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Impact of Bariatric Surgery on Perianal Fistulas: A Case Report and Review of the Literature

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Complex perianal fistulas can be a challenging manifestation of inflammatory bowel disease (IBD) for both gastroenterologists and surgeons. We present a patient with Crohn's disease in endoscopic remission on monoclonal antibody therapy. Despite adequate control of her luminal disease, there was no improvement in her complex perianal fistulas with antibiotic treatment, surgical drainage, seton placement, and ultimately diversion colostomy. Bariatric surgery, which resulted in weight loss of 135-pounds, was associated with immediate control of her fistulas. Bariatric surgery in a select subset of patients may reduce the pro-inflammatory state that obesity, central or otherwise, promotes and may help IBD patients have improved health outcomes.

CASE PRESENTATION

A 28-year-old female with a BMI (body mass index) 47 kg/m2 was diagnosed with fistulizing ileocolonic and perianal Crohn's disease 10 years ago. She was initially treated with infliximab and developed anti-drug antibodies. Upon switching to ustekinumab she achieved complete endoscopic remission but continued to have active perianal disease. Initial treatment with antibiotics were unsuccessful and she required regular exam under anesthesia (EUA) with seton placement. Within two years, the frequency of EUA with seton placement increased to five episodes in the same year. A switch to adalimumab with methotrexate was unsuccessful. She underwent diverting loop transverse colostomy to provide relief from recurrent perianal fistulas. Despite the diversion, she continued to have rectal pain, new abscesses and drainage.

After failing non-surgical weight loss, she underwent laparoscopic sleeve gastrectomy after discussion with both colorectal and bariatric surgery. Reversal of the loop colostomy occurred a year later. Her post-operative course was complicated by a peri-gastric fistula and abscess that was endoscopically drained. Post-bariatric surgery, she lost 135 pounds and only experienced a single perianal abscess in 12 months as compared to multiple annual episodes prior to bariatric surgery. Subsequent colonoscopy showed continued normal luminal findings and significantly improved perianal disease with no active fistulas or abscess.

DISCUSSION

This case highlights the impact of bariatric surgery on a patient suffering from recurrent, fistulizing,

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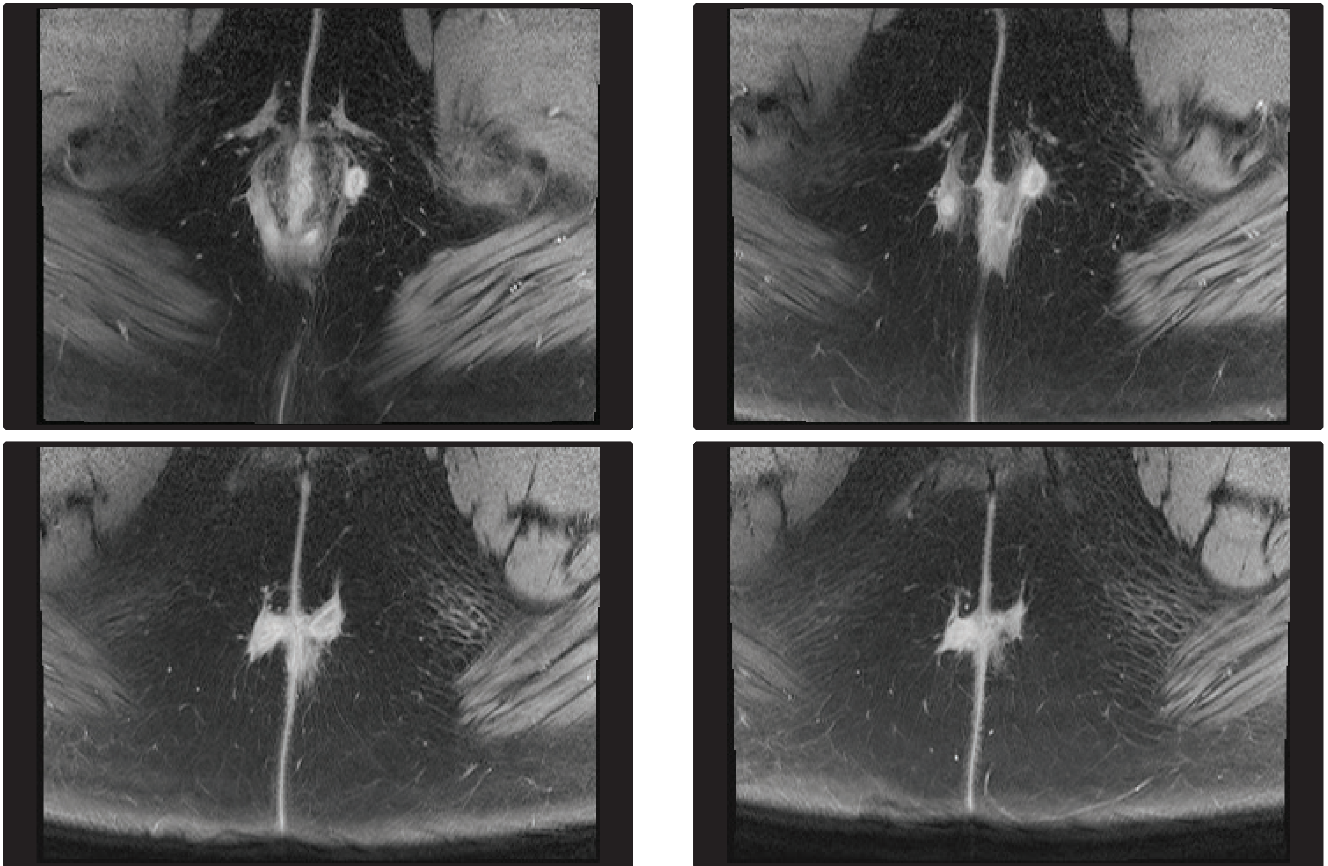

