



Gallstone Ileus with Atypical Clinical Presentation: A Case Report

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ABSTRACT

Introduction: Gallstone ileus is a rare complication of cholelithiasis, described as a mechanical intestinal obstruction due to the impaction of one or more large gallstones within the gastrointestinal tract. It is caused by the passage of a gallstone from the bile ducts into the intestinal lumen through a fistula. The most frequent type of fistula is located between the gallbladder and the duodenum. **Clinical Case:**

A 60-year-old male was admitted with a diagnosis of DM 2 / hypovolemic shock / upper gastrointestinal bleeding. Began 24 h before admission, presented asthenia, adynamia, hyporexia, tolerating only a liquid diet, 3 vomits of gastric contents and one melanic evacuation. level of care for surveillance and diagnostic protocol, upon admission to this hospital he presented vomiting in coffee grounds and hypotension that responded to intravenous fluids. An exploratory laparotomy was performed, finding: obstruction of the small intestine by a gallstone of approximately 7 cm in diameter at 170 cm from the angle of Treitz, reactive appendicitis, and abundant inflammatory reaction fluid; Enterolithotomy + primary closure was performed with the Heineke-Mikulicz technique and a Penrose drain was placed into the pelvic cavity. Discussion: Intestinal obstruction caused by gallstones is rare, this event occurs more frequently in the elderly. The clinical picture is often diffuse and requires a high index of suspicion. Conventional radiography can be of great help for its diagnosis, but also Abdominal Ultrasound and Computerized Axial Tomography. Surgical treatment can range from enterotomy and lithotomy, which is the simplest, to enterotomy with lithotomy plus cholecystectomy, and fistula treatment, which is a complex procedure.

Keywords: Intestinal obstruction, Gallstone ileus, íleo biliary, cholelithiasis.

INTRODUCTION

Gallstone ileus is a rare complication of cholelithiasis, described as a mechanical intestinal obstruction due to the impaction of one or more large gallstones within the gastrointestinal tract. It is caused by the passage of a gallstone from the bile ducts into the intestinal lumen through a fistula. The most frequent type of fistula is located between the gallbladder and the duodenum. Once the gallstone is in the intestinal lumen, it can obstruct any part of the gastrointestinal tract, but the most common location is the distal ileus. The mortality rate associated with gallstone ileus ranges from 12 to 27%, and the morbidity rate reaches 50%, due to the older age of the patients, associated pathologies (usually severe), late hospital admission, and delayed treatment. BI represents 0.3-0.5% of the complications of gallbladder disease, indicating 30-35 cases per million hospitalizations. It is more prevalent in women, with a female-to-male ratio of 4:1, and patients are usually older than 65 years of age [1].

Gallstone ileus does not present with unique symptoms, making diagnosis difficult. It has a high mortality (12 to 27%) due to associated comorbidities and diagnostic delays. Gallstone ileus is a difficult clinical entity to diagnose and therefore requires a high index of suspicion. Gallstone ileus treatment aims to release the obstruction, which is done through enterolithotomy. It is the recommended technique for gallstone ileus management because of its lower morbidity and mortality, compared with the other techniques [2].

Gallstone ileus is an infrequent cause of mechanical bowel obstruction, it is an unusual complication of cholelithiasis, occurring in less than 0.5% of patients who present with mechanical small bowel obstruction, affecting older adult patients. It is caused by the impaction of a gallstone in the ileum after being passed through a biliary-enteric fistula [3].

CLINICAL CASE.

A 60-year-old male was admitted with a diagnosis of DM 2 / hypovolemic shock / upper gastrointestinal bleeding. Background: not relevant to the current condition. Current condition: began 24 h before admission, presented asthenia, adynamia, hyporexia, tolerating only a liquid diet, 3 vomits of gastric contents and one melanic evacuation. level of care for surveillance and diagnostic protocol, upon admission to this hospital he presented vomiting in coffee grounds and hypotension that responded to intravenous fluids, with laboratories in which he stands out: leukocytosis $35,000 \times 10^9/L$ at the expense of neutrophilia 78%, hypokalemia 3.0 mEq/L, glycemia 547 mg/mL, rest normal.

