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UNUSUAL PRESENTATION OF SCRUB TYPHUS WITH CEREBELLITIS WITHOUT ESCHAR

General Medicine

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ABSTRACT

Scrub typhus presents with varied involvement of CNS. Our case presented with fever without eschar for 15 days and later developed features suggestive of cerebellitis .IgM antibodies to scrub typhus was found to be positive. Patient showed response to doxycycline and cerebellitis improved with dexamethasone.

KEYWORDS

INTRODUCTION

Scrub typhus is an infection caused by Orientia tsutsugamushi. It has become a major public health problem in India over last few years. Infection manifests as headache, myalgia, lymph adenopathy, nausea, vomiting or breathlessness. Characteristic "eschar" is noted only in 40-50% of cases. Scrub typhus cause wide range of neurological manifestations. IgM antibodies by ELISA is widely used for diagnosis with high sensitivity and specificity. The drug of choice is Doxycycline.1 In patients with scrub typhus there is no guidelines for use of corticosteroids in central nervous system involvement.

CASE

A 67years old male presented with history of fever for past 15 days with headache, generalised body pain with vomiting. He developed swaying on right side while walking 2 days after admission.

General physical examination:

- Febrile, Jaundice +, conjunctival suffusion+, no eschar .
- Vitals- stable

Neurological examination:

- He was conscious, oriented
- Scanning of speech +,tremors+, finger nose finger test +, knee heel test +, rebound phenomenon +, dysdiadokokinesia+

Truncal as well as gait ataxia+, horizontal nystagmus +.
Per abdomen: Hepatosplenomegaly+ Other system-normal

INVESTIGATIONS

Investigation	Results
TLC	2000/mm3
ESR	36mm in 1 hour
Total protein	7gm%
Total serum bilirubin	3.2mg%
Conjugated bilirubin	1.6mg%
SGOT/SGPT/ALP	86/74/115 IU/L
CSF examination	
proteins	68mg%
sugar	24mg%
ADA	Negative
Gram stain	Negative
NMDA antibodies	Negative
Other investigations	
widal	Negative
Smear for mp & mf	Negative
Dengue serology	Negative
Blood culture	Negative
Urine culture	Negative
IgM antibodies for scrub typhus	Positive
CT BRAIN with contrast	Inconclusive
MRI brain	Uniform enhancement of pachymeninges with edema of b/l cerebellar hemisphere

MRI brain with contrast could not be done as patient had ataxia.

Treatment:

Doxycycline 100 mg BD inj. Dexamethasone 4 mgs TDS. He became afebrile on third day of hospitalisation and ataxia also slowly improved. He was able to walk with support on 7th day of treatment. His liver function tests started decreasing and became almost normal at the time of discharge. Injection dexamethasone was stopped after 21 days and doxycycline was given for 14 days. He was discharged after 3 weeks and he was able to walk with support however there was still subtle cerebellar dysfunction, which improved on further follow up.

DISCUSSION

Complications usually develop after first week of scrub typhus of illness. It includes Jaundice, renal failure, pneumonia, ARDS, septic shock, myocarditis and meningoencephalitis. Neurological manifestations reported with scrub typhus includes Leptomeninges - diffuse or focal mononuclear cell exudates and presence of typhus nodules (cluster of microglial cells) throughout the brain substance.2 A large study showed that focal neurological deficit occur rarely though CNS was involved at least slightly in almost all patients.3 In a study from Himachal Pradesh, 15% of patients had CNS involvement with altered sensorium & abnormal cerebrospinal fluid but no one had focal neurological deficit.1,4 Pai et al demonstrated that presence of rickettsiae in CSF from patients with scrub typhus using nested PCR.CSF studies revealed mild to moderate pleocytosis (mainly mononuclear) in 48% of patients with normal glucose levels and mild increase in protein levels in 30% of patients, similar to those with viral meningitis. Presence of erythrocytes in the CSF of some cases can be attributed to presence of generalized vasculitis.5 Other manifestations of scrub typhus includes delirium, myelitis, cerebral haemorrhage, hearing loss, isolated 6th nerve palsy, bilateral 6th and 7th nerve palsy, trigeminal neuralgia, opsoclonus, transient parkinsonism, myoclonus, brachial plexopathy, polyneuropathy, acute disseminated encephalomyelitis and Guillain–Barre syndrome reported in patients of scrub typhus.6, 7There are no guidelines regarding the use of corticosteroids in scrub typhus. Choi et al used steroids in a patient of scrub typhus with acutely progressive local neurologic symptoms and initial neurologic symptoms like restlessness, irritability and abnormal lateral gaze and paralysis in upper extremities also recovered and there was no new neurologic sequelae appearance.8

CONCLUSION

After treatment with dexamethasone, our patient showed rapid improvement in neurological deficit. Further more studies are needed for the use of corticosteroids in patients with scrub typhus. Our case of scrub typhus presented with isolated acute cerebellar involvement, which is quite rare. There is scant literature which described isolated cerebellar dysfunction in patients with scrub typhus.

CONFLICT OF INTEREST

Conflict of interest declared as none.

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