BENEFITS OF EARLY MANAGEMENT OF INTESTINAL MALROTATION IN ADULTS: CASE REVIEW

Leonardo Kozian, MD; Ryan Cohen, MD; Sakib Adnan, MD; Molly Casey, DO; Moshumi Godbole, MD; Pak Leung, MD, MS, MBA, FACS;
Einstein Medical Center Philadelphia – Jefferson Health | Department of Surgery

Background

Intestinal malrotation is an anatomic aberrancy caused by failure of midgut development during early embryogenesis, previously estimated to occur in 1 in 6000 live births, with 90% of cases identified within the 1st year of life. Epidemiological data in adults is less precise, though recent reports suggest a prevalence of 0.2-0.5% in the general population. In patients of all ages with acute cases of malrotation without volvulus, the long-established procedure of choice has been the Ladd procedure. However, compared to well-defined pediatric presentations, adults with malrotation typically present with chronic and non-specific symptoms thereby making diagnosis challenging. Literature regarding the management of this subset of patients remains controversial. Due to the high morbidity associated with delays in diagnosis, early and empiric surgical intervention, i.e. Ladd procedure, is increasingly being favored as the management of choice.

Case Presentation

We present the case of a 36-year-old female presenting with chronic non-specific gastrointestinal symptoms due to her previously undiagnosed intestinal malrotation. Computer tomography scan was obtained and aberrancies in the patient's gastrointestinal anatomy were suggestive of a partial intestinal malrotation (Image 1). Given these findings, the decision was made with proceeding with a diagnostic laparoscopy. Intraoperatively, the diagnosis was confirmed, and we were also able to identify the presence of extrinsic compression of the duodenum by the Ladd's bands which was not evident on imaging. The decision was made to proceed with robotic-assisted laparoscopic Ladd procedure. The patient tolerated the procedure well and had an uneventful hospital course. After being discharged home on postoperative day 3, outpatient follow up was notable for expeditious recovery with resolution of her symptoms.

Discussion

Adults with intestinal malrotation often have non-specific and chronic gastrointestinal symptoms which results in diagnostic delays. In this subset of patients, early or empiric operative intervention may improve associated morbidity. Additionally, minimally invasive Ladd procedures are now rapidly gaining favor over the open approach due its superior immediate postoperative outcomes. Our case highlights the importance of maintaining a high index of suspicion for non-acute intestinal malrotation thereby allowing for a less morbid surgical approach to be taken by means of a robot-assisted laparoscopic Ladd's procedure.

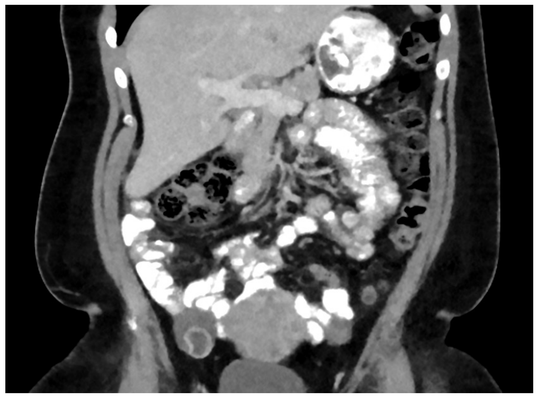


Image 1:
CT scan demonstrating the aberrant large and small bowel positions