Scholars Journal of Applied Medical Sciences (SJAMS) ISSN: 2347-954X (P) & 2320-6691(O)
Sch. J. App. Med. Sci., 2013; 1(5):376-377

(An International Publisher for Academic and Scientific Resources)
www.saspublishers.com DOI: 10.36347/sjams.2013.v01i05.004

Case Report

Billiary Peritonitis due to Enteric Fever Gallbladder Perforation: A Case Report and Review of Literature

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Abstract: Billiary peritonitis following gall bladder perforation due to enteric fever is very rare and usually follows fatal surgical complication. The present case report is of billiary peritonitis following enteric fever perforation of the gall bladder in a young female patient, successfully treated by cholecystectomy and appropriate antimicrobial therapy.
Keywords: Enteric fever, Gall bladder perforation, Billiary peritonitis.

INTRODUCTION

Surgical complications of enteric fever usually involve gut but infrequently it also involves gallbladder. Complications range from acalculous cholicystites to perforation. Here we report a case of billiary peritonitis due to enteric fever gallbladder perforation managed successfully by cholecystectomy and antibiotic therapy.

METHODS

Information on the management of a patient with gall bladder perforation following enteric fever in Shimoga Institute of Medical Sciences and Mc Gann hospital, Shimoga in August 2011 was extracted for publication.

CASE REPORT

A 16 year old female was admitted our hospital complaining of severe abdominal pain and vomiting. She had also a history of recurrent attack of fever for the past 3 weeks. Examination revealed generalized abdominal tenderness and muscle garding, tachycardia and shock. After initial resuscitation erect x-ray abdomen revealed no air under diaphragm. A provisional diagnosis of enteric small bowel perforation was made and patient was explored by right paramedian incision. The peritoneal cavity was found to be flooded with bile stained pus fluid. Thorough search for the intestinal perforation was found to be normal. During evaluation of other hallow viscus, gall bladder was found to be perforated at the neck with surrounding area of necrosis. There was no calculus either in the gall bladder or in the common bile duct. Cystic duct and artery were ligated separately and cholecystectomy performed. Abdomen was closed with drain after peritoneal lavage. Bile culture revealed salmonella typhi organism. Postoperative recovery was uneventful with third generation cephalosporin antibiotic which was found to be sensitive. Widal test showed salmonella typhi H titer 1:180 which was highly significant. Histopathology of the gall bladder revealed perforated ulcer with areas of congestion and hemorrhagic necrotic epithelium along with severe degree of acute inflammatory infiltration and micro abscess.

DISCUSSION

Perforation of the gall bladder was first reported in 150 years ago by J. Duncan, a surgeon at the Royal Infirmary, Edinburgh [1]. Science then numerous cases of gall bladder perforation due to calculous cholecystites has been reported. It accounts for approximately 3% of all patients undergoing cholecystectomy for gall stones [2]. However perforation of the gall bladder in absence of stone is very rare, more so following infection with salmonalle typhi.

Acute cholecystitis is often misdiagnosed with acute appendicitis. Both the appendix and the gall bladder are hallow viscus and are liable to perforate if their intraluminal pressure becomes sufficiently high. Such a condition occurs due to obstruction by stone in the gall bladder and by fecolith in the appendix. Localization by adhesion of intestinal loops and omentum leads to localized perforation with abscess formation [3]. The infrequency of gall bladder perforation appears to be due to thickened wall of the organ following chronic cholecystites. Nonobstructive cholecystitis is unlikely to result in a perforation. Intense inflammation coupled with infection with more virulent organism and existence of an immunocompromised state like in

patients with organ transplantation lead to thrombosis of the blood vessels. This in turn causes transmural necrosis and perforation [4].

Ultrasonography is useful in 70% of cases in diagnosing gall bladder perforation and detecting defect in gall bladder wall and hence it can be used in as first line imaging modality for evaluating such a case [5].

Neimeier categorized gall bladder perforation in to 3 grades. Grade 1 (Acute): Acute free perforation. Rare event, occurring in less than 1% of acute cholecystitis and approximately 10% of patients with gall bladder perforations. Grade 2 (Subacute): Pericholecystic abscess formation. It is the most common variant of gall bladder perforation. Grade 3 (Chronic): Billiary fistula. Most commonly fistula forms between the gall bladder and duodenum (cholecysto-duodenal fistula) [2, 6]. Our case fell in to grade 1. The overall mortality in this group is 55%. Reason for higher mortality in such perforation is that acute noncalculous cholesystitis is often associated with other acute infection like pneumonia, viral influenza, enteric fever etc [7].

Fig.: Perforated gall bladder at neck. Above portion of gall bladder is cut for grossing

CONCLUSION

Gall bladder perforation secondary to 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 choice. Early surgical intervention with appropriate antibiotic are helpful for successful out come of the patient.

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