

Gall Stone Ileus: A Rare Cause of Intestinal Obstruction, Complication of Gall Bladder Stone Disease

Rajkumar¹, Sharma Neeraj², Kumar Amit³

¹Assistant Professor, ²Junior Resident, ³Senior Resident, Department of surgery, MLN Medical College, Allahabad, UP, India

***Corresponding author**

Neeraj Sharma

Email: neeraj8005479284@gmail.com

Abstract: Gall stone ileus is an extremely rare cause of small intestinal obstruction accounting for only 1-4% case overall. The clinical presentation is variable, depends on the site of obstruction. It is manifested as acute, intermittent or chronic episodes. A 45 year old female was admitted to our emergency department with chief complains of obstipation and constipation since 12 days and had a history of similar complains 5 months back. At admission there were signs of intestinal obstruction, with X-ray showing multiple air fluid levels. Once stabilised laparotomy was performed and a palpable stone in terminal ileum with adhesion between gall bladder and first part of duodenum was seen. The postoperative course was uneventful. This one stage repair should be the first choice of treatment for well stabilised patient having good cardiopulmonary and metabolic reserve.

Keywords: Gall stone ileus, Small intestine, Constipation, Laparotomy.

INTRODUCTION

Gall stone ileus and Mirizzi syndrome are rare complications of gall stone disease [1, 2]. Gallstone ileus is described as mechanical intestinal obstruction due to impaction of one or more stone originating in gall bladder [3]. A biliary-enteric fistula allows passage of large gall stone between the gallbladder and the duodenum commonly [4]. Gall stone is most commonly impacted at the terminal ileum or the ileocaecal valve [5]. The clinical presentation varies with the site of obstruction and may be manifested as acute, intermittent or chronic episodes [6]. In approximately 50% of cases diagnosis is made on laparotomy [7].

CASE REPORT

A 45 year old female was admitted in emergency surgery department with chief complains of obstipation and constipation since 12 days, abdominal pain with moderate abdominal distension. She had similar episode five months back. There was previous history of cholelithiasis with acute cholecystitis for which she was managed conservatively. At admission, physical examination revealed normal temperature, pulse rate of 92/minute, blood pressure 110/76. Bowel sounds were exaggerated with moderate abdominal distension and no tenderness or guarding. Haematological reports showed WBC 8500/mm³, TLC showed 78% neutrophils. Other tests were not remarkable. X-ray of abdomen showed multiple air fluid levels. Ultrasound report showed gall bladder stones with signs of chronic cholecystitis, and transition

point between dilated proximal ileum and terminal ileum.

Once the patient was stabilised, laparotomy was undertaken. Peroperatively generalised distended proximal jejunal and ileal loops was found proximal to a palpable stone of size 3.5 cm impacted approximately 45 cm proximal to ileocaecal junction. Gall bladder was edematous and adherent to first part of duodenum, suggestive of cholecystoduodenal fistula. Enterolithotomy with primary repair of ileum, ligation of fistula, omentopexy and cholecystectomy was done. At histopathology gall bladder showed cholelithiasis with signs of chronic cholecystitis and fistulous tract lined by fibrous tissue. Following an uneventful recovery patient was discharged on 14th day. After 1 month follow up she remains in good health.

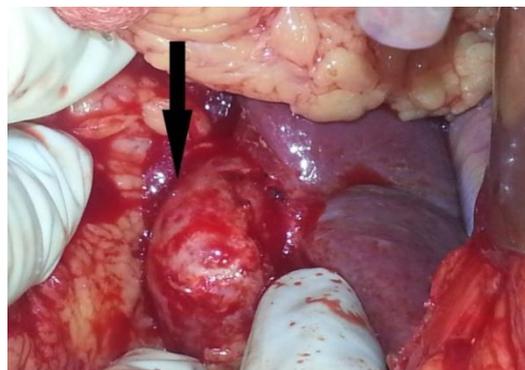


Fig. 1: Arrow showing adhesion between duodenum and gall bladder

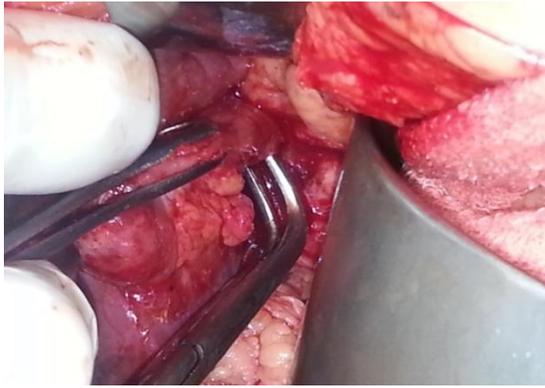


Fig. 2: Forceps into the cholecystoduodenal fistula



Fig. 3: Enterotomy showing stone within small bowel

DISCUSSION

Gall stone ileus is described as mechanical intestinal obstruction due to impaction of one or more stone within gastrointestinal tract originating in gall bladder [3, 9]. It is a rare cause of intestinal obstruction accounting for 1-4% of all cases [10]. Usually this condition is preceded by episode of cholecystitis with consequent adhesions and inflammations resulting in fistulous tract between gall bladder and first part of duodenum and passage of stone into gastrointestinal tract [9, 11,12]. It has been suggested as a part of natural history of Mirrizi's syndrome [9, 13].

The most common site for fistulous tract is between gall bladder and duodenum in 60-86% cases, and stone of average size 2.5 cm is required for obstruction at ileocaecal junction [9].

The classic radiologic triad of gall stone ileus called as Rigler's Triad includes small bowel obstruction, pneumobilia and ectopic gall stone [14]. Only 9-14% of patients have a classic rigler's triad signs [15, 16].

Clinical presentation is that of intestinal obstruction, usually depends upon site of obstruction and may be manifested as acute, intermittent and chronic episodes [6]. The vomiting of proximal intestine material, becoming dark and feculent is called as "tumbling" indicating the halting movement of gallstone down the gastrointestinal tract [9, 17, 18]. Gall

stone ileus occurs more commonly in women than in men [19].

The terminal ileum and ileocaecal are the most common sites (50-75%) [20], followed by jejunum (30%), duodenum (2.5%) and colon (2.5%) [21]. The diagnosis of gall stone ileus is difficult and is not made until laparotomy in 50% of cases [7].

The treatment aims in prompt relief of obstruction by the removal of offending gall stone. The surgical intervention is the treatment of choice. The current approaches are 1) Enterolithotomy alone 2) Enterolithotomy with cholecystectomy performed later (two stage procedure) 3) Enterolithotomy, cholecystectomy and fistula closure (one stage procedure) [9], this being the procedure of choice once the patient is stabilised .

The prognosis of gall stone ileus is usually poor. The rate of mortality is upto 20%, mainly because of delayed diagnosis and comorbid conditions [9].

The patient herein reported had a 12 day background of complete intestinal obstruction, history of intermittent obstruction five months back. Patient was stabilised with adequate cardiorespiratory and metabolic reserve and single stage procedure was justified.

CONCLUSION

One stage repair should be the first choice of treatment of gall stone ileus for well stabilised patient having good cardiopulmonary and metabolic reserve.

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