Figures 1-4. MRI Pelvis with and without Contrast. Complex transsphincteric perianal fistula, with opening at the posterior anal canal around 6:00. Extension to the skin surface is at the medial gluteal folds bilaterally, two openings on the left side and one on the right. The sinus tract component noted in the left ischiorectal fossa. Additional intersphincteric fistula with openings at the anterior wall around 11:00 and 1:00. These communicate with each other and extend to the skin surface at the labial folds.

perianal Crohn's disease previously refractory to medical and surgical management even with endoscopic remission. From a surgical perspective, she had multiple seton placements and eventually a diversion colostomy without control of her perianal disease. A multidisciplinary approach determined that obesity may be playing a key role in limiting drug efficacy, impairing wound healing from mechanical pressure, and driving inflammation with ongoing fistulas. Therefore, the risks of bariatric surgery would be outweighed by the benefit of controlling her recurrent perianal Crohn's disease.

Obesity, a public health epidemic, is also a concern in patients with IBD, traditionally thought to be a disease of those with low BMI. Current estimates show that 25-30% of patients with IBD have obesity, with 5-6% of them severely obese.[1-4] These estimates reflect a similar trend in the general population. Until recently, Crohn's disease has been considered a relative contraindication to Roux-en-Y gastric bypass (RYGB) surgery, according to the Guidelines for Clinical Application of Laparoscopic Bariatric Surgery of the Society of American Gastrointestinal and Endoscopic Surgeons, which is further endorsed by the American Society for Metabolic and Bariatric Surgery.[5] The hesitation surrounding bariatric surgery in patients with IBD is layered. Patients with obesity have increased post-operative complications and micronutrient deficiencies become more pronounced in patients with IBD.[6,7] Sleeve gastrectomy is less invasive with fewer potential complications for the patient with IBD.

Increasing evidence suggests that patients with IBD and obesity have worse clinical outcomes as they are more likely to have extraintestinal manifestations of IBD, prolonged hospitalizations

and increased healthcare costs.[8,9] Studies have also highlighted suboptimal response to biologic therapy in patients with obesity possibly attributed to rapid clearance of biologic agents which subsequently leads to low serum trough concentrations[10] versus increased inflammatory burden from cytokines produced by adipose cells. Additionally, significant obesity precludes ileal pouch-anal anastomosis, thus, obesity management becomes an imperative target as part of IBD management.

Prospective and retrospective studies have now suggested safety and efficacy of bariatric surgery in patients with IBD.[11-13] Beyond showing that IBD should not be considered a contraindication for bariatric surgery, these studies have also exhibited an additional advantage of weight loss. Bariatric surgery reduces the number of IBD related complications including reduced corticosteroid use, IBD related surgeries, dose reduction in IBD medications, and overall improvement in quality of life.[14] These benefits may be due to a decrease in the chronic pro-inflammatory state associated with obesity, including low production of C-reactive protein, tumor necrosis factor-alpha (TNF), and interleukin-6. These studies emphasize a multidisciplinary approach prior to opting for bariatric surgery and determining the best surgical approach.

Perianal fistulas cause significant morbidity including persistent drainage, fecal incontinence, scarring, and poor disease related outcomes. The desired treatment outcome is fistula closure. The Guidelines for the Multidisciplinary Management of Crohn's Perianal Fistulas recommend the following treatment algorithm for perianal fistula management:[15] simple fistulas rely on treatment with antibiotics, immunomodulators, with or without anti-TNF alpha agents. Surgical intervention (e.g., setons) in addition to the aforementioned therapies may be necessary for complex fistulas. Those with refractory fistulas may require other surgical treatments including use of fibrin glue, fistula plug, diverting colostomy, and proctectomy or protocolectomy.

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CONCLUSION

The potential benefit of weight loss surgery in disease management of significantly obese patients with IBD is discussed above. IBD should not be considered a contraindication for bariatric surgery. Instead, with a multidisciplinary team approach, it should be seen as an opportunity for improving overall management of IBD, particularly in a subset of patients who have disease refractory to current medical and or surgical treatments. ■

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