

■ *Case Report*

A case of colonic gallstone ileus with a spontaneous evacuation

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Abstract

Colonic gallstone is an uncommon entity with a high morbidity and mortality due to various reasons. It remains a diagnostic challenge because of delayed and non-specific presentations, especially in the elderly population, often with multiple co-morbidities. We present a case of colonic gallstone ileus with spontaneous evacuation in a 67 years female who had a three-day history of intermittent bouts of colicky abdominal pain, vomiting, constipation and progressive abdominal distension, features of large bowel obstruction treated non operatively for 72 hours and passage of the stone spontaneously.

Keywords: gallstone ileus, large bowel obstruction, colonic gallstone

Introduction

Cholecysto-colonic fistula is an uncommon cause of large bowel obstruction, it is a mechanical obstruction caused by intraluminal impaction of one or more gallstones which enter the colon usually via a cholecystocolonic fistula. and comprises 10% to 20% of entero-biliary fistulae.^[1] Mortality and morbidity with gallstone ileus remains high, as patients are often the elderly with multiple co-morbidities, with delayed presentation and diagnosis. Management of these patients remains controversial. We report a case of colonic gallstone ileus and discuss the investigation and management of the condition together with a review of the literature.

Case History

A sixty seven year-old woman was admitted to our hospital with a three-day history of intermittent bouts of colicky abdominal pain, vomiting, constipation and progressive abdominal distension. She had multiple episodes of biliary colic in the past for several years which was untreated. Abdominal examination revealed a tender soft abdomen, with visible peristalsis, and hyperactive bowel sounds on

auscultation. Laboratory examination showed a white blood cell count of 11,500/mm³ (neutrophils 82%), normal serum liver enzymes and amylase values. Plain abdominal X-rays (Fig:1) demonstrated pneumobilia, multiple air-fluid levels. Ultrasound of abdomen revealed pneumobilia, and dilated bowel loops but no visible stone.

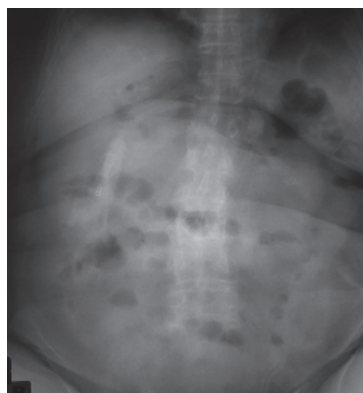


Figure 1: shows pneumobilia with dilated bowel loops.

A diagnosis of sub acute large bowel obstruction was made and she was managed conservatively with nil by mouth, intravenous fluids, nasogastric tube aspiration, intravenous antibiotics of third generation cephalosporin, metronidazole and enema twice a day. Patient symptomatically improved in a couple of days time. However, at 72 hours of admission; the gallstone of a size of 6X4 cm was spontaneously evacuated. (Fig:2) Plain films of the abdomen in the following

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hours showed decompression of the bowel loops and no gallstone could be seen. The patient recovered uneventfully, but refused to undergo any further therapeutic management. She was discharged on request and has not been followed lap till date for a definitive procedure.



Figure: 2 shows the stone size of 6x4cm.

Discussions

Gallstone ileus was first described by Bartholin in 1654 and yet remains uncommon. The term ileus is a misnomer as impaction of a gallstone leads to a true mechanical obstruction. It accounts for 1%-4% of cases of small bowel obstruction,^[2] but this is higher in elderly patients, in whom gallstones account for about 25% of cases of non-strangulated small bowel obstruction.^[2] A colonic fistula is invariably between gallbladder and hepatic flexure.^[1] Enterobiliary fistulae may involve, in order of frequency, the duodenum, colon, stomach and jejunum.^[3] The intermittent nature of the obstruction makes the diagnosis of gallstone ileus difficult. Colonic gallstones may present with non-specific symptoms (diarrhoea, steatorrhea, electrolyte imbalance or hypoprothrombinemia), cholangitis or a bleed from the fistulous tract.^[1]

The classical X-ray description of gallstone ileus is Rigler's triad (ectopic gallstone, partial or complete bowel obstruction and gas in the gallbladder or biliary tree).^[4] Pneumobilia is seen in only a third of cases probably due to occlusion of the cystic duct from the inflamed gallbladder.^[5-7] Radiological features of small bowel obstruction may be absent when in the sub-acute phase, as seen in this case. One study has demonstrated 96% sensitivity in diagnosis when abdominal X-ray is combined with an abdominal

ultrasound scan.^[8] Although ultrasound is useful in detecting biliary disease,^[7,9] computed tomography (CT) has been proven to be the most effective imaging technique in these cases.^[7,10]

