

# Community acquired tinea imbricata outbreak among Bateq subtribe in Pahang, Malaysia: Epidemiological trends and treatment outcomes

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## ABSTRACT

**Introduction:** Tinea imbricata (TI), a superficial fungal infection caused by *Trichophyton concentricum*, poses a significant health burden among indigenous populations in rainforest region. Despite its endemicity, limited research has focused on understanding the epidemiological patterns and optimal treatment strategies for TI outbreaks within these communities. This study aimed to investigate the epidemiological patterns of a community-acquired outbreak of TI and to evaluate the effectiveness of treatment strategies among the Bateq subtribes in Pahang, Malaysia. A cross-sectional survey was conducted within Bateq communities in the National Rainforest Park, Pahang Malaysia from July–October 2023. Epidemiological data, including socio demographic characteristics, clinical manifestations, and treatment outcomes, were collected through interviews. Treatment modalities, including topical and combination therapy, were evaluated for their effectiveness in reducing disease burden. **Case presentation:** A total of 569 individuals were surveyed, revealing a prevalence rate of 7.91%, with children aged 15 years and below exhibiting the highest susceptibility. Treatment modalities, including terbinafine gel and combination therapy with oral griseofulvin, demonstrated efficacy in reducing affected body surface area (BSA), with combination therapy ( $\bar{x}$ BSA = 0.158 cm<sup>2</sup>) exhibiting superior outcomes ( $p < 0.05$ ) than terbinafine gel only ( $\bar{x}$  BSA = 3.684 cm<sup>2</sup>). Notably, treatment adherence was high in both treatments group, with no reported side effects. Our findings reveal concerning trends in hygiene practices among community members, with only 15.2% reported to be using soaps during bathing. These low rates of hygiene product usage highlight potential contributing factors to the prevalence of TI in the community. **Conclusions:** Community-acquired outbreaks of TI pose a significant public health challenge among indigenous populations. These findings underscore the importance of early detection, prompt treatment, and patient education in TI management. Importantly, treatment adherence was high, with the majority of patients following treatment instructions. Further research is warranted to investigate long-term treatment outcomes and genetic factors influencing susceptibility.