CLINICAL CASE

Management of complicated inflammatory fibroid polyp by partial laparoscopic esophagogastrectomy – A case report

Manejo de pólipo inflamatorio fibroideo complicado mediante esofagogastrectomía parcial por laparoscopía. Reporte de caso

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Abstract

Background: *Inflammatory fibroid polyps (IFP), known as Vanek tumors, are benign neoplasms, usually located in the stomach and small bowel. The prognosis is good in long term.* **Clinical case:** *We report a 24-year-old woman, with 3 days history of abdominal pain located in the epigastrium, accompanied by melenic evacuations and weight loss since the last month, making the diagnosis of inflammatory fibroid gastric polyp by means of the upper endoscopy and biopsy.* **Conclusions:** *IFP are extremely rare neoplasms in the Mexican population. The symptoms range from asymptomatic, epigastralgia, anemia, and weight loss to intestinal obstruction. Its diagnosis is histopathological.*

Key words: *Inflammatory fibroid polyps. Vanek's tumor. Gastric polyp.*

Resumen

Antecedentes: *Los pólipos inflamatorios fibroideos, conocidos como tumores de Vanek, son neoplasias benignas localizadas en el antro gástrico y en el intestino delgado. El pronóstico es bueno a largo plazo.* **Caso clínico:** *Mujer de 24 años, ingresada por 3 días de evolución con epigastralgia, acompañada de evacuaciones melénicas y pérdida de peso de 2 kg en el último mes. Se diagnostica, por endoscopía y biopsia, un pólipo inflamatorio fibroideo gástrico.* **Conclusiones:** *Los pólipos inflamatorios fibroideos gástricos son neoplasias extremadamente raras en la población mexicana. Sus síntomas varían desde cuadros asintomáticos, epigastralgias, anemia y pérdida de peso hasta obstrucción intestinal. Su diagnóstico es histopatológico.*

Palabras clave: *Pólipo gástrico. Pólipo fibroideo inflamatorio. Tumor de Vanek.*

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Background

Inflammatory fibroid polyps (IFP) are rare, benign and solitary mesenchymal neoplasms[1], located frequently in the gastric antrum (66-75%), small bowel (18-20%), specifically in the ileum, colon (1%), gallbladder (1%), esophagus (1%), duodenum (1%), and cecal appendix (< 1%). IFP represent 0.1% of gastric polyps in general population, they occur around the sixth decade of life, more often in males and are usually < 25 mm in diameter[1].

IFP were described by Vanek in 1949 as gastric submucosal granulomas with eosinophilia[2]. Immunohistochemistry stained positively for CD34 and negatively for proteins 100 and desmin. Its etiology is indeterminate; however, hypotheses are established on allergic reactions mediated by eosinophils as the cause of IFP. Other factors have been involved, such as neural hyperplasia, repeated trauma to the gastric mucosa, irritants, genetic alterations, and bacterial agents. Activating mutations in the alpha receptor gene of platelet-derived growth factor have been associated with the development of IFP. Genetic mutations have been documented in 21-69% of cases[3].

A number of clinical features have been described and may range from asymptomatic patients to sporadic epigastralgia, gastrointestinal bleeding, iron deficiency anemia, weight loss, intestinal obstruction, and intussusception, especially when found in the small bowel[4]. Occasionally, they may present fever as a response to the release of tumor mediated cytokines.

The diagnosis of IFP is histopathological, often revealing onion-skin lesions with perivascular appearance. Differential diagnosis must include gastrointestinal stromal tumors, leiomyomas, schwannoma, perineural sheath tumors, and among others. The treatment depends on its location and size[5].

Endoscopic polypectomy is indicated when the tumor is accessible and pedunculated, however, intestinal perforation or incomplete resection of the neoplasm is complications of the procedure. Surgical treatment is sometimes recommended in large, sessile tumors or when there is evidence of infiltration in the muscularis mucosae[6].

