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Management of Gallstone ileus and Repair of Cholecysto-duodenal Fistula in a Single Stage: A Rare Entity and its Successful outcome.

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Abstract: *Gallstone ileus (GI) associated with cholecysto-duodenal fistula is a rare disease and occurs in 1%-4% of all cases of bowel obstruction[1]. The mortality associated with GI ranges between 12% and 27%. X-ray, ultrasound and CT of abdomen are usually required to confirm the diagnosis. Enterolithotomy with closure of Cholecysto-duodenal fistula is required for the management of this entity which can be done in single stage or in two stages. We present one such rare case of GI who was successfully managed in a single stage.*

Keywords: *Gallstone Ileus, Cholecysto-enteric fistula, Cholecystectomy*

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I. Introduction

Gallstone ileus (GI) associated with cholecysto-duodenal fistula is a rare disease and occurs in 1%-4% of all cases of bowel obstruction[1]. This is more common in females with an incidence of 72–90% and the mortality associated with GI ranges between 12% and 27%[2,3]. Apart from clinical history and examination; X-ray, ultrasound and CT of abdomen are usually required to confirm the diagnosis. The abnormal communication between biliary and enteric system are usually identified on CT scan of abdomen[4,5]. Enterolithotomy with closure of Cholecysto-duodenal fistula is required for the management of this entity which can be done in single stage or in two stages[6,7]. However this depends mainly upon the clinical condition of the patient and co-morbidities. We present one such rare case of GI who was successfully managed in a single stage.

II. Case Report

55-years-old female presented with history of distension of abdomen, vomiting , abdominal pain and relative constipation for seven days. On examination signs of subacute intestinal obstruction were present. X ray abdomen showed distended small bowel loops (Figure-1). Ultrasound of the abdomen suggested presence of gallstones and cholecystitis alongwith dilatation of small bowel loops. Contrast Enhance CT scan of the abdomen showed a large stone stuck up inside the small bowel lumen alongwith features of cholecyto-duodenal fistula. Exploratory laparotomy was performed and enterolithotomy done to excise a large stone of approximately 4 cms followed by cholecystectomy and repair of duodenal opening with Grahm's patch (Figure-2-4). Postoperative period was uneventful.

III. Discussion

Gall stone ileus is an unusual and rare complication of cholelithiasis. This occurs usually due to formation of cholecysto-enteric fistula caused by pressure necrosis of the walls of gall bladder and intestine by the large stone[8]. However such fistulas may also occur secondary to abdominal trauma, Crohn's disease, peptic ulcer disease, and malignancies of the biliary tract, bowel, and head of pancreas [9]. The most common type of fistula is between the gallbladder and the duodenum, although cholecysto-colonic and cholecysto-gastric fistulae have also been reported. Clinically it is difficult to diagnose gall stone ileus and the preoperative diagnosis of this condition is usually made on the basis of radiological aids especially X-ray , ulatrasonography and more

importantly CECT of the abdomen[10-12]. However in many cases the accurate diagnosis is usually made on laparotomy or laparoscopically. The management of GI depends mainly on the clinical condition of patient and co-morbidities. There are different options available in literature for the management of GI including Non-operative, Laparoscopy, Laparoscopic assisted and Laparotomy[13-15]. The ususal management is two stage procedure with an aim of releaving the intestinal obstruction in first stage followed by cholecystectomy and repair of fistula in another stage due to much adhesions at the site of fistula. However if possible one stage procedure should be done involving enterolithotomy, cholecystectomy and Grahm's patch repair for fistula as this avoids recuurent attacks of cholecystitis and cholangitis[16,17]. We performed one stage procedure in our patient successfully.

IV. Conclusion

Gall stone ileus is a rare entity with a difficulty in making the accurate pre-operative diagnosis of this disease. Similarly there are different ways of management. However with the help of radiological aids an accurate preoperative diagnosis is possible and it can be managed successfully even in a single stage if the clinical condition of the patient permits.

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Figure-1: X- ray of abdomen showing distended bowel loops

