

Multivarious Presentations and Complications of Scrub Typhus Successfully Treated

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Introduction:

A few cases of PUO were evaluated in the Advance fever clinic of Apollo hospital and among them, various presentations of scrub typhus were noticed. All were positive for scrub typhus and responded to treatment. The cases are described below.

Pneumonia:

A 34-year-old male was admitted with high fever, purulent sputum and breathlessness and was given IV antibiotics. X-ray chest revealed right lung pneumonia and an eschar was seen in the folds of the neck. IgM for scrub typhus was positive and IV ceftriaxone and doxycycline were given. He responded to treatment and became afebrile.

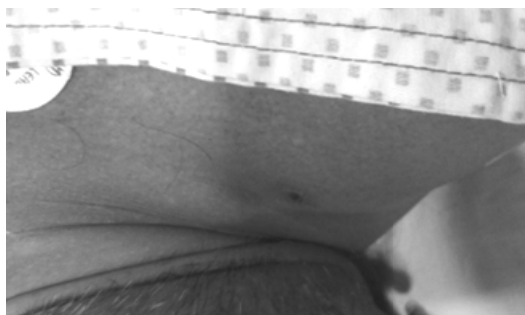


Fig no: 1 Picture of eschar in the folds of the neck

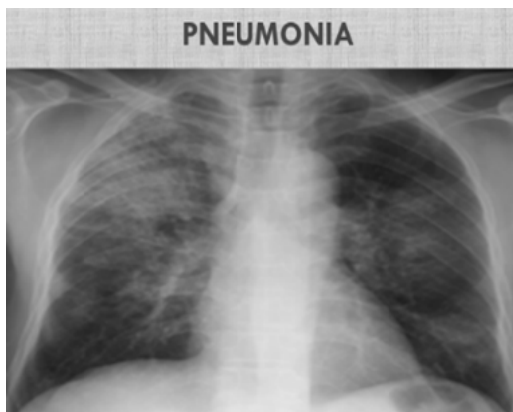


Fig no: 2 Picture of X-ray with pneumonia

Scrub typhus presenting as Hilar adenopathy:

A 44-year-old male was admitted for high fever and chills with herpes labialis. He brought out yellow sputum blood-tinged. The x-ray chest revealed bilateral mediastinoadenopathy, and scrub typhus was positive and responded to the addition of doxycycline.

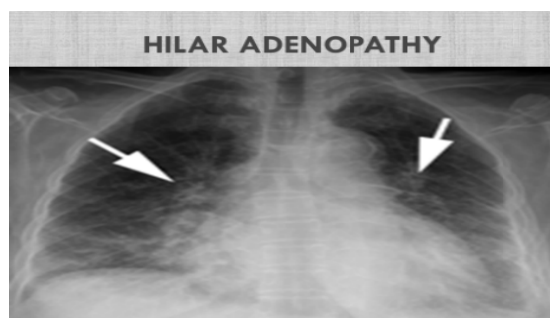


Fig no: 3 X-ray showing hilar adenopathy

Scrub typhus with GB thickening:

A 30-year-old female was admitted with a high fever, cough, arthralgia, vomiting and mild liver enzymes elevation. Scrub typhus was positive and ultrasound revealed hepatomegaly, splenomegaly and thickened gall bladder. She responded to therapy. Blood culture grew with no organisms.

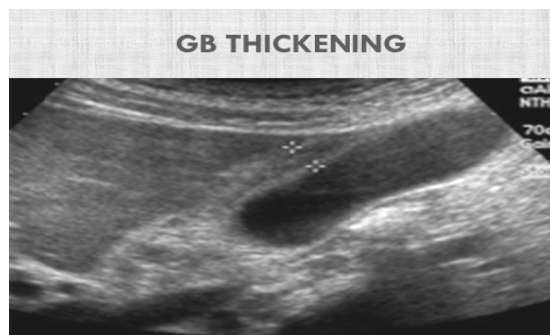


Fig no: 4 GB thickening

Scrub Typhus co-infection with Enteric fever:

A 50-year-old female was admitted for 20 days with fever, headache, chills and diarrhoea.

She had leukopenia, coated tongue and splenomegaly. Blood culture revealed Salmonella typhi and she was put on ceftriaxone. An eschar was seen on the abdomen and a blood test revealed scrub typhus. She responded to the addition of doxycycline and was discharged.

Scrub typhus with ARDS:

A 30-year-old female was evaluated for rashes all over the body with a fever and cough. All the tests for exanthematous fever were negative. Routine investigations for febrile patients include scrub typhus which was positive. The patient became breathless requiring intubation, and assisted ventilation due to ARDS. She responded well to IV ceftriaxone and doxycycline and antihistamines.

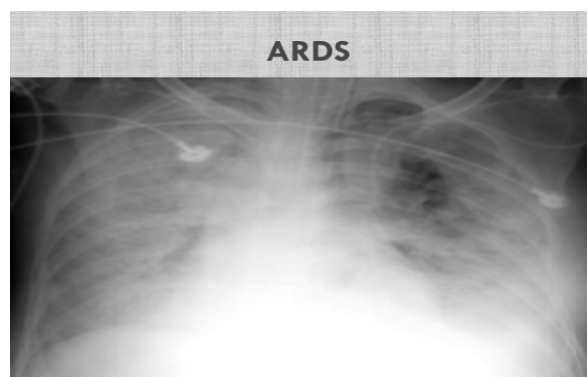


Fig no: 5 Picture of X-ray with ARDS

HIV with Scrub typhus:

Young male 30 years old HIV positive and undergoing treatment developed a fever and investigations revealed positive for scrub typhus. Since he had an eschar behind the hip thread, doxycycline was added and the temperature subsided. All the bacterial diseases accompany HIV patients were tested and negative



Fig no: 6 Eschar of scrub typhus behind the hip thread

A case of UTI with diabetes mellitus with Scrub typhus – An eschar hidden behind the thick beard.

