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Intestinal Obstruction Due to Ileotransverse Anastomosis Stenosis Secondary to Crohn's Disease: A Case Report

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ABSTRACT

Introduction: Crohn's disease is a chronic inflammatory bowel disease that can affect any part of the gastrointestinal tract. This report explores a case of intestinal obstruction resulting from stenosis of ileotransverse anastomosis, secondary to Crohn's disease.

Epidemiology: The macroscopic features of Crohn's disease vary, including patchy inflammation, ulcers, and stenosis. Stenosis is a common occurrence, particularly in the terminal ileum, affecting 30-40% of individuals with Crohn's disease. OBJECTIVE: To describe a clinical case of intestinal obstruction due to ileotransverse anastomosis stenosis secondary to Crohn's disease, aiming to recognize its behavior and determine surgical management in patients with a high suspicion of this condition.

Patient and Method: A 35-year-old female diagnosed with ankylosing spondylitis, recent Crohn's disease, and intestinal obstruction. Surgical history includes exploratory laparotomy, right hemicolectomy, and ileotransverse anastomosis due to acute appendicitis. Current symptoms led to surgical exploration, revealing extensive adhesions and stenosis at the anastomosis.

Results: The patient underwent resection of the affected intestinal segment and the creation of a terminal ileostomy, successfully resolving the obstruction. Comprehensive preoperative evaluation, diagnostic confirmation through imaging, and appropriate surgical intervention played critical roles in achieving a positive outcome.

Discussion: The discussion emphasizes the complexities associated with Crohn's disease surgery, highlighting common complications such as infection, fistulas, and anastomotic stenosis. The case underscores the need for a cautious surgical approach and the importance of early consideration of Crohn's disease in patients with intestinal obstruction.

Conclusions: This case report underscores the significance of recognizing Crohn's disease in patients presenting with intestinal obstruction. Appropriate surgical management, though challenging due to the heightened risk of complications, is essential for improving treatment outcomes. A comprehensive approach, from timely diagnosis to surgical intervention, is crucial for effectively addressing Crohn's disease manifestations and enhancing patient quality of life.

KEYWORDS: Crohn's disease, anastomosis, stenosis, Intestinal obstruction, appendix

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INTRODUCTION

Crohn's disease is a chronic inflammatory bowel disease that can affect any part of the gastrointestinal tract, from the mouth to the anus. The macroscopic features of Crohn's disease may vary depending on the location and severity of inflammation. Some of the most common macroscopic characteristics of Crohn's disease include: 1. Patchy inflammation: it can appear as inflammation in patches of different sizes and shapes anywhere in the gastrointestinal tract. 2. Ulcers: These may be small or large, with small areas

of hemorrhagic ulceration that eventually become fissures. The mucosa presents a cobblestone pattern due to deep fissured ulcers between areas of edematous mucosa. 3. Stenosis: Due to inflammation and scar tissue (fibrosis), cracks and thickening of the intestinal wall can occur.[1] The percentage of stenosis in Crohn's disease can vary; in some cases, it may be mild or significant, or even absent. According to some studies, approximately 30% to 40% of people with Crohn's disease may develop stenosis at some point in their lives.[2] Stenosis may be more common in individuals with Crohn's disease in the terminal ileum.[3] Additionally, if the body is unable to absorb proteins, vitamins, or minerals, nutritional problems may arise.[1] 4. Enlargement of regional lymph nodes is often observed.[2]

EPIDEMIOLOGY

Crohn's disease, classified as an autoimmune disease within the group of inflammatory bowel diseases,[4] typically manifests at various ages, from childhood to advanced adulthood. The majority of cases (over 80%) are diagnosed before the age of 40, commonly affecting the terminal ileum and colon.[5] In some instances, the onset of the disease may mimic acute appendicitis, presenting with pain in the right iliac fossa, leukocytosis with neutrophilia, and ultrasound findings consistent with appendicitis.[4]

Appendix involvement occurs in approximately 25% of patients with ileal Crohn's disease, but it is uncommon for appendicular involvement to be the first manifestation of the disease.[6] Since its initial description in 1953 by Meyerding and Bertram, around 160 cases have been documented in the medical literature.[7] The nonspecific symptoms of Crohn's disease at its onset may be confused with appendicitis, leading to surgery.[4] This presentation is exceptional, and when it occurs, definitive diagnosis is obtained through histopathological analysis.[6]

