaysia is increasing, with 3,759 dengue patients reported this year (Ministry of Health Malaysia, 2013). Given the absence of anti-dengue drug vector control remains the major factor of the dengue control programs in many countries (Yang et al., 2011), although recent advances have witnessed the development of vaccine candidates (San et al., 2010; Lee et al., 2017; Marthinus et al., 2003). In addition, the current version of dengue vaccine does not provide suitable levels of protection against the disease (Coppola et al., 2013). Around 300 million of the estimated 390 million dengue infections per year are additional (Ghosh et al., 2013). Dengue virus infection has been reported in many countries. Inapparent dengue infection may have no clinical manifestations of typical dengue infection, or present as an illness that is mild and is not associated with a visit to a health-care provider nor as illness related to absence from work or school. Thus, inapparent dengue infection may not be directed by surveillance programs as most programs collect data

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