

Discussion

Gastro-intestinal stromal tumours (GIST) are rare primary mesenchymal tumours arising from the Cajal cells of the gastrointestinal tract. Since longitudinal submucosal spread is very limited and lymph node involvement is rare, margin-negative resection without lymphadenectomy is the commonly accepted surgical treatment. Due to the rarity of duodenal GISTs, there are no large studies to define the optimal surgical procedure. Literature reports a 2% mortality after pancreas sparing total duodenectomy but a high morbidity of around 60% with most of the complications being secondary to anastomotic leaks.⁵ Pancreas sparing distal duodenectomy eliminates the risk of biliary and pancreatic anastomotic leak and thus is a good alternative for infra-ampullary tumours. Since the tumour does not invade the pancreas the procedure is oncologically sound. Our patient was an ideal candidate for this procedure. Positivity for CD117 (protein tyrosine kinase Kit) is the gold standard to establish a diagnosis of GIST. However, around 10% of cases have clinicopathologic features of GISTs but do not express Kit. Recently published reports mention higher sensitivity for DOG-1 than CD-117 for diagnosis of GIST. Our patient's lesion was positive for both CD-117 and DOG-1.

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A rare complication of Meckel's diverticulum

Meckel's diverticulum results from failure of the omphalomesenteric duct (vitelline duct) to regress during embryologic development. The incidence of Meckel's diverticulum varies between 1-2% and carries a lifetime risk of 4-6% of becoming symptomatic. The incidence of complications relating to Meckel's diverticulum decreases with increasing age. Stone formation in Meckel's diverticulum is rare.¹ Here, we report a case of Meckel's diverticulum with lithiasis in a patient who presented with right lower quadrant abdominal pain.

Case Report

A 62-year old male presented with recurrent right lower abdominal pain for 2 months.

He had previously undergone laparoscopic cholecystectomy for calculous cholecystitis. On examination, his vitals were stable and abdomen was soft

and non-tender. X-ray abdomen (supine) (**Figure 1**) showed calcification in the right lower quadrant. CT abdomen and pelvis (**Figure 2**) revealed an ileal diverticulum with calculi within it. He underwent a laparotomy which revealed Meckel's diverticulum with a narrow base with smaller diverticulae containing multiple stones (**Figure 3,4**). Subsequently, a Meckel's diverticulectomy

was performed. The post-operative recovery was uneventful and the patient was discharged after 4 days. The biopsy report was consistent with Meckel's diverticulum.



Figure 1: Abdomen X-Ray showing calcification in right lower quadrant.

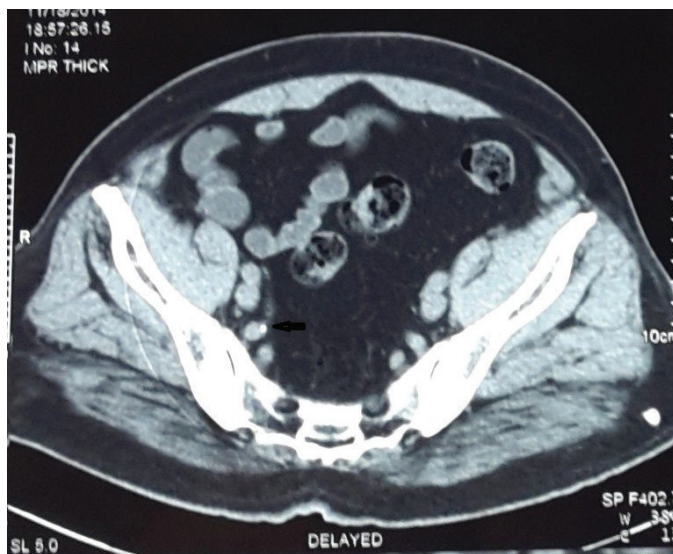


Figure 2: CT Abdomen showing ileal diverticulum with calculi within it.

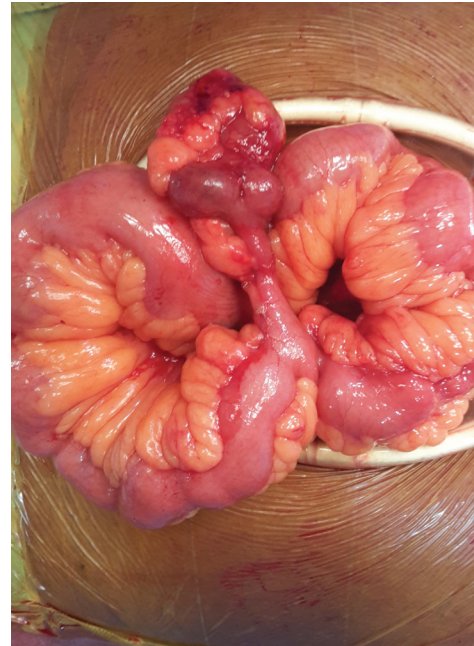


Figure 3: Laparotomy revealed Meckel's diverticulum with a narrow.

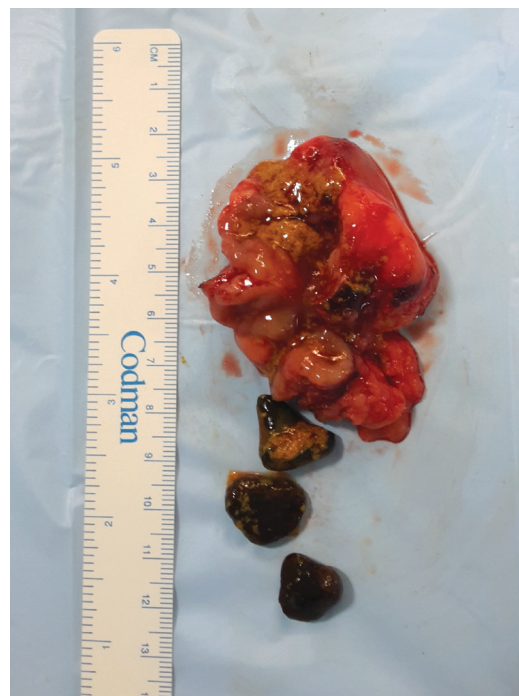


Figure 4: Resected specimen containing multiple calculi.

Discussion

Meckel's diverticulum is the commonest congenital malformation of the gastrointestinal tract.² Although it mostly remains silent, it can present with pain abdomen, bleeding, perforation, intestinal obstruction, intussusception, and malignant transformation.³ Stone formation in Meckel's diverticulum is rare¹ and to identify this pre-operatively is extremely difficult. Meckel's stones may be misinterpreted as gallstones, teeth within a dermoid or an appendiceal faecolith when symptomatic. The pathogenesis of lithiasis in Meckel's diverticulum remains unclear. It may be related to stasis resulting from poor coordination of peristaltic waves at the site of Meckel's diverticulum.^{1,2} The absence of ectopic gastric mucosa may also lead to a more alkaline environment in the diverticulum, favouring precipitation of calcium and other minerals necessary for lithiasis.^{4,5} The "stone" itself may usually be either a fecolith, bezoar, or gallstone. Meckel's diverticulolithiasis can cause acute or intermittent abdominal pain, chronic gastrointestinal blood loss, diverticulitis, perforation¹ or sub-acute intestinal obstruction. This case report illustrates one of the few circumstances when a plain abdominal X-ray may provide a helpful clue to the diagnosis of Meckel's diverticulum.

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