Crohn's disease can exhibit various patterns, including inflammatory-active, penetrating-fistulizing, stricturing-fibrostenotic, and reparative-regenerative.[9]

The disease's activity is established as the primary clinical risk factor predicting symptomatic postoperative recurrence.[8] Common complications encompass pouchitis (40-50%), anastomotic failures (7%), obstruction (13-25%), pouch-vaginal fistula (3-15%), and anastomotic stenosis (16%). Although surgery can resolve the condition, it is not always curative, and many patients require additional interventions due to stenosis in previous anastomoses or new disease episodes. Approximately 35% of patients will need some form of reintervention within 10 years of the initial surgery.[10]

OBJECTIVE

Describing a clinical case report of intestinal obstruction due to ileotransverse anastomosis stenosis secondary to Crohn's disease to recognize its behavior and thus determine the surgical approach in patients with a high suspicion of this disease.

PATIENT AND METHOD

A 35-year-old female patient diagnosed with ankylosing spondylitis + inflammatory bowel disease (recently diagnosed Crohn's disease) + intestinal obstruction. The patient has the following relevant history: Chronic degenerative conditions: Ankylosing spondylitis diagnosed 7 years ago. Alcohol use for 15 years, once a month until intoxication, currently discontinued. Denies smoking and substance abuse. No reported allergies. Positive transfusions in LAP of February 2023. Surgical history: EXPLORATORY LAPAROTOMY + RIGHT HEMICOLECTOMY + ILEOTRANSVERSE ANASTOMOSIS on 02/02/2023 at HGZ due to acute appendicitis. Findings: The vermiform appendix is not identified, prompting the before mentioned surgery. The resected surgical specimen is opened, revealing thickened walls of the terminal ileum and cecum with ulcerated areas in the colon mucosa. The cecal appendix cannot be identified from the intestinal lumen, and inflammatory bowel disease is not ruled out.

Current Condition

It begins in July 2022 with the presence of evacuatory changes. In March 2023, the patient is admitted to this general surgery unit due to a case of intestinal obstruction, initiating a study protocol due to a probable inflammatory intestinal disease. Currently, the patient is readmitted on 04/24/23 due to a new episode of intestinal obstruction. Reports a weight loss of 10 kg in 3 months due to intestinal disease. An esophagogastroduodenal series is performed on 04/05/2023, reporting non-occlusive ileus data, with no evidence of stenosis or other alterations by this imaging method.(Figure1) As there is no response to medical management, a colonoscopy is performed, reporting a non-navigable anastomotic stenosis by endoscope, prompting a surgical procedure to be planned.

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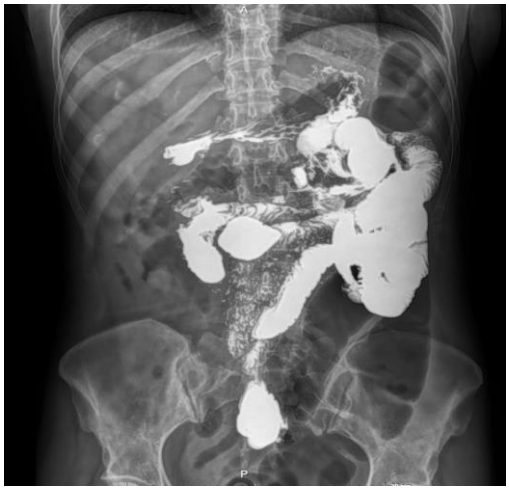

Figure 1. Esophagogastroduodenal series

Surgical Procedure: EXPLORATORY LAPAROTOMY + ADHESIOLYSIS + INTESTINAL RESECTION + ILEOSTOMY WITH THE FOLLOWING FINDINGS: Abundant Mazuji III adhesions, omentum-wall, omentum-loop, loop-loop, bending with a fibrosis zone involving ileotransverse anastomosis and small intestine 10 cm from the fixed loop, anastomotic stenosis is identified, finding a lumen of approximately 1 cm.(Figure 2)