Treatment options include enterolithotomy which can be performed laparoscopically.^[12] Although this may be appropriate for high-risk elderly patients, symptoms recur in about 5% as the gallbladder forms stones *de novo*.^[5,14] Definitive treatment, especially for the lower risk patient is a single stage enterolithotomy, cholecystectomy and fistula closure.^[5,11,13] In all cases, a second "silent stone" within the intestinal tract should be actively sought.^[5] Simple colonoscopic removal of stones has been described and may be appropriate in surgically unfit patients.^[5,15]

Conclusion

Colonic gallstones pose a particular diagnostic challenge and demand a high index of suspicion. The entity of colonic gallstone ileus has been reported previously. However, the management of the stone appears to vary depending on the mode of presentation. A high index of suspicion is needed on interpreting plain X-ray films as Rigler's classical triad may not be present as in this case report. Abdominal ultrasound, contrast studies and an abdominal CT scan are all complimentary and may help in reaching a pre-operative diagnosis. The ideal treatment for colonic gallstones is a single stage enterolithotomy, cholecystectomy and fistula repair.

References

- 1 Goldberg RI, Phillips RS, Barkin JS. Spontaneous cholecystocolonic fistula treated by endoscopic sphincterotomy. *Gastrointest Endosc* 1988;34:55-56.
- 2 Doko M, Zovak M, Kopljar M, Glavan E, Ljubicic N, Hochstadter H. Comparison of surgical treatments of gallstone ileus: preliminary report. *World J Surg* 2003;27:400-404.
- 3 Grossman ET. Cholecystocolic-fistula—an unusual cause of diarrhea. *Am J Gastroenterol* 1971;55:277-283.
- 4 Rigler Et Al. Gallstone obstruction: pathogenesis and roentgen manifestation. *The journal of the American medical association, Chicago* 1941;117:1753-1759.

- 5 Anagnostopoulos GK, Sakorafas G, Kolettis T, Kotsifopoulos N, Kassaras G. A case of gallstone ileus with an unusual impaction site and spontaneous evacuation. *J Postgrad Med* 2004;50:55-56.
- 6 Bose SM, Sastry RA. Agenesis of gallbladder with choledcho-colonic fistula. *Am J Gastroenterol* 1983;78:34-35.
- 7 Lassandro F, Gagliardi N, Scuderi M, Pinto A, Gatta G, Mazzeo R. Gallstone ileus analysis of radiological findings in 27 patients. *Eur J Radiol* 2004;50:23-29.
- 8 Ripolles T, Miguel-Dasit A, Errando J, Morote V, Gomez-Abril SA, Richart J. Gallstone ileus: increased diagnostic sensitivity by combining plain film and ultrasound. *Abdom Imaging* 2001;26:401-405.
- 9 Lasson A, Loren I, Nilsson A, Nirhov N, Nilsson P. Ultrasonography in gallstone ileus: a diagnostic challenge. *Eur J Surg* 1995;161:259-263.
- 10 Reimann AJ, Yeh BM, Breiman RS, Joe BN, Qayyum A, Coakley FV. Atypical cases of gallstone ileus evaluated with multidetector computed tomography. *J Comput Assist Tomogr* 2004;28:523-527.
- 11 Tan YM, Wong WK, Ooi LL. A comparison of two surgical strategies for the emergency treatment of gallstone ileus. *Singapore Med J* 2004;45:69-72.
- 12 Lichten JB, Tehrani K, Sekons D. Laparoscopically assisted enterolithotomy for a gallstone ileus in an atypical location. *Surg Endosc* 2003;17:1496-1497.
- 13 Pavlidis TE, Atmatzidis KS, Papaziogas BT, Papaziogas TB. Management of gallstone ileus. *J Hepatobiliary Pancreat Surg* 2003;10:299-302.
- 14 Guttikonda S, Vaswani KK, Vitellas KM. Recurrent gallstone ileus: a case report. *Emerg Radiol* 2002;9:110-112.
- 15 Shenoy VN, Limbekar S, Long PB, Bashar AA. Relief of small bowel obstruction following colonoscopy in a case of gallstone ileus. *J Clin Gastroenterol* 2000;30:326-328.