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Intestinal Wall Mass: Always Tumoral?

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Abstract **Case Report**

Background: Intestinal wall thickening with a mass-like appearance often raises suspicion for malignancy. However, inflammatory and lymphoproliferative disorders can present similarly, leading to diagnostic challenges. ***Case Presentation:*** We report two cases of intestinal pseudo-tumoral masses with distinct etiologies. The first case involved a 30-year-old male presenting with chronic abdominal pain and bowel disturbances. Imaging revealed a circumferential thickening of the ileocecal region, mimicking a stenosing mass. A right hemicolectomy was performed, and histopathology confirmed Crohn's disease in an acute flare. The second case concerned a 43-year-old diabetic male with chronic abdominal pain and subocclusive episodes, progressing to acute intestinal obstruction. Imaging and intraoperative findings revealed an infiltrative mass in the terminal ileum. Histopathological analysis confirmed a B-cell marginal zone lymphoma. ***Conclusion:*** These cases highlight the importance of considering inflammatory and lymphoproliferative disorders in the differential diagnosis of intestinal masses. A multidisciplinary approach combining imaging, endoscopy, and histopathology is essential for accurate diagnosis and appropriate management.

Keywords: Intestinal Pseudo-tumor, Crohn's Disease, Marginal Zone Lymphoma, Ileocecal Mass, Histopathology.

INTRODUCTION

Intestinal masses often raise concern for malignancy, particularly adenocarcinoma. However, various non-neoplastic conditions, such as inflammatory bowel disease (IBD) and lymphoma, can mimic tumor-like lesions. Crohn's disease can present as an inflammatory or fibrotic mass, while lymphoma may appear as an infiltrative, stenosing lesion. Distinguishing between these entities is crucial for appropriate management. We report two cases where intestinal wall thickening with a pseudo-tumoral appearance led to different diagnoses: Crohn's disease and marginal zone B-cell lymphoma.

CASE REPORTS

Patient 1

A 30-year-old male with no significant past medical history presented with chronic intermittent right iliac fossa pain and mucus-laden diarrhea for two months, with mild weight loss. The symptoms progressed to sub-occlusive episodes, prompting emergency consultation. On physical examination, the patient was in good general condition, with localized tenderness in the right iliac fossa but no signs of peritoneal irritation. Laboratory tests revealed an inflammatory syndrome with CRP at 40 mg/L and mild hyperlymphocytosis.

Abdominopelvic contrast-enhanced CT scan showed circumferential and irregular thickening of the distal ileum, cecum, ascending colon, and transverse colon, measuring up to 15 mm, forming a pseudo-tumoral, nearly stenotic mass in the right iliac fossa. Colonoscopy revealed congestive mucosa with an impassable stenosis at the cecum, limiting progression to the distal ileum.

A multidisciplinary team recommended an extended right hemicolectomy. Histopathological analysis of the resected specimen confirmed Crohn's disease in the acute inflammatory phase.

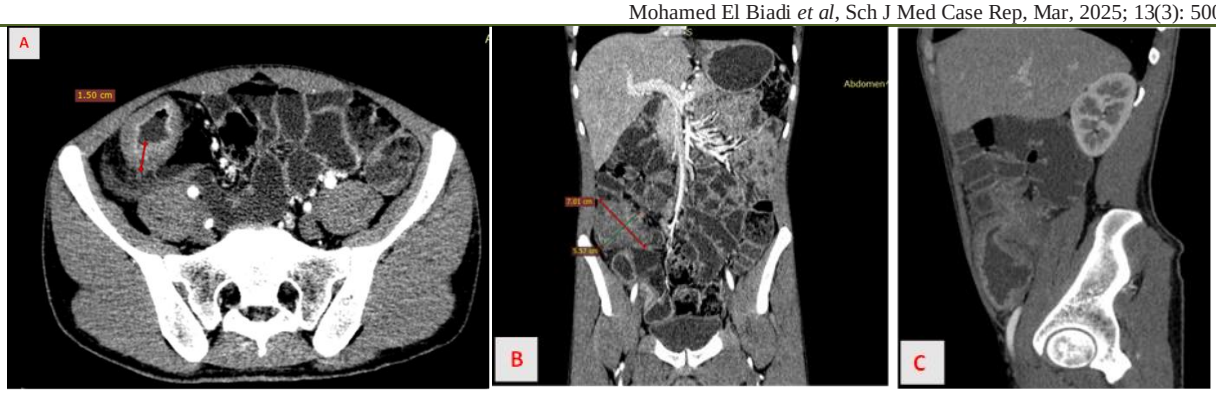

Figure 1 (patient 1): Abdominopelvic contrast-enhanced CT scan in axial (A), coronal (B), and sagittal (C) sections showing irregular circumferential ileocecal thickening forming a pseudo-tumoral mass in the right iliac fossa.

Figure 2 (patient 1): Image of the right hemicolectomy specimen. Note the fibrous appearance of the chronic inflammatory thickening and the stenosis of the terminal ileal loop (Yellow arrow).
Histopathological analysis: Crohn's disease in the acute inflammatory phase.

Patient 2

A 43-year-old male with a history of type 2 diabetes mellitus presented with chronic abdominal pain and recurrent spontaneously resolving subocclusive episodes for five months. He developed acute intestinal obstruction two days prior to admission. On physical examination, he had significant abdominal distension, diffuse tenderness, and an empty rectal ampulla.

