

Case Report

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**Typhoid Perforation of Gall Bladder in Pediatric Patient**Jatinder Singh¹, Daaman Mittal², Rishi Markanda³, S Arora⁴¹Associate Professor, ²MBBS Final Prof. Student, ³Senior Resident, ⁴Professor, Department of Pediatrics, Punjab Institute of Medical Sciences, Jalandhar, 144001**Abstract**

Surgical complication of typhoid fever is rare, however when it occurs usually involves gut rather than the gallbladder. The present case report is of biliary peritonitis following enteric fever perforation of the gall bladder in a 13 year old female patient, successfully treated by cholecystectomy and appropriate antimicrobial therapy.

Keywords: Biliary Peritonitis; Cholecystectomy; Typhoid Infection

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I**NTRODUCTION**
Gall bladder perforation is a potentially life-threatening condition. Spontaneous perforation is infrequent and rarely seen in the absence of gallstones but gall bladder perforation is an occasional complication of typhoid fever. If such perforations are not treated in time, mortality rates are very high.¹ Typhoid infection is common in poor and developing countries. Among the various complications of this condition, gallbladder perforation is uncommon and has high mortality if not managed promptly.² Spontaneous perforation in calculus cholecystitis is infrequent. In young patients, perforation is often associated with acute acalculous cholecystitis due to acute infections like pneumonia, viral influenza and enteric fever. Perforation in such cases is likely to be result of intense inflammation coupled with acute infection and existence of an immuno-compromised state leading to uncontrolled infection and thrombosis of the blood vessels.³ Here we report a case of biliary peritonitis due to enteric fever gallbladder perforation managed

successfully by cholecystectomy and antibiotic therapy.

CASE REPORT

A 13 year old female was admitted to our hospital complaining of severe abdominal pain, bilious vomiting and blood in stools since 2 days. She also had history of fever for the past 2 weeks. General examination revealed signs of shock with tachycardia, low volume pulse, and hypotension. Per abdomen examination revealed generalized abdominal distention with tenderness and guarding. Fluid resuscitation was given. Erect x-ray abdomen was done which was normal and ultrasound revealed ascites with echoes so CT abdomen was done which revealed fluid accumulation in the perihepatic, subphrenic, and both paracolic gutters; collapsed gallbladder with poor definition of its thickened wall with perforation. Laboratory reports documented a white blood cell count of 9,300 cu/mm with 70 % neutrophils. Liver function tests were within normal limits. The Widal test was positive for 'O' antigen in high titre (1:320).

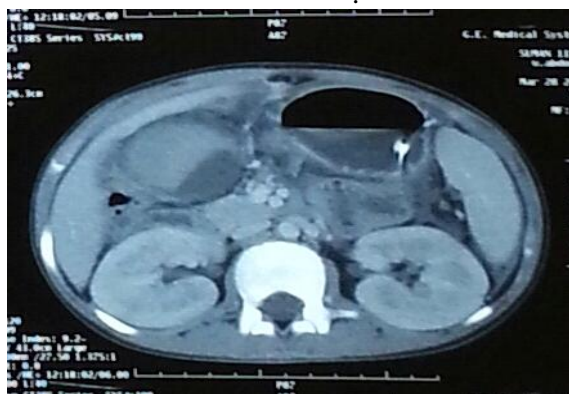


Figure 1: CT Abdomen

The patient was started on inj. ceftriaxone (75mg/kg/day). In view of signs of generalized peritonitis, laparotomy was planned. During surgery, 1.5-2 liters of bile stained peritoneal fluid was drained. Gall bladder was gangrenous with small perforation in its body with collection of blood within its fossa. Cholecystectomy was performed. The patient had an uneventful recovery and was discharged after 10 days of antibiotics.

DISCUSSION

Gallbladder perforation (GBP) is rare and as a complication of typhoid fever is extremely rare.⁴ It occurs in 2-11% of acute cholecystitis patients. Typhoid complicated by cholecystitis has a reported incidence of 2.8% with 1.7% being acalculous. Peritonitis due to gall bladder perforation is associated with high mortality rate of 39.1%.⁵ The chances of gall bladder perforation is more in cases of obstruction of the gallbladder, resulting in steep rise of intraluminal pressure as it happens in calculus disease of gallbladder. The intense inflammation coupled with infection with more virulent organisms and existence of an immuno compromised state leads to thrombosis of the blood vessels which predisposes to the setting of transmural necrosis which eventually leads to perforation.² Inflammation may progress and cause ischemia and necrosis, thus resulting gall bladder perforation in 2% to 11% of acute cholecystitis patients.⁶ In the present case, patient developed gallbladder perforation due to acute intense inflammation and decreased blood supply to gallbladder wall. Typhoid cholecystitis usually present in the first week of illness. Clinical features suggestive of gall bladder perforation are nonspecific. Paracentesis may reveal bile-stained ascitic fluid. Abdominal X-rays may not show pneumoperitoneum as seen in our patient, and

hence, they are not always helpful. Ultrasonography and computerized tomography may demonstrate abdominal fluid but lack specificity to diagnose gall bladder perforation, which can be easily detected on hepatobiliary scanning.⁷ In the present case, erect x-ray abdomen was done which was normal and ultrasound revealed ascites with echoes so CT abdomen was done which revealed fluid accumulation in the perihepatic, subphrenic, and both paracolic gutters; collapsed gallbladder with poor definition of its thickened wall with perforation. Ugwu BT et al⁸ order determined the pattern and the prognostic indices, among patients with typhoid intestinal perforation managed over a ten-year period and reported that the most significant prognostic factor is late presentation which prolongs perforation-surgery interval and the other complication and mortality indices are directly influenced by it. Due to the high mortality that can be caused by a delay in the correct diagnosis and following adequate surgical treatment, gallbladder perforation represents a special diagnostic and surgical challenge.⁹

CONCLUSION

Gall bladder perforation as a complication of enteric fever may be considered in the differential diagnosis of generalized peritonitis following enteric fever in endemic areas. Emergency laparotomy and cholecystectomy is the procedure of preference. Early surgical intervention with appropriate antibiotic are helpful for successful outcome of the patient.

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