



Behcet's Disease Following Bariatric Surgery: A Case Report

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Abstract

Introduction: Behcet's disease (BD) is a systemic vasculitis that can affect the gastrointestinal system.

Case Presentation: This report discusses a 41-year-old woman with a history of bariatric surgery who later developed gastrointestinal symptoms and arthralgia consistent with BD. Diagnosing BD is challenging because there are no specific diagnostic tests; instead, diagnosis is based on the constellation of clinical signs and symptoms such as recurrent oral and genital ulcers, uveitis, and multisystem involvement, which can overlap with other diseases. It remains unclear whether surgical procedures influence the onset or progression of the disease.

Conclusions: The relationship between surgical interventions and the onset of BD requires further investigation. This case underscores the importance of considering BD in the differential diagnosis of post-surgical GI symptoms and highlights the role of tailored immunosuppressive therapy in achieving resolution of GI ulceration or arthralgia. Future studies must clarify the interplay between surgical procedures and immune-mediated diseases like BD.

Keywords: Gastrointestinal Behcet's Disease, Behcet's Disease, Differential Diagnosis

1. Introduction

Behcet's disease (BD) is a chronic, systemic inflammatory disorder characterized by recurrent oral and genital ulcers, ocular inflammation, and multisystem involvement, including the gastrointestinal tract. Gastrointestinal Behcet's disease (GI-BD) is less common but can present diagnostic challenges due to its overlap with other conditions like Crohn's disease (1, 2). This case highlights a patient whose GI symptoms emerged after bariatric surgery, raising questions about the potential influence of surgical procedures on BD development.

2. Case Presentation

A 41-year-old woman underwent sleeve gastrectomy shortly before presentation. Her past medical history was unremarkable, except that she had undergone an

oophorectomy and hysterectomy eight years ago. About six months after the procedure, she experienced recurrent oral aphthous ulcers. Four months later (ten months postoperatively), she developed arthralgia in the hips, knees, wrists, and hands, consistent with an inflammatory pattern. She reported diarrhea, hematochezia, and skin lesions (pseudofolliculitis). Notably, she had no history of genital aphthae. The diagnosis of GI-BD was based on clinical presentation, a positive pathergy test, human leukocyte antigen (HLA)-B5/B51 positivity, and the exclusion of other conditions such as Crohn's disease. Treatment with corticosteroids and immunosuppressive therapy (azathioprine, methotrexate) led to significant clinical improvement.

1. Physical examination:

- Multiple oral aphthae.
- Decreased mobility in the wrists, PIP joints, cervical and lumbar spine, and hip joints.

- Tenderness in the sacroiliac joints and swelling in both knees.

2. Laboratory results:

- WBC: 8000; Lymph: 30%; Hb: 13 g/dL; MCV: 89 fL; PLT: $213 \times 10^9/L$.

- ESR: 13 mm/h; CRP: 23 mg/L.

- Pathergy test: Positive.

- The HLA B5, B51: Positive.

- Calcium: Normal; viral markers: Negative; U/A: Trace protein; 24-hour urine protein: 55 mg.

3. Endoscopic findings:

- Upper GI: Congestion and erythema in the gastric mucosa with multiple erosions and superficial ulcers (5 mm).

- Lower GI: Diffuse congestion, erythema, and multiple ulcers (largest diameter 5 mm) extending from the rectum to the ileum.

- Histologic findings showed no granulomas, dysplasia, or transmural inflammation, and imaging did not support a diagnosis of Crohn's disease, thus supporting a diagnosis of GI-BD.

4. Biopsy results:

- Moderate chronic gastritis and severe active colitis with no dysplasia or intestinal metaplasia. A subsequent MRI of the lumbosacral spine showed disc herniation at the L4-L5 and L5-S1 levels. The patient was later admitted with acute arthralgia, lower extremity edema, abdominal pain, and hematochezia. Vital signs were stable with no fever.

5. Follow-up findings:

- Laboratory tests revealed elevated inflammatory markers and anemia (Hb: 9.5 g/dL, ESR: 54 mm/h, CRP: 16 mg/L).

- Brain MRI showed subcortical and periventricular foci consistent with microvasculitis or ischemia.

- Pelvic MRI indicated mild hip joint effusion with normal sacroiliac joints.

5. Management:

The patient received 1 gram of methylprednisolone pulse therapy for three days, followed by 60 mg of oral prednisolone. Symptoms, including inflammatory arthritis and GI symptoms, improved significantly. The treatment regimen included azathioprine (100 mg), methotrexate (15 mg), and additional supportive therapies such as Rifaximin, probiotics, and citalopram.

