Factors associated with delay in dengue diagnosis in Manjung District, Perak

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ABSTRACT

Introduction: Dengue fever, caused by the dengue virus, is a significant public health concern in tropical and subtropical regions worldwide. Prompt diagnosis is crucial for effective patient management, timely treatment, and public health response. Objective: This study aims to determine the factors associated with delays in dengue diagnosis in Manjung District, Perak. **Materials and Method:** A cross-sectional study was conducted using a universal sampling method to include all patients with a confirmed diagnosis of dengue registered in the e-Dengue v2 system from January 2023 until June 2024. The patients were stratified into two categories based on the number of days from onset to diagnosis: those diagnosed early (within 3 days or less, ≤3 days) and those diagnosed after 3 days (≥4 days), defined as delayed. Sociodemographic and clinical characteristics were analysed using logistic regression to ascertain any significant associations. **Results:** A total of 838 patients were enrolled in the study, of which 221 (26.4%) experienced delays in dengue diagnosis. The mean duration between symptom onset and diagnosis was 2.9 days (SD = 2.1). Multivariate analysis revealed several significant associations with diagnostic delay: female gender was associated with an adjusted odds ratio (OR) of 1.41, while treatment at a private clinic was linked to an adjusted OR of 0.40. In contrast, treatment at a health clinic was associated with an adjusted OR of 1.61, indicating notable differences in diagnosis delays based on gender and treatment facility. **Conclusions:** The findings suggest that female patients and those receiving treatment at health clinics are more likely to experience diagnosis delays, while those treated at private clinics tend to receive a quicker diagnosis. These insights can inform public health strategies and resource allocation to enhance early diagnosis and management of dengue fever, ultimately reducing the risk of severe complications. Furthermore, this highlights the need for targeted interventions to improve diagnostic timeliness.