As part of the diagnostic approach, a panendoscopy was performed, which reported mild hyperemic gastritis and a giant Forrest III ulcerated diverticulum at the level of the duodenal knee (Fig. 1).



Figure 1. Panendoscopy images show a giant ulcerated diverticulum at the level of the duodenal knee.

After correcting the fluid and electrolyte imbalance, the patient persisted with no bowel movements and abdominal distension, he was channeling gases, a digital rectal examination was performed, finding an empty rectal ampulla, a simple abdominal X-ray was requested, observing significant dilation of the small bowel loops, an image of a stack of coins, and air-fluid levels. Therefore, it is complemented with simple and contrasted tomography of the abdomen in which an image compatible with gallstone ileus is observed, with stone impacted at the jejunum level, with abundant free fluid in the cavity (fig. 2).

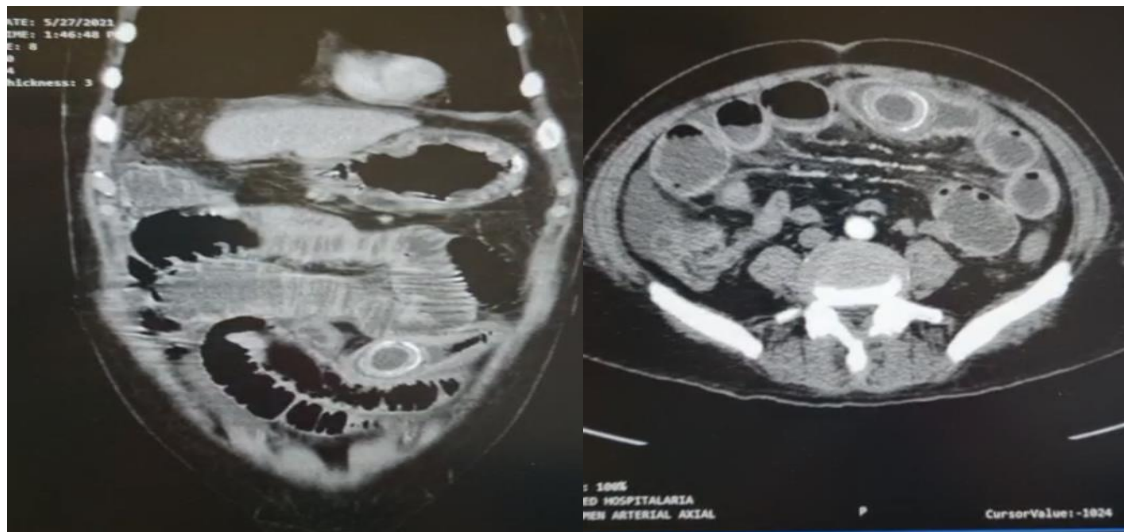


Figure 2. Tomographic images showing impacted foreign body stones at the jejunal level, about gallstone ileus.

An exploratory laparotomy was performed, finding: obstruction of the small intestine by a gallstone of approximately 7 cm in diameter at 170 cm from the angle of Treitz, reactive appendicitis, and abundant inflammatory reaction fluid; Enterolithotomy + primary closure was performed with the Heineke-Mikulicz technique and a Penrose drain was placed into the pelvic cavity (Fig. 3).



Figure 3. Intraoperative images, where enterotomy and stone extraction of approximately 7 cm in diameter are observed impacted in the jejunal loop.

During his stay on the general surgery service, the patient had an adequate post-surgical evolution, tolerated the oral route, presented normal bowel movements, and was discharged due to improvement with follow-up via outpatient clinic, where he was definitively discharged from the service 6 months after do not accept open cholecystectomy.

DISCUSSION

Intestinal obstruction caused by gallstones is rare, this event occurs more frequently in the elderly. The clinical picture is often diffuse and requires a high index of suspicion. Conventional radiography can be of great help for its diagnosis, but also Abdominal Ultrasound and Computerized Axial Tomography. Surgical treatment can range from enterotomy and lithotomy, which is the simplest, to enterotomy with lithotomy plus cholecystectomy, and fistula treatment, which is a complex procedure [4].

