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Case Report

Right-sided malignant colonic obstruction the use of a self expanding metal stent to facilitate laparoscopic surgery: A case report

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ABSTRACT

The use of self expanding metals stents (SEMS) is established for management of left sided colonic obstruction. Its use for right sided malignant colonic obstructing (RMCO) tumours is less established with risks related to perforation of the colon. The use of a right sided colonic stent can be used to decompress the colon or small bowel and facilitate subsequent laparoscopic resection.

A 68 year old gentleman presented with a history of right upper quadrant pain associated with fever, chills, loss of weight and abdominal distention. Examination revealed a tender right upper quadrant mass, workup revealed an empyema of the gallbladder with an associated colonic mass.

The sepsis was controlled via percutaneous transhepatic cholecystomy and subsequent colonscopy revealed an obstructing hepatic flexure colonic tumour and multiple large left sided colonic polyps not amenable to snare excision. This tumour was stented at endoscopy under fluoroscopic control. The patient was taken to theatre and a laparoscopic subtotal colectomy with complete mesocolic excision and en bloc cholecystectomy was performed.

In this case report, we demonstrate the use of SEMS for RMCO as a bridge for laparoscopic subtotal colectomy in a patient with right sided colonic cancer. This case also presented a unique challenge with the associated gallbladder empyema due to cystic duct obstruction. The stenting for RMCO and subsequent laparoscopic subtotal-colectomy was performed successfully for this patient, showing promise in the future utility of SEMS placement in RMCO. This report therefore adds to increasing evidence that emphasize the viability of SEMS in RMCO as a bridge to laparoscopic surgery for more proximal obstructions. According to our literature search, this is the third reported case of laparoscopic colectomy following SEMS for RMCO.

1. Introduction

The use of self-expanding metallic stent (SEMS) placement is known as a safe and effective treatment for malignant colonic obstruction (MCO) [1–3]. Traditionally, this was reserved for left-sided MCO but there has since been demonstrated potential for use in the right-side MCO (RMCO) [4–6]. This is in the context of studies suggesting that emergency right-sided colonic resections being associated with significantly higher morbidity and mortality when compared to similar elective surgeries [7,8].

In this case report, we demonstrate the use of SEMS for RMCO as a bridge for laparoscopic subtotal colectomy in a malnourished individual with right sided colon cancer and multiple large left sided polyps. The stenting for RMCO and subsequent laparoscopic subtotal-colectomy was performed successfully for this patient. This case and others shows promise in the future utility of SEMS for right sided colonic obstruction to facilitate laparoscopic surgery by decompressing the proximal distended bowel and increases working space. According to our literature search, this is the third reported case of laparoscopic colectomy following SEMS for RMCO [5,9].

2. Case presentation

A 68 year old gentleman presented with right upper pain and associated chills and rigours. Clinically he was not jaundiced,

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abdominal examination revealed a tender mass in the right upper quadrant.

No known comorbidities.

No significant past surgical history.

An ultrasound examination revealed an enlarged gallbladder with associated pericholecystic fluid. There were no dilated ducts or associated liver lesions.

Blood results:

U + E: Na 131 mmol/l/Cl 96 mmol/l/K 3,9 mmol/l/2,8 mmol/l/Cr 61 μmol/l

CRP: 245 mg/l

WCC 12,48 × 10^9/l

Hb 9,9 g/dl

Plt 509 × 10^9/l

CT showed a large hepatic flexure tumour with associated proximal dilatation of the colon, the gallbladder was distended, there was no ascites or distant metastases (Figs. 1–3). Percutaneous tranhepatic drainage of the gallbladder was performed and culture grew Coagulase Negative Staphylococcus. The inflammatory markers of the patient subsequently improved.

The patient was taken for colonoscopy and the finding were multiple large left sided colonic polyps and an obstructing right sided colonic tumour. The tumour was biopsied which revealed infilitrating moderately differentiated adenocarcinoma. The tumour was traversed under fluoroscopic guidance with a 480 cm Boston Jag Wire and a 120 mm × 20 mm colonic stent was deployed. At the same setting contrast was injected into the gallbladder via the pigtail which showed a patent cystic duct (Figs. 4 and 5). The patient's obstructive symptoms resolved and he was nutritionally rehabilitated. 20 Days post colonic stenting the patient was taken to theatre for laparoscopic subtotal colectomy and ileorectal anastomosis. The procedure was carried out under general anaesthesia. The patient was positioned supine.

