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OUTBREAK OF SCRUB TYPHUS IN EASTERN INDIA

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ABSTRACT

Scrub Typhus is a zoonotic disease caused by Orientia tsutsugamushi, transmitted by the bite of chiggers of Leptotrombidium deliense group. This study was done to detect outbreak of cases of scrub typhus in Eastern India. A total of 161 cases were examined over a period of 2 ½ months (June 2016 to August 2016). This study was conducted in collaboration with other institute. Out of 161 total cases 111 were positive for Weil felix titre> 1:160 and this was further confirmed by specific IgM testing. Patients who tested positive for scrub typhus improved radically with doxycycline. Thus scrub typhus should be considered in all cases of febrile illness even in absence of eschar. In untreated cases, it can cause death of individuals.

KEYWORDS: Scrub typhus, Zoonotic disease, Weil Felix test.

INTRODUCTION

Scrub typhus is a zoonotic disease caused by *Orientia tsutsugamushi*. It is transmitted by the bite of chiggers of the Leptotrombidium deliense group. This disease was once considered a rare, transmitted from animals to man.[1] However recent times have shown a spurt of cases in the hospital. Previously the mites, which are vectors, were found in forested areas. Hence people who had travelled to places of dense vegetation or lived in the fringes of forests were occasionally affected.[2] However, recently these mites have been found in urban shrubs too. People living even in the heart of the city had been diagnosed with scrub typhus in our hospital.

MATERIALS AND METHODS

This test was carried out in our tertiary care hospital in collaboration with other institutes. A total number of 161 cases were observed over a period of 2 ½ months. Patients were admitted with fever, myalgia and lymphadenopathy. Those who had skin lesions were considered as well as ones without eschar, but with other symptoms, were also considered.

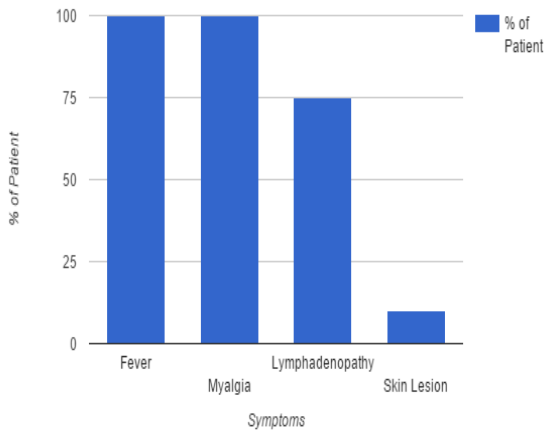

Fig 1. Bar diagram showing distribution of symptoms of patients

Initially, standard tests were done. These included complete blood count, peripheral blood film, urine examination, liver function tests and urea creatinine. No conclusive results were reached. So special tests were done. These included blood culture tests, X ray and WIDAL, rapid card test for malaria, serological test for dengue (the last two were done as there was a spurt in the number of cases of malaria and dengue during this time).

Finally some special tests for scrub typhus which included Weil Felix test and IgM test for scrub typhus done.

RESULTS

The total number of cases =161.
The Weil Felix test was done for all.
Number of cases positive =111.
The titre value of positive cases >1:160.

For the rest of the 50 cases the titre value in the Weil felix test was between 1:40 and 1:80.

For further confirmation, IgM test was done. In cases where the Weil Felix titre was > 1:160 it was positive. In case where the titre value between 1:40 and 1:80 it was negative.

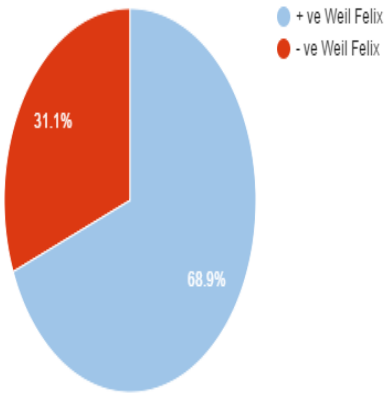

Fig 2. Diagram Showing Distribution of Weil Felix test positivity

DISCUSSION

Diagnosis of scrub typhus is done on clinical grounds usually. The hallmark feature being the eschar.[3] Unfortunately in dark skinned people it is often not visible, further it may be in a place which is covered. Further the insect is very small and its bite is painless so often there is no history of bite.[4] Making diagnosis even more difficult is that clinical symptoms often coincide with those of dengue, malaria and enteric fever.

Fortunately the treatment of scrub typhus is very effective when started in the initial stages. Doxycycline is the drug of choice.[5] In doxycycline resistant cases or in pregnant mothers or children, azithromycin may be given. No vaccines are available.

CONCLUSION

Scrub typhus should be considered in all cases with febrile illness even in the absence of eschar, as untreated cases may be fatal, while treatment with doxycycline is very effective. Further as mite is the vector, efforts should be made for vector reduction and vegetation control.

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