

A RARE CASE OF GALL STONE ILEUS WITH OBSTRUCTION OF SMALL BOWEL

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Authors' contributions

This work was carried out in collaboration between both authors. Author VHM designed the study and wrote the first draft of the manuscript. Author VHM managed the literature searches. Author RP was the corresponding author and wrote the final draft. Both authors read and approved the final manuscript.

ABSTRACT:

Gallstone ileus is condition where small bowel is mechanically obstructed by gallstones. It's a true mechanical obstruction. It is uncommon entity which accounts for one to three percent of all small bowel obstruction [1]. Elderly people are usually affected [2]. X-ray, USG, CT SCAN are usual modalities of diagnosis [2]. Mainstay of treatment is to relieve obstruction by surgery [3].

KEYWORDS:

Small bowel obstruction, Gallstones, Gallstone ileus, enterolithotomy

INTRODUCTION:

Gallstone ileus is true mechanical obstruction, so word ileus is misnomer. This is one of the infrequent complications of gall stones which results as one or more gallstones enter into small bowel by cholecysto-enteric fistula. Early diagnosis and treatment are necessary as morbidity is high [3]. Open/laparoscopic surgery is the mainstay of treatment.

CASE REPORT:

A 62-Yr -old lady came with history of pain abdomen for three to four days, vomiting for two days and distention of the abdomen for one day. On examination 94 was pulse per minute,

Blood pressure was 120/70 mm of mercury, mild abdominal distention was present. On auscultation bowel sounds were hyper, rectum was empty. Blood investigations showed raised white blood cell counts and renal function and liver function tests were normal. X-ray showed dilated small bowel loops. Ultrasound abdomen showed dilated small bowel loops and a calculus measuring 1.5cm in gall bladder (which is pneumobilia on Computed tomography) and calculus in mid ileum measuring 3*3 cm (figure 1). Contrast Computed tomography scan abdomen was done, which showed pneumobilia in gall bladder (initially thought as calculi in gall bladder on Ultrasound), and calculi in the mid ileum around 3cm*3cm*2.5cm in dimension with proximal dilated small bowel loops (figure 2). There was a cholecysto-duodenal fistula with stranding of omentum around the gallbladder (figure 3).

