

## Case Report

# Scrub typhus presenting without fever

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### ABSTRACT

Scrub typhus may be a very a familiar reason for an acute undifferentiated fever. Although there has been an improvement in the diagnostics as well as an increased awareness regarding this disease, it still remains belatedly diagnosed and eventually turns fatal. We present a male patient who was brought to us with jaundice, tender hepatomegaly and distinctly no history fever who turned out to have a Scrub typhus infection and was salvaged owing to a diverse empirical antibiotic coverage. This represents an atypical clinical presentation of a very familiar infection: Tropical rickettsioses infection presenting with afebrile jaundice in an immunocompetent patient. It also brings into perspective the wavered nature of its disease presentation, the significant merit of procuring a good patient history and a change in empirical antibiotic policies especially in areas endemic for scrub typhus.

**Keywords:** Afebrile jaundice, Fever, Scrub typhus

### INTRODUCTION

Scrub typhus infection is the commonest cause of rickettsial infection in India. Scrub typhus, caused by *Orientia tsutsugamushi*, is an acute infectious disease that is transmitted to humans (as an accidental host) by an arthropod mite vector.

Clinical manifestations can range from fever, cough, myalgias, vomiting, headache, eschar and multi-organ dysfunction. In studies from India involving patients with Scrub typhus infections, all of them had fever.<sup>1-12</sup>

When the presenting clinical feature is only jaundice, to start with, according to the diagnostic algorithm, fever is the cardinal starting point to proceed from which can rule-in or rule-out major clinical syndromes. With no fever, a majority of diseases were ruled-out putting us into a diagnostic dilemma. But we were yet to learn that Scrub typhus can itself present without a febrile episode.

### CASE REPORT

This 30-years-old male private entrepreneur who underwent a laparoscopic cholecystectomy in the past had presented himself to the emergency department with history of yellowish discoloration of urine and eyes for the last two days and right hypochondrial pain for the last two days. He had an associated decreased appetite as well as nausea. He categorically denied having any episodes of fever in the past, no pruritis, clay or pale coloured stools. There was no history of travel. There was no previous medication intake.

On examination he was moderately built and nourished, conscious, oriented. His general examination was unremarkable apart from the icterus and the yellow tinge in his skin colour. He did not have any rash or eschar present on his body. A tender hepatomegaly was present with a liver span of 16cm. Spleen was palpable 4cm below the left costal margin. He was initially only on

injectable metronidazole. His blood reports are mentioned in Table 1.

Since he denied ever having any fever episode, undoubtedly the febrile causes of jaundice were never thought of. Eighteen hours into his admission, he complained of a decrease in urine output and was then found to be in hypotension. A central line was inserted, two litres of intravenous fluids was rushed following which the central venous pressure was found to be 18 cm H<sub>2</sub>O.

The patient was started on ionotropic supports (nor-adrenaline and dopamine) in view of persistent

hypotension. His antibiotics were escalated to meropenem, doxycycline and continued on metronidazole.

On day 2, he found to have paroxysmal runs of bradycardia, with echocardiography and troponin T indicating a myocarditis. He developed a mild acute respiratory distress syndrome and was given oxygen via facemask. He developed a multi-organ dysfunction. He drastically improved in the next 5 days. On the eighth day of his illness, IgM antibodies against scrub typhus. Scrub typhus came out to be positive and doxycycline was continued for a total of fourteen days and was discharged in a satisfactory, ambulatory condition.

**Table 1: Blood investigations.**

Blood investigations	Day 1	Day 3	Day 6	Day 8
Hemoglobin (g/dL)	13	13.6	11	-
Total leukocyte count (cells/mm <sup>3</sup> )	12,200	42,800	14,000	-
Platelet count (cells/mm <sup>3</sup> )	2,15,000	1,56,000	1,90,000	-
Blood urea (mg/dL)	22	76	45	-
Serum creatinine (mg/dL)	0.8	2.6	0.8	-
Total bilirubin (mg/dL)	7.23	-	1.61	-
Direct bilirubin (mg/dL)	4.73	-	1.05	-
SGOT (U/L)	175	-	33	-
SGPT (U/L)	222	-	43	-
ALP (U/L)	340	-	161	-
GGT (U/L)	1288	-	233	-
Amylase (U/L)	-	34	-	-
Lipase (U/L)	-	10	-	-
Anti-amoebic serology	-	Negative	-	-
Blood culture	-	No growth	-	-
Urine culture	-	No growth	-	-
Scrub typhus	-	-	-	Positive

## DISCUSSION

Scrub typhus always presents as an acute febrile illness. It is known to be a masquerader of diseases and an etiological agent for pyrexias of unknown origin. A tropical fever syndrome presenting without fever can be misleading. Although unprecedented, primary care physicians must be aware of these atypical presentations and look for other clues suggesting a fever syndrome (e.g.: eschar). The atypical nature of the disease is demonstrated by other authors as well. A wide spectrum of clinical presentations has been associated with this disease: rhabdomyolysis, acute respiratory distress syndrome, myocarditis, meningism, gastrointestinal bleeding and multiorgan dysfunction-all associated with fever.<sup>13-15</sup> This also justifies tetracyclines being added as an empirical antibiotic especially in the setting of multi-organ dysfunction. The physician must be aware that although the art of procuring an exceptional history of illness reaps ample rewards and constitutes the pillars of

therapeutic success, sporadically, the onus of the disease falls in the hands of how atypical the clinical syndrome behaves and equally important is how reliable a history is given. This is pertinent especially in developing countries where there is lack of education and awareness among the patient population, thereby altering the quality of the history.

## CONCLUSION

Although Scrub typhus is an eminent cause of pyrexia in both the developing and the developed world, it can often be missed. Just as this case demonstrates, a history of fever in a patient with organ dysfunction may be absent. What would have been straight forward to diagnose and treat, turned out to be a diagnostic dilemma with our diverse empirical antibiotic coverage saving just at the nick of time before the body IgM response was picked up and improved from then on. Empirical antibiotics covering for atypical organisms should be incorporated

into hospital antibiotic policies especially in geographical areas endemic for them.

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