ORIGINAL RESEARCH PAPER
Volume - 13 | Issue - 11 | November - 2024 | PRINT ISSN No. 2277 - 8179 | DOI : 10.36106/ijsr
INTERNATIONAL JOURNAL OF SCIENTIFIC RESEARCH

RAREST OF RARE CASE OF SPLENIC INFARCT IN PATIENT WITH SCRUB TYPHUS.

General Medicine

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ABSTRACT

Scrub typhus is an infectious disease caused by Rickettsia bacterium Orientia tsutsugamushi; transmitted by the bite of larva (chigger) which is the only stage that can transmit the disease. It presents as acute febrile illness along with multi – organ involvement. Here we present a case report of a 36 year G3P2L2A0 with 2 months of amenorrhea who presented with fever, jaundice, hepatic encephalopathy, IUD and splenic infarct which is the rarest of rare complication.

KEYWORDS

Scrub typhus, Splenic infarct, IUD, Encephalopathy

INTRODUCTION

There is an estimated 1 million new scrub typhus infection each year and over 1 billion people around the world are at risk.[1.] It affects people of all age group including children. Humans are accidental hosts in this zoonotic disease.[2] Scrub Typhus is a rickettsial disease caused by Orientia tsutsugamushi, which is transmitted to humans through infected chigger mites. When the rickettsia is transmitted through the bite of an infected mite to human, it begins to proliferate at the bite site and a characteristic skin lesion, known as an Eschar, is formed.[3.]

Orientia tsutsugamushi is highly virulent gram – negative coccobacillus, having various unique characteristics, for example, being obligate intracellular parasites (can be cultured only in cell line based media) and antigenically distinct from other typhus group rickettsiae, exhibiting extensive genomic and antigenic heterogeneity, etc.[4.] The disease is transmitted by the bite of larva, and the larva (chigger) is the only stage that can transmit the disease. Clinical feature of scrub typhus usually being within 10 days of being bitten by an infected chigger.[2.] The sign and symptoms are fever with chills, headache, body aches, muscle pain, rash, enlarged lymph node, eschar, altered mental status, liver dysfunction and acute kidney injury, etc. It can be diagnosed by serological test, PCR and Eschar biopsy.[4.]

Case Study

A 36 years female G3P2L2A0 with 2 months of amenorrhea presented with chief complains of fever with chills and rigor since 7–8 days, vomiting 4–5 episodes per day, abdominal pain which was diffuse and Yellowish discoloration of sclera for 5 days. She was admitted in ICU at Ananta Institute of Medical Science and Research Centre, Rajsamand, Rajasthan. Patient has no notable past history of any chronic illness. On examination patient was vitally stable; Icterus, pallor & flapping tremor present, abdomen was soft but generalized tenderness was present. Patient was conscious oriented but irritable. Other systemic examination was unremarkable. Viral marker and tropical fever profile along with routine investigation were sent for investigation. Scrub typhus IgM was positive with deranged LFT & thrombocytopenia. USG of fetal well-being revealed absent fetal cardiac activity and body movements suggesting IUD. USG whole abdomen showed a hyperechoic lesion of size 36*26 mm seen in left lobe of liver suggestive of hemangioma. Spleen was normal in size (10.5 cm) with multiple well-defined mixed hypoechoic partly necrotic lesions in splenic parenchyma suggestive of splenic infarct.(Image 1) Blood culture & sensitivity showed no aerobic pyogenic organism growth. Urine culture & sensitivity showed Klebsiella species sensitive to Meropenem. OBGY department reference taken and evacuation of fetus was done and patient was managed appropriately with antibiotics (Doxycycline) and supportive management. Patient improved drastically from all complication like encephalopathy, sepsis, thrombocytopenia. However, repeat USG suggested persistence of splenic infarct.

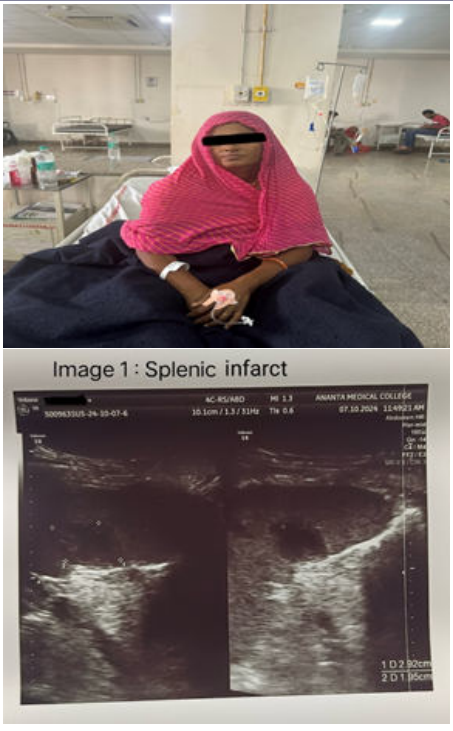

Image 1 : Splenic infarct

DISCUSSIONS

Scrub typhus is one of the earliest known vector-borne zoonotic infectious diseases, posing a life-threatening risk to individuals of all ages. It typically presents with acute fever and affects multiple organs. The disease is transmitted through the bite of infected Trombiculid mites, also known as chigger mites..[5.] The clinical presentation may range from acute febrile illness, myalgia, arthralgia, thrombocytopenia, acute hepatic dysfunction, acute kidney injury, suffused face, eschar, pneumonitis, acute respiratory distress syndrome, myocarditis, pericarditis to severe neurological manifestations.[2.] Scrub typhus has a variety of clinical presentations ranging from asymptomatic to fever with chills, myalgias, hepatitis, gastric ulcerations and pancreatitis, all being attributed to disseminated vasculitis, with splenic infarction being a rare presentation.[6]

The incubation period generally ranges from 6 to 21 days. Early treatment leads to better outcomes and quicker recovery compared to delayed intervention. Treatment for scrub typhus is usually initiated based on clinical suspicion. The first line treatment is Doxycycline, 3 mg/kg/day for 7 days. An alternative option is Chloramphenicol at a

dosage of 500 mg administered four times daily. For patient not responding to conventional treatment, Rifampicin at 600 mg daily for a week has shown effectiveness. Azithromycin has been found to be effective in doxycycline – resistant strains of scrub typhus. While oral antibiotics are suitable for mild cases, injectable treatments are advised for those who are critically ill[7.]

CONCLUSIONS

Based on the above case study it can be concluded that Splenic infarct is rarest of rare complication of scrub typhus. In our case we show multiple involvement in form of IUD, Jaundice, Acute hepatic encephalopathy, Anemia and Splenic infarct. With early diagnosis and treatment our patient recovered and this is message to all medical fraternity that as clinicians we should look for all organs. Since complication like splenic infract is not routinely found it is overlooked by clinician and remains underdiagnosed.

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