Figure 1. USG showing gall stone in small bowel

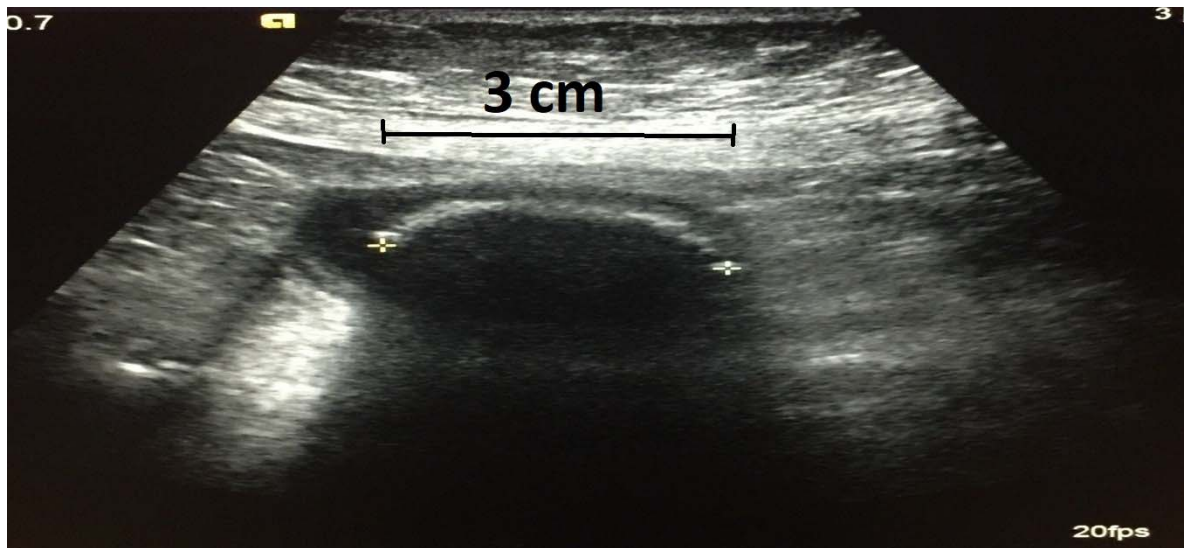
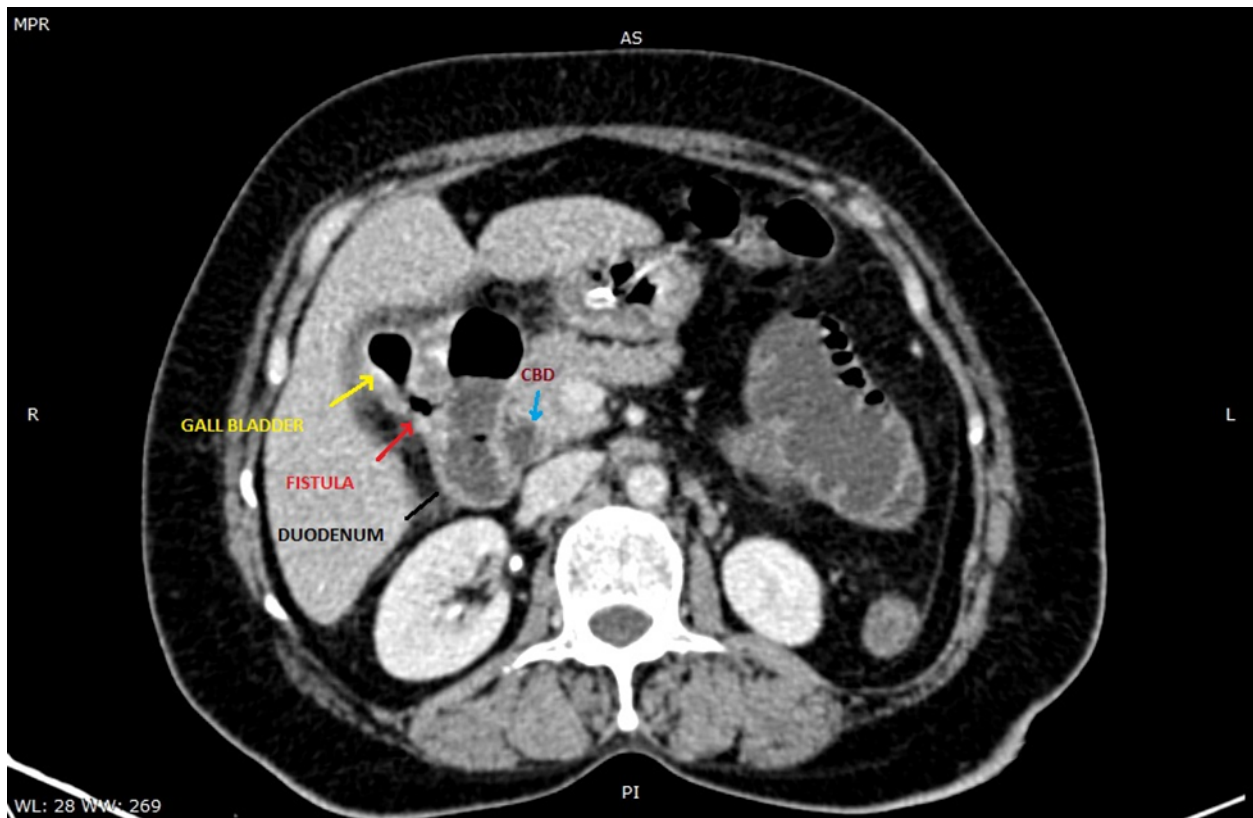


Figure 2. CT scan showing gallstone in small bowel



Figure 3. CT scan showing cholecysto-duodenal fistula.



