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Scrub Typhus With Multiorgan Dysfunction Syndrome : A Case Report

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2.FLAT NO 410,MGM NEW PG HOSTEL.NEAR MGM WOMENS AND CHILD HOSPITAL,KALAMBOLI,PANVE;-410218

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Abstract

Scrub typhus is a rare rickettsial disease which is endemic in the state of Himachal Pradesh. It is caused by bacteria called Orentia tsutsugumasi and transmitted by larvae of
Trombiculid mites.Though rarely seen in the plains, it should be kept as differential for a patient presenting as fever with rash. Although scrub typhus is endemic in our country, it is grossly under diagnosed owing to the nonspecific clinical presentation, lack of access to specific diagnostic
facilities in most areas, and low index of suspicion by the clinicians. It presents as either a nonspecific febrile illness with constitutional symptoms such as fever, rash, myalgias and headache or with organ dysfunctions involving organs such as kidney (acute renal failure), liver (hepatitis), lungs (acute respiratory distress syndrome), central nervous system (meningitis), or with circulatory collapse with hemorrhagic features. We are reporting a case report of scrub typhus presenting as fever with rash with multi organ involvement.

Keywords: Fever, Eschar, Multiorgan Dysfunction, Doxycycline

Introduction

Scrub typhus is one of the tropical rickettsial infection which if left untreated can have fatal consequences.

It is most common re-emerging rickettsial infection in India and is confined geographically to Asia Pacific region.

It is an infectious disease caused by the rickettsial bacterium Orientia tsutsugamushi.

It is transmitted to humans by the bite of larva of trombiculide mites.Later it causes disseminated vasculitis and perivascular inflammation ultimately leading to significant vascular leakage leading to end organ injury.

The causative organism displays high level of antigenic variation.During second world war, scrub typhus emerged out to be the most dreaded disease among the soldiers of far east.

In India, it broke out in an epidemic form in Assam and West Bengal during second world war. Clinical features usually arise after an incubation period of 6-21 days and manifest as fever, headache, myalgia and gastrointestinal symptoms.

An eschar which usually begin as a primary papular lesion later crust to form black ulcer with central necrosis is a distinct feature of scrub typhus.

The mortality of scrub typhus in untreated patients ranges from 0% to 30% and tends to vary with age and region of infection.

Case Description

A 33 year old male grass cutter by occupation resident of Old Panvel brought by his father to MGM casualty with chief complaint of yellowish discolouration of eyes and generalised weakness with decreased appetite since past 5 days.

He also had a history of intermittent fever which was associated with chills since last 3 days for which he was received some intravenous medication from local hospital, symptoms got resolved in 2 days.

On detailed clinical examination, diffuse skin lesion all over the body predominantly on nape of neck, and bilateral lower leg which were indurated with blackish scab in centre surrounded by slightly elevated dull red areola.It started with fine erythematous painless papule with eschar which then ulcerated and forms black non painful ulcers.Routine lab investigation suggestive of leucocytosis with thrombocytopenia with acute liver injury with acute kidney injury .

After initial assessment we suspected it as a Tropical fever with multi system involvement. Hence we ordered Weil Felix test and antibody test for Scrub typhus which came positive.

Investigations

Hb-12.9 TLC-34340

Platelet-0.12 PCV-31.6 MCV-75.8

Total Bilirubin-21.44 Direct Bilirubin-13.29 SGOT-125

SGPT-65 ALP-191

Total Protein-5.19 Albumin-2.15 Urea-555 Creatinine-6.13 Uric Acid-19.71 Sodium-122 Potassium-4.9 PT/INR-12.7/1.08 aPTT-40.7(28.4)

HHH-Non Reactive Fever Profile-Negative

IgM antibody for Scrub Typhus-Reactive(2.81) Weil Felix Test

1. OX K-Agglutination(1:640)
2. OX 19-No agglutination
3. OX 2-No agglutination

Urine R/M

20 cc,Dark Yellow Specific Gravity-1.020 Protein-Present

Bile salt-Present

Bile Pigment-Present Pus Cells-6 to 7

Epi Cells-3 to 4 Rest-Absent

Case Discussion

A 33 year old man presenting with complaint of yellowish discolouration of skin, maculopapular rash (over nape of neck and right foot, shin of tibia) intermittent fever and generalised weakness since last 8-10 days.

