Case Report

Gall bladder perforation: A rare complication of a common disease

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ABSTRACT

Perforation of the gall bladder is rare in acalculous cholecystitis, more so following infection with Salmonella typhi. This is a case report of a 55 year old lady who presented with fever for 3 weeks duration with sudden severe generalized pain abdomen associated with bilious vomiting for 2days. The patient was investigated and in view of signs of generalized peritonitis, exploratory laparotomy was done. Operative finding was gallbladder perforation and she underwent cholecystectomy. Post operative period was uneventful and the patient was discharged on 10th post operative day.

Key words: gallbladder, perforation, peritonitis, typhoid

INTRODUCTION

Gallbladder perforation (GBP) is a relatively rare complication that can occur in a number of situations but usually from acute cholecystitis which carries a relatively high mortality rate [1]. Acute cholecystitis and perforation of gall bladder are rare and dreaded complications of typhoid fever [2]. Surgical complications of typhoid more commonly involve the gut than the gallbladder and occur more frequently than with parathyroid fever [3]. This is a report of a case of billiary peritonitis due to gallbladder perforation as a complication of typhoid fever managed successfully by cholecystectomy and antibiotic therapy.

CASE REPORT

A 55 yrs old non-diabetic, hypertensive lady was admitted in our hospital complaining of pain in upper abdomen for last 2 days along with nausea & bilious vomiting for the same duration. Pain was acute in onset, aching and continuous in nature, gradually spread all over the abdomen and back, was aggravated by body movements and relieved partially on lying down in right lateral position. She had fever for last 3 weeks. She had no history of drug abuse, alcoholism, and jaundice and no history suggestive of cholangitis in the past.

On examination the patient had mild pallor, tachycardia, tachypnoea. Abdominal examination showed mild distension of abdomen with tenderness over right hypochondrium, right epigastrium and right lumbar region with overlying

Figure 1: An erect abdominal radiograph revealed multiple air-fluid levels

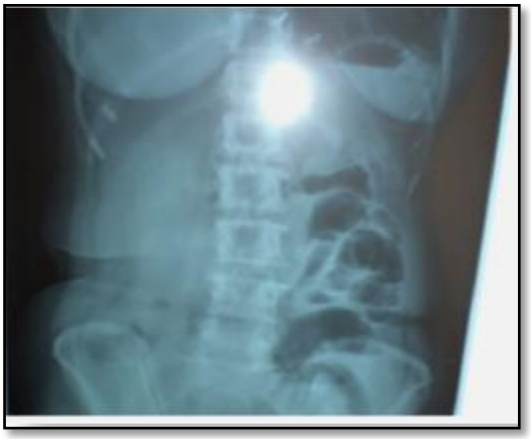


Figure 2: CECT scan of the abdomen showing ascitis, omental thickening, few adhered gut loops at lower abdomen

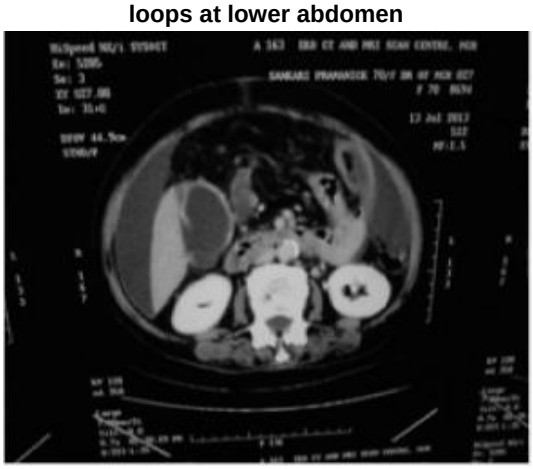
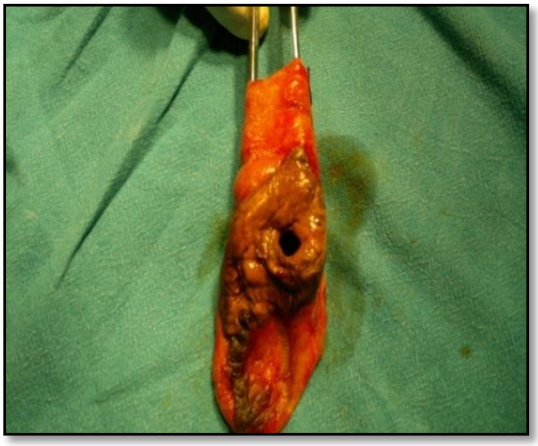


Figure 3: Perforated gall bladder removed after operation



muscle guarding. Leucocyte count was markedly raised (16,700/cu mm; neutrophil 86%), CRP 100 mg/L with normal renal and liver function tests. An erect abdominal radiograph revealed multiple air-fluid levels (Figure 1). A contrast enhanced computerized tomography scan of the abdomen (Figure 2) suggested ascitis, omental thickening, right pleural effusion, few adhered gut loops at lower abdomen. There was no calculus either in the gall bladder or in the common bile duct. Exploratory laparotomy was done and there was 2.5 litres of bilious peritoneal collection. Full evaluation of the gut and other viscera was done to find out the site of perforation. GB perforation was revealed (Figure 3) and cholecystectomy was performed. Abdomen was closed with drain after peritoneal lavage. Post operative period was uneventful except mild serous discharge from wound. Oral feed was given from 2nd post operative day. Drain was removed on 6th post operative day. Intravenous antibiotic (third generation cephalosporin) was given for 7 days followed by oral cephalosporin for another 7 days. Widal test was available which was strongly positive for S. typhi O (1:160) and H (1:320). But blood and bile couldn't grow any organism in culture.

Histopathology of the gall bladder revealed focal ulceration with areas of hemorrhagic necrosis along with acute inflammatory infiltration. Patient was discharged on 10th post operative day.

DISCUSSION

Only 5-10% of the patients with acute cholecystitis are associated with acalculous cholecystitis with mortality rate ranging from 6% -67 % [4]. GBP occurs in 2-11% of acute cholecystitis patients [5, 6]. Typhoid complicated by cholecystitis has a reported incidence of 2.8% with 1.7% being acalculous [7]. Peritonitis due to gall bladder perforation is associated with high mortality rate of 39.1% [8].

Perforations of the gallbladder usually occurs in the presence of gall-stone disease, gallbladder malignancies, risk factors e.g. atherosclerosis, diabetes mellitus, congenital anomalies of the biliary system, gallbladder infections, and pancreatitis [5]. Non-obstructive cholecystitis is unlikely to result in a perforation. Intense inflammation coupled with infection with more virulent organism and existence of an immunocompromised state like patients with organ transplantation lead to thrombosis of the blood vessels. This in turn causes transmural necrosis and perforation [9]. Niemeier (1934) classified gallbladder perforations: generalized peritonitis as acute or type I; pericholecystic abscess and localized peritonitis as subacute or type II and cholecystoenteric fistula as chronic or type III [10]. Fundus, followed by the body, is the most distal part with regards to blood supply and therefore this makes it the most common site for perforation [4][11].

CONCLUSION

Due to high mortality, timely diagnosis and management of perforated gall bladder is highly crucial. The diagnosis of gallbladder perforation requires high index of suspicion, often it is a peroperative diagnosis. Limited success of ultrasonography & CT in detecting GB perforation (GBP) and poor guidance of clinical features requires a strong clinical suspicion about GB perforation. Early surgical intervention decreases the mortality with good outcome.

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