A 70-year-old man, a known diabetic had features of UTI and not responding to antibiotics given, supported by culture sensitivity. A routine blood test for PUO showed scrub typhus was positive. A detailed examination was done by different doctors in search of an eschar. One examiner detected an eschar hidden by a thick beard. Clearing the beard, an eschar was noticeable.

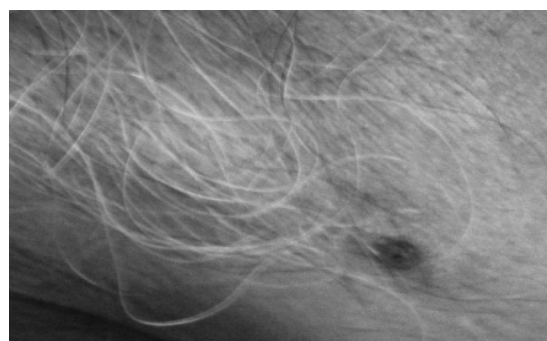


Fig no: 7 Eschar of scrub typhus concealed by fully grown beard

A case of Urinary tract infection with Scrub typhus – An eschar over the breast:

A 35-year-old lady was evaluated for a fever of two weeks with dysuria, frequency of micturition and loin pain. The test revealed plenty of pus cells in the urine and the culture grew E.Coli. USG revealed mild pyelonephritis. A nurse, on changing the clothes accidentally saw an eschar over the breast and a blood test revealed scrub typhus. She was given combinations of drugs for both E. coli and Scrub typhus to which she responded.



Fig no: 8 Eschar over the left breast

Scrub typhus – An eschar hidden behind a plaster:

A 40-year-old male went trekking in the south, evaluated outside for 20 days' fever with no diagnosis. All the tests included cultures of blood and urine. All tests for febrile agglutinins, CT scans and PET scans were normal. When we removed the plaster applied in the right lower chest an eschar was visible. Those days we did not have an ELISA test for typhus so we used Weil-Felix reaction which was strongly positive. He was given doxycycline and became afebrile and was discharged.



Fig no: 9 Scrub typhus eschar concealed by plaster

Scrub typhus – Mesenteric adenopathy:

A middle-aged male presented with four weeks of fever and an ultrasound revealed mesenteric adenopathy. A laparoscopy biopsy of the lymph node showed non-specific granuloma. Scrub typhus was positive and doxycycline was added.

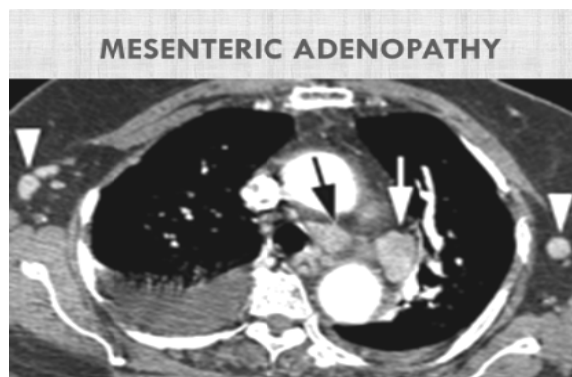


Fig no: 10 Ct scan showing mesenteric adenopathy

Scrub typhus - An eschar in the medial aspect of the thigh

A young female with a pregnancy of 24 weeks was evaluated for dengue fever with

thrombocytopenia. Under treatment for dengue with positive NS1 Antigen, she showed an eschar of scrub typhus and subsequently doxycycline was added. She responded to the treatment.



Fig no: 11 Eschar in the medial aspect of the thigh

Conclusion:

Scrub typhus is a common infection in the tropics with various presentations like pneumonia, ARDS, Gall bladder thickening, and Mediastinal adenopathy and has been co-infection with UTI, Enteric fever.

An eschar is pathognomonic of scrub typhus seen in many places of the body that are too unusual sites. Thinking of the possibility of an eschar a detailed clinical examination is imperative for the diagnosis and treatment of scrub typhus.

Early diagnosis, visualisation of the eschar and lab test for scrub typhus takes us a long way to diagnose and treat scrub typhus successfully. This fever can cause almost all chest, abdomen and head complications.

Early diagnosis and treatment go a long way in treating fevers of unknown origin cases. The abnormal sites of an eschar are to be kept in mind and a detailed physical examination is to be done to see the eschar.

References:

1. BLANCO JR (eds): Century of Rickettsiology: Emerging, Remerging Rickettsioses, Molecular Diagnostics, and Emerging Veterinary Rickettsioses. Malden, MA, Blackwell Scientific, 2006.
2. RAOULT D et al: Q fever 1985-1998. Clinical and epidemiologic features of 1,383 infections. Medicine (Baltimore) 79: 109, 2000.