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Gastric GIST invading the body of the pancreas

GIST gástrico que invade el cuerpo del páncreas

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ABSTRACT

Stromal or mesenchymal tumors of the gastrointestinal tract represent a relatively uncommon group of malignant lesions that originate at the expense of connective tissue components along the gastrointestinal tract. These tumors frequently create metastases to the liver and peritoneum, and their infiltration to intra-abdominal organs is rare, so the objective is to describe a clinical case in which the tumor invades the body of the pancreas. This is a 69-year-old male patient, who was admitted due to a feeling of heaviness and gastric fullness, complementary studies were performed and he was diagnosed with a tumor of the gastrointestinal stroma of the greater curvature of the abdomen that invades the body of the pancreas. These tumors are a diagnostic challenge for surgeons due to their non-specific presentation and rapid progression.

RESUMEN

Los tumores estromales o mesenquimatosos del tubo digestivo representan un grupo relativamente infrecuente de lesiones malignas que se originan a expensas de componentes del tejido conectivo a lo largo del tracto gastrointestinal. Dichos tumores crean metástasis con frecuencia a hígado, y peritoneo, siendo rara su infiltración a órganos intraabdominales, por lo que se plantea como objetivo de describir un caso clínico en el cual el tumor invade el cuerpo del páncreas. Se trata de un paciente masculino de 69 años de edad, el cual ingresa por sensación de pesantez y plenitud gástrica, se le realizan estudios complementarios y es diagnosticado con un tumor del estroma gastrointestinal de la curvatura mayor del abdomen que invade el cuerpo del páncreas. Dichos tumores constituyen un reto diagnóstico para los cirujanos, debido a su forma de presentación inespecífica y su rápido avance.

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INTRODUCTION

Stromal or mesenchymal tumors of the digestive tract, known in the Anglo-Saxon literature as GIST (Gastro Intestinal Stromal Tumor), represent a relatively rare group of malignant lesions that originate at the expense of components of the connective tissue along the gastrointestinal tract, deriving from the extramucosal wall of the same.[1,2,3] They are a pathology whose incidence has increased in the last 15 years given their increasing incidental finding in digestive endoscopies and in the study of anemic syndromes.[4]

A global incidence is estimated at 10 to 20 cases per million inhabitants, with a median age of presentation between 55 and 70 years.[3,6,8] They represent 80% of the latter and are part of a group of non-epithelial neoplasms. of the third and fourth layer (submucosa and muscular propria), they can be mesenchymal such as a stromal tumor of various origins, for example, GIST, leiomyoma, lipoma, nerve sheath tumor (schwannomas) or they can also be lymphomas. Reported annual incidence rates worldwide are less than 10-20 per million, with no differences in gender or race.[5,6] These tumors express the KIT (c-kit) protein, react positively to immunohistochemical staining with CD117 and They carry a mutation in a gene that encodes the type III receptor tyrosine kinase 1.[6]

Surgical resection of the tumor is the main treatment and is curative in itself in localized, resectable and primary disease. Tumor removal must be macroscopic and microscopic and total gastrectomy, Whipple procedure or abdominoperineal resection may be necessary.[7,9]

These tumors are located in the gastrointestinal tract, creating distant metastases in the liver and peritoneum, their infiltration to other abdominal organs being rare, there being the possibility of having to change the surgical technique during the intervention since the tumor has infiltrated other organs without doing so. metastasis, for which it was decided to make a report of a patient with said tumor, with the objective of describing a case of a gastric GIST which invades the body of the pancreas.

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CASE PRESENTATION

Male patient, 69 years old, white skin, retired, obese, with a personal pathological history of high blood pressure for 30 years, being treated with Amlodipine ½ tablet every 12 hours and hydrochlorothiazide (25 mg tablet) 1 tablet daily. He was admitted to the oncology ward due to a clinical picture of approximately one year of evolution with a sensation of premature fullness and abdominal distension, associated with nausea and vomiting, where a CT scan of the chest and abdomen was performed, showing a mass at the level of the the greater curvature of the stomach with polylobed contours that contrasts with the body and tail of the pancreas which measures with calcifications and area of necrosis. He reports drinking alcoholic beverages 1 bottle a day and that he has not had previous operations nor has he been transfused. As a family pathological history, he has high blood pressure.

On physical examination, a globular abdomen was found, which was distended; on palpation it was soft, depressible, not painful on superficial or deep palpation, with a palpable mass in the epigastrium and left hypochondrium. Hydro-aerial noises present. No peritoneal reaction.

Complementary to the patient's admission are indicated humoral humoral lesions present in Table 1 below, abdominal ultrasound, and simple abdominal computed tomography.

Table 1. Humoral complementary

Complementary:	**Result:**
Hemoglobin	12 g/dL
Leukogram	5,1 x 10^9/L
Platelet count	340 x 10^9/L
Bleeding time	1min
Clotting time	8min
Glycemia	5,3 mg/dL
Erythrocyte sedimentation rate	120 mm/h
Blood Type	O+

Source: Medical history.

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Slight anemia is observed due to decreased hemoglobin and accelerated erythrocyte sedimentation rate.

Abdominal ultrasound: large amount of subhepatic fluid, moderate amount at the level of the hypogastrium, a large tumor mass is visualized occupying the hypogastrium and mesogastrium, this heterogeneous mass with irregular contours with multiple hypoechoic areas towards its thickness and may be with it, measuring 20x11 mm, an area of larger necrosis. measuring 11.8 x 4.5 mm, this injury causes compression and displacement of the structures at that level, linking the rejected pancreas.