Follow-up labs showed stabilization of inflammatory markers and improved clinical outcomes (Table 1).

3. Discussion

Complications resulting from the development of significant neurological diseases and a wide range of these complications have been reported (3). This case underscores the complexity of diagnosing and managing GI-BD, particularly when preceded by surgical interventions. The GI-BD is an uncommon but significant manifestation of BD, often presenting with nonspecific symptoms like abdominal pain, diarrhea, and ulceration of the intestinal mucosa. In this patient, symptoms emerged after bariatric surgery, raising the question of whether surgical stress or alterations in the gastrointestinal environment might trigger BD activation.

Due to overlapping clinical and endoscopic findings, gastrointestinal involvement in BD is often challenging to differentiate from other conditions, particularly Crohn's disease. Li et al. (4) described a case of a 50-year-old woman with a single ileocecal ulcer forming a sinus tract, a rare but possible presentation of GI-BD. Similarly, Kim et al. (5) reported a 39-year-old woman with multiple elongated ulcers and an anorectal fistula, features more typical of Crohn's disease but occasionally observed in BD. These cases highlight the necessity of a thorough differential diagnosis, particularly in patients with a history of surgical interventions or atypical presentations.

The surgical aspect is particularly noteworthy. Zeng et al. (6) reviewed patients with GI-BD and reported that surgical interventions are often reserved for emergencies, such as perforation or severe bleeding. However, they found that patients with GI-BD are more prone to postoperative complications, including recurrence, than those with Crohn's disease, necessitating more aggressive postoperative management. This reinforces the importance of prioritizing medical therapy to control inflammation and prevent complications.

Additionally, Kim et al. (5) and Zeng et al. (6) emphasized that while BD and Crohn's disease share overlapping features, they are distinct conditions with different treatment approaches. Recognizing the subtle differences is crucial for effective management. In this case, the patient's history of sleeve gastrectomy and subsequent onset of GI-BD symptoms raises a potential association. Although direct evidence is lacking, surgical

Table 1. Feature, Gastrointestinal Behcet's Disease and Crohn's Disease

Feature	GI-BD	CD
Etiology	Auto-inflammatory, vasculitic process	Immune-mediated chronic inflammation
Genetic association	HLA-B5, HLA-B51	NOD2/CARD15 and other susceptibility genes
Ulcer location	Terminal ileum and cecum most common	Can affect entire GI tract (mouth to anus)
Ulcer characteristics	Round, punched-out, deep ulcers with discrete borders, volcano-shaped ulcers	Longitudinal, serpiginous ulcers with cobblestone mucosa
Fistula formation	Rare	Common (perianal, enterocutaneous)
Granulomas on biopsy	Absent	Often present (non-caseating granulomas)
Histopathology	Vasculitis, neutrophilic infiltration	Transmural lymphoid inflammation
Extraintestinal symptoms	Oral/genital ulcers, uveitis, arthritis, and vasculitis	Arthropathy, erythema nodosum, and pyoderma gangrenosum

Abbreviations: GI-BD, gastrointestinal Behcet's disease; CD, Crohn's disease; HLA, human leukocyte antigen.

procedures could theoretically influence immune homeostasis, potentially unmasking latent autoimmune or autoinflammatory conditions. Further research is required to explore this hypothesis.

Treatment strategies for GI-BD aim to control inflammation and prevent complications. Corticosteroids remain the cornerstone of initial therapy, as demonstrated by the patient's significant improvement following methylprednisolone administration. Immunosuppressants such as azathioprine and methotrexate are crucial for long-term disease control, as highlighted in this case. The addition of probiotics and Rifaximin addressed secondary bacterial overgrowth, which may exacerbate GI symptoms.

Overall, this case contributes to the growing understanding of GI-BD and its potential triggers, particularly in the context of surgical interventions. Further studies are needed to clarify the relationship between bariatric surgery and BD activation and to establish evidence-based management guidelines for this rare but challenging condition.

3.1. Conclusions

The relationship between surgical interventions and the onset of BD requires further investigation. This case underscores the importance of considering BD in the differential diagnosis of post-surgical GI symptoms and highlights the role of tailored immunosuppressive therapy in achieving symptom control. Future studies must clarify the interplay between surgical procedures and immune-mediated diseases like BD.

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Footnotes

Authors' Contribution: P. P., M. H., M. D., and H. M. were responsible for the concepts and design. P. P., M. H., and H. M. helped with the literature search. P. P., M. H., and H. M. revised the article language, and all the authors participated in writing and revisions.

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Data Availability: The dataset presented in the study is available on request from the corresponding author during submission or after publication.

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