Laboratory findings included microcytic anemia (Hb: 10.5 g/dL), elevated CRP (50 mg/L), and leukocytosis (13,000/mm³). Abdominal CT revealed an extensive circumferential thickening of the terminal ileum (maximum thickness: 41 mm, extending over 16 cm), forming a pseudo-tumoral pelvic mass displacing the sigmoid colon posteriorly and causing colonic obstruction.

Intraoperatively, sero-hematic ascites, an inflamed and adherent greater omentum, and a conglomerate of inflamed small bowel loops were noted. A perforated segment of small bowel was identified. The patient underwent segmental ileal resection with an ileostomy.

Histopathological examination confirmed a B-cell marginal zone lymphoma of the small intestine. The patient was referred to oncology for further treatment.

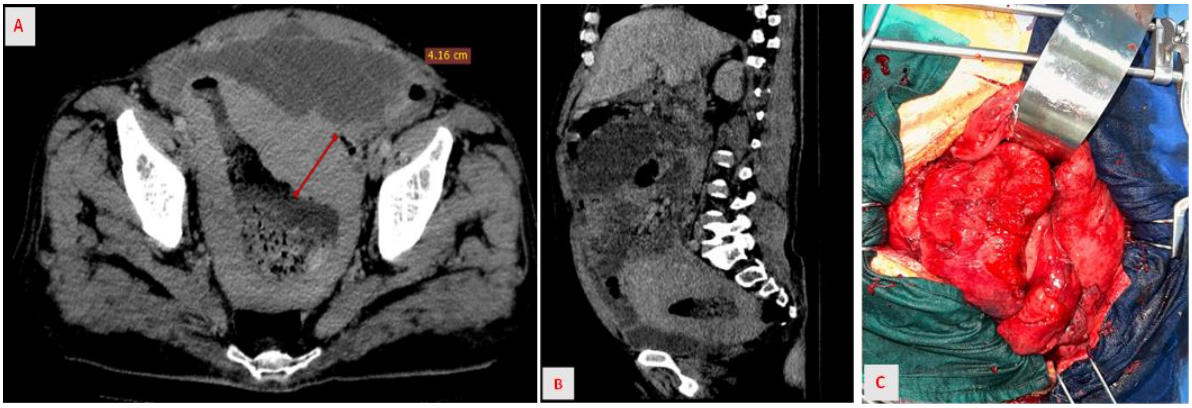

Figure 3 (patient 2): Radiological and surgical correlation of the pelvic mass. (A-B) Abdominopelvic contrast-enhanced CT scan in axial and sagittal sections showing extensive irregular circumferential thickening of the terminal ileum, forming a tumoral pelvic mass displacing the sigmoid colon posteriorly and causing upstream colonic obstruction. (C) Intraoperative view of the pelvic mass showing inflamed small bowel loops, adherent and clumped in certain areas, with a thickened and congested mesentery. Histopathological analysis: B-cell marginal zone lymphoma of the small bowel.

DISCUSSION

Intestinal wall thickening can have multiple etiologies, including inflammatory bowel diseases (IBD), infections, ischemic conditions, and neoplasms such as lymphomas or adenocarcinomas [1,2]. Distinguishing between these causes is crucial to avoid unnecessary surgical interventions or delays in appropriate treatment.

Crohn's Disease and Pseudotumoral Forms

Crohn's disease is a chronic inflammatory disorder that can affect the entire gastrointestinal tract, with a predilection for the terminal ileum and right colon. It can present in various forms, including pseudotumoral masses that mimic neoplastic processes due to significant mural thickening associated with fibrosis and transmural inflammation [3].

In the first case presented, the initial clinical presentation suggested a neoplastic process, given the presence of subocclusive episodes and marked circumferential thickening of the cecum and ascending colon. However, histological examination confirmed an acute exacerbation of Crohn's disease. Pseudotumoral Crohn's disease is well-documented in the literature and poses a diagnostic challenge, particularly when an impassable stenosis is observed during colonoscopy [4].

B-cell Marginal Zone Lymphoma with Intestinal Involvement

Primary gastrointestinal lymphomas are rare, accounting for approximately 1–4% of digestive tract tumors, with marginal zone B-cell lymphoma being a subset of indolent non-Hodgkin lymphomas [5]. These malignancies are often diagnosed late due to their nonspecific clinical presentation, ranging from chronic abdominal pain to acute intestinal obstruction, as observed in our second case [6].

Intestinal involvement in B-cell lymphoma can lead to a stenosing tumoral mass with significant mural thickening, mimicking a solid tumor. Imaging, particularly contrast-enhanced CT scans, may show irregular thickening with mesenteric infiltration, but definitive diagnosis relies on histopathological analysis and immunohistochemistry [7]. Treatment strategies typically involve a multidisciplinary approach, with surgical resection reserved for complications such as obstruction or perforation, followed by chemotherapy tailored to the histological subtype [8].

Differential Diagnosis and the Role of Multimodal Diagnosis

The primary challenge posed by these two cases lies in the radiological similarities between severe Crohn's disease flares and intestinal lymphoma. Red flag signs that may suggest a neoplastic origin include a well-defined mass, associated lymphadenopathy, and a lack of response to anti-inflammatory treatments [9].

Advanced imaging modalities such as MR enterography and PET-CT scans can aid in differentiating these conditions by characterizing metabolic activity and assessing tissue infiltration [10].

CONCLUSION

These two cases highlight the diagnostic complexity of intestinal wall masses and emphasize the importance of a thorough evaluation incorporating advanced imaging, colonoscopy, and histopathology. A multidisciplinary approach is essential to ensure accurate diagnosis and prevent unnecessary interventions or delays in appropriate treatment.

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