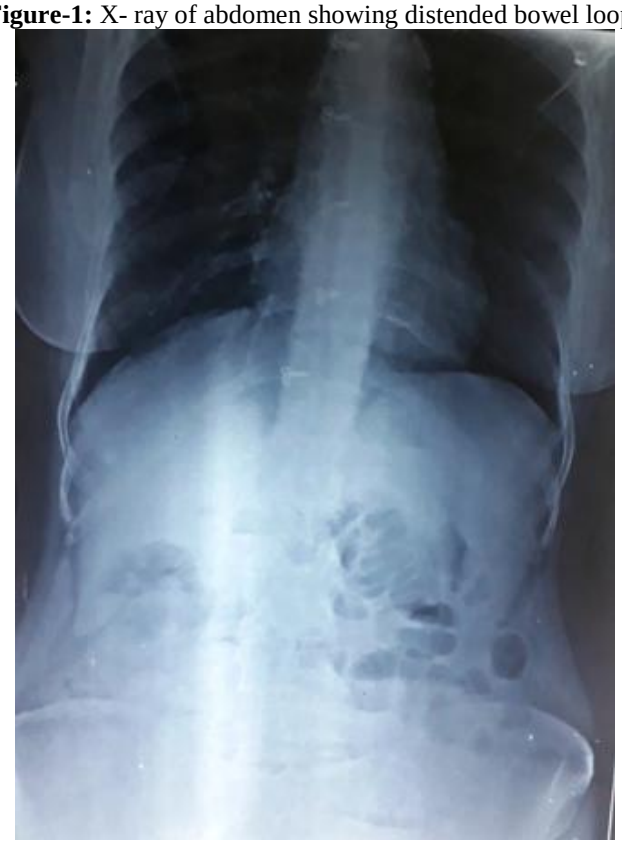
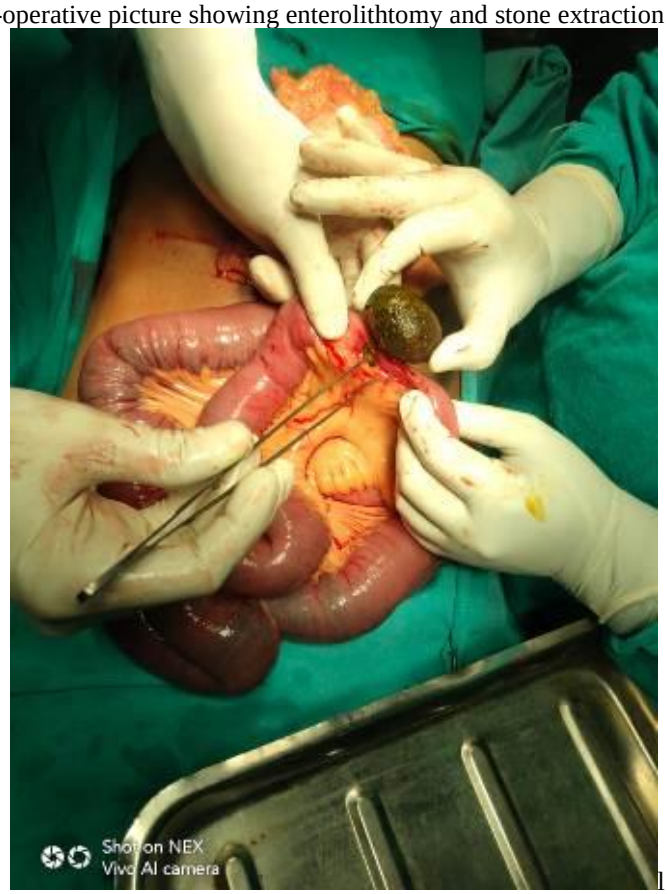


Figure-2,3: Intra-operative picture showing enterolithtomy and stone extraction from small bowel.



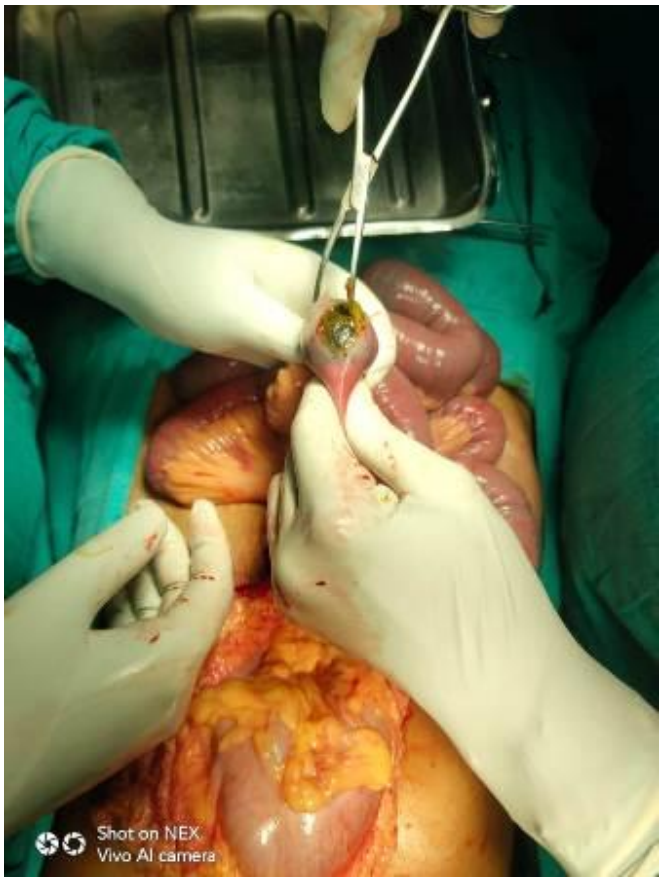


Figure-4: Intra-operative picture showing Cholecysto- duodenal fistula