

Title: Severe Scrub Typhus with Pulmonary Involvement: Eschar Recognition and Skin Rickettsial PCR as Diagnostic

Afiq Iddin Rosli¹, Suzanne Lo Shushan¹, Norhayati Mansor¹,
Ummu Afeera Zainulabid^{1,2}, Wan Nurliyana Wan Ramli^{1,2}

1 Department of Internal Medicine, Sultan Ahmad Shah Medical Centre@IIUM , Pahang, Malaysia.

2 Department of Internal Medicine, Kulliyah of Medicine, International Islamic University Malaysia.

Introduction

Scrub typhus, caused by *Orientia tsutsugamushi*, is endemic in Southeast Asia and may present with severe complications such as pneumonitis and liver dysfunction. Diagnosis remains challenging, but eschar identification and targeted PCR testing can aid early confirmation.

Case Presentation

A 49-year-old teacher presented with two days of acute dyspnoea following 12 days of fever, vomiting, and poor oral intake despite empirical outpatient antibiotics. He reported recent exposure to bushy vegetation while attending community work in Ulu Tembeling 2 weeks prior. On arrival, he was febrile and tachypnoeic with SpO₂ 90% on room air. Examination revealed a painless eschar on the left abdomen and left basal crepitations. Blood investigations showed leucocytosis and transaminitis. He was clinically diagnosed with severe scrub typhus with pulmonary involvement, and started on oral doxycycline and azithromycin for seven days. His fever and oxygenation improved within 48 hours, and he was discharged well on day 4 of admission. Histopathology of the eschar revealed epidermal and superficial dermal necrosis with lymphocytic vasculitis. Skin rickettsial PCR was positive for *Orientia tsutsugamushi*, while blood PCR was negative. Liver enzymes normalised by day 14 follow-up.

Conclusion

This case highlights the value of combining blood and skin rickettsial PCR in patients with eschar, especially when blood PCR is negative. Early eschar recognition and prompt combination antimicrobial therapy can prevent complications and lead to rapid recovery in severe scrub typhus.

Figure 1 Eschar

