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Case Report

Investigating the Existence of Multiple Ulcers in the Small Intestine Similar to the Crohn Disease: A Case Report

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ABSTRACT

Background: The Small bowel ulcer may be caused by several factors. In most cases, bleeding and intermittent small bowel obstruction are common.

Case Presentation: This report describes a case complaining of severe abdominal pain. The patient stated the history of taking ibuprofen over the last 18 months. She experienced severe weight loss but the results of diagnostic tests were normal. Finally, the patient underwent exploratory laparotomy. According to intraoperative investigations, treatment for Crohn's disease was started for the patient. However, due to the lack of remission of the disease, the patient underwent laparotomy again and 70 cm of the affected parts were resected. Histological studies indicated that possible cause of this disease was the use of NSAIDS, which is consistent with the patient's statement.

Conclusion: It should be kept in mind that the symptoms of Crohn's disease and bowel ulcers caused by NSAIDs may overlap in some cases.

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Introduction

Among the conditions that lead to the development of chronic or recurrent ulcers of the small intestine, Crohn disease, intestinal tuberculosis, Behcet disease, and nonsteroidal anti-inflammatory drugs (NSAIDs) can be mentioned. However, there are still cases of unknown causes [1]. In the past five decades, several distinct diseases causing superficial idiopathic ulcers and small bowel strictures have been identified and evaluated. These diseases, which almost exclusively affect the small intestine, are chronic nonspecific multiple ulcers of the small intestine, cryptogenic multifocal ulcerous stenosing enteritis, neuromuscular and vascular hamartoma enteropathy associated with the *SLCO2A1* gene, and non-granulomatous ulcerating jejunoileitis. Most of these conditions are associated with obscure gastrointestinal bleeding or intermittent small bowel obstruction. Bleeding is commonly caused by the formation of a shallow ulcer while obstructive symptoms are due to the narrowing of parts of the small intestine. Although the intestinal mucosa is normal in the affected areas, some of the patients may suffer from malabsorption. In most cases, the diagnosis was incorrect. These patients have a long course of treatment and their symptoms may persist for years even after multiple surgeries [2]. In the present study, we report the case of a 47-year-old female with multiple ulcers of the small intestine, a condition similar to Crohn disease.

Case Presentation

A 47-year-old female with severe abdominal pain was referred to the hospital. The abdominal pain became more severe after eating to the extent that the patient could only drink water and liquids. Concerning the history of previous illnesses, the patient mentioned heart disease. In addition, the patient had a history of ibuprofen use in the last 18 months and was addicted. She had a history of laparoscopic cholecystectomy surgery in the last 18 months, after which she suffered from abdominal pain. In addition, in the last 18 months, she had experienced severe weight loss, losing 50% of her body weight. The results of diagnostic tests, such as colonoscopy, computed tomography scan, and upper endoscopy were also normal and no lesions were found. Finally, the patient underwent an exploratory laparotomy. Intraoperative observations showed evidence similar to Crohn disease in the small intestine and fat trapping was observed in the small intestine (Figure 1). Therefore, some small intestinal tissue was resected for pathological studies, and treatment for Crohn disease was started. Despite starting the treatment for Crohn disease, the patient's disease did not subside and the complications of the disease were not limited. Accordingly, the patient underwent laparotomy again, and after an accurate evaluation of the intestine and abdominal cavity, 70 cm of the small intestine was resected, which included multiple strictures and large ulcers that almost caused intestinal obstruction (Figure 2). After the resection, the patient's symptoms were limited and the pain gradually disappeared. Histological studies did not find a definite cause for the intestinal ulcers and just indicated that the possible cause of this disease was the use of NSAIDS, which is consistent with the patient's statement about the use of ibuprofen in the last 18 months. The follow-up showed that the general condition of the patient is good she has no pain or nutritional problems, and her bowel habits are normal.