Pneumoperitoneum was established via open Hasson technique via an infraumbilical incision. Further ports were as demonstrated (Fig. 6). At laparoscopy no ascites was noted, the stent caused mass effect in the right upper quadrant. A Nathanson liver retractor was used to improve visualistion. A Harmonic scalpel was used to facilitate dissection. The presence of the metal made dissection more difficult than a standard hemicolectomy however with safe adherence to surgical planes the dissection was done safely (Fig. 7). The ileocolic vessels and middle colic vessels were ligated close to the takeoff from the superior mesenteric artery to improve lymph node yield. The inferior mesenteric artery was taken close to the aorta. The

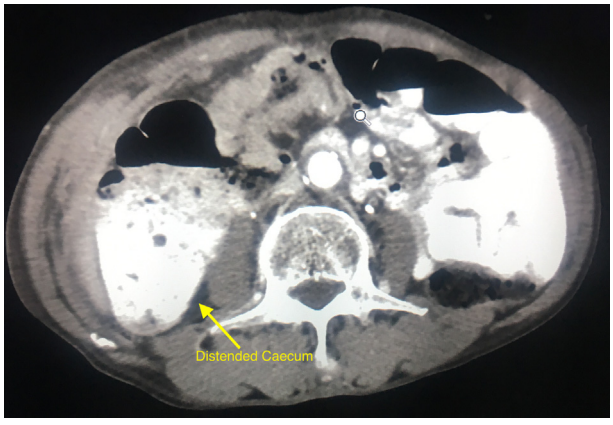

Fig. 1. C.T. showing distended caecum.

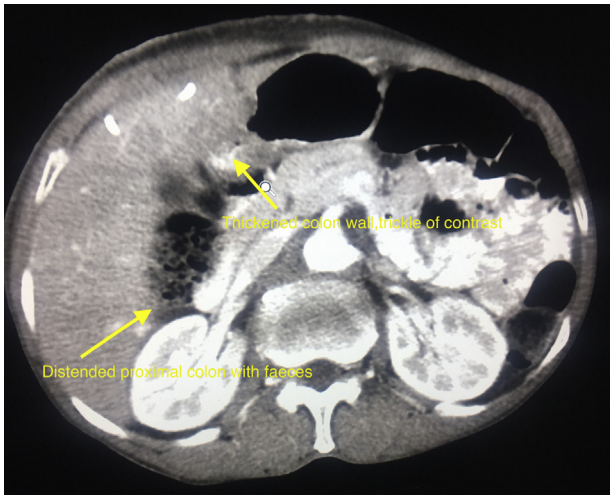

Fig. 2. C.T. showing area of hepatic flexure.

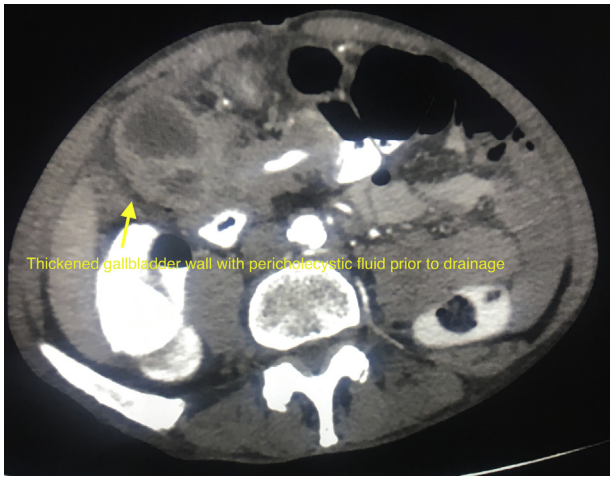

Fig. 3. Thickened gallbladder wall on C.T.

Fig. 4. Colobscopic view of tumour.