

Cluster of acute febrile illnesses from a neglected tropical infection in Pekan, Pahang: Epidemiological report and its challenges

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ABSTRACT

Introduction: Among tropical infections that are endemic within the Asia-Pacific region is a neglected disease caused by the *Orientia tsutsugamushi* bacteria commonly known as scrub typhus. Despite being one of the most common causes of Acute Febrile Illness, most clinical and public health protocols in Malaysia have largely overlooked this disease. This study aims to provide an epidemiological report of a scrub typhus cluster in Pekan, Pahang and describe the challenges faced in its management. **Materials and Method:** During the monsoon season of 2023, an outbreak investigation was conducted to identify cases presenting with acute undifferentiated febrile illness. The investigation involved assessing cases, contacts, and environmental variables. Samples were gathered from both patients and the surrounding area. Responsive control measures were continuously adjusted based on evolving findings throughout the outbreak period. **Results:** A total of five cases fit the criteria for the cluster's case definition. All cases had fever, and almost half had headache, myalgia, and maculopapular rash. Only one case had an eschar lesion. All cases (100%) exhibited a fourfold surge in IgG titers in consecutive serum samples, a clear indication of rickettsia infection. One case tested positive for rickettsial infection via PCR, while other tropical infection tests were negative. Environmental investigation revealed infestation of rodents with chiggers but absence of *Rickettsia* pathogens. Identified risk factors include exposure to vectors and engagement in activities during the monsoon and flood season. **Conclusion:** Our report revealed that scrub typhus is a public health problem in Pekan, Pahang, emphasizing the need for better surveillance and control measures. Optimizing vector control and dynamic health education are crucial to manage the endemicity of this infection. Policymakers and healthcare stakeholders can leverage these insights to devise targeted interventions and enhance the region's capacity to respond to this neglected tropical infection.