Chronic Abdominal Pain in Adulthood: Unmasking Malrotation - A Case Report

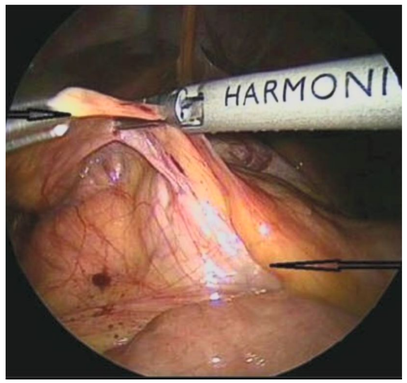
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Introduction:

Malrotation, typically diagnosed in infancy, is a rare anatomical anomaly that results from improper rotation of the midgut during embryonic development. While it predominantly presents in the pediatric population, adult-presentation malrotation is a seldom encountered entity. We present the case of a 26-year-old female who was referred for surgical intervention due to chronic intermittent abdominal pain and nausea, ultimately diagnosed with malrotation.

Case Report:

A 26-year-old female with no significant medical history presented with chronic intermittent abdominal pain and nausea persisting for 1-2 years. She denied emesis, changes in bowel habits, or weight loss. A CT scan of the abdomen and pelvis revealed evidence of malrotation. The patient underwent an elective diagnostic laparoscopy, lysis of adhesions, and an appendectomy (Ladd's procedure). Complete nonrotation of the bowel was noted, with all small bowel on the right side and large bowel on the left. Multiple adhesive bands (Ladd's bands) were found causing partial blockage and kinking. These bands were meticulously released, restoring proper bowel alignment. A prophylactic appendectomy was performed. The patient was discharged on the same day.

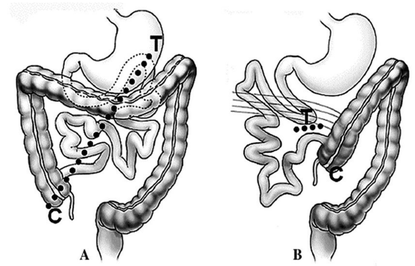


Discussion:

Adult-presentation malrotation is exceedingly rare, with most cases diagnosed in infancy. Patients may present with vague abdominal symptoms, making diagnosis challenging. Bilious emesis, distention, and metabolic alkalosis are cardinal signs in pediatric cases, but these may be absent in adults. Imaging studies, such as CT or upper gastrointestinal series, are essential for diagnosis. Our case highlights the importance of considering malrotation as a differential diagnosis in adult patients with chronic abdominal complaints.

Conclusion:

This case highlights the importance of considering adult-presentation malrotation in patients with chronic abdominal symptoms. Timely diagnosis and surgical intervention, often involving laparoscopy and a Ladd's procedure, can provide relief even in cases with prolonged symptoms. Continued research and comprehensive case reporting are essential to further understanding this rare presentation of malrotation and refining management approaches.



Intestinal malrotation: A) normal situation of the bowel; B) malrotation (proximal small bowel is on the right and cecum is on the left)

References:

1: Fu, T., Tong, W. D., He, Y. J., Wen, Y. Y., Luo, D. L., & Liu, B. H. (2007). Surgical management of intestinal malrotation in adults. World Journal of Surgery, 31(9), 1797–1803. https://doi.org/10.1007/s00268-007-9018-2

2: Mazziotti, M. V., Strasberg, S. M., & Langer, J. C. (1997). Intestinal rotation abnormalities without volvulus: The role of Laparoscopy. Journal of the American College of Surgeons, 185(2), 172–176. https://doi.org/10.1016/s1072-7515(01)00900-0

3: Panda, N., Bansal, N., Narasimhan, M., & Ardhanari, R. (2014). Laparoscopic correction of intestinal malrotation in adult. Journal of Minimal Access Surgery, 10(2), 90. https://doi.org/10.4103/0972-9941.129961

4: VIDAL, E. A., RENDON, F. A., ZAMBRANO, T. A., GARCÍA, Y. A., VITERI, M. F., CAMPOS, J. M., RAMOS, M. G., & RAMOS, A. C. (2016). Intestinal malrotation in patients undergoing bariatric surgery. ABCD. Arquivos Brasileiros de Cirurgia Digestiva (São Paulo), 29(suppl 1), 24–26. https://doi.org/10.1590/0102-6720201600s10007

5: von Flüe, M., Herzog, U., Ackermann, C., Tondelli, P., & Harder, F. (1994). Acute and chronic presentation of intestinal nonrotation in adults. Diseases of the Colon & Rectum, 37(2), 192–198. https://doi.org/10.1007/bf02047549

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