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Case Report

SCRUB TYPHUS IN A PATIENT PRESENTING WITH ACUTE FEBRILE ILLNESS AND GASTROINTESTINAL MANIFESTATIONS

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ABSTRACT

Scrub typhus is an acute febrile illness that is known to be endemic in the South East Asian countries and the Western Pacific region. It is one of the differential diagnosis of haemorrhagic fevers. The classical case presents with an eschar at the site of chigger feeding, regional lymphadenopathy and a maculopapular rash. We present a case of scrub typhus with pyrexia, maculopapular rash and non specific symptoms of gastrointestinal tract.

Keywords: *Orientatsutsugamushi*, Febrile Illness, Scrub Typhus, Doxycycline

INTRODUCTION

Scrub typhus is a rickettsial disease caused by the organism *Orientatsutsugamushi*, an obligatory intracellular gram negative bacterium. The organism is transmitted through the bite of larval forms (chiggers) of trombiculid mites¹. The natural reservoir of rickettsial infections is the adult mite from which the organism passes to the larva by transovarian transmission.

Scrub typhus is grossly under diagnosed in India due to its non specific clinical presentations, limited awareness and low index of suspicion among clinicians². Scrub typhus is one of the differential diagnosis (in addition to leptospirosis, malaria or dengue fever) in patients with haemorrhagic fever especially if associated with jaundice or renal failure³. We report a case of Scrub typhus in a patient presented with pyrexia and non specific gastrointestinal symptoms.

CASE HISTORY

A 25 year old male patient presented at Sir Ronald Ross Institute of Tropical and Communicable Diseases, Hyderabad, with fever, body pains, vomiting, severe headache and diarrhoea since 8 days. There were no haemorrhagic manifestations at the time of admission.

On examination patient was febrile with pulse rate of 96 per minute, B.P 120/80mm of Hg, respiratory rate 20 per minute, no hepatosplenomegaly. Patient was provisionally diagnosed as a case of viral pyrexia and was investigated for the same. He was treated with Injection monocef, antipyretics and sporolac.

On 2nd day of admission patient developed maculopapular rash over posterolateral surface of trunk. [Figure 1] Laboratory findings were - Hb% was 11 gm/dl, WBC count 10,500/c mm - P-75%, L-20%, E-0.3%, monocytes-0.7%, basophils - 0.1%, platelet count was 3.2 lakhs /cmm, hepatic transaminases, serum bilirubin and alkaline phosphatases were within normal limits. Serum creatinine was within normal limits. Patient's serum sample was negative for Leptospirosis, Dengue and Brucella. Peripheral smear was negative for haemoparasites. Weil-Felix agglutination test containing *Pr. vulgaris* antigen suspension OX19, OX2 and *Pr. mirabilis* antigen suspension OXK (Tulip Diagnostics (P) Ltd., Verna, Goa, India) gave a titer of >320 dilutions. The sample was further subjected to Immunochromatography (ICT) card test (Standard Diagnostics, Seoul, South Korea) for *O. tsutsugamushi* (Gilliam, Karp and Kato strains), ICT test was positive confirming the diagnosis of scrub typhus. Patient received Tab. Doxycycline 100mg Bd, recovered from febrile illness

and rash disappeared. He was discharged on 5th day and advised to come for follow up after 10 days.



Figure 1: Maculopapular rash on posterolateral surface of trunk.

DISCUSSION

There have been reports of the outbreaks of Scrub typhus from various parts of the country in the recent past with serological evidence of widespread prevalence of spotted fevers and scrub typhus in the neighboring states and Hyderabad⁴⁻⁶.

The disease presents as an acute febrile illness with non specific signs and symptoms. Fever with rash/myalgia occurs in many other febrile illnesses like dengue fever or leptospirosis. Gastrointestinal symptoms could be used as a differentiating feature for suspecting scrub typhus⁷. Though necrotic eschar at the inoculating site of the mite is pathognomonic of scrub typhus⁸, it is rarely seen in South East Asia and Indian subcontinent⁹. In our case patient presented with nausea, vomiting and diarrhoea and eschar was absent. Indirect immunofluorescence antibody (IFA) assay and indirect immunoperoxidase (IIP) test are the gold standard diagnostic tests for scrub typhus but they require highly trained personnel and production of antigens may vary among different laboratories, leading to inconsistencies in the interpretation of results¹⁰.

Weil-Felix test serves as a useful and affordable tool for laboratory diagnosis of rickettsial diseases in resource poor countries. A fourfold rise in agglutination titers in paired sera or a single serum sample with high titer of 320 is diagnostic for infection¹¹. The present sample was positive for scrub typhus with OXK cut off titer 320.

CONCLUSION

Scrub typhus should be kept in mind when treating acute febrile illness with haemorrhagic manifestations and gastrointestinal symptoms. Absence of eschar does not rule

out scrub typhus. If untreated, scrub typhus may lead to complications and prove fatal. As it can be treated easily by simple antibacterial agents like doxycycline and macrolides, patients suspected of scrub typhus should be empirically treated with these agents.

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