

Gallstone ileus in geriatric patients: a report of two cases

CASE REPORT

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ABSTRACT

Gallstone ileus is a mechanical obstruction of the small intestine caused by gallstone impaction. It accounts for 1% to 4% of all cases of mechanical obstruction. Previous acute cholecystitis results in development of a fistula between the gallbladder and the gastrointestinal tract. Diagnosing gallstone ileus is difficult as symptoms and signs are non-specific and most patients are elderly with multiple comorbidities. We report two cases of gallstone ileus in elderly patients. The first case is a 72-year-old man with multiple comorbidities who presented with vomiting, intermittent colicky right-sided abdominal pain, and inability to pass motion. He underwent enterolithotomy alone. The second case is a 73-year-old woman who presented with abdominal pain, distension, fever, and a fistulous communication between the gallbladder and the duodenum. She underwent enterolithotomy, partial cholecystectomy, and closure of the fistula.

Key words: Gallstone; Ileus

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INTRODUCTION

Gallstone ileus is a rare complication of cholelithiasis and accounts for 25% of non-strangulated small intestinal obstruction.¹ It is a surgical emergency in elderly patients who usually present with non-specific symptoms such as abdominal pain, distension, nausea, and vomiting.^{2,3} Bilio-enteric fistula is caused by recurrent inflammation secondary to cholelithiasis, with cholecystoduodenal fistula more common than cholecystocolonic fistula (89% vs 11%).^{3,4} Most patients are older women with multiple comorbidities, and the mortality is high (10% to 18%).^{1,5} Radiography, ultrasonography, and computed tomography of the abdomen are important tools for diagnosis. Surgical options remain controversial in terms of whether to perform a single-stage or two-stage procedure for enterolithotomy, stone removal with cholecystectomy, and repair of fistula. Enterolithotomy alone is a suitable option for patients who are unstable and have multiple comorbidities.

CASE REPORTS

Patient 1

In June 2015, a 72-year-old man with hypertension, beta thalassaemia, and end-stage renal failure presented with vomiting (>10 times a day for 3 days), intermittent colicky right-sided abdominal pain, and inability to pass motion. On examination, he was mildly dehydrated with a soft non-distended abdomen and no palpable mass. His electrolyte levels were deranged and creatinine level was elevated and required dialysis. Radiography of the abdomen showed a dilated small bowel. Computed tomography of the abdomen revealed the presence of pneumobilia within the common bile duct and intrahepatic duct, and a fistula between the gallbladder and a large calculus within the small bowel at the jejunoileal junction (**FIGURE 1**). Emergency laparotomy and enterolithotomy were performed, and a stone (2x2 cm) was removed 20 cm from the ileocecal junction. Postoperatively, the patient recovered well.

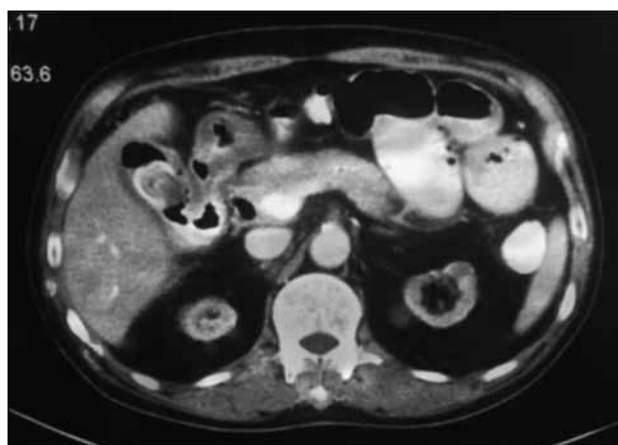


FIGURE 1. Patient 1: a computed tomographic scan showing pneumobilia.



FIGURE 2. Patient 2: enterolithotomy and the gallstone.

Patient 2

In December 2014, a 73-year-old woman with hypertension presented with a 1-month history of abdominal pain. She reported vomiting, abdominal distension, and low-grade fever 2 days prior to admission. On examination, her abdomen was distended and tender at the right hypochondrium. Ultrasonography of the abdomen revealed multiple gallstones and mild thickening of the gallbladder wall. Computed tomography showed pneumobilia and gallstones at the proximal ileum. Intraoperatively, adhesions were noted between the gallbladder and the duodenum in the region of the fistula. Enterolithotomy, partial cholecystectomy, and closure of the fistula were performed (**FIGURE 2**). Postoperatively, the patient recovered well and was discharged on day 4.

DISCUSSION

Cholelithiasis affects 10% to 20% of adults in a western population,³ and is easily diagnosed by ultrasonography of the abdomen. It may cause gallstone ileus and result in severe morbidity and mortality. Gallstone ileus is often seen in geriatric patients with multiple comorbidities. Biliary symptoms preceding the presentation is rare, and only 50% of patients with gallstone ileus have a history of biliary disease.⁶ In a case series, abdominal pain and vomiting were common symptoms in all patients except one.⁷

Gallstone ileus has a mortality as high as 18% and a morbidity of 37.5%.^{1,3} Radiography, ultrasonography, and computed tomography are important tools for diagnosis; features include dilated bowel loops, calcific shadow in the bowel loops, presence of gallstones, and pneumobilia.⁵ Treatment options include a one-stage procedure that involves enterolithotomy (to remove the obstruction), cholecystectomy, and repair of the fistula; or a two-stage procedure that involves enterolithotomy (to remove the obstruction), followed by cholecystectomy and repair of the fistula at a later date.^{1,3,4,7} The optimal choice depends on the patient's general condition and American Society of Anesthesiologists (ASA) score. Enterolithotomy alone is suitable for patients with an ASA score of 4 who are haemodynamically unstable. The risk of developing acute cholecystitis, recurrent gallstone ileus or cholangitis following enterolithotomy alone is 5% to 17%.^{1,7} Management with lithotripsy has been performed in a small number of patients.⁸ A delay in diagnosis increases morbidity and mortality; timely intervention is important in the care of elderly patients.

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DECLARATION

The authors have no conflicts of interest to disclose.

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