Scrub typhus is a zoonotic infectious disease. Human beings get infected accidentally when they encroach upon mite-infested rural and suburban areas.[5] It is often acquired during recreational, occupational or agricultural exposure because crop fields and scrub vegetation are an important reservoir for transmission.

The average incubation period of O. tsutsugamushi in humans is 10–12 days, the onset of disease is characterized by fever, headache, myalgia, cough, and gastrointestinal symptoms. Patients often present with pyrexia of unknown origin.[6] The severity of the symptoms varies widely, depending on the susceptibility of the host, the virulence of the bacterial strain, or both. Various serological tests are available like Weil–Felix test, Indirect immunofluorescence, rapid card tests and IgM ELISA. In this study IgM ELISA was evaluated and found to be quite satisfactory.

With the changing epidemiology of scrub typhus, it is now among the commonest causes of AFI in India. It is important to get familiar with the clinical and diagnostic laboratory features of scrub typhus, so as to differentiate it from other etiologies of AFI. This study was carried out to know the epidemiology and seroprevalence of scrub typhus in patients of acute febrile illness as early diagnosis and institution of specific treatment will reduce morbidity and mortality.

**MATERIAL AND METHOD:** This prospective, observational study was carried out at a tertiary care hospital in the Hadoti region of Rajasthan from August 2018 to December 2018. All demographic data and detailed history were recorded. Scrub typhus serology was tested for IgM antibodies against O. tsutsugamushi using IgM ELISA kits (INBIOS).

**Result:** Total 609 samples were tested for scrub typhus out of which 120 samples were found positive. Out of 120 sample 62 and 58 were males and females respectively. Highest seropositivity was found in 21-40 year age group and among rural population. The clinical manifestations varied from minimal to severe illness with 3 case fatalities.

**Conclusion:** Scrub typhus should be included in the differential diagnosis of acute febrile illness along with malaria and dengue fever which are other endemic diseases in this region, which will help in proper diagnosis, timely and adequate treatment.

**KEYWORDS**

scrub typhus, acute febrile illness, seroprevalence
Highest seropositivity was found in 21–40 year age group in our study which may be due to more active life style of this age group. People working outdoor tend to be affected more often. Also most of the positive cases were from rural areas and in months of September and October (immediate post monsoon period) as there is growth of secondary scrub vegetation, which is the habitat for trombiculid mites. Similar findings were reported by Sinha et al and Medi et al.[12,13] The clinical manifestations of this disease vary from minimal to severe fatal illness with multimorbid dysfunction.[14] In our study 3 case fatalities were reported.

Eschar at the site of attachment of the larval mite is considered highly suggestive of scrub typhus, but occurs in a variable proportion of patients in different studies.[13] Its presence is considered pathognomonic of the disease but its absence does not exclude the possibility of scrub typhus. Premaratna et al, also postulated that in dark-skinned patients early/ very small eschar could be easily overlooked.[15] In our study we did not observe eschar in any patient. Sinha et al also did not observe eschar in any patient.[12]

The diagnosis of scrub typhus poses a problem due low index of suspicion, non specific signs and symptoms, absence of specific presentation of an eschar and lack of diagnostic facilities in India. There are several diagnostic tests available with their own advantages and disadvantages. Indirect immunoﬂuorescence test, the gold standard is beyond affordability specially in poor and developing countries like India and needs expertise for interpretation.[16] IgM ELISA is an easy and comparatively economic method. Jang et al, evaluated IgM ELISA for the diagnosis of scrub typhus and reported sensitivity of 96.3% for IgG IFA – positive samples and of 100% for 100% for IgM IFA- positive samples. The speciﬁcity of the IgM capture ELISA was 99%, for IgG-positive samples.[17] It is recommended that scrub typhus should be included in the differential diagnosis of acute febrile illness along with malaria and dengue fever which are other endemic diseases in this region, which will help in proper diagnosis, timely and adequate treatment and avoidance of the complications which are associated with high mortality.

REFERENCES