Laparotomy with enterolithotomy and extraction of gall stone was carried out successfully (Figure 4 and 5). Nothing was done for Fistula between gall bladder and duodenum. Patient was extubated and shifted to recovery then ward. Recovery was uneventful. Patient didn't have any history of gallstones before. At present patient is on follow up. Once patient gives consent for definitive surgery, i.e. cholecystectomy with repair of the fistula will be done.

Figure 4. Intra operative findings, dilated small bowel with gallstone in distal ileum

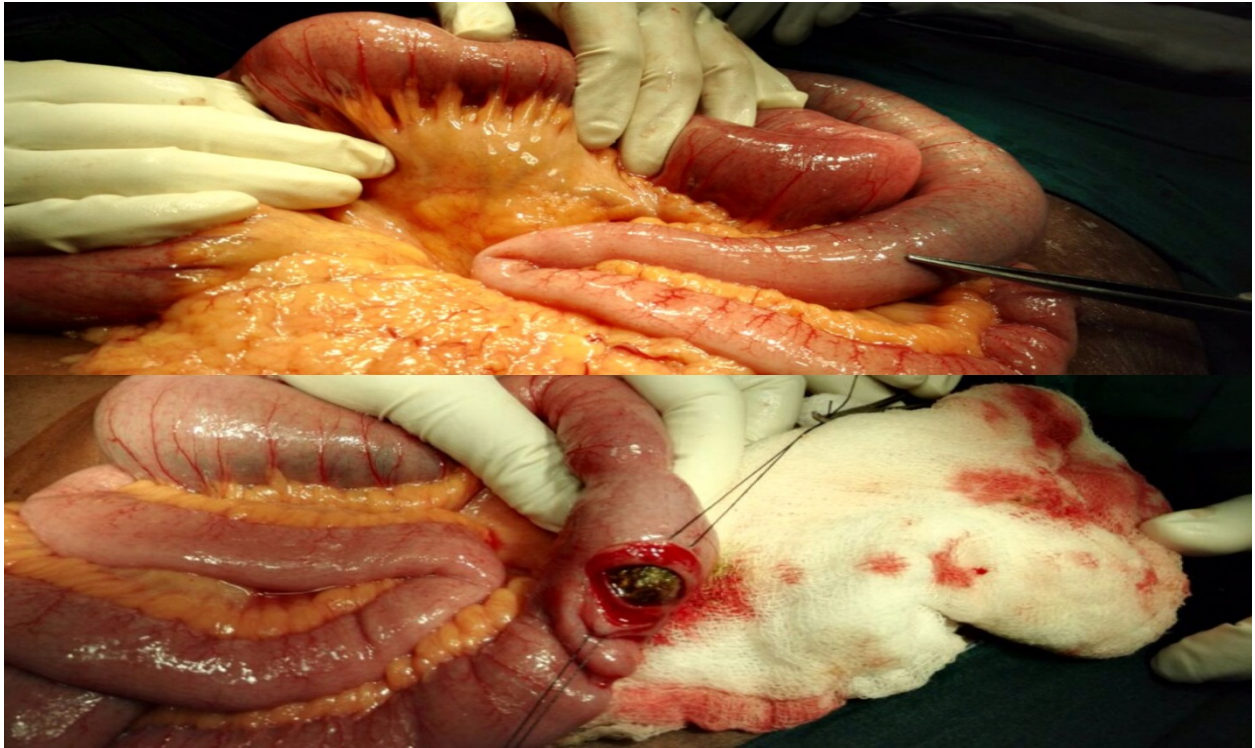
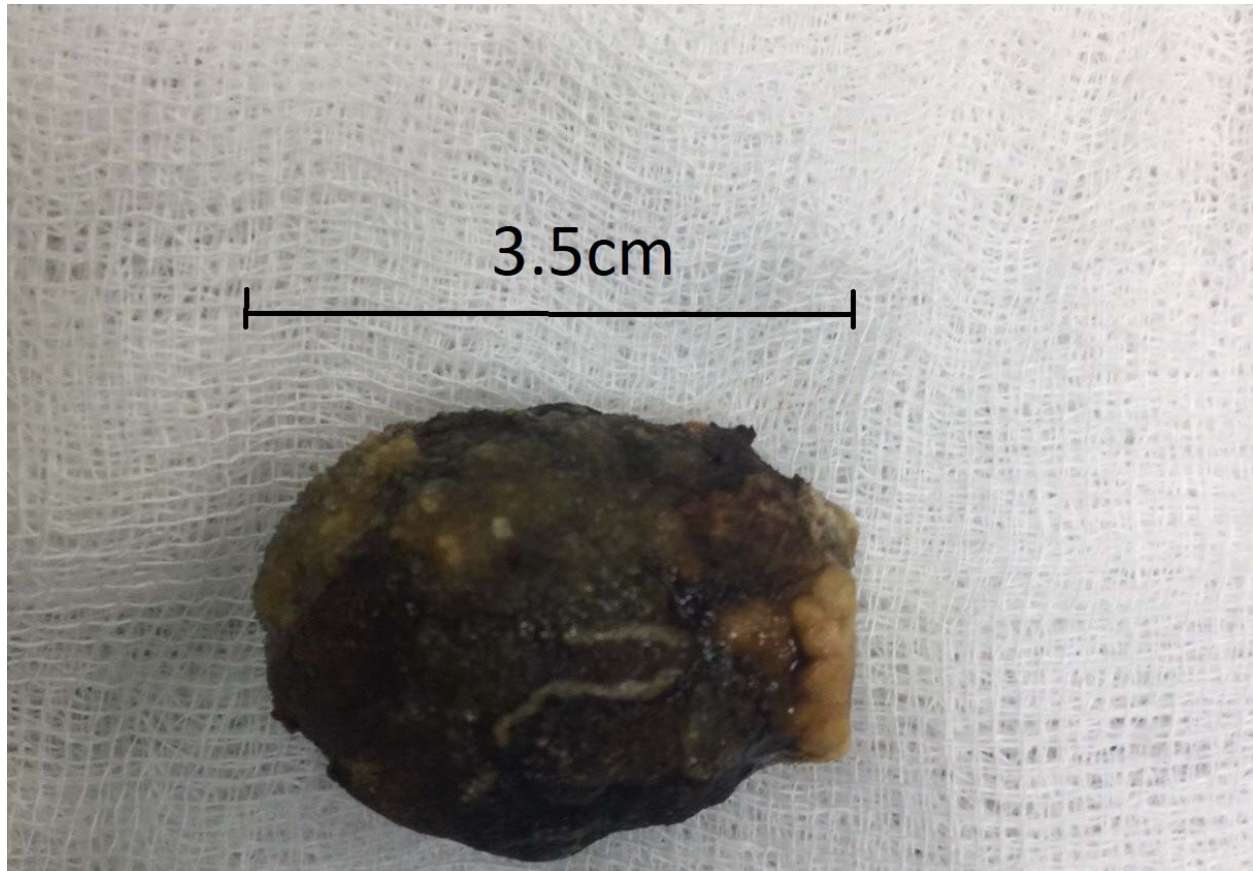


