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CONTINUING MEDICAL EDUCATION
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Surgery Quiz – Case 16

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A 78-year-old male patient with a history of vascular dementia presented to the emergency department complaining of abdominal distention, nausea, bilious vomiting and absence of stools over the preceding 10 days. Direct questioning revealed a history of fatigue and weight loss of approximately 22 kg over the last three months. Abdominal computed tomography (CT) depicted: (a) A circumferential, asymmetric thickening of the cecum wall with luminal narrowing, pericolic lymphadenopathy and fat infiltration (fig. 1), and (b) a horseshoe kidney with a giant simple cyst at the isthmus of the renal fusion (fig. 2). Colonoscopy demonstrated a nearly obstructing cecal mass. Histology of biopsy specimens revealed a poor differentiated adenocarcinoma. Open right colectomy with complete mesocolic excision and central vascular ligation performed for a poor differentiated cT4cN1-2M0 adenocarcinoma of the cecum. Immediate postoperative period was characterized by continuation of nausea, bilious vomiting and absence of stools. Non-operative management of supposed early postoperative small bowel obstruction initiated unsuccessfully. Open adhesiolysis performed on postoperative day 22; no transition point and no stenosis of the former handsewn ileotransverse anastomosis recognized. Despite re-laparotomy, increased nasogastric drainage and bilious vomiting after several attempts for initiation of oral feeding continued. The patient gradually died on postoperative day 42 due to intractable cachexia.

What went wrong?

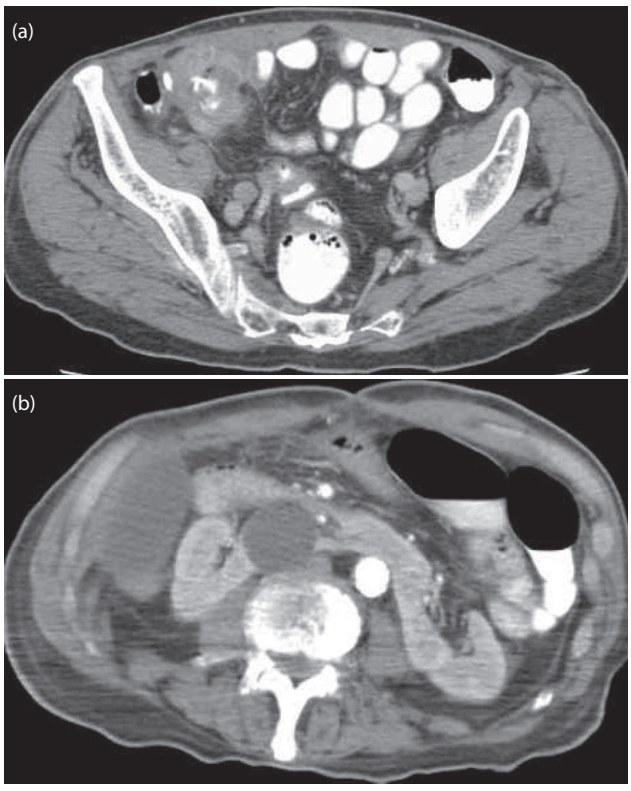

Figure 1. Computed tomography (CT) showed (a) thickening of cecum wall with luminal narrowing and (b) horseshoe kidney with a giant simple cyst at the isthmus of the renal fusion.

Comment

The patient had a nearly obstructing non-metastatic cancer of the cecum. The patient had also additional pathologies: (a) A giant cyst at the isthmus of a horseshoe kidney and (b) a history of

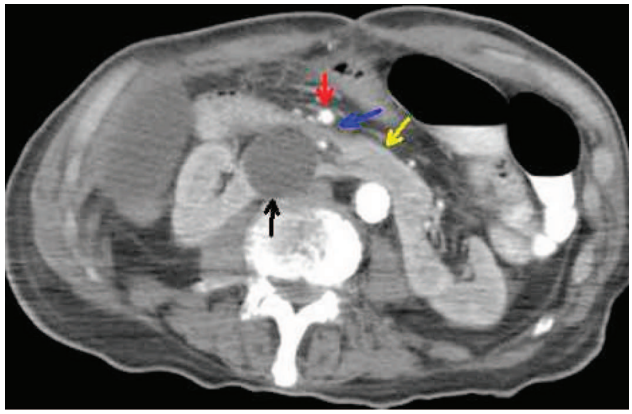

Figure 2. Axial computed tomography (CT) showing duodenal dilation proximal to the level of the third part (blue arrow) which is compressed by the close proximity of superior mesenteric artery (red arrow) to the renal cyst (black arrow) and isthmus (yellow arrow) of the horseshoe kidney.

22 kg of weight loss over the last three months. Clinical symptoms of abdominal distention, bilious vomiting and absence of stools attributed to the obstructing nature of the cecal mass. Additional pathologies were not considered to have significant impact on clinical presentantion. Continuation of similar symptomatology after initial laparotomy attributed to early postoperative small bowel obstruction. Once more, additional pathologies were not considered to have a significant impact on clinical presentantion. Re-laparotomy performed which revealed no evidence of transition point and stenosis of the anastomosis. Only after continuation of analogous symptomatology, additional pathologies were considered conclusive for clinical presentation.

Review of CT images enabled visualization of duodenal vascular compression. The third part of the duodenum was compressed by the close proximity of the superior mesenteric artery (SMA) to the renal cyst and isthmus. Although the aortomesenteric angle and distance were above normal values, the distance between the SMA and the renal cyst was 6 mm (fig. 3). The above imaging findings were compatible with SMA syndrome. Eventually, the patient suffered from misdiagnosed chronic SMA syndrome; the sequence of the events was as follows: (a) Delayed diagnosis of colon cancer resulted in incomplete bowel obstruction and acute weight loss, and (b) weight loss resulted in acute exacerbation of chronic mesenteric artery syndrome which dominated clinical presentation. The decisive fault was that no gastrojejunostomy or feeding jejunostomy added at re-laparotomy which was definitely a point of no return, as decision-making for third corrective laparotomy was difficult considering deterioration of patient's nutritional status.

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