Simple abdominal computed tomography: due to non-availability of contrast, bordering the gastric fundus, occupying the space without being able to separate the pancreas, a large tumor mass is observed that predominates in its most central part that liquid, septations and solid walls which present punctate calcifications infiltrating the prerenal fascia, managing to delimit the pancreatic tail, the tumor mass bulges the anterior abdominal wall, hypochondrium and left flank where the parietal peritoneum is seen thickened. This tumor mass measures 17x 12 cm in axial section and 20 cm in coronal section, causing significantly extrinsic compression of the stomach and descending colon near the splenocolic flexure. Light to moderate ascites is observed, especially in the hypogastrium and posterior cul-de-sac. (Figure 1)

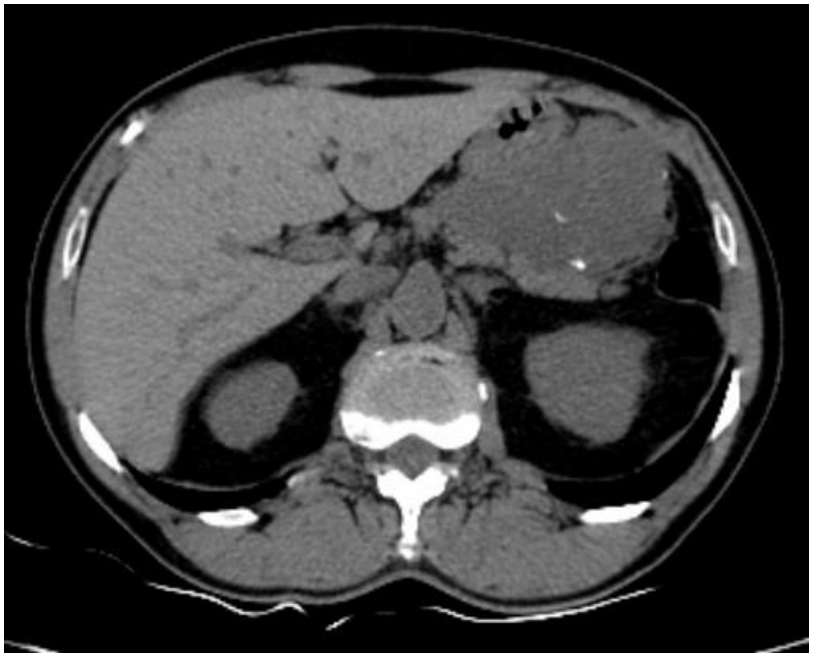

Figure 1. Abdominal CT scan showing the tumor infiltrating the body and tail of the pancreas.

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The diagnostic impression was a gastrointestinal stromal tumor (GIST) of the greater curvature of the stomach, for which it was decided to perform a subtotal gastrectomy.

During the surgical intervention, a supraumbilical transverse incision was made, addressing and exploring the transcavity of the omentum (figure 2), finding that there was no metastasis in the peritoneum or in the liver. A considerable size tumor is found on the posterior surface of the body of the stomach infiltrating the body of the pancreas and transverse mesocolon. It was decided to perform an atypical gastrectomy because only the affected area of the stomach was resected. It was planned to perform a subtotal gastrectomy because it had been seen that the lesion was independent of the stomach and during the surgical exploration it came from the body and tail of the pancreas, posterior gastric wall and the spleen; Therefore, it was decided to also perform coprocaudal splenopancreatectomy, removing the tumor in its entirety (figure 3).

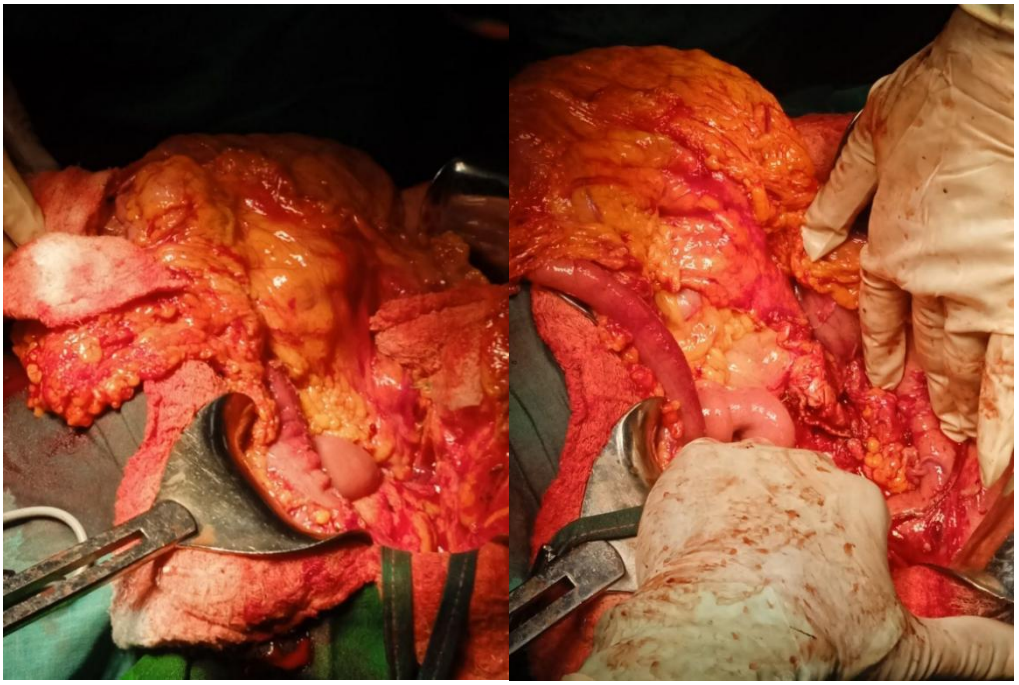

Fig- 2. Surgical intervention. Observation of the transcavity of the omentums

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