



## Perforation of Gallbladder – A Rare Complication of Acute Calculous Cholecystitis : A Case Report

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## ABSTRACT

Gallbladder perforation (GBP) is a serious complication of acute cholecystitis. It was first classified by Niemeier in 1934 since then various modifications have been made in the treatment of gallbladder perforation. It occurs in up to 10% of patients with acute cholecystitis[1], but GBP in the absence of acute cholecystitis is rare. Non traumatic perforation results from ischemia and gangrene of the gallbladder wall and occurs most commonly in the fundus in cases of acute cholecystitis (with or without stones). Such perforations are usually contained within the subhepatic space by the omentum, duodenum, liver, or colon, and a localized abscess may form. Less commonly, the gallbladder perforates into an adjacent viscus, resulting in an enteric fistula and possible gallstone ileus. We are presenting a case of 52 year old male patient with complaints of pain in the right hypochondrium and epigastrium for 2 days which on ultrasonography was diagnosed as GBP .The patient was operated and there was a GBP in fundus and a single stone impacted in hartmann's pouch. Cholecystectomy with peritoneal lavage was done. On follow up patient was asymptomatic after 6 months.

## KEYWORDS

Gallbladder perforation, cholecystitis, hartmann's pouch, Neimeier

## Introduction

Gallbladder perforation is a rare but life-threatening complication of acute cholecystitis. In 1934, Niemeier classified the condition into three types: type I, acute perforation into the free peritoneal cavity; type II, subacute perforation with abscess formation; and type III, chronic perforation with fistula formation between the gallbladder and another viscus[2].

In this study we will discuss the diagnostic as well as therapeutic aspects of gall bladder perforation.

## Case Report

A 52 year old man had complaints of pain abdomen for 2 day. He had a history of recurrent pain in right hypochondrium for last two months which used to relieve on analgesics but in this episode pain was severe and didn't relieve on analgesics. On examination there was tenderness in right hypochondrium and right lumbar region. On investigations WBC count was 18000cells/mm<sup>3</sup> and raised serum bilirubin both direct and indirect, SGOT, SGPT and serum alkaline phosphatase. Abdominal X ray didn't reveal anything. Abdominal ultrasound showed pericholecystic collection having same echogenicity as content inside gallbladder lumen with a stone of size 8mm impacted at the neck of gallbladder. So with a provisional diagnosis of gallbladder perforation, the patient was operated. On exploration, omentum was densely adhered to the inferior surface of liver. After adhesiolysis, pus collection of around 50cc was seen which was coming out from the gall bladder lumen through a perforation at the fundus. On palpation, a single stone was present at the neck of gall bladder. Cholecystectomy with peritoneal lavage was done with a drain placement in the subhepatic space. Drain was taken out on 3<sup>rd</sup> postoperative day and after resuming oral feeds, patient was discharged on 8<sup>th</sup> postoperative day. Histopathology revealed acute cholecystitis. Patient was asymptomatic on follow up after 6 months.

## Discussion

Perforation of the gallbladder is a rare but severe complication of acute calculous cholecystitis, like empyema, gallstone ileus, cholecystoenteric fistula and emphysematous cholecystitis [3]. Perforation of the gallbladder can occur as early as 24 h after the onset of acute cholecystitis, or after a few days to

weeks [4]. According to different studies, an incidence rate of 3.3–5.9% is reported of acute and chronic perforations[3,5]. Our patient had a Type 2 perforation according to Neimeier classification, combined with an acute cholecystitis, given the acute onset and the evident localised peritonitis. The perforation was probably caused by the obstructing gallstone at the neck leading to mucocele of gallbladder which later got infected leading to empyema and ultimately perforation.

CT scans are needed in case of discrepancies between clinical symptoms and sonographic findings suggestive of GBP.

## Conclusion

The diagnosis of an acute perforation in cholecystitis and immediate surgical intervention are very important in decreasing morbidity and mortality associated with this condition [6]. Despite being rare, it should be considered in patients with acute abdominal pain.

## References

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