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Case report

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Case series report: 3 Cases of gallbladder perforation of three different types

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ABSTRACT

Gallbladder perforation (GBP) is a rare clinical entity but life threatening condition with high morbidity and mortality rates because of delay in diagnosis. Thus GBP still remains a big challenge for the surgeons. Most cases can only be diagnosed during surgery. Niemeier in 1934, classified gallbladder perforation on the basis of his observation. In spite of many modifications this classification is still in use. GBP was classified as acute or type I for free perforation and generalized biliary peritonitis, sub acute or type II for pericholecystic abscess and localized peritonitis, and chronic or type III for cholecystenteric fistula. Here we are presenting a case series of 3 cases of gallbladder perforation of three different types as mentioned above. Common clinical symptoms in these patients were abdominal pain mainly in upper quadrant, tenderness, lump in Rt. Hypochondrium, and peritonitis. Surgical management and some specific presentation varied according to type of gallbladder perforation. All the patients were treated surgically.

Keywords: Acute cholecystitis, Gall bladder perforation (GBP), pericholecystic abscess, cholecystenteric fistula, biliary peritonitis.

INTRODUCTION

Gallbladder perforation (GBP) is a rare but life threatening condition. Sometimes GBP may present as uncomplicated acute cholecystitis with high morbidity and mortality rates. Niemeier(1) concluded that this rare condition 'demands eternal vigilance. Various factors have been identified as risk factors that contribute to the development of perforation (2,3,4) in acute cholecystitis. In patients with acute cholecystitis.

Advanced age, male sex, associated chronic diseases, fever $>38^{\circ}\text{C}$, and marked leukocytosis should give immediate attention towards complications. However, there are many studies in the literature that investigate predisposing factors in patients with acute cholecystitis that contribute to the development of perforation. Niemeier(1) in 1934, classified gallbladder perforation on the basis of his observation. This classification is still in use.

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| Type –I (Acute) | Free Gallbladder perforation with generalized biliary peritoniti: |
| Type –II (Sub acute) | Gallbladder perforation with pericholecystic abscess with local biliary peritonitis |
| Type-III (Chronic) | Gallbladder perforation with cholecystenteric fistula |

