

## Case Report

# Identifying Eschar in Acute Undifferentiated Febrile Illness: Saving Lives!

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### ABSTRACT

Scrub typhus is one of the common causes of acute undifferentiated febrile illnesses in India. The manifestations are protean, are nonspecific, and may lead to multiorgan dysfunction syndrome and mortality if prompt recognition and treatment is not received. Identification of eschar through meticulous examination and consequent empirical use of doxycycline can save lives.

**KEYWORDS:** Doxycycline, eschar, scrub typhus

A 42-year-old male presented with a history of fever and dry cough of 5 days' duration. The fever was continuous and associated with chills, rigors, myalgia, and headache. Examination revealed an eschar on the scapha of the right earlobe though he denied any mite or tick bite during the last 1 month [Figure 1]. A diagnosis of scrub typhus was considered, and he was started on doxycycline. Investigation revealed neutrophilic leukocytosis (total leukocyte count 16,800/ $\mu$ l with 80% neutrophils), thrombocytopenia (42,000/ $\mu$ l), and raised transaminase levels (aspartate transaminase/alanine aminotransferase 123/245 U/L). On day 3 of admission, Weil–Felix test showed reactive titers of 1:40 for Proteus antigen OX 2 and 1:80 titers for Proteus antigen OX K. Immunoglobulin M antibody for *Orientia tsutsugamushi* by immunochromatography was positive. He was treated with 7 days of doxycycline and became afebrile in 24 h with an uneventful recovery.

Scrub typhus is an acute febrile illness endemic in the “tsutsugamushi triangle” region of the world. It is a significant public health threat in India, yet it is underrecognized and grossly underdiagnosed. Scrub typhus came into prominence during World War II along the Indo-Myanmar border in India, and numerous outbreaks have been described from all parts of the country since then.<sup>[1]</sup> Clinical features include fever, myalgia, headache, rash, and pathognomonic eschar. The disease can lead to multiorgan dysfunction in at least one-third of the cases, and the mortality of untreated disease is >50%.<sup>[2]</sup> Eschar, a 5- to 20-mm-sized necrotic lesion on the skin, is formed by the bite of chigger



Figure 1: An eschar on the scapha of the right earlobe

mite that inoculates the causative agent of scrub typhus *O. tsutsugamushi*. Although it can clinch the diagnosis, it often goes unnoticed as the mite bite is painless.<sup>[3]</sup> Meticulous examination of the probable sites of eschar, especially the flexures irrespective of mite bite history in all acute undifferentiated febrile illnesses, helps in documenting eschar in 50%–60% of proven scrub typhus cases [Figure 2].<sup>[4]</sup> This can result in presumptive diagnosis of scrub typhus and use of doxycycline at the

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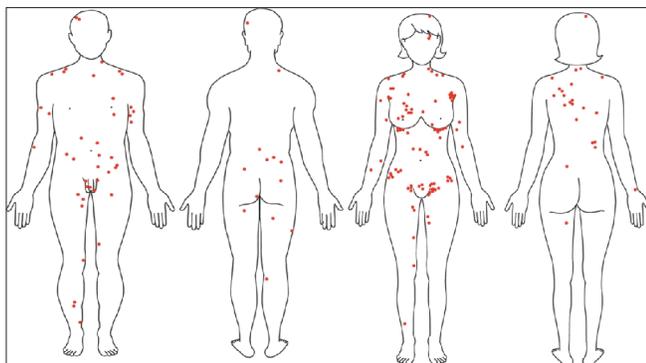
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**Figure 2:** Probable sites of eschar which needs to be assessed while examining a patient with acute undifferentiated febrile illness

first point of contact with primary care provider and save lives. This assumes importance as serological tests for scrub typhus such as Weil Felix test are not sensitive in the first 5 days of illness and tests such as enzyme-linked immunosorbent assay or polymerase chain reaction are not available in most resource-limited settings.<sup>[5]</sup>

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### Conflicts of interest

There are no conflicts of interest.

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