Gastrocolic fistula due to colon cancer

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ABSTRACT
Colorectal cancer is a very common disease. However, invasion of other organs occurs in only 10 to 20% of cases. The most commonly invaded organs are the abdominal wall, pancreas and duodenum. Gastric invasion is extremely rare and rarely reported. The aim of this paper is to present a patient with a gastrocolic fistula caused by a tumor of the transverse colon

Keywords: Colon cancer; Gastrocolic fistula; Invasive colonic tumor

INTRODUCTION

Invasion of adjacent organs in colorectal cancer is rare and challenging to treat. En bloc resection of the tumor with the affected organs is often performed to achieve clear margins. The most commonly affected organs are the pancreas, duodenum, and abdominal wall. Gastric invasion is an infrequent complication, rarely reported in the literature[1,2]
Gastrocolic fistulas resulting from colonic adenocarcinoma have been documented in Western countries, although the preponderance of cases is attributed to gastric tumors. Additional etiologies include complications associated with benign peptic ulcers, Crohn's disease, and iatrogenic procedures, such as the migration of percutaneous gastrostomies.[3,4]
The clinical manifestations of the condition include weight loss, diarrhea, abdominal pain, and nausea. Fecal vomiting or defecation of undigested food is pathognomonic, although this occurrence is rare. The gold standard for diagnosis is a contrast-enhanced CT scan or a barium upper gastrointestinal series.

CASE

A 41-year-old male patient with a paternal history of colon cancer and a personal history of bipolar disorder, taking multiple medications due to severe episodes of schizophrenia, came to consultation for behavioral disorders due to medication malabsorption. In the directed anamnesis, the patient and family report nausea, vomiting, diarrhea, and weight loss of 8 kg in 4 months.
Upper gastrointestinal endoscopy and colonoscopy were performed, revealing the presence of fistulous orifices in the stomach and colon. These orifices connected a large, circumferential, friable colonic tumor to the greater curvature of the stomach (Fig. 1). A biopsy revealed a moderately differentiated mucinous adenocarcinoma.

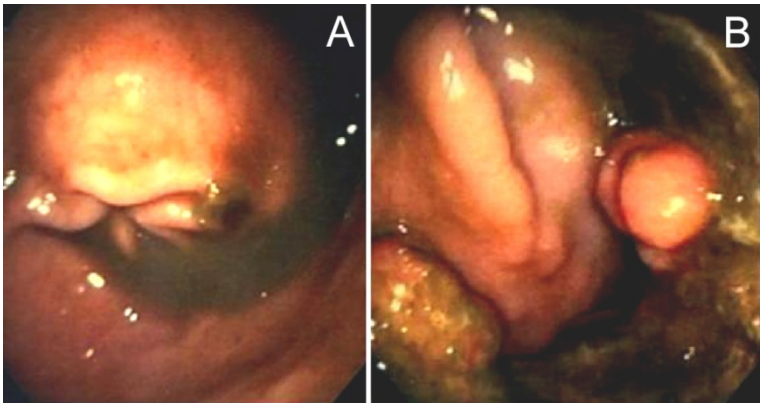

Figure 1. *Endoscopic study of the gastrocolic fistula.* ***A.*** *Esophagogastroduodenoscopy shows infiltration of the gastric wall and the presence of a fistulous orifice.* ***B.*** *Colonoscopy shows a large circumferential colonic tumor and a fistulous orifice.*

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The oral contrast-enhanced CT scan revealed a 7 cm colonic tumor with regional mesocolonic adenopathy and the presence of a gastrocolic fistula between the mid-transverse colon and the greater gastric curvature (Fig. 2). The hematocrit was 33%, and albumin was 4.13 mg/dl.

Figure 2. *Abdominal CT scan. Coronal section shows a 1.7 cm diameter gastrocolic fistula between the greater curvature of the stomach and the antimesenteric border of the transverse colon.*

A laparoscopic transverse colectomy with end-to-end anastomosis and en bloc resection of the entire greater curvature of the stomach was performed as a gastric sleeve (Fig. 3). Parenteral nutrition was initiated 24 hours postoperatively. On the 4th postoperative day, the patient experienced a dehiscence of the colonic anastomosis, which was treated laparoscopically by lavage, drainage, and exteriorization of both ends of the colon.

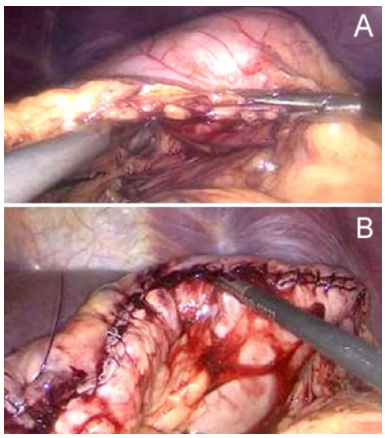

Figure 3. *Laparoscopic approach to the gastrocolic fistula.* ***A.*** *Colonic lesion infiltrating the greater curvature of the stomach.* ***B.*** *Laparoscopic sleeve gastrectomy.*

The patient was discharged after 30 days with improved nutritional parameters and adequate oral tolerance.
Pathology revealed a moderately differentiated colloid-type adenocarcinoma measuring 6.5 cm with 100% circumferential involvement without vascular or perineural invasion. The nearest gastric margin was 2 cm and the colonic margin was 16 cm from the lesion. The 24 resected lymph nodes were free of neoplastic disease. Stage II: T4bN0M0.
The patient received adjuvant treatment and bowel transit was restored 12 months after surgery. Luego de 15 meses de seguimiento, el paciente no presenta recidiva.

DISCUSSION

Digestive disorders in patients with fistulas proximal to the angle of Treitz of neoplastic origin generate a severe nutritional risk, which must be taken into account when deciding on management. This must be comprehensive and include not just surgical treatment, but also a multidisciplinary approach.[7]
Among the strategies to improve surgical outcomes, the indication for parenteral nutrition, both pre- and post-operatively, plays an important role. Both are the choice for patients who cannot tolerate oral nutrition or who have clinical or analytical signs of malnutrition. In addition, they have been shown to reduce the incidence of postoperative complications and shorten hospital stays. In patients in whom the oral and/or enteral route cannot be optimized, parenteral nutrition has many advantages over the alternative of nonfeeding the patient.[8,9]
In this particular case, the administration of preoperative parenteral nutrition was deemed unnecessary due to the patient's relatively young age, the absence of comorbidities that could potentially hinder the anastomotic healing, and his acceptable nutritional status, which included mild anemia and normal hypoalbuminemia levels.
The most common complication in patients undergoing colonic resections is anastomotic leakage, which often leads to significant morbidity and mortality. To mitigate this risk, rather than a single-stage procedure, a resection and exteriorization of the colonic ends may be chosen to reconstruct the transit after improving nutritional status.
The decision to perform a primary anastomosis should be based on a thorough evaluation of the patient's clinical status, including hemodynamic stability. Typically, patients with an ASA (American Society of Anesthesiologists) score of 2 or less, adequate colonic perfusion, and no hypoalbuminemia or severe comorbidities are considered ideal candidates for primary anastomosis.[10] Based on this principle, we performed a primary anastomosis of the stomach and colon, although the colonic anastomosis experienced a dehiscence.
Finally, patients with severe mental illness, who control their pathologies and psychological stability with strict pharmacological treatment, are at risk due to the impossibility of receiving drugs through the usual oral route or when their enteral absorption is altered. The decision to proceed with surgical treatment without further delay was influenced by this situation in our patient.
In conclusion, the combination of an appropriate surgical approach, adequate nutritional management, and collaboration with the mental health team, in addition to a comprehensive multidisciplinary care strategy, is essential to address the challenges presented by patients with infiltrating colorectal tumors and gastrointestinal fistulas. This strategy not only optimizes surgical outcomes, patients' quality of life throughout their oncology treatment.

CONCLUSION

Gastric invasion by colon cancer is a rare complication whose management presents significant challenges. In this case, coordination between the surgical, nutritional, and mental health teams was crucial for the comprehensive management of the patient, particularly considering his psychiatric pathology. However, it could not prevent anastomotic

dehiscence related to the deterioration of nutritional status often associated with gastrocolic fistula.

The pathology was resolved through en-bloc resection with adequate oncological margins and adjuvant chemotherapy, with no evidence of recurrence observed after 15 months.

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