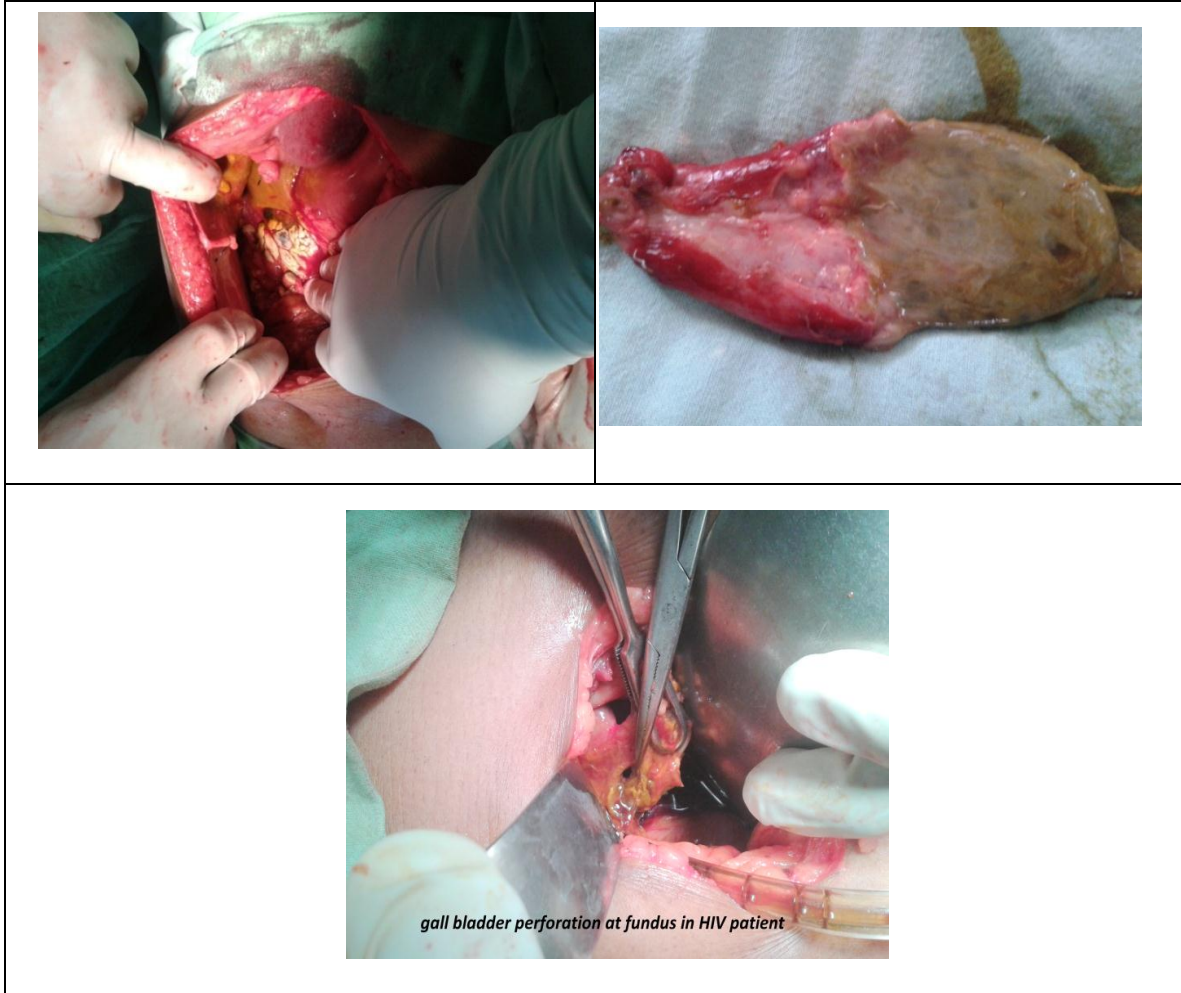
CASE REPORT

Case-1 A 65 yr. old female patient presented with sudden pain abdomen along with vomiting from 5 days. Patient was known case of DM and hypertension taking irregular treatment. On clinical examination pt. had rigidity and diffuse lump in Rt. Hypochondrium . Lab investigation revealed Hb- 7.8 TLC-12200, blood sugar level-163, HB₁Ac- 9.5, S.AlkPo₄-525, electrolyte imbalance K⁺- 2.9 rest lab investigations were in normal limit. Ultrasound revealed hepatomegaly with distended gallbladder and pericholecystic collection S/O acalculus cholecystitis. First anemia and electrolyte imbalance were corrected then after pt. was operated with std. kochar’s incision. A acalculus gangrenous gallbladder which was perforated from fundal region found with pericholecystic collection, cholecystectomy done with peritoneal cavity washing . That patient was expired after 12 hrs. of surgery.

Case-2 A 70 years female housewife presented with pain in Rt. Upper quadrant of abdomen with a ill-defined swelling in the same region with high grade fever and anorexia from 7 days. Examination revealed tender lump in Rt. Hypochondrium. Lab. Investigation were showing – TLC- 11500, RFT,LFT were within normal limits and reactive HIV TEST with CD-4 count -564. Ultra sound of this patient showing changes of acute cholecystitis with pericholecystic collection. CECT abdomen revealed distended GB showing edematous wall thickening with pericholecystic collection and a small perforation at fundus communicating with large perihepatic subcapsular collection with max. thickness of 34 mm S/O hepatobiliomo, nodular

peritoneal thikhening with omental fat stranding predominantly in Rt. Parcolic gutter S/O biliary peritonitis change and mild ascitis. Pt was posted for surgery after control of blood pressure as Pt. was hypertensive in preoperative period. Abdomen was opened by std. cholecystectomy incision 1x1cm perforation found on fundus of GB, cholecystectomy done , Rt. paracolic gutter washed with normal saline. post operative period was uneventful . Pt. was discharged after 10 days . Histopathology report of GB was chronic non specific cholecystitis; follow-up period was uneventful.

Case-3 A 50 yr. old female patient presented with pain abdomen in Rt upper abdomen since 10 days . Pt was known case of diabetes mellitus taking OHA. On examination Pt had rigidity and guarding over Rt. Hypochondrium with early lump formation . Lab investigation revealed TLC 16500, blood sugar- 385, Hb₁Ac-9.1, S.AlkPo₄-405 rest lab investigation were normal. Ultrasound of this patient reveled cholelithiasis with pericholecystic edema. Patient was operated as a case of acute cholecystitis with std. kochar’s incision and found a inflamed thickened gall bladder adherent to hepatic flexor of colon. On adhesinolysis a cholecystenteric fistula found with surrounding omental thickening . Gall bladder was perforated at fundal region. In this patient cholecystectomy done with primary repair of colonic fistula. Post operative period was uneventful, biopsy report reveled nonspecific cholecystitis with cholelithiasis and patient was discharged after 10 day.



DISCUSSION

Sometimes GBP may not be different from uncomplicated acute cholecystitis with high morbidity and mortality rates because of delay in diagnosis. Most cases can only be diagnosed during surgery, as in my series two patient diagnosed intraoperatively (2,5). Inflammation may progress and cause ischemia and necrosis, thus resulting GBP in 2% to 11% of acute cholecystitis patients [6,7]. GBP also develops following acalculous cholecystitis, although rare[8,9], 2 were acalculus cholecystitis . GB fundus, the most distal part with regard to blood supply, is the most common site of perforation[7] all 3 pts. were perforated from fundus. Hayrullah Derici, et al[10] studied records of 332 patients with the diagnosis of acute cholecystitis retrospectively. Sixteen (4.8%) of

those patients had gallbladder perforation. Seven patients had type I gallbladder perforation, 7 type II gallbladder perforation, and 2 type III gallbladder perforation. Stefanidis D[11], found in his study of 11,360 patients who underwent cholecystectomy 30 were diagnosed with gallbladder perforation. The perforation was contained in 9 and free in 21 patients. The diagnosis of gallbladder perforation was made preoperatively only in 3% of patients. C L Ong, T H Wong, A Rauff[12] reported six patients with gall bladder perforation with mean age of 47yr. to show the difficulty of making an early diagnosis. 5 cases were of type II and one case was of type I. USG was used in 3 patients, which was s/o Ac. cholecystitis in 2 patients. and empyema in one patient.

CONCLUSION

In conclusion, early diagnosis of gallbladder perforation upper abdominal CT for acute cholecystitis in which and immediate surgical intervention are of crucial pericholecystic fluid is found by USG may increase the importance (13). Although standard abdominal CT has rate of preoperative diagnosis of gallbladder perforation an important role in diagnosing gallbladder perforation, (14,15).

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