DOI: 10.21088/ijmp.2395.311X.8225.4

RFP Indian Journal of Medical Psychiatry
Volume 8 Number 2, July–December 2025

CASE REPORT

Scrub Typhus with Psychosis

Swati Chandramouli[1], Hemendra Singh[2]

HOW TO CITE THIS ARTICLE:

Swati Chandramouli, Hemendra Singh. Scrub Typhus With Psychosis. RFP Ind Jr of Med Psy. 2025; 8(2): 69-71.

ABSTRACT

Scrub typhus is a vector borne febrile illness caused by *Orientia tsutsugamushi*. Psychiatric manifestations in the absence of organic pathology associated with scrub typhus is rare. Here is a 20-year-old female who had acute febrile illness. Within 1 week of onset of illness patient developed visual hallucinations, auditory hallucinations, persecutory delusions and referential ideation. Lab investigation positive for O. tsutsugamushi Ig M, CSF analysis and MRI brain were normal. Diagnosis of Organic hallucinosis and Scrub typhus was made and treated with risperidone doxycycline and paracetamol. Acute psychosis is a rare complication of scrub typhus which may require independent treatment.

KEYWORDS

• Scrub Typhus • Psychosis • Visual Hallucinations

INTRODUCTION

Scrub typhus is a vector-borne, acute febrile illness caused by obligate intra-cellular, gram-negative bacteria *Orientia tsutsugamushi*. It is transmitted to humans by the bite of mite larvae or chiggars of the genus *Leptotrombidium*.[1] Reservoir for the bacterium is small mammals, mostly rodents. Scrub typhus commonly presents with fever, headache, myalgia and enlarged lymph nodes[1] which are indistinguishable from other febrile illnesses clinically. Eshchar is more specific sign which indicates the site of bite from mite but present in only 50% patients.[2] Complications of the disease include neurological manifestations (ranging from confusion, focal neurological deficits to coma), acute kidney disease, ARDS, myocarditis, septic shock[3] and renal failure.[4] The median estimated mortality with treatment is 1.4%[5] and without treatment is

AUTHOR'S AFFILIATION:

[1] Assistant Professor & Consultant, Department of Psychiatry, Ramaiah Medical College, Bangalore, Karnataka, India.

[2] Associate Professor & Consultant, Department of Psychiatry, Ramaiah Medical College, Bangalore, Karnataka, India.

CORRESPONDING AUTHOR:

Swati Chandramouli, Assistant Professor & Consultant, Department of Psychiatry, Ramaiah Medical College, Bangalore, Karnataka, India.

E-mail: swaticrs@gmail.com

➢ **Received:** 06-11-2025 ➢ **Accepted:** 09-12-2025

6%.[6] Neuropsychiatric manifestations of scrub typhus are uncommon and literature available is limited to case reports.

CASE REPORT

Mrs. N, 20-year-old female, lactating mother with 7-month-old baby, presented with history of fever and myalgia of 1 week duration. Five days after onset of illness, patient developed belief that she is dead and, in a coffin, visual hallucinations, auditory hallucinations, persecutory delusions and referential ideation. She also believed that she was pregnant when she had delivered a baby 7 months ago and investigations came negative for pregnancy. Physical examination was unremarkable.

Blood investigations showed Normocytic normochromic anemia (Hb: 9.2) and CRP – 160 mg/L; otherwise hemogram, PT, aPTT, urine routine and microscopy, LFT and creatinine were within normal limits. Serology was negative for dengue (DEN1 – DEN 4), HIV, HBsAg and enteric fever (Widal test). CNS infection was suspected and MRI brain and CSF analysis was done and both were within normal limits. Patient was empirically started on tab. Amoxycillin 500 mg + Clavulanic acid 125 mg BD as well as Paracetamol 650 mg TID. Patient continued to be symptomatic after 1 week of treatment and hence differential diagnosis of Viral Meningoencephalitis and Tropical Fever were considered. Scrub typhus (O. tsutsugamushi) Ig M antibody test by immunochromatography came positive. Patient was started on Inj. Ceftriaxone 2 gm IV OD and Inj. Doxycycline 100 mg IV BD. Psychotic symptoms were treated with Tab. Risperidone 4 mg/day. Within 12 days of starting anti-psychotics, psychotic symptoms subsided.

