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Alimentary loop intussusception in a patient with gastric bypass and systemic lupus erythematosus

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Abstract:

Abstract: Intussusception has been recognized as a late and infrequent complication in bariatric patients; its etiology and treatment are highly controversial, and the reason for our discussion.

Clinical Case: 38-year-old female patient, with a history of Systemic Lupus Erythematosus (SLE) and a gastric Bypass performed 13 years ago, who reported onset of symptoms 36 hours prior to admission after presenting epigastric pain, nausea, vomiting and hematemesis. An abdominal CT scan was performed, with suggestive findings of intussusception. In exploratory laparotomy was confirmed anastomotic leak, ischemic intestinal segment of 10 cm, and intussusception of the alimentary limb; it was performed resection and anastomosis of the alimentary limb and distal to it, a new lateral jejunojejunostomy anastomosis.

Conclusion: The therapeutic option with less recurrence is the resection and reanastomosis; more evidence is required to describe the effects of bariatric surgery on the digestive tract of patients with SLE.

Keywords:

- Intestinal intussusception
- Gastric Bypass
- Lupus enteritis
- SLE
- Bariatric surgery

Introducción

Thin-loop intussusception is a late and infrequent complication in patients with a history of gastric bypass and can cause intestinal obstruction and ischemia. It was first described in 1986 and its etiology is still uncertain; it could be associated with a post-procedure intestinal motility disorder or intra-abdominal trophic changes.1 It presents some characteristics such as occurring in most cases in relation to the entero-entero anastomosis and being a retrograde intussusception. Its treatment is controversial, with several alternatives; simple reduction, reduction and fixation of the compromised loop, but apparently intestinal resection would have better results, with a lower frequency of recurrence.2 In patients with systemic lupus erythematosus (SLE), bariatric surgery has shown clinical improvement and lower requirements for glucocorticoids in treatments , however, gastrointestinal manifestations of the disease such as lupus enteritis or even immunosuppressive drugs, could appear as a cause of digestive bleeding and intestinal motility disorders.[3]

Clinical case

A 36-year-old female patient with a history of systemic lupus erythematosus treated with Prednisone and Mycophenolate, high blood pressure and laparoscopic Roux-en-Y gastric bypass performed 13 years ago. She reports weight regain, voluntary discontinuation of vitamin supplements, and a smoking habit of 5-6 cigarettes/day in the last 3 months.

Clinical picture and diagnostic methods

He went to the emergency room due to severe colic-type pain in the epigastrium, nausea, vomiting and hematemesis of 36 hours' evolution. Physical examination revealed tachypnea (22rpm), tachycardia (107lpm) and high blood pressure (170/90mmHg), pale skin and mucous membranes, slightly distended abdomen, diminished air-fluid noises, pain and a soft, mobile and deep palpable mass in the mesogastrium. She was admitted by the Gastroenterology Service with upper gastrointestinal bleeding confirmed by endoscopy that reported a Forrest IIc ulcer distal to the gastroenteroanastomosis. In view of the exacerbation

of abdominal pain, the appearance of signs of peritoneal irritation, anemia, elevated leukocytes, a tomography of the abdomen was requested, showing proximal dilation of thin loops and a target image of thickened intestine within the intestine, suggestive of intussusceptions, evolves torpidly, presenting fever, tachycardia, tachypnea, nitrogen elevation, hypokalemia, convulsive episodes and consolidation foci with pleural effusion, suggestive of SARS-Cov19 infection. This infection is ruled out and probable active lupus is considered. In view of the exit of intestinal fluid through drains, she was reoperated on 5 days later, showing leak from the alimentary loop anastomosis. An anastomosis and Stamm-type gastrostomy were performed again.

Indicated treatments:

Internal medicine service suspends regular treatment for SLE and indicates methylprednisolone. In view of acute anemia, he received a transfusion of 1 unit of erythrocyte concentrate, antibiotic therapy with Ciprofloxacin and Metronidazole.

Surgical technique:

A laparotomy was performed, and intussusception of the alimentary loop was confirmed at 60cm from the fixed loop, with an intestinal segment of 10cm with irreversible ischemic changes and perforation of the entero-enter anastomosis, for which a resection and anastomosis of the alimentary loop and distal to it were performed, a new Lateral entero-enter anastomosis.

