



## Case Report

### Rare Coinfection of Scrub Typhus and Malaria in Immunocompetent Person

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**Abstract:** Scrub Typhus, or tsutsugamushi disease is a febrile illness caused by bacteria of the family Rickettsiaceae and named *Orientia tsutsugamushi*. Recently it has been found to endemic in Subhimalayan region of India. Malaria is highly endemic in rest of India but its prevalence is low in Subhimalayan region because of the altitude. We report a rare case of a patient having coinfection with scrub typhus and malaria.

**Key Words:** Scrub Typhus; Malaria; Coinfection

#### Background

Scrub Typhus, or tsutsugamushi disease is a febrile illness caused by bacteria of the family Rickettsiaceae and named *Orientia tsutsugamushi*. Recently it has been found to endemic in Subhimalayan region of India. Malaria is highly endemic in rest of India but its prevalence is low in Subhimalayan region because of the altitude. We report a rare case of a patient having coinfection with scrub typhus and malaria.

#### Case Report

A 47 year old female presented with history of fever of 5 days duration, fever was high grade documented around 103°F, associated with severe bodyaches. There was no history of any yellowish discoloration of eyes, decreased urine output, headache & altered sensorium. There was also no history of any travel to plains in the preceding past. On examination patient was febrile, there was conjunctival suffusion and insignificant axillary lymphadenopathy. Eschar was present on anterior abdominal wall. Rest of the systemic examination was normal.

On investigation hemoglobin, total count, liver and renal function tests, urine examination and HIV-Elsa were normal. IGM-Elsa for scrub typhus was positive. Patient was managed for scrub typhus infection with doxycycline 100 mg Bid. In spite of taking medications for 72 hours patient was febrile, so further work up for cause of pyrexia was sent, which revealed presence of

plasmodium vivax in peripheral smear. Patient was started on chloroquine and primaquine after which patient responded and discharged on 5<sup>th</sup> day after admission.



**Fig.1: Eschar over the anterior abdominal wall**

#### Discussion

Scrub typhus is a common infection in sub Himalayan region of India<sup>1</sup> and it is known to occur all over India, including Southern India<sup>2</sup>. Scrub typhus lasts for 14 to 21 days without treatment. Severe infections may be complicated by interstitial pneumonia, pulmonary edema, congestive heart failure, circulatory collapse, and a wide array of signs and symptoms of central nervous system dysfunction, including delirium, confusion, and seizures.

Death may occur as a result of these complications, usually late in the second week of the illness.

By contrast, patients treated with appropriate antibiotics typically become afebrile within 48 hours of starting therapy. This response to treatment may be useful diagnostically; failure of defervescence within 48 hours is often considered evidence that scrub typhus is not present, and that an alternate diagnosis such as malaria or dengue should be considered<sup>3</sup>. But in Subhimalayan region prevalence of malaria is low and usually not suspected and usually not sought after. For our best of knowledge we are reporting the first case report from India citing coinfection of malaria and scrub typhus. Though the presence of coinfection of scrub typhus and malaria has been reported in Thai patients with fever<sup>4</sup>, no such case report has been published from India.

#### **Learning Points**

The importance of this case report is to highlight that we should suspect other causes of fever in patients of scrub Typhus who are not responding to fever within 48 -72 hours of treatment.

#### **References**

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