

Spontaneous Perforation of Acalculous Gallbladder: A Case Report

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Abstract Main cause of gallbladder perforation is cholecystitis with or without stones. In old age, spontaneous perforation of gallbladder can be due to decreased blood supply which can be as the result of atherosclerosis, focal vasospasm or localized vasculitis. Perforation is associated with high morbidity and mortality if left untreated. Here, we report a rare case of idiopathic and spontaneous perforation of gallbladder in a 77 years old lady.

Keywords Spontaneous · Perforation · Gall bladder · Acalculous

Main Cause of Gallbladder Perforation is Cholecystitis with or Without Stones

In old age, spontaneous perforation of gallbladder can be due to decreased blood supply, which can be as the result of atherosclerosis, focal vasospasm, or localized vasculitis. Perforation is associated with high morbidity and mortality

if left untreated. Here, we report a rare case of idiopathic and spontaneous perforation of gallbladder in a 77-year-old lady.

A 77-year-old female presented with sudden pain in upper abdomen for the last 12 h. Pain was more in epigastrium along with nausea and occasional vomiting. There was no history of other medical co-morbidity. Vitals were within normal limit. On examination, abdomen was distended and tender in upper half with guarding. Provisional diagnosis of duodenal perforation was made. Routine investigations were within normal limit. Total leucocytes count was 10,500/cmm. X-Ray standing did not show any free air under the right dome of diaphragm. Ultrasound showed pericholecystic fluid collection along with collection of fluid in upper abdomen with minimal pleural effusion on right side. There was no calculus in gallbladder with normal wall thickness. Suspicious rent was seen in fundus of gallbladder. Common bile duct was normal. Contrast enhanced computed tomography (CECT) revealed large collection of fluid in the sub diaphragmatic region, gallbladder fossa, and perihepatic spaces. The collection was communicating with a rent in the fundus of gallbladder (Fig. 1). Gall bladder was not distended and wall thickness was normal. No focal lesion was seen in liver. Pancreas were normal and no enlarged lymph nodes were found anywhere. Both kidneys were normal.

Exploratory laparotomy was done. Abdomen was full of bile stained fluid. There was a rent in the fundal area of gallbladder. Cholecystectomy was performed along with peritoneal lavage. Post-operative period was uneventful except superficial wound infection.

Idiopathic and spontaneous perforation of acalculous gallbladder is very rare [1, 2]. Mostly, gallbladder perforation is due to inflammation, trauma, or obstruction [3]. Perforation of gallbladder can be classified into three

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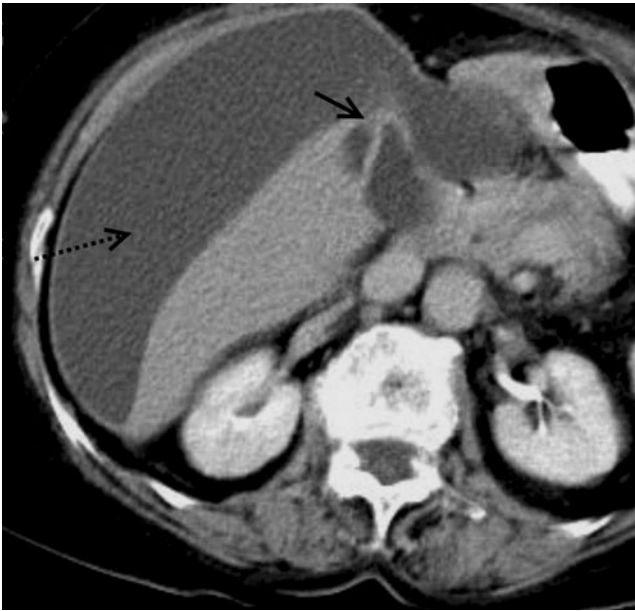


Fig. 1 CECT scan is showing rent in the fundus of gall bladder (*solid arrow*) communicating with the pericholecystic and perihepatic collection (*dotted arrow*)

groups: [1] Spontaneous, [2] Traumatic, and [3] iatrogenic. The spontaneous group is further sub-divided into an idiopathic group and a secondary group, which includes acute inflammation, infection, lithiasis, congenital obstruction, and anticoagulant therapy, etc. [2]. Causes of gallbladder perforation in acute cholecystitis are: [1] Bile stasis due to cystic duct obstruction, fasting, dehydration, and total parenteral nutrition, which leads to a change in the bile content and concentration; [2] Vascular impairment of the gallbladder wall due to distention of the viscous, underlying systemic illness, such as sepsis, shock, atherosclerosis; and [3] Ischemic necrosis. As gallbladder perforation occurs most commonly at fundus due to least blood supply, this proves the importance of ischemic mechanism. Conditions such as cholelithiasis, infections, malignancy, steroid therapy, diabetes mellitus, and atherosclerosis are all predisposing factors for gallbladder perforation. However,

idiopathic spontaneous perforation of normal gallbladder is mysterious [3, 4].

Clinical diagnosis of idiopathic spontaneous gallbladder perforation is very difficult. Different modalities have been used to diagnose gallbladder perforation including ultrasound, computed tomography (CT), peritoneal lavage, retrograde cholangiography, hepatobiliary imaging, and diamethyl iminodiacetic acid (HIDA) scan [5]. Confirmatory diagnosis is only after laparotomy and by seeing bile coloured peritoneal collection and perforated gallbladder.

In conclusion, to decrease the morbidity and mortality associated with gallbladder perforation, early diagnosis and surgical intervention are of prime importance. Such cases should always be properly investigated keeping in mind the serious complications. Gallbladder perforation should always be considered in differential diagnosis in elderly patients presenting with peritonitis with an unknown etiology.

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