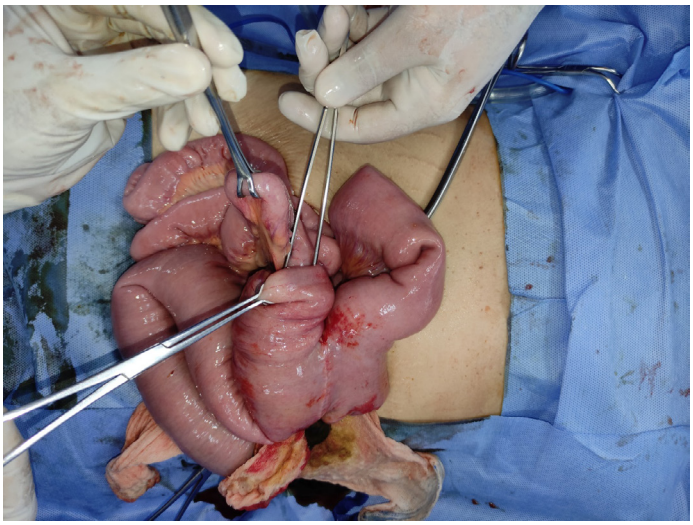

Image 1. Intussusception of the alimentary loop and perforation of the side-to-side anastomosis.

Post-surgical evolution:

In the postoperative period, the patient receives antibiotic therapy with Meropenem and Vancomycin and is transfused due to exacerbated chronic anemia. The patient evolves in a torpid manner presenting fever, tachycardia, tachypnea, elevated nitrogen levels, hypokalemia, convulsive episodes and foci of consolidation with pleural effusion, suggestive of SARS-Cov19 infection. This infection is ruled out and probable active lupus is considered. In view of the exit of intestinal fluid through drains, she was reoperated on 5 days later, showing leak from the alimentary loop anastomosis. An anastomosis and Stamm-type gastrostomy were performed again.

Image 2. Feeding loop anastomosis leak

In the immediate postoperative period, intestinal fluid is again observed through drains, and she is laparotomized for the third time, finding a leak from the side-to-side anastomosis, which is resected and reanastomosed. She evolves satisfactorily and after 7 days she is discharged in stable conditions with a recovery nutritional plan through the oral route and gastrostomy. Immunological tests were performed that did not report active lupus. The resected small intestine biopsy reported the presence of atrophic and wide intestinal villi, accentuated vascular and lymphatic ectasia edema, moderate and nonspecific chronic inflammation in the interglandular chorion.

Discussion

Various causes of intestinal obstruction have been described in patients undergoing gastric bypass surgery, the least frequent and the most delayed being retrograde and anterograde intussusceptions complicated with strangulation and ischemia[2] In one of the largest series published, an incidence of 0.64% was described, mostly retrograde, located in the alimentary loop and diagnosed in women. The reported symptoms were abdominal pain,

nausea and vomiting, as in the case presented.[4]

The etiology of intussusceptions in patients with bypass is still controversial, but it has been suggested that with the section of the jejunum in the making of the Roux-en-Y, the pacemaker cells of the duodenum are separated and thus a new pacemaker is formed in the loop of bypass. Roux producing anterograde peristalsis, but also retrograde.5 Other explanations are the thinning of the mesentery with weight loss and greater length of the entero-enter anastomosis suture line.[1, 5]

Simper, Stephenson and Orthopoulos report among the types of surgical resolution, spontaneous reduction, reduction with or without plication of the affected segment and reduction with reconstruction of the jejunojeunoansatomosis.[6, 7,8]

In the case presented, the complication occurs 13 years after the bariatric intervention, coinciding with inadequate eating behaviors and suppression of vitamins and treatments for arterial hypertension and SLE; Aggravating factors of chronic immunosuppression and perioperative risk of the patient. Some tomographic findings and the torpid postoperative evolution in the first surgery, suggested active lupus and lupus enteritis as a trigger for the initial abdominal symptoms and anastomotic leaks. The immunological tests were negative, but the histological study reports findings compatible with chronic enteritis.

Among the manifestations of SLE, lupus enteritis requires a high index of suspicion in undiagnosed patients and in those with symptoms refractory to treatment, since its appearance is infrequent.[3, 9] It has been described that its prevalence reaches 0.2-2% in all patients with SLE, and 45-79% in patients with SLE who present with abdominal pain. [10]

The histological findings of lupus enteritis are nonspecific, showing an inflammatory process at the submucosal level, with fibrinoid and leukocytoclastic necrosis of the vascular wall.[10] In addition to the history and symptoms of diffuse abdominal pain, nausea and vomiting, it is important for the diagnosis abdominal tomography. The classic findings include diffuse thickening of the intestinal wall, dilatation of intestinal loops, splanchnic hypervascularization, blurring of mesenteric fat, and ascites [11], observed in this case.

Regarding management, there is currently no established consensus on the best therapeutic choice, due to the lack of clinical trials on this subject.[12] The usual and initial treatment is generally with methylprednisolone or high-dose oral prednisone.

For corticosteroid-resistant cases, cyclophosphamide or mycophenolate can be used, the latter having a better safety profile.[13]

Conclusion

Intestinal intussusception is an expected and rare complication in patients with a history of gastric bypass. In several cases, spontaneous resolution is reported, but the therapeutic option with less recurrence of the condition is resection and reanastomosis. In lupus patients, the effects of bariatric surgery on the digestive tract have yet to be described.

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