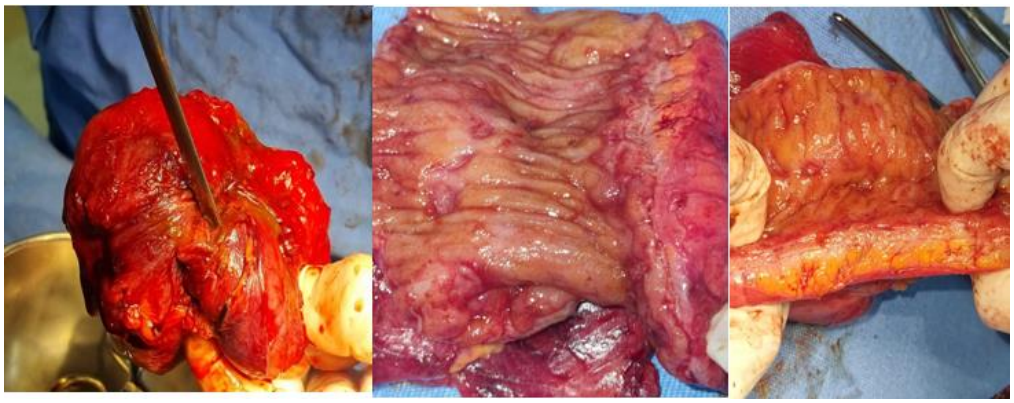

Figure 2. Surgical findings.

RESULTS

In this clinical case, a patient with a recent diagnosis of Crohn's disease was attended to, presenting intestinal obstruction due to stenosis of the ileotransverse anastomosis resulting from their initial surgery. Symptoms were assessed, and a physical examination was conducted, along with imaging tests that included prior pathology results to confirm the diagnosis. Subsequently, the patient underwent surgery, where an anastomotic stenosis with an approximate lumen of 1 cm was identified. Resection of the affected portion of the intestine was performed, and a terminal ileostomy was carried out due to the high risk of recurrent stenosis. This resolved the obstruction. A comprehensive approach to patients with this disease is crucial to achieve timely diagnosis and prevent the adverse progression of the condition.

DISCUSSION

Crohn's disease, a chronic condition characterized by intestinal inflammation, exhibits diverse macroscopic manifestations, including patchy inflammation, ulcers, and stenosis. In this case, ileotransverse anastomosis stenosis, secondary to Crohn's disease, led to intestinal obstruction in a patient recently diagnosed with the disease.

The significance of this case lies in the necessity of a comprehensive approach to Crohn's disease patients. Clinical presentation, diagnostic confirmation through imaging tests, and pre-surgical assessment are crucial. The patient experienced nonspecific symptoms since July 2022, highlighting changes in bowel habits and significant weight loss, underscoring the importance of early attention in such cases.

The surgical procedure revealed Mazuji III adhesions and an anastomotic stenosis, with a lumen of approximately 1 cm. Intestinal resection and the creation of a terminal ileostomy proved effective in resolving the obstruction but also underscored the complexity and surgical risks associated with Crohn's disease.

CONCLUSION

In conclusion, this case report underscores the intricate

interplay between Crohn's disease, surgical interventions, and the development of intestinal complications, specifically ileotransverse anastomosis stenosis leading to intestinal obstruction. The meticulous examination of this patient's clinical course unveils the nuanced challenges encountered in managing Crohn's-related complications, emphasizing the imperative for vigilant postoperative surveillance.

The emergence of ileotransverse anastomosis stenosis as a causative factor for intestinal obstruction in the backdrop of Crohn's disease highlights the multifaceted nature of this chronic inflammatory condition. The recognition and management of such complications necessitate a comprehensive understanding of the underlying pathophysiology, emphasizing the role of multidisciplinary collaboration involving gastroenterologists, surgeons, and radiologists.

Furthermore, this case underscores the significance of tailored therapeutic strategies in the management of Crohn's disease, with a heightened awareness of potential postoperative complications. The importance of ongoing monitoring and proactive intervention in patients with a history of ileotransverse anastomosis cannot be overstated, as prompt identification and management can significantly impact clinical outcomes.

In the broader context of gastrointestinal surgery and Crohn's disease management, this case report contributes to the growing body of literature elucidating the intricate relationships between surgical interventions, disease progression, and resultant complications. As the medical community continues to refine its understanding of Crohn's disease pathogenesis and therapeutic modalities, this case serves as a poignant reminder of the dynamic nature of the disease process, necessitating ongoing research and clinical vigilance to optimize patient outcomes.

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