A rare case of dengue & malaria co-infection

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ABSTRACT

Introduction: Being tropical, vector-borne infections are common in Malaysia, especially Dengue fever. However, Dengue and Malaria co-infections are relatively rare. A meta-analysis by Kotepui et al. between 2009 and 2019 covering India, Brazil, French Guiana, Pakistan and Peru revealed a higher risk of severe disease among patients with co-infections. Hence, it is a crucial and clinically challenging dilemma to identify co-infections promptly. These cases also leverage public health concerns to determine the presence of multiple vectors within a common locality or human migration as a transmission source between different localities, hosting more than one pathogen concurrently. **Case Report:** A 33-year-old Iban gentleman presented with fever, chills, rigour and headache for a few days. He visited the Solomon Islands from March to June 2024 and returned to Malaysia several days before the onset of current symptoms. His blood counts suggested a viral infection; he proceeded with a Dengue rapid test, which revealed immunoglobulin-M (IgM) and immunoglobulin-G (IgG) positive. Blood film for malarial parasite (BFMP) was taken due to the travel history to the Malaria endemic region, which showed the presence of Plasmodium vivax. The patient was then admitted to a tertiary hospital for further management. He was given intravenous hydration and commenced on anti-malarial drugs. He was discharged well within a week without requiring intensive care. Epidemiological assessment in this case revealed that this patient had Malaria symptoms during his stay in the Solomon Islands. However, he did not comply with the initial treatment. A field assessment encompassing two kilometres from his residence in Malaysia revealed no presence of a Malaria vector, which was hence declared an imported infection. **Discussion:** A high index of suspicion coupled with sound clinical acumen is required to identify a co-infection as they manifest overlapping clinical features. Comprehensive history-taking is pivotal in establishing the epidemiological links and potential sources of infection, as establishing either imported or local infection status takes precedence in planning vector-control programmes.