DISCUSSION

Neuropsychiatric manifestations of scrub typhus have been known for a longtime ranging from meningitis, encephalitis to neurological deficits due to vascular events.[7,8] Psychiatric manifestations in the absence of organic lesion is rare in scrub typhus and as per our knowledge only 2 reported cases are available in the literature.[2,9] As in the previous 2 case reports, in our case also the psychiatric manifestations occurred within 2 weeks of onset of illness and patient had visual hallucinations. Auditory hallucinations which was present in our patient was also reported in one previous case.[2] Unlike the previous reported cases our patient had delusions as well. The theme of the psychotic symptoms in all 3 cases were however similar. In previously reported cases patients were seeing/hearing dead people/animals; while in our case patient believed herself to be dead and buried. In the previous 2 cases patients were treated with doxycycline, paracetamol and fluids for scrub typhus which led to subsequent resolution of psychotic symptoms. In Mrs N, a differential of delirium was considered, however, as the sensorium was clear and no diurnal variation of symptoms were noticed, a diagnosis of Organic hallucinosis was made. The psychotic symptoms were severe and prolonged enough to cause dysfunction and hence anti-psychotic (Risperidone) was started. Case reports are available on neurological symptoms persisting for months after adequate treatment of scrub typhus,[8] mechanism of persistent psychotic symptoms could be similar.

CONCLUSION

Though psychiatric manifestations of scrub typhus are rare and usually resolves with resolution of the infection, clinicians must be vigilant about requirement of treatment of psychiatric manifestations independent of scrub typhus treatment and appropriate referral must be done.

Sources of Support: Nil

Acknowledgements: Nil

Conflict of Interest: The authors have no conflicts of interest to declare.

REFERENCES

1. Farrar J, Hotez P, Junghanss T, Kang G, Lalloo D, White NJ. Manson's Tropical Diseases E-Book. Elsevier Health Sciences; 2013. 1664 p.
2. Mahajan SK, Kaushik M, Raina R, Sharma RC, Thakur P, Bharat Sharma J. Scrub typhus with visual hallucinations. Trop Doct [Internet]. 2015 Apr 1 [cited 2021 Dec 8];45(2):146–7. Available from: https://doi.org/10.1177/0049475514565426.
3. Tsay RW, Chang FY. Serious complications in scrub typhus. J Microbiol Immunol Infect Wei Mian Yu Gan Ran Za Zhi. 1998 Dec;31(4):240–4.

4. Yen T-H, Chang C-T, Lin J-L, Jiang J-R, Lee K-F. Scrub Typhus: A Frequently Overlooked Cause of Acute Renal Failure. N Y. :15.

5. Bonell A, Lubell Y, Newton PN, Crump JA, Paris DH. Estimating the burden of scrub typhus: A systematic review. PLoS Negl Trop Dis [Internet]. 2017 Sep 25 [cited 2021 Dec 8];11(9):e0005838. Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5634655/

6. Taylor AJ, Paris DH, Newton PN. A Systematic Review of Mortality from Untreated Scrub Typhus (Orientia tsutsugamushi). PLoS Negl Trop Dis [Internet]. 2015 Aug 14 [cited 2021 Dec 8];9(8):e0003971. Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4537241/

7. Mahajan SK, Mahajan SK. Neuropsychiatric Manifestations of Scrub Typhus. J Neurosci Rural Pract [Internet]. 2017 [cited 2021 Dec 8];8(3):421–6. Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5488565/

8. Ripley HS. Neuropsychiatric observation on tsutsugamushi fever (scrub typhus). Arch Neurol Psychiatry. 1946 Jul;56(1):42–54.

9. Hulkoti V, Dubey A, Kumar S, Pratapa S. Psychotic scrub typhus: A Case Report. 2020 Mar 11;24.