



CROHN'S DISEASE PRESENTED AS APPENDICITIS—A CASE REPORT

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ABSTRACT **Background:** Crohn's disease (CD) is a chronic transmural inflammation and could be misdiagnosed as appendicitis, infectious enterocolitis, Meckel's diverticulitis, or mesenteric adenitis. The aim of this presentation was to improve the diagnostic tools of CD. **Case presentation:** A 54-year-old man presented to a government hospital due to severe progressive right lower quadrant abdominal pain associated with fever. He was diagnosed as acute appendicitis. Exploratory laparotomy was done, but the patient was not improved. Further medical attention was sought. Histopathological examinations of the appendix raised the possibility of inflammatory bowel disease. Full history, complete physical examinations, advanced lab tests, imaging, and good response to treatment confirmed the diagnosis of Crohn's disease. **Conclusion:** Physicians must consider differential diagnosis by taking a good history, performing a well-focused physical examination, and order specific investigations to confirm the diagnosis.

KEYWORDS : Crohn's disease, appendicitis, abdominal pain, misdiagnosis.

INTRODUCTION :

Crohn's disease (CD) is a chronic inflammatory bowel disease (IBD) that can affect any part of the gastrointestinal tract. The most commonly affected areas include the distal ileum, colon, and perianal region [1]. Diagnosis of CD relies on a combination of factors, including a patient's medical history, physical examination, laboratory tests, imaging studies, endoscopic procedures, and histological analysis of tissue samples [1]. However, due to the variable presentation of CD symptoms, it can be challenging to distinguish it from other conditions.

This presentation focuses on the specific challenges of diagnosing CD. CD can be easily mistaken for other conditions, such as appendicitis, infectious enterocolitis, Meckel's diverticulitis, mesenteric adenitis, and even acute gynecological issues like ovarian torsion, ectopic pregnancy, or hemorrhagic ovarian cysts [2, 3, 4].

Misdiagnosis can lead to unnecessary surgeries like appendectomy, which can increase the risk of complications like peritoneal adhesions, ectopic pregnancy, and infertility in women [5]. This presentation aims to explore improved diagnostic tools and strategies for differentiating CD from other conditions in young women, particularly when surgery is being considered.

Case Presentation

A 54-year-old man presented to CMCH, Coimbatore, with a concerning scenario. He experienced severe and progressively worsening pain in the lower right quadrant of his abdomen, accompanied by a fever. These symptoms are highly suggestive of acute appendicitis, an inflammation of the appendix. Based on the clinical presentation, a diagnosis of acute appendicitis was made. To address this, an emergency laparotomy, a surgical procedure involving opening the abdominal cavity, was performed. During the surgery, the appendix was successfully removed.

However, despite the appendectomy, the man's symptoms persisted. This raised a red flag for the medical team, indicating that the initial diagnosis of appendicitis might not have been the complete picture. To further investigate the cause of his ongoing pain, a colonoscopy was performed after the laparotomy. A colonoscopy is a procedure that allows visualization of the inner lining of the colon using a thin, flexible tube with a camera attached. During the colonoscopy, a crucial finding emerged - a stricture, which is an abnormal narrowing, was identified at the ileocecal junction. The ileocecal junction is the point where the small intestine (ileum) connects to the large intestine (cecum).

Given the presence of a stricture and the persistent symptoms, a decision was made to proceed with a hemicolectomy. A hemicolectomy is a surgical procedure that involves removal of a portion of the colon. In this case, a hemicolectomy likely involved removing the right half of the colon, encompassing the ileocecal junction and the identified stricture. The resected tissue sample was

then sent for histopathological examination (HPE). HPE is a microscopic examination of tissues to determine the presence and nature of any abnormalities.

The HPE examination revealed a crucial diagnosis - Crohn's disease. Crohn's disease is a chronic inflammatory bowel disease (IBD) that can affect any part of the gastrointestinal tract. It causes inflammation of the lining of the digestive system, leading to a variety of symptoms like abdominal pain, diarrhea, and weight loss. The presence of a stricture at the ileocecal junction identified during the colonoscopy is a common finding in Crohn's disease.

Thankfully, with the definitive diagnosis of Crohn's disease, the man was able to receive appropriate treatment. This likely involved a combination of medications aimed at reducing inflammation and managing symptoms. Following the diagnosis and treatment initiation, he has been undergoing regular follow-up appointments with his doctor. This close monitoring allows for adjustments in treatment plans as needed and ensures the man receives optimal care for his Crohn's disease.

The case highlights the importance of considering alternative diagnoses, especially when symptoms persist after an initial intervention. A thorough investigation through procedures like colonoscopy and HPE examination can lead to a definitive diagnosis and appropriate treatment plan, ultimately improving the patient's quality of life.

DISCUSSION

Crohn's disease (CD) is a chronic inflammatory bowel disease (IBD) that can affect any part of the gastrointestinal tract, with the distal ileum being most commonly involved [6]. While the appendix is rarely the sole site of CD involvement, cases have been reported, particularly in young adults [7, 8].

This case presentation highlights the challenges of diagnosing CD who initially underwent an appendectomy based on symptoms suggestive of appendicitis (fever, lower right abdominal pain). However, persistent symptoms like chronic diarrhoea, abdominal pain, and weight loss, following surgery the symptoms kept persisting pointing towards a possible alternative diagnosis of IBD, which was later confirmed by HPE examination.

Importance of Comprehensive Evaluation and Avoiding Misdiagnosis

This case underscores the importance of a thorough evaluation beyond the classic triad of appendicitis for patients presenting with similar symptoms. A detailed medical history, comprehensive physical examination, and selective laboratory and imaging tests are crucial for accurate diagnosis. Special attention should be paid to adults experiencing chronic diarrhoea, weight loss, or rectal bleeding, regardless of gender.

Neglecting past medical records and failing to consider alternative diagnoses can lead to unnecessary surgeries and potential complications. For example, appendectomy carries a risk of developing peritoneal adhesions, which can increase the risk of bowel obstruction in both men and women.

CONCLUSION

Physicians must prioritise a comprehensive diagnostic approach for patients. This includes a detailed medical history, a focused physical examination, and targeted investigations to reach an accurate diagnosis. By considering all possibilities and avoiding assumptions based on gender, healthcare professionals can ensure optimal outcomes for their patients.

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