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Dancing eyes and dancing feet in scrub typhus

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CASE STUDY

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ABSTRACT

A 26-year-old male, presented to us with complaints of fever for five days and breathlessness for one day. During the hospital stay, he developed myoclonic jerks in all four limbs, head titubation, and saccadomania. Magnetic resonance imaging (MRI) of the brain ruled out structural lesions and cerebro spinal fluid (CSF) analysis ruled out meningo-encephalitis. Weil Felix was strongly positive, OX K titres were one in 640, and IgM for scrub typhus was positive. He was treated with doxycycline for one week. On follow-up he was found to be doing well with resolution of opsoclonus myoclonus.

Key Words
saccadomania, scrub typhus, opsoclonus myoclonus

Implications for Practice:

1. What is known about this subject?
Scrub typhus, which is a common unresolved febrile illness in India, can have myriad clinical presentations, involving many organ systems. Neurological manifestations are quite common.

2. What new information is offered in this case study?
Opsoclonus myoclonus can be one of the rare presentations of scrub typhus.

3. What are the implications for research, policy, or practice?
Infectious causes of opsoclonus myoclonus should be looked for in patients presenting with febrile episodes.

Background

Scrub typhus, a mite borne infection, is quite common on the Indian subcontinent during monsoon and is responsive to tetracycline. Opsoclonus myoclonus is a rare presentation of scrub typhus and has been reported only twice previously in literature. Opsoclonus myoclonus syndrome has been classically seen as a paraneoplastic manifestation. We would like to report a rare infectious cause of it.

Case details

A 26-year-old male, a school teacher by occupation from South India, with no history of any neurological problems or any other premorbid illness, presented to us with the complaints of fever for five days and breathlessness for one day. On examination he was febrile (100.4^0F) and had tachycardia (heart rate 120bpm) while the rest of his vitals were stable. General and systemic examinations were unremarkable. In view of acute history, the epidemiology of the region from which he hailed, and the season (rainy) in which he presented, the possibility of scrub typhus was considered. However, the next day the patient developed restlessness, myoclonic jerks in both upper and lower limbs, head titubation, and saccadomania suggestive of opsoclonus myoclonus. After careful history taking no such episodes were noticed in the past by the patient or his spouse.

On re-evaluation, tone in both upper and lower limbs was found to be increased and all the deep tendon reflexes were exaggerated. A brain MRI was done, which ruled out structural lesions. CSF analysis was done, which did not show any evidence of meningo-encephalitis. Weil Felix was

positive with OX K 1 in 640 titres. IgM for scrub typhus was also positive. His blood culture and CSF culture were sterile. Thus, diagnosis of para infectious opsoclonus myoclonus syndrome secondary to scrub typhus was made. His complete blood picture showed leucocytosis (14300cells/mm^3) with predominant lymphocytosis (74%). Hepatic functions showed normal bilirubin with elevated transaminase levels (ALT-394 and AST-145). Renal functions were normal. Chest roentgenogram was normal. He was treated with doxycycline for one week. In his four days of hospital stay he showed dramatic response to doxycycline, was afebrile after two days and his agitation subsided opsoclonus myoclonus resolved in two days. He had no further episodes of opsoclonus myoclonus He remained asymptomatic on his follow-up visit after two weeks and resumed his daily activities.

Discussion

Scrub typhus is a mite born rickettsial disease common on the Indian subcontinent. It presents as febrile illness with myalgias, headache, and eschar at the chigger bite site. Neurological manifestations reported in the literature include meningoencephalitis, acute demyelinating encephalomyelitis, transient Parkinsonism, bilateral abducens, or facial nerve palsy, which are found to improve with treatment for scrub typhus.[1]

Opsoclonus myoclonus associated with scrub typhus is very rare and has been sporadically reported. One such published case report describes a 64-year-old and a 40-year-old, respectively, diagnosed with scrub typhus presenting as opsoclonus;[2] another describes a 54-year-old farmer presenting with fever and opsoclonus myoclonus, which responded promptly to treatment with doxycycline for scrub typhus.[3]

Opsoclonus myoclonus, also called dancing eyes and dancing feet, is characterised by involuntary horizontal, torsional, and vertical eye saccades with no saccadic interval, myoclonus is involuntary jerky movements of muscle groups associated with ataxia and other cerebellar signs. It is a rare presentation, which is either para-neoplastic or non para-neoplastic. The pathogenesis of opsoclonus myoclonus is suspected to be auto-immune with anti-neuronal antibodies, which are not detectable in most patients. The immunopathogenesis is still unclear.[4] In adults, small cell carcinoma lung and breast cancers are commonly associated with it. Non para-neoplastic causes being viral infections, toxic-metabolic causes, post-streptococcal, and idiopathic. Opsoclonus myoclonus resolves with the treatment of underlying condition or immunotherapy.

In our case, opsoclonus myoclonus is considered secondary to scrub typhus as there are no other possible associated conditions that can cause opsoclonus myoclonus or can mimic opsoclonus myoclonus syndrome, and it has resolved dramatically with treatment of scrub typhus.

Conclusion

Opsoclonus myoclonus commonly a paraneoplastic presentation, can accompany infectious diseases—with scrub typhus being one of them.

References

1. Gulati S, Maheshwari A. Neurological manifestations of scrub typhus. Ann Indian Acad Neurol. 2013;16(1):131. doi:10.4103/0972-2327.107701
2. Nam TS, Choi SM, Park KH et al. Opsoclonus associated with scrub typhus. Neurology 2010;74;1925. doi:10.1212/WNL.0b013e3181e2438d
3. D'sa S, Singh S, Sowmya S. Opsoclonus in scrub typhus. J Postgrad Med 2012;58:296. doi: 10.4103/0022-3859.105453
4. Wong A. An update on opsoclonus. Current Opinion in Neurology 2007;20:25–31.

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CONFLICTS OF INTEREST

The authors declare that they have no competing interests.

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PATIENT CONSENT

The authors, *Neeraja K, Aswani SM, Shivashankara KN, Chandrashekar UK* declare that:

1. They have obtained written, informed consent for the publication of the details relating to the patient(s) in this report.
2. All possible steps have been taken to safeguard the identity of the patient(s).
3. This submission is compliant with the requirements of local research ethics committees.