A 33-year-old man from a rural Taiwanese village was admitted with a three-day history of fever, headache, muscle pain and skin rashes. On examination, he was febrile (39.2°C) with generalized macular patches and an eschar measuring 15 mm on the left lower quadrant of his abdomen (Figure 1). His leukocyte count was normal, but he had an elevated C-reactive protein level of 83 (normal 0–8) mg/L, an aspartate aminotransferase level of 183 (normal 0–37) U/L and an alanine aminotransferase level of 166 (normal 0–41) U/L. His blood cultures showed no growth.

Based on a working diagnosis of scrub typhus, we prescribed doxycycline. The patient’s condition improved dramatically within two days, and he had a full clinical recovery by the eighth day of treatment. The diagnosis of scrub typhus was confirmed serologically using the indirect fluorescent method, with a greater than fourfold increase in antibody titers between two samples drawn two weeks apart.1

Scrub typhus is often diagnosed clinically based on exposure to endemic regions and its characteristic eschar, which usually appears on the lower extremities, axillae or genital region.2

Scrub typhus is a potentially fatal mite-borne rickettsial infection caused by Orientia tsutsugamushi. It is endemic to the Asia–Pacific region, which has an estimated 1 million instances per year.2 Among North American travellers returning from Asia, rickettsial diseases account for 1.0%–1.6% of febrile illness.3 Those affected may have headache, myalgia, hearing loss and rash, in addition to fever. Encephalitis, hepatitis, and pulmonary and cardiac involvement can occur.4

Scrub typhus is often diagnosed clinically based on exposure to endemic regions and its characteristic eschar, which usually appears on the lower extremities, axillae or genital region. It is caused by Orientia tsutsugamushi, a rickettsial agent that is transmitted to humans by the bite of an infected Ixodes or Orientia tick. The disease is characterized by a progressive fever, headache, myalgia, and characteristic eschar at the site of the tick bite. Laboratory diagnosis relies on the detection of antibodies against O. tsutsugamushi in serum or on the isolation of the organism from blood or skin biopsy specimens.

Early recognition and prompt treatment with empirical doxycycline can be life-saving.

References