



DELAYED MANIFESTATION OF LATERAL RECTUS PALSY: UNUSUAL PRESENTATION IN SCRUB TYPHUS INFECTION

Internal Medicine

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ABSTRACT

Scrub typhus, a vector-borne disease caused by *Orientia tsutsugamushi*, is known for its diverse clinical manifestations, but neurological complications are relatively uncommon. This case report describes an unusual presentation of lateral rectus palsy, which developed several days after the initial symptoms of scrub typhus. The patient, a 38-year-old female, presented with characteristic signs of scrub typhus, including fever, rash, and eschar, and was treated with appropriate antibiotics. However, approximately two weeks later, she developed sudden-onset diplopia and was diagnosed with lateral rectus palsy. Neurological evaluation and imaging studies ruled out other causes, and the temporal association with scrub typhus suggested an indirect link. This case highlights the importance of considering delayed neurological sequelae in patients recovering from scrub typhus and underscores the need for ongoing surveillance for such complications. Further research is warranted to elucidate the mechanisms underlying this rare presentation and to improve clinical management strategies for affected patients

KEYWORDS

Scrub Typhus, Neurological Complications, Lateral Rectus Palsy, Diplopia

INTRODUCTION

Scrub typhus is endemic in many parts of India. The clinical profile of scrub typhus patients ranges from sub clinical infection to multi organ failure and death. Central nervous system involvement is common in scrub typhus and can present as meningitis, altered sensorium and neurological deficits. Very few cases of cranial nerve palsies have been described in literature. We report a patient with delayed manifestation of Abducens Nerve (CN VI) palsy in scrub typhus which improved completely with antibiotic treatment.

Case Report

38 years old female was admitted with high grade intermittent fever of 10 days duration with subsequent development of vomiting, generalised headache and altered sensorium in form of irrelevant talks and confused state. On examination she was febrile with tachycardia along with hypotension. On general physical examination she had maculopapular rash over trunks, face and arms and an eschar over left lumbar area (Fig 1).



Fig 1: Eschar over Anterior Abdomen Wall

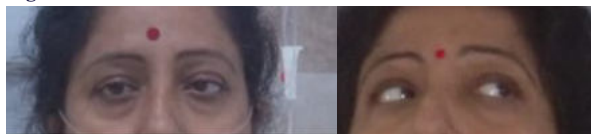


Fig 2: Left Eye Deviated Medially

Fig 3: Left Lateral Rectus Palsy

Neurologically she was confused without any focal neurological deficit. On investigations she had anaemia, thrombocytopenia and non-neutrophilic leucocytosis along with azotaemia and transaminitis. Her CSF examination showed normal biochemistry and cytology and was negative for ADA and microbial stains. Her serological work up for dengue, malaria and typhoid antigens were also negative however she had a high titre of OXK > 1:80 on Weil Felix examination and IgM for scrub typhus was positive. Scrub Typhus was confirmed by positive PCR on blood.

She was managed with Doxycycline, IV Fluids support, anti-pyretic

and other supportive measures. On Day 5 of admission, she complained of diplopia and was noted to have strabismus (Fig 2 & 3).

She was unable to abduct her left eye and diagnosed as isolated Left Lateral Rectus palsy. Rest of the cranial nerves and central nervous system examination was within normal limits. NCCT HEAD and MRI Brain was normal. She was continued on Doxycycline and oral Azithromycin was added with other supportive care. Left Lateral Rectus palsy also improved subsequently over a period of 10 days. She was finally discharged and was followed up on OPD basis and there was no residual Left Lateral Rectus palsy left.

DISCUSSION

Scrub typhus is caused by obligate intercellular gram-negative coccobacilli of rickettsia family i.e. *Orientia tsutsugamushi*. The disease begins with bite of chigger (mite) followed by introduction of organism to human body. The multiplication of organism at this site leads to formation of eschar which is pathognomic of the disease. Although Eschar is considered diagnostic, but it is seen in only up to 58 % of patients (1). Neurological involvement in scrub typhus is caused due to inflammation and vascular leakage of intracranial blood vessels. CSF examination is consistent with aseptic meningitis. Neurological involvement in scrub typhus may present in the form of encephalomyelitis with prominent focal neurologic signs (2). It is very uncommon to find Cranial nerve involvement in a case of scrub typhus. Cranial nerve involvement in the form of bilateral facial nerve palsy & eighth cranial nerve with sensorineural hearing loss has been reported (3,4). Very few cases of Rickettsial fever with isolated third nerve and sixth nerve palsy has been reported (5-9). Neuro-imaging studies are often normal in these settings. The isolated cranial nerve palsies are attributed due to the micro infarction by vascular involvement of vasa nervorum and stretching of the vessels due to dilated ventricles.

CONCLUSION

Clinicians need to consider Scrub Typhus as differential diagnosis in a case of sudden onset isolated cranial nerve palsy or focal neurological deficit with clinical, laboratory or imaging evidence of infection with preceding fever and where the disease is endemic in nature.

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Conflict Of Interest: None

Consent:

A written informed consent has been taken from the patient for publication of pictures in medical journal.

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