Discussion

Conditions that can lead to ulceration of the small intestine include excessive use of NSAIDs and intestinal tuberculosis. Furthermore, these ulcers have also been reported in several patients with Crohn disease, ischemic colitis, and multiple non-specific ulcerations of the small intestine [3]. In the case of intestinal tuberculosis, mucosal adhesion and border irregularity are obvious [4]. Longitudinal ulcers extending along the long axis of the small intestine are the main features of ischemic colitis; however in the present case, according to the doctor's opinion and histopathological results, the probability of these disorders was rejected. Similarly, the evaluations showed no evidence of multiple non-specific small intestine ulcers or lesions that indicate the presence of malignancy.

Crohn disease is an inflammatory gastrointestinal disease that can involve any part of the digestive system but it often affects the small intestine [5]. It commonly appears with abdominal pain, particularly because of ileum involvement, anemia, and blood-stained diarrhea. Mild fever, vomiting, or nausea may arise In some cases. Besides, fissures, abscesses, and fistulas may also occur if the anus is involved [6]. Due to the non-specific nature of the symptoms, the clinical diagnosis of Crohn disease is almost impossible. Further assessments are necessary in cases of symptoms such as bloody diarrhea, iron deficiency, and weight loss [7]. Our patient had the main symptoms of Crohn disease, including abdominal pain, and severe weight loss. Additionally, fat-trapping was observed during intraoperative assessments. However, some signs distinguished our patients from those who had Crohn disease.

