CUSTOMIZED SURGICAL APPROACH TO SMALL BOWEL PERFORATION SECONDARY TO BILIARY STENT MIGRATION; A CASE REPORT AND REVIEW OF THE LITERATURE

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INTRODUCTION

- Endoscopic placement of a biliary stent to treat benign or malignant biliary obstructions is a well-established practice and may prevent the need for further surgical intervention. (1). It can be associated with complications including occlusion, cholangitis, bleeding, as well as, late complications of migration and perforation. Stent migration, proximal or distal, is relatively uncommon with an overall incidence of 6% (2). We report a case of distal biliary plastic stent migration with delayed small bowel perforation which required surgical intervention

CASE PRESENTATION

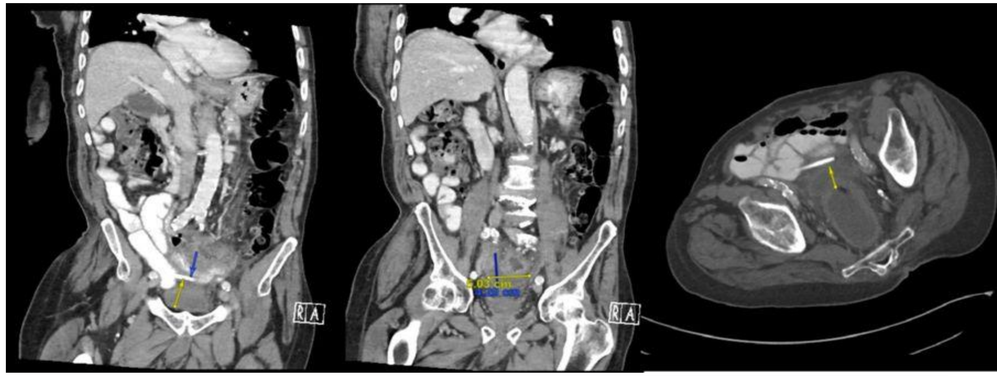
- A 79 year-old nursing home male patient presented with persistent lower abdominal associated with nausea and vomiting.. On physical exam, his abdomen was notable for generalized tenderness, localized guarding, and rebound in LLQ and suprapubic area. His past medical history was significant for endoscopic retrograde cholangio-pancreatography (ERCP) with common bile duct stent placement for cholangitis 18 months for non malignant common bile duct stricture. The patient underwent an unsuccessful attempt to retrieve the stent via EGD three months prior. Labs showed: white cell of 14.6, and lactic acid:1.6. Computed tomography (CT) of the abdomen and pelvis revealed biliary stent migration into a small bowel loop in the right lower quadrant with perforation and an adjacent abscess in the lower pelvis (figure 1) The patient was taken to the operating room. Considering CT findings of matted loops under the previous midline incision, a Pfannenstiel incision was carried out right above the the visualized abscess. Intra-op findings confirmed ill stent migration and perforation (figure 2). The stent was removed and the bowel was repaired primarily. His post op course was uneventful, and he was discharged from hospital on post operation day

DISCUSSION

- Distal migration of plastic stents have been known to cause intestinal perforation in 1% of reported cases, requiring immediate surgical intervention (4). Factors including papillary stenosis, omission of sphincterotomy, plastic stents and benign lesions have been reported to increase the risk of distal migration and eventual perforation (1). Biliary stents can be classified by size and material : plastic stents have been associated with increased rates of migration due to their straight shape compared to the interwoven alloy wire shape and flaring of metal stents . Short stents when compared to large-diameter stents also hold their own risk in stent migration(3). Self-expanding metal stents (SEMS) used for the treatment of malignant biliary obstruction due their larger diameter and greater radial force Uncovered SEMS prone to tissue ingrowth are at increase the risk of migration. Inflammation and infection in the biliary tract bile , duct stones or debris in cholangitis or pancreatitis can increase the risk of biliary stent migration by altering bile flow dynamics and increasing peristalsis. Primary sclerosing cholangitis or recurrent cholangitis, may be particularly susceptible to stent migration due to narrow or tortuous bile ducts with high pressure Previous surgical interventions such as cholecystectomy or liver transplantation can increase the risk of biliary stent migration due to altered anatomy and scarring in the biliary tract. Inadequate stent placement and improper deployment can increase the risk of stent migration

CONCLUSION

- Endoscopic placement of a biliary stent can treat biliary obstructions but can be associated with complications such as obstruction, distal migration and intestinal perforation. Risk factors for migration include but are not limited to the size, material , type of stent, inflammation or infection of the biliary tract , previous surgical interventions, placement technique. The treatment of migration of a biliary stent depends on clinical presentation and can include endoscopic retrieval but unsuccessful attempts and complications often require surgical intervention





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