

Case Report

Intestinal malrotation presenting with midgut volvulus in an adult

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Case Report

A 36-year-old man without previous medical history presented to the emergency department with abdominal pain and vomiting of acute onset. His vital signs were stable and he had no fever. Abdominal exploration revealed distention with pain at palpation. Laboratory tests were normal. Abdominal X-Ray showed gastric and small intestine distention. A nasogastric tube was placed and fluid therapy started. Computed tomography showed an intestinal malrotation, without the duodenum crossing the midline and with the colic frame arranged in the left hemiabdomen (Figure 1), complicated with a midgut volvulus as demonstrated by the whirlpool sign (Figure 2, arrow). Ladd's procedure was performed using a midline open approach. Mesenteric lymphadenopathy and chylous ascites was found (Figure 3). The volvulus was reduced by counter-clockwise detorsion without need of intestinal resection and Ladd's bands division along with an extended Kocher manoeuvre (Figure 4) allowed a good position of the mesentery. Appendectomy was also conducted. Postoperative course was uneventful with the

More Information

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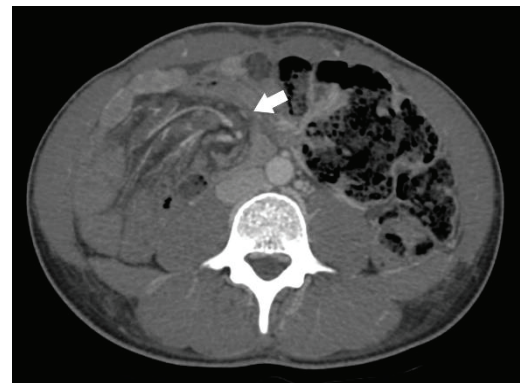


Figure 2: Abdominal computed tomography. Axial section. Whirlpool sign (arrow) due to rotation of the bowel around its mesentery leading to whirls of the mesenteric vessels.



Figure 1: Abdominal computed tomography. Coronal section. Abnormal disposition of the small intestine, all of it located in the right hemiabdomen, and of the colon, rejected to the left hemiabdomen.

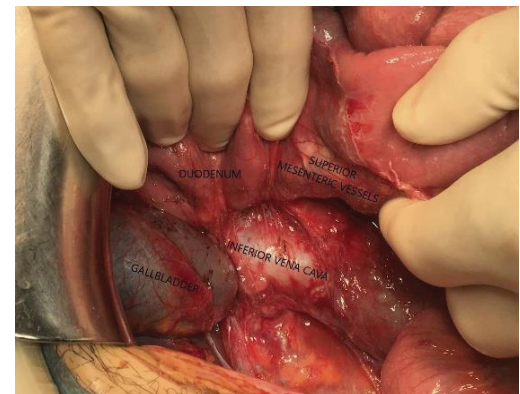


Figure 3: Intraoperative finding of mesenteric lymphadenopathy as a consequence of intestinal lymphatic drainage obstruction.

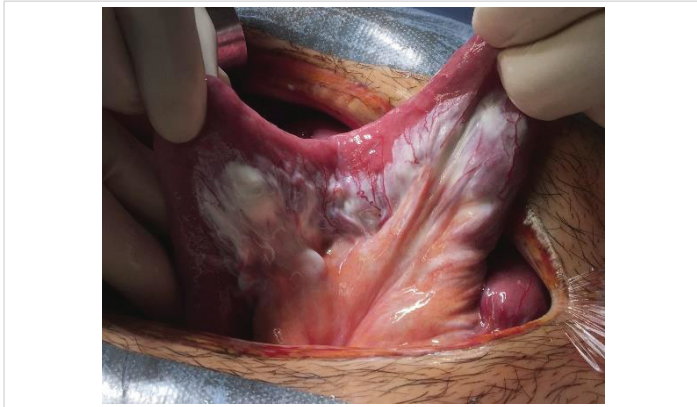


Figure 4: Intraoperative image showing an extensive Kocher manoeuvre, which was necessary to restore a flat position of the mesentery.

patient being discharged the fifth day, after resumption of bowel function. No alterations were detected at follow up one month later.

Discussion

Intestinal malrotation is a rare fetal developmental

abnormality which may go unnoticed until adulthood. It can be an incidental finding or present with mild symptoms, but it can also lead to an intestinal obstruction or acute ischemia due to a midgut torsion requiring emergency surgery [1]. Ladd's procedure is the standard treatment. It was described in 1936 and consists in a repositioning of the intestine by lysing the abnormal fixations. Since it is an uncommon situation and due to challenging anatomy and possible difficulties in reducing the volvulus an open approach is usually preferred. Appendectomy is recommended in order to avoid failure or delay in diagnosis [2,3].

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