Predictably, patient demographics for sigmoid gallstone ileus are similar to that of the more classical gallstone ileus with elderly women being those most commonly affected. This echoes the fact that the female gender has a compelling association with cholelithiasis, with stone formation twice as likely in women when compared to men. The incidence of gallstone formation, and by extension its complications, increases with age and escalates markedly after the age of 40 years [5].

Gallstone ileus is described as a mechanical intestinal obstruction caused by the impaction of one or more gallstones in any part of the digestive tract, mainly in the small intestine, the most common site being the distal ileum¹. The etiology is secondary to the passage of a gallstone from the bile ducts or gallbladder into the gastrointestinal tract through an enterobiliary fistula (cholecystoduodenal fistula being the most common cause), which is formed by the presence of recurrent episodes of Acute cholecystitis or secondary to Mirizzi syndrome, in which there is chronic perivesicular inflammation, generating adhesions between the bile duct and the gastrointestinal tract, and after that the pressure exerted by the gallstone produces necrosis of the gallbladder wall, eroding it and creating the communication Bilioenteric [6].

Gallstone ileus is a very rare cause of mechanical bowel obstruction with often-delayed presentation and nonspecific symptoms. Aerobilia is found in approximately 50% of patients with gallstone ileus [7].

Gallstone ileus occurs in 0.15-1.5% of cholelithiasis cases and <0.1% of ileus cases overall, and the recurrence rate is 5-8%. In patients with gallstone ileus, the gallstones are usually eliminated via an internal biliary fistula. In the majority of cases (75-83%), the elimination route is from the gallbladder to the duodenum. However, elimination may proceed from the gallbladder to the colon or stomach, or in extremely rare cases, naturally via the bile duct, involving passage from the gallbladder to the common bile duct and subsequently to the papilla of Vater [8].

Clinically it is a very non-specific clinical picture, being able to find common symptoms of intestinal obstructions of other etiologies. The Literature describes two rare syndromes, defined by the level where the stone is impacted producing the occlusion. One of these syndromes is that of Barnard, in which the calculus is impacted at the ileocecal valve level; when the said calculation is found obstructing the duodenum is called Bouveret syndrome. Despite not showing specific symptomatology, it has been described as the triad of Mordor: history of cholelithiasis and combined clinic of intestinal obstruction and colic bile. This allows us to guide the diagnosis of ileus bile in elderly patients [9].

The surgical treatment options for gallstone ileus are both a one-stage procedure (cholecystectomy with fistula closure and enterotomy and stone extraction) and a two-stage procedure (enterotomy and stone extraction followed by cholecystectomy and fistula closure at a later stage). However, the two-stage procedure has a risk of cholecystitis, recurrence, and gallbladder malignancy due to persisting cholecysto-intestinal fistula. The single-stage procedure is recommended in low-risk patients with adequate nutrition and hemodynamic stability. For high-risk patients, a two-stage approach is recommended. We have done a single-stage procedure because of the low-risk patient with the good general condition [10].

Once the diagnosis is made, the patient's hydro electrolytic and metabolic disorders must first be corrected. The treatment is the surgical approach and the options are usually three. The one-stage procedure consists of enterolithotomy, cholecystectomy, and closure of the fistula, all during a single surgical time, which entails greater morbidity and is reserved for younger and clinically stable patients. The two-stage procedure consists of performing an enterolithotomy first, and after 4–6 weeks, cholecystectomy and closure of the fistula are performed. Enterolithotomy at the antimesenteric border is currently the most widely used procedure. The main drawback of solely doing enterolithotomy is that fistula persistence may cause recurrent cholangitis, sepsis, or recurrent gallstone, the latter occurring between 4.7 and 17%, and in these cases; 57% occurs within the first six months of the original surgery. Spontaneous closure of cholecystoenteric fistulas that persist after management with enterolithotomy, has been reported [11].

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