Original Research Paper Medicine

ATYPICAL PRESENTATION OF SCRUB TYPHUS

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ABSTRACT Scrub typhus is a mite borne infectious disease caused by gram negative coccobacillus Orientia tsutsugamushi. It is antigenically distinct from the typhus group rickettsiae. We present here 2 cases of scrub typhus with unusual presentations. The first patient was a 38 year old male patient presenting to us with history of fever since 7 days and diffuse blanching rash associated with enlargement of both parotids. The second patient was a 50 year old woman complaining of prolonged fever associated with acute abdominal pain in epigastric region with vomiting diagnosed to have acute pancreatitis .

KEYWORDS : Scrub typhus, unusual presentation

INTRODUCTION

Orientia tsutsugamushi is distributed throughout the Asia pacific rim. Scrub typhus is endemic in India, Pakistan , China , Korea , Taiwan, Thailand, Malaysia and Australia.1 Most of the scrub typhus occur in rural areas especially in remote forest areas.2 Low index of suspicion among doctors may be contributing to the under reporting of scrub typhus in our country.

CASE 1

A 38 year old male patient was admitted with complaints of fever since one week and altered sensorium since 2 days. Fever was high grade , intermittent associated with chills and rigors. No history of associated headache , vomiting and seizures. On general examinat ion , the patient was febrile with altered sensorium and both parotids were enlarged. Eschar was not found on examination, meningeal signs were negative and diagnosis of Mumps encepha litis was suspected.

On Laboratory investigations his total leukocyte count was 18700/ cumm, platelets of 173000 /cumm . Random glucose 95 mg/dL , Renal function parameters were in normal range.

AST 94 IU/L , ALT 96 IU/L , ALP 153 U/L, Total bilirubin 1.2 mg/dL , Albumin 4.32 g/dL and creatinine phosphokinase (CPK) 1758 U/L ; QBC malaria negative, antibodies to HIV 1&2, Hepatitis B and C were Non reactive , **Scrub IgM antibody by immunoflorescent came as positive** , Weil felix showed significant titer of OX:K 1:640 , OX 19 1:640 , OX 2 1:80 titer.

Lumbar puncture was done. Cerebrospinal fluid showing low WBC count with lymphocyte predominant reflecting viral etiology , CSF glucose 52 mg/dL , CSF protein 75mg /dL , CSF gram stain and AFB stain negative. Mumps virology , varicella virology, herpes virology ,dengue virology were negative.

CECT brain was done showing normal study. Contrast enhanced MRI brain was done showing acute lacunar infarcts in bilateral lentiform nuclei ?Vasculitic infarcts .

Diagnosis of scrub typhus causing **parotitis** was made and he was started on doxycycline. Patient showed signs of clinical recovery and patient was discharged in stable condition .

CASE 2

A 50 year old female patient complaining of fever since 7 days associated with acute abdominal pain in epigastric region associated with vomiting since 5 days. Fever was intermittent , high grade associated with chills. Patient had acute onset abdominal pain in epigastric region which is radiating to back associated with 3-4 episodes of vomiting per day. On physical examination patient was febrile and had tachycardia. Systemic examination was unremarkable except tenderness in epigastric region. **Eschar** was found near right axillary region.

Laboratory investigations were showing high count with elevated serum amylase(420) and serum lipase 737 U/L levels . Renal parameters were in normal range. Liver function test showing total bilirubin 0.9 mg/dL ; AST 100 IU/L ; ALT 40 IU/L; ALP 416 U/L, serum albumin 2.6 g/dL serum Triglycerides 155 , serum calcium 9.5 mg/dL and patient antibodies are Non reactive to HIV, Hepatitis B & C viruses. Dengue serology was negative . **Scrub IgM antibody by immunoflorescent came as positive** , Weil felix showed significant titer of OX:K 1:320 for Scrub typhus fever. Diagnosis of scrub typhus causing **Acute Pancreatitis** was made.

Ultrasound of abdomen showing mildly bulky pancreas with mild ascites.

Patient was kept on NPO started on IV fluids and treated with Doxycycline and Tramadol . In couple of days patient became afebrile and was discharged in stable condition.

DISCUSSION

Scrub typhus is a mite-borne infectious disease caused by Orientia tsutsugamushi, which is distributed throughout Asia and northern portions of Australia. After an incubation period of 6-21 days the illness is manifested clinically by high fever, intense generalized headache, diffuse myalgias, malaise ,weakness and in many patients maculo papular rash and an eschar at the site of the chigger bite.[3] It can also cause painless lymphadenopathy. Rash fades by 14 th day. In severe infection, the patient is prostrate with cough, pneumonia ,encephalitis due to vascular injury. Cardiac failure , renal failure and hemorrhages may develop. The case –fatality rate for unreated classic cases is 7% but would probably be lower if all mild cases were diagnosed.

The diagnosis is suggested by the clinical history (including visit to an endemic area) and physical findings and confirmed by serologic testing or biopsy of an eschar. Serological assays include indirect fluorescent antibody , indirect immunoperoxidase, and enzyme immunoassays. PCR amplification of Orientia genes from eschars and blood also is effective.

Treatment includes **Doxycycline** 100mg bid orally for 7-15 days. Azithromycin has been advocated as an alternative agent in special circumstances (azithromycin 500 mg orally for 3 days) or Chloramphenicol 500 mg qid orally for 7-15 days.[4]

Scrub typhus may cause spontaneous abortions in pregnant women. **Azithromycin** is an alternative drug to treat scrub typhus, which has an acceptable safety profile in pregnant woman.

No vaccine is available to prevent the transmission of scrub typhus. Several studies have demonstrated that chemoprophylaxis with a long-acting tetracycline is highly effective when used by nonimmune individuals living or working in areas in which scrub typhus is endemic. The use of insect repellants and miticides are highly effective when applied to both clothing and skin. Permethrin and benzyl benzoate are also useful agents when applied to clothing and bedding.

CONCLUSION

It is very common to miss the diagnosis if scrub typhus presents in an unusual manner. So the treating doctor should keep in mind even the atypical presentations. The history and examination are very important in arriving at the diagnosis. Early diagnosis and treatment are important as it prevents serious complications.5 Protection from the disease causing mite by using insect repellants is a prophylactic measure.

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