After initial resuscitation done in emergency room for hypotension and tachycardia with IV crystalloids, patient was shifted to medical ICU for further management

Broad spectrum antibiotics (Piperacillin - Tazobactum and Doxycycline) were started after obtaining paired blood cultures.

Hemodialysis was not considered and hydration was continued, with strict urine output, IVC assessment - monitoring .

Injectible Doxycycline was given for 7 days and then started on oral regimen.

Follow Up

7 days post discharge, he followed up in OPD, his icterus was still persistent but rash subsided and he was vitally stable and clinically asymptomatic.

Conclusion

Scrub typhus is showing a recent resurgence in our country as evidenced by reports from different parts of India in the last two decades.

Important outbreaks have been noticed in India in Tamil Nadu (28 cases in 2001–2002), Himachal Pradesh (200 cases, 13 fatal in 2011), Nagaland (9 cases, 3 fatal in 2011), Meghalaya (80 cases, 5 fatal in 2010), and in Puducherry in 2008.[56]

It is a serious acute febrile illness associated with significant morbidity and mortality.

A high index of suspicion is needed in patients presenting with fever during the monsoon months. Diagnosis is often missed, and tools for confirming diagnosis are often not available in resource- poor setups.

Delay in initiating treatment owing to this may lead to untoward fatality.

More widespread access to medical care, close suspicion of the disease along with the increased use of affordable and accurate rapid tests, is mandatory to improve diagnosis and treatment of this condition which can be easily treated with antibiotics.

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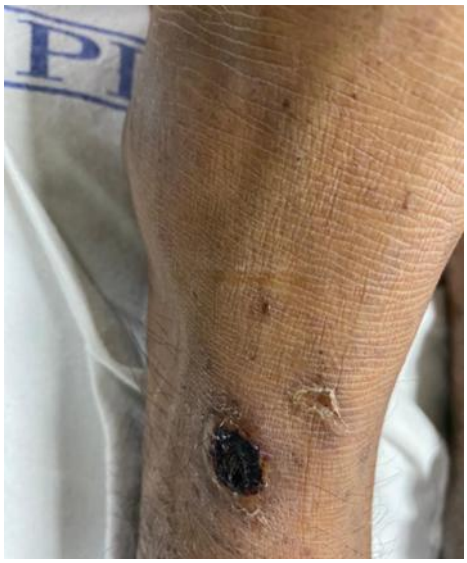
Erythematous Papule With Scab



Icterus

Blackish Pigemntation

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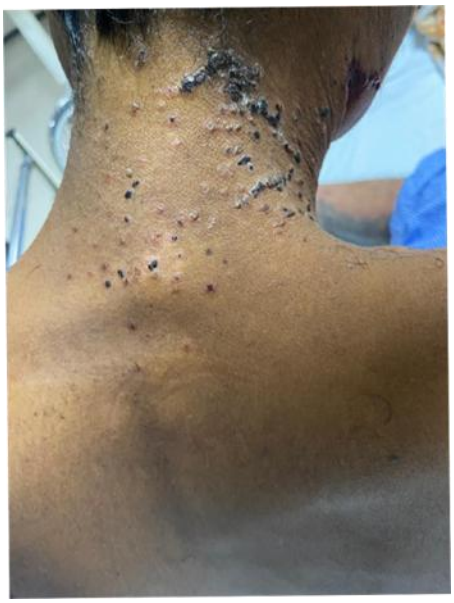
Multiple Rashes With Ischar Over Nape Of Neck



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