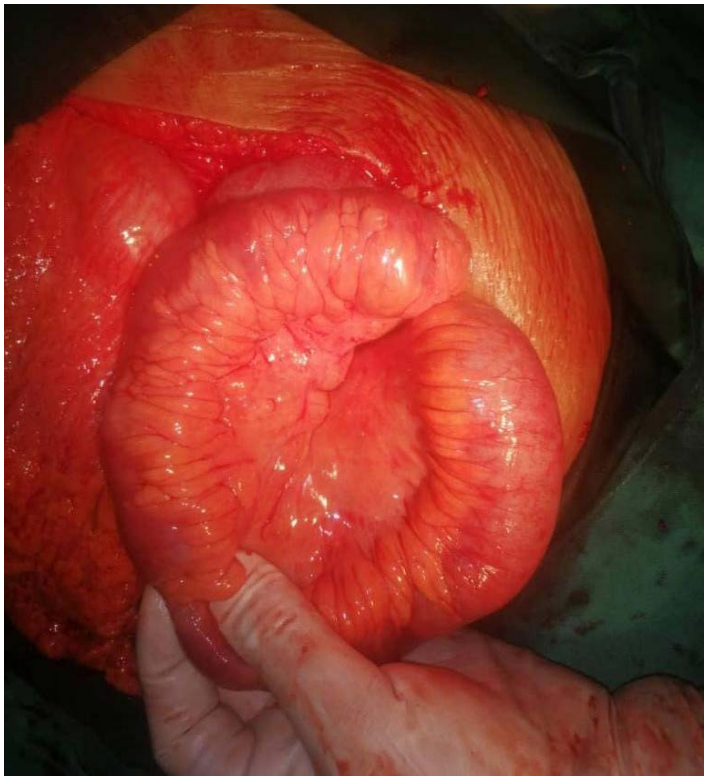

Figure 1. Intraoperative observations; fat trapped in the small intestine

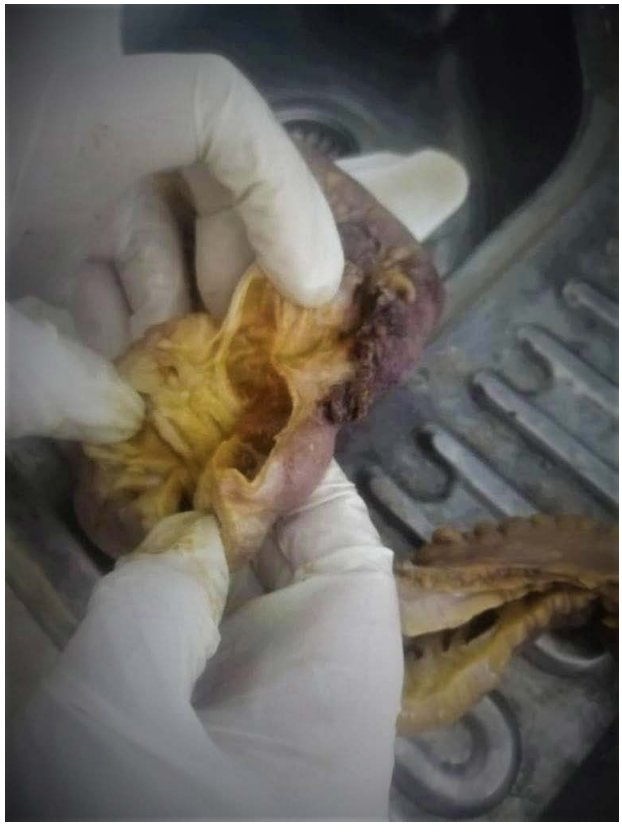

Figure 2. Part of the resected intestine; multiple intestinal strictures

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According to the diagnostic criteria that were reported by Nishimura et al. [8], the annular ulcer of the small intestine, which was diagnosed in the patient was most likely caused by the utilization of NSAIDs. Several reasons have been reported as follows: The patient had a history of frequent NSAIDs taken to relieve pain; the ulcer was detected in the part of the small intestine wall that was characteristic of NSAID-induced ulcers [9]; the symptoms improved after bowel resection and discontinuation of NSAIDs; and the possibility of infection and inflammatory bowel disease was ruled out by histopathological assessments.

NSAIDs cause immunosuppression through inhibition of cyclooxygenase 2 or the permeation of intestinal bacteria, which occurs due to drug-induced increases in intestinal mucosal penetrability. Following this immune disorder, NSAIDs gradually cause lesions of the small intestine and this disorder eventually causes tissue damage [10]. Recuperation after discontinuation of NSAIDs serves as the foundation for a definitive diagnosis.

The findings of an investigation by Matsumoto et al. [8] about the incidence of annular ulcer caused by NSAIDs in 21 patients showed that annular ulcer was diagnosed in 12 cases, of which 4 cases were associated with advanced stenosis. These results indicated that the occurrence of an ulcer progression to stenosis and the formation of an annular ulcer is rare.

The present patient was discharged from the hospital after surgery. She was forbidden to take NSAIDs, and to ensure there was no bleeding in the small intestine and to relieve the pain, she was monitored on an outpatient basis.

Conclusion

Altogether, in the case of the mentioned patient, clinical examinations and diagnostic tests did not determine the cause of the disorder, and histological studies indicated that the possible cause of this disease was the use of NSAIDS. Although the symptoms of Crohn disease and bowel ulcers caused by NSAIDs may overlap in some cases, an accurate diagnosis is possible by examining the patient's medical records and paying attention to the symptoms of ulcers caused by NSAID use.

Ethical Considerations

Compliance with ethical guidelines

Informed consent was obtained from the patient regarding the publication of her disease history, process, and treatment. She was also assured that her name and identity would remain anonymous in the study and images and diagnostic test results were included in the article.

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Authors' contributions

Conceptualization: Farzad Abaszadeh, Habiballah Nikzad Jamnani, Mahshid Nazemzadeh Shoaei, Mina Zamanbeygi Mahani and Fatemeh Mohammadi Vahedi; Methodology: Farzad Abaszadeh and Fatemeh Mohammadi Vahedi; Validation: Farzad Abaszadeh; Data gathering: Habiballah Nikzad Jamnani and Khadijeh Momeni; Analysis: Mina Zamanbeygi Mahani; Resource investigation: Khadijeh Momeni and Fatemeh Mohammadi Vahedi; Project administration: Habiballah Nikzad Jamnani and Mahshid Nazemzadeh Shoaei; Writing: Farzad Abaszadeh and Fatemeh Mohammadi Vahedi.

Conflict of interest

The authors declared no conflict of interest.

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