CASE REPORT

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Psychotic scrub typhus: A Case Report

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ABSTRACT

Scrub typhus in human being is after bite by mites prevalent in many part of India especially after rainy seasons. It typically presents fever, headache, chills, and non-specific gastrointestinal complaints. Rare presentation may be neurological but, there have been no reported cases in the literature of scrub typhus causing symptoms of acute psychosis.

Keywords: mite, scrub typhus, psychosis, rickettsial disease

1. INTRODUCTION

Scrub typhus is caused by Rickettsia tsutsugamushi, transmitted to humans by bite of mites, mainly prevalent in area of "tsutsugamushi triangle" which ranges from Northern Japan and Far-Eastern Russia in the North, to Northern Australia in the South, and to Pakistan and Afghanistan in the West (Mahajan et al., 2017). Scrub typhus has been reported from many parts of India especially after rainy season (Mahajan et al., 2017; chogle et al., 2010). The most common presentation is fever, headache, bodyache, cough, conjunctival congestion, and gastrointestinal symptoms. An eschar (looks like cigarette burn mark surrounded by erythema) at the site of chigger bite with regional lymphadenopathy sometimes gives clue to the diagnosis. Common site of eschar is in soft skin areas such as skin folds—axilla, groin, gluteal folds, breast folds, and external genitalia. The neurological manifestations of scrub typhus are not so common but are limited to case reports only. Reports are available about meningo encephalitis, cerebellitis, cranial nerve palsies, plexopathy, transverse myelitis, neuroleptic malignant syndrome and Guillan-Barré syndrome (Chogle et al., 2010; Mishra et al., 2014; Gulati et al., 2013). Here we report a case of scrub typhus whose main clinical presentation was acute psychosis.

2. CASE

A 45 year old female farm labourer presented in medicine emergency ward with history of fever, headache, bodyache, irritableness and irrelevant behaviour since last 8 days. Since last 2 days, she also gave history of visual and auditory hallucination in the form of perceiving ghosts and dead relatives; though she was alert but confused. There was no history of any psychiatric disorder in past. She also had taken some treatment outside from general physician, before coming to this hospital as there was no improvement. On general examination, she was febrile with a temperature of 101 degree Fahrenheit, anicteric, and restless on bed. Her pulse was 102 beats per min, blood pressure of 110/70 mmHg, and respiratory rate of 20 breaths per min. Her neurological examination revealed no neurological deficit. Bilateral plantar were normal. The pupils were equal in size and reacting to light. There were no signs of meningeal irritation and Fundus examination was normal. Other systemic examination was also normal except small sized crusted ulcer with surrounding induration (eschar) found on the right posterior axillary line [Figure 1].

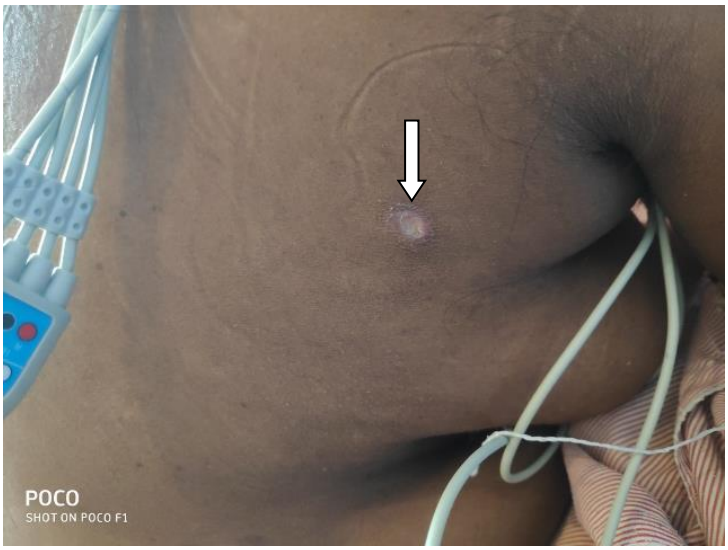

Figure 1 showing eschar (white arrow)

On laboratory investigation her total leukocyte countwas 3,200 mm^3, haemoglobin of 9.7 gm/dl, and platelet count of 79,000 mm3. Her liver function test showed aspartate aminotransferase 82; alanine aminotransferase 68 mg/dl; total bilirubin, 0.8 mg/dl; albumin 3.8 gm/dl. Her kidney function test and thyroid profile were within normal limits. Her Rapid malaria antigen test paracheck (histidine-rich protein 2 and plasmodium lactate dehydrogenase) was negative. Abdominal ultrasonography revealed no obvious abnormality. In view of irritability and altered behaviour cerebrospinal fluid examination was planned which had normal cell, protein 45 mg/dl, and glucose 47 mg/dl. Serologic tests were negative for dengue, leptospirosis, and human immunodeficiency virus (HIV). Her widal agglutination test was negative. Rapid detection kit for scrub typhus (a solid phase immune chromatographic assay) was positive. His brain magnetic resonance imaging did not reveal any abnormality. In view of possibility of scrub typhus, doxycycline 100 mg twice daily, and for fever paracetamol 650 mg daily and as required was started. Patient improved clinically and discharged after one week.

3. DISCUSSION

Scrub typhus though not so uncommon in many parts of India, it is under recognized and neglected entity especially in rural area in this region, due to limited awareness and its nonspecific varied presentation (Chogle et al., 2010). Neurological involvement is commonly seen in scrub typhus infection due to invasion of organism to the endothelial cells of blood vessels leading to cytokines release and fluid leakage. This also causes localized platelet aggregation, polymorphs, and monocyte proliferation in the vessels (Mishra et al., 2014; Gulati et al., 2013). CNS complications may range from aseptic meningitis to meningoencephalitis, the latter being more common [40%] (Rana et al., 2017). In this patient altered behaviour and acute psychosis can be due to all these factors, but exact pathogenesis is still obscure. However, occurrence of neuropsychiatric manifestations in scrub typhus is not a commonly reported entity in literature (Mahajan et al., 2017; Rana et al., 2017). Brain Magnetic Resonance imaging on T2-weighted images had shown areas of signal hyper intensity in the dorsolateral Ponto medullary region, cerebellar peduncles, cervical spinal cord and leptomeningeal enhancement (Sood et al., 2015). In our patient brain MRI was normal.

4. CONCLUSION

General physicians should keep in mind possibility of scrub typhus, search for the presence of "eschar" when patients presents with fever, myalgia, headache and psychosis. Earlyclinical diagnosis, and hence treatment with doxycycline or tetracycline can prevent further complications.

Informed consent

Signed by patient / relatives

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Conflicts of Interest: The authors declare no conflict of interest.

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