Figure 5: Gallstone of 3.5cm extracted from ileum



DISCUSSION:

The gallstone ileus term was coined by Dr. Erasmus Bartolini in 1654 [4]. It is a rare complication of cholelithiasis, accounting for one to four percent of all cases of bowel obstruction [2]. Bouveret described a syndrome of gastric outlet obstruction caused by gallstone impaction in the duodenum after its migration through a cholecystoduodenal or choledochoduodenal fistula in 1896[5]. It is caused by one or more gallstone getting impacted within the lumen of the bowel. Adhesions forming between the inflamed gallbladder and an adjacent part of the gastrointestinal tract is the main pathogenesis. Large stones within the gallbladder subsequently cause pressure necrosis and forms a cholecysto–enteric fistula, which creates path for gallstones entry into the gut [7]. Elderly and females are usually affected. Any part of the bowel can be affected, but most commonly ileum which is 60.5%. Next is jejunum which is 16.1%, stomach 14.2%, colon 4.1% and duodenum is 3.5%. Terminal ileum and the ileocecal valve commonly affected because of the anatomically small lumen. [8]

Diagnosis of gallstone ileus should be considered in patients who are elderly and with history of gallstones and no history of previous surgery and tuberculosis. Usually patients present with colicky abdominal pain, distention of the abdomen, vomiting with constipation for

few days. With past history of recurrent upper abdominal pain and inflammatory episodes [16]. On plain abdominal radiography, classical signs of Rigler's triad i.e. pneumobilia, dilated intestinal loops, aberrant gallstone aid diagnosis [9]. Ultrasonography is helpful but pneumobilia may be misdiagnosed as gallstone as it happened in our case. Computed tomography has higher sensitivity and specificity in detecting gall stone ileus [9].

The mainstay of treatment of gallstone ileus is a relief of mechanical obstruction of the bowel. Most of the patients with gallstone ileus requires surgical intervention. If stone is within proximal duodenum, then it can be removed by endoscope or if it is in large bowel, then can be removed by colonoscope [9]. Extracorporeal shockwave lithotripsy can also be done but this method has its own limitations. Majority of patients requires surgery. Surgical options include laparotomy with enterolithotomy. Stones are removed by small incision through the bowel. Most of the surgeon's favor enterolithotomy as first procedure. Cholecystectomy and repair of fistula is done in later settings. [10,11,12,13]

CONCLUSION:

Gall stone ileus is one of the rear causes of intestinal obstruction. This etiology has to be kept in mind when dealing with cases of intestinal obstruction specially in women and patients without the history of prior surgery. [14]. In case of gall stone ileus early diagnosis and surgical intervention influences the final outcome of the patient.

Consent and Ethical Approval:

Ethical committee clearance and consent for publication from patient is taken and there is no conflict of interest between authors.

References:

1. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4724589/>
2. <https://link.springer.com/article/10.1007%2Fs00268-007-9011-9>
3. Lobo DN, Jobling JC, Balfour TW: Gallstone ileus: diagnostic pitfalls and therapeutic successes. J Clin Gastroenterol 2000; 30: 72–76
4. <https://www.sages.org/meetings/annual-meeting/abstracts-archive/bouverets-syndrome-gallstone-ileus-of-the-duodenum/>

5. <https://www.hindawi.com/journals/cris/2013/839370/>
6. Rigler LJ, Borman CN, Noble JF. Gallstone obstruction: pathogenesis and roentgen manifestations. JAMA 1941; 117: 1753-9
7. <http://www.pathologyoutlines.com/topic/gallbladdergallstoneileus.html>
8. <https://www.sciencedirect.com/science/article/pii/S2210261213000175>
9. <https://radiopaedia.org/articles/gallstone-ileus>
10. https://journals.lww.com/annalsofsurgery/Abstract/2014/02000/Surgery_for_Gallstone_Ileus_A_Nationwide.20.aspx
11. <https://www.karger.com/Article/FullText/475749>
12. http://www.scielo.br/scielo.php?script=sci_arttext&pid=S1516-31801996000400009
13. <https://www.wjnet.com/1948-9366/full/v7/i8/152.htm>
14. <https://www.uptodate.com/contents/gallstone-ileus>
15. Deepak J, Ali V, Tom MR, Fox C, Arun D: Bouveret's syndrome as an unusual cause of gastric outlet obstruction: a case report. Journal of Medical Case Reports. 2007, 1: 73-10.1186/1752-1947-1-73
16. Summerton SL, Hollander AC, Stassi J et-al. US case of the day. Gallstone ileus. Radiographics. 1995;15 (2): 493-5