Clinical case

We present a case of a 24-year-old female, with no previous medical history, that came to our hospital,

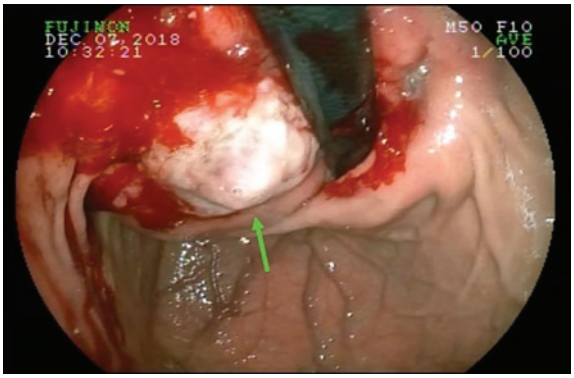

Figure 1. *Endoscopic view showing friable and bleeding tumor located in the posterior side of the gastric body.*

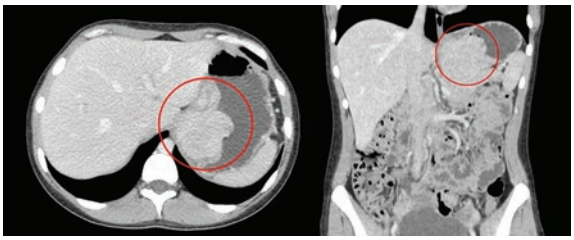

Figure 2. *Axial and coronal section of IV contrast abdominal tomography showing IFP in the posterior wall of the gastric body, adjacent to the esophagogastric junction.*

presenting colicky abdominal pain, of moderate intensity, located in the epigastrium, without irradiation, aggravated to the intake of food without attenuating, accompanied by multiple melenic evacuations, and weight loss of 2 kg since the last month.

On arrival, she was pallor, with stable vital signs, soft depressible abdomen, audible peristalsis, painful to medium and deep palpation in epigastrium and mesogastrium, without evidence of peritoneal irritation. The laboratory data revealed microcytic anemia (HBG 9.6 g) with the rest of the values between normal ranges.

The upper endoscopy reported a lobulated solid tumor of approximately 6 × 5 cm, located in the posterior wall of the gastric chamber, near the esophagogastric junction, with bleeding traces (Fig. 1), biopsies are taken evidencing IFP. Abdominal computed tomography was requested as an extension study, evidencing a 6.7 × 5.9 × 5.8 cm tumor with a solid, lobulated appearance that captures homogeneous contrast material that affects the posterior wall of the stomach near the esophagogastric junction, extending inferiorly, and displacing the tail of the pancreas. There are two

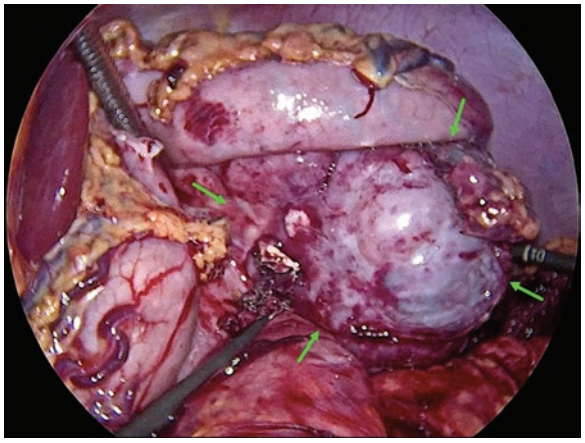

Figure 3. *Transoperative view of the tumor on the posterior side of the stomach.*

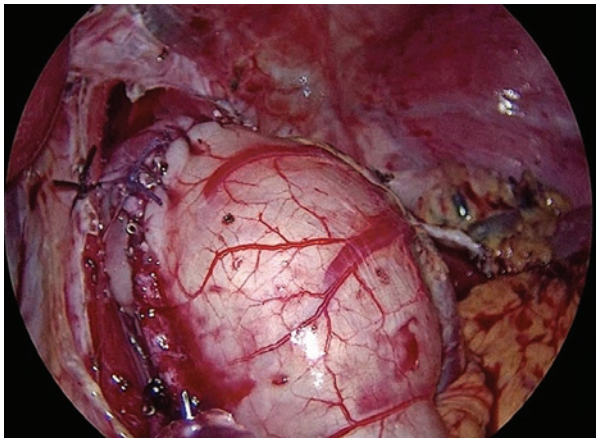

Figure 5. *Esophagogastric anastomosis end-to-end.*

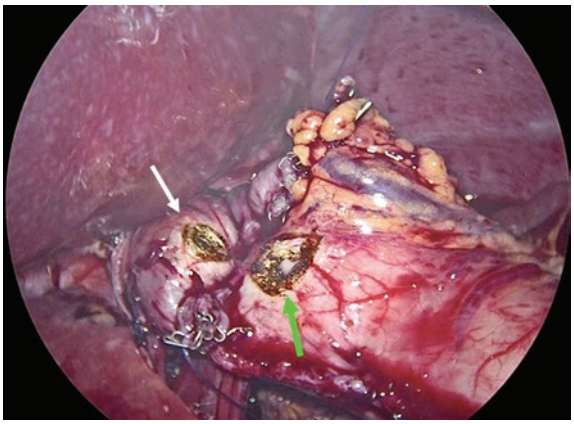

Figure 4. *Esophagotomy (white), gastrotomy (green).*

Figure 6. *Surgical piece of fibroid inflammatory polyp (Vanek's Tumor) of 5.2 cm.*

lymph nodes at the splenic hilum with a suspicious appearance (Fig. 2). It is scheduled for surgery.

The laparoscopic approach was performed, after induction of pneumoperitoneum with Veress needle, we proceeded to place five ports, one 11 mm trocar 8 cm below the xiphoid process for a 30° optic, two 12-mm trocars at right and left clavicular midline, a 5 mm trocar in subxiphoid region, and a 5 mm trocar in the right flank. The dissection of the gastric greater curvature with bipolar energy device was started, respecting the integrity of the gastroepiploic arch, until the angle of his and the left diaphragmatic pillar was freed, observing the tumor on the posterior wall of the stomach (Fig. 3). The dissection of the pars flaccida was continued, releasing the right diaphragmatic pillar and dissecting 5 cm of the distal esophagus. The partial gastrectomy is performed, initiating the cut in the lesser curvature at the height of the third vascular arch, with linear stapler (60 mm in length, and 3.5 mm staples), placed perpendicular to the lesser curvature and then the stomach is sectioned. Next, the stomach section continues vertically, ascending parallel to the greater gastric curvature until reaching the angle of his. Subsequently, esophagectomy of the distal third with linear stapler (60 mm in length, and 3.5 mm staples) was performed, corroborating total resection of the lesion. The esophagogastric anastomosis was performed, with an orogastric calibration probe of size 36 F, manual end-to-end, in two planes with absorbable suture (Figs. 4 and 5). After this, a Heineke-Mikulicz pyloroplasty was performed. Pneumatic test was performed with methylene blue without evidence of leakage.

The patient progressed favorably, being discharged on the 6th post-operative day. The definitive histopathological reported IFP of 5.2 cm, mild chronic gastritis, submucosa edema, and recent hemorrhage (Fig. 6). Proximal and distal resection margins were negative to alterations. Immunohistochemistry was positive for CD34 and negative for CD117, smooth muscle actin and DOG1, consistent with a fibroid inflammatory polyp.

Discussion

Most of the IFP are asymptomatic and their diagnosis is made incidentally through the upper endoscopy[7].

Clinical symptoms are heterogeneous and depend essentially on the location and tumor size, usually at the time of diagnosis the IFPs measure 2-5 cm, in this case, the reported measure was 5 cm. The most common signs are epigastralgia, gastrointestinal bleeding, iron deficiency anemia, and weight loss, being these the same presented at the time of diagnosis in the reviewed case. The gastric antrum is the most frequent location (66-75%)[8], in our case, the location was on the posterior side of the gastric body, near the gastroesophageal junction, representing a therapeutic challenge due to technical difficulty. The definitive treatment is surgical or endoscopic removal, although there is a risk of recurrence, if it is not complete. Once the resection is done, no additional treatment is required, and it has an excellent long-term prognosis[9].

Conclusions

IFPs are benign, solitary, usually asymptomatic neoplasms that can mimic GIST tumors, lymphomas, or carcinomas in some cases. In general, clinical manifestations and radiological findings do not establish the diagnosis, so it is necessary to perform histopathological studies and immunohistochemical analysis. The treatment can be performed by endoscopic and surgical means. Due to advances in minimally invasive surgery, we concluded that the laparoscopic approach is an effective and safe therapeutic option, with mayor postoperative advantages over conventional open surgery.

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Conflicts of interest

The authors declare that they have no conflicts of interest.

Ethical disclosures

Protection of human and animal subjects. The authors declare that no experiments were performed on humans or animals for this study.

Confidentiality of data. The authors declare that they have followed the protocols of their work center on the publication of patient data.

Right to privacy and informed consent. The authors have obtained the written informed consent of the patients or subjects mentioned in the article. The corresponding author is in possession of this document.

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