

SCRUB TYPHUS PRESENTING WITH ACUTE ABDOMEN

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ABSTRACT

A 61-year-old male presented with a 1-day history of acute pain abdomen, fever and vomiting. Abdomen was firm with generalized tenderness, guard and rigidity. Abdomen X-ray showed gas under diaphragm. Patient was operated for DU perforation with omental patch closure. Post-operatively patient's fever persisted. IgM for scrub turned out positive. Fever subsided after treatment with Doxycycline. Scrub Typhus can present unusually with fever and severe abdominal pain mimicking acute abdomen. Therefore, scrub typhus should be included in the differential diagnosis of peritonitis in areas where *Orientia tsutsugamushi* is endemic.

KEYWORDS : Duodenal Ulcer (DU), Scrub typhus, Peritonitis.

INTRODUCTION

Scrub typhus is a mite-borne disease caused by *Orientia tsutsugamushi*, which is transmitted to humans through the bite of the larva of trombiculid mites, which presents as an acute febrile illness with headache, myalgia, breathlessness, and an eschar. However, this illness can present unusually with fever and severe abdominal pain mimicking acute abdomen. Over one-third of patients with scrub typhus present with gastrointestinal symptom.^{1,2} Scrub typhus is widespread in so-called "tsutsugamushi triangle" which extends from Pakistan, India, and Nepal in the West to South-eastern Siberia, Japan, China, and Korea in the North to Indonesia, the Philippines, Northern Australia, and the Pacific islands in the South.³ The WHO identifies scrub typhus as a re-emerging disease in Southeast Asia and Southwestern Pacific region with a case fatality rate of 30% if left untreated and affecting 1 million people annually.⁴

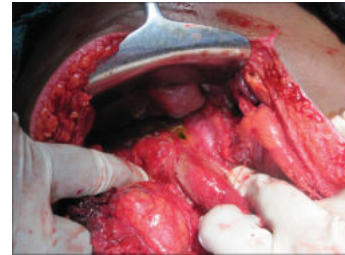
CASE REPORT

A 61-year-old male patient presented to us with complaints of pain involving the whole abdomen for 1 day. Pain was acute in onset, moderate to severe in intensity, generalized, non-radiating, continuous and progressive. He also had complaints of vomiting which were 3-4 episodes, non-bilious, foul smelling and contained food particles. There were no associated aggravating or relieving factors. There was no history of analgesic intake. He had no associated comorbidity. On per abdomen examination, patient was found to be having generalized tenderness all over the abdomen along with guarding, rigidity and rebound tenderness. Blood investigations were as follows: Hb -12.8g/dl, TLC - 11800 mcg/L, Urea-46 mg/dl, Creatinine - 1.4mg/dl, Na -130 mmol/L, K - 4.0 mmol/L. His chest X-ray revealed air under diaphragm. A diagnosis of acute generalized peritonitis was made and the patient was taken to the operation theatre for exploratory laparotomy and further management.

**Intraoperative findings:**

Midline laparotomy incision was given. About 500 ml of free fluid, mixed with pus flakes was present which was suctioned out carefully. Stomach was found to be distended and normal. A perforation of size 1 cm X 0.5 cm was present in the first part of duodenum. Rest of the gut loops were normal including the

appendix. All solid organs were found to be grossly normal. Thorough peritoneal toileting along with peritoneal drainage followed by omental patch closure of the perforation was done.

**Postoperatively:**

Patient's fever persisted. Blood, urine and drain cultures were found to be sterile. IgM for scrub was found to be positive. Patient was put on oral doxycycline. His fever subsided and was discharged on 13th post-operative day.

DISCUSSION

Approximately 22.7% of all patients with scrub typhus have gastrointestinal manifestations, which typically include associated abdominal pain/tenderness, indigestion, nausea, vomiting, hematemesis, melena, and diarrhea.⁶

Patients with scrub typhus who complained of gastrointestinal symptoms, exhibited diverse lesions in the stomach, including superficial mucosal hemorrhage, erosions, ulcers, and vascular bleeding.⁶ Upper gastrointestinal bleeding associated with scrub typhus was found in 10.3% patients, and active bleeding that requires treatment with endoscopic clipping was found in 3.4%.⁶ These complications result from vascular injury by vasculitis and perivasculitis in the capillaries or small arterioles.^{5,8} In the present case, peritonitis originated from a duodenal ulcer perforation that occurred in patient with scrub typhus. These lesions pathologically consisted of vasculitis and perivasculitis in the affected bowel wall in our patient. Other reported gastrointestinal manifestations include granulomatous hepatitis, acalculous cholecystitis, pancreatic abscess and hemoperitoneum.

This case indicates that scrub typhus should also be included in the differential diagnosis of peritonitis in areas where *Orientia tsutsugamushi* is endemic. Further studies are needed to understand the clinical characteristics of peritonitis with scrub typhus and determine the pathophysiology of peritonitis in a patient with scrub typhus.

CONCLUSION

This study indicates that scrub typhus should also be included in the differential diagnosis of peritonitis in areas where O.

tsutsugamushi is endemic. A careful search for an eschar should be a part of routine examination in any patient who presents with an acute febrile illness. Further studies are needed to understand the clinical characteristics of peritonitis with scrub typhus and to determine the pathophysiology of peritonitis in scrub typhus.

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