



MALROTATION IN A 42 YEAR-OLD MALE : A CASE-REPORT

General Surgery

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ABSTRACT

Malrotation of the intestine is a rare clinical presentation in adults. We report a case of malrotation presenting as acute intestinal obstruction in a 42 year old male. This case has been presented due to the rarity of this clinical presentation in the adult population.

KEYWORDS

INTRODUCTION:

Malrotation of the intestine is a rare clinical presentation in adults. Patients may be asymptomatic or they may have chronic abdominal symptoms. Malrotation predisposes the individual to develop midgut volvulus causing intestinal obstruction and acute abdomen. Treatment involves performing the Ladd's procedure which includes division of the Ladd's band and inter-mesenteric fibrous bands, widening the mesenteric base, appendectomy and finally, repositioning the intestine. We present this case of malrotation of gut in a 42 year old male presenting with acute obstruction. This case prompts discussion due to the rarity of this clinical presentation in the adult population.

CASE PRESENTATION :

A 42 year old male presented to the surgery emergency with chief complaints of pain abdomen for 4 days and vomiting for past one day. There was no history of constipation, loose motions, bleeding per rectum or yellowish discoloration of skin and sclera. The patient was a heavy smoker and an occasional alcoholic. There was no history of similar complaints in the past and the patient was otherwise healthy. On physical examination, his vitals were stable. He had a blood pressure of 120/88 mmHg, his pulse rate was 90 beats/min and there was no respiratory distress. Mild tenderness was present per abdomen and the abdomen was distended. His rectal examination was normal. His complete blood count was sent which showed leucocytosis. Rest of his complete blood count and kidney function tests were normal. His abdomen X-Ray in standing position showed several air-fluid levels. His ultrasound abdomen revealed dilated gut loops with interloop fluid and free fluid in subhepatic space. Initially, the patient was managed conservatively and a contrast enhanced CT scan of the abdomen was planned. However, due to progressively increasing tenderness and distension and increasing air-fluid levels on the subsequent X-Ray abdomen, the patient was shifted to the operating room for an emergency exploratory laparotomy.

Upon entry into the abdomen, about 500mL of fluid was present in the abdominal cavity. The entire small bowel was on the right side and the colon was on the left. The Duodeno-jejunal flexure was present on the right side of the abdomen and the ileocaecal junction, the caecum and the appendix were present in the right upper quadrant on the left side of the DJ junction. The small bowel wall appeared edematous. However, there were no gangrenous changes. We performed the Ladd's procedure which involved division of the Ladd's band, inter-mesenteric band division, widening of the mesenteric border, appendectomy and finally, placement of the bowel in its corrected position. (1) Drains were placed in the sub-hepatic space and in the pelvic cavity. The postoperative period remained uneventful and the patient was discharged on the eighth post-operative day.

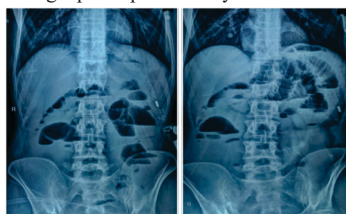


Fig 1: X-Ray Abdomen (erect) showing multiple air-fluid levels and progressively increasing levels in the subsequent X-Ray



Fig 1 : X-Ray Abdomen (supine) showing dilated gut loops



Fig 2: Intraoperative view depicting caecum and appendix in the right upper quadrant

DISCUSSION :

Intestinal malrotations are mostly diagnosed in the paediatric population mostly in the first month of their life. (2) Adult presentation is rare and is reported with an incidence of 0.2% to 0.5%. (3) (4) Malrotations of gut occur when normal embryonic rotation fails to occur during the 10th – 12th week of gestation. Most adults present with chronic symptoms which are sometimes greater than six months in duration. (5) Our patient did not have any history of similar complaints in the past. Preoperative work-up includes upper gastrointestinal series and CT scan of the abdomen. The Ladd's procedure is the treatment of choice (6) which was also performed in our patient. Previous studies report that laparotomy is recommended even if patients are asymptomatic in order to avoid any possible mismanagement in the future. (7) The outcome of patients depends on severity of presentation. Post-operative prolonged ileus, recurrent

volvulus and a higher risk of adhesion obstruction of the small bowel are the possible complications.

CONCLUSION :

In conclusion, we present a rare case of adult presentation of malrotation of the gut. Adult malrotation of the gut is a rare clinical presentation and thus, is a difficult diagnosis in adults.(2). The patients may be completely asymptomatic, they may present with chronic symptoms or they may have acute abdomen. Pre-operative work up includes upper gastrointestinal series which reveals the entire small bowel located on the right side of the abdomen. Ladd's procedure is the treatment modality of choice and is recommended even in asymptomatic patients to avoid any confusion in the future.(7) Post-operative complications include prolonged ileus and a higher lifetime risk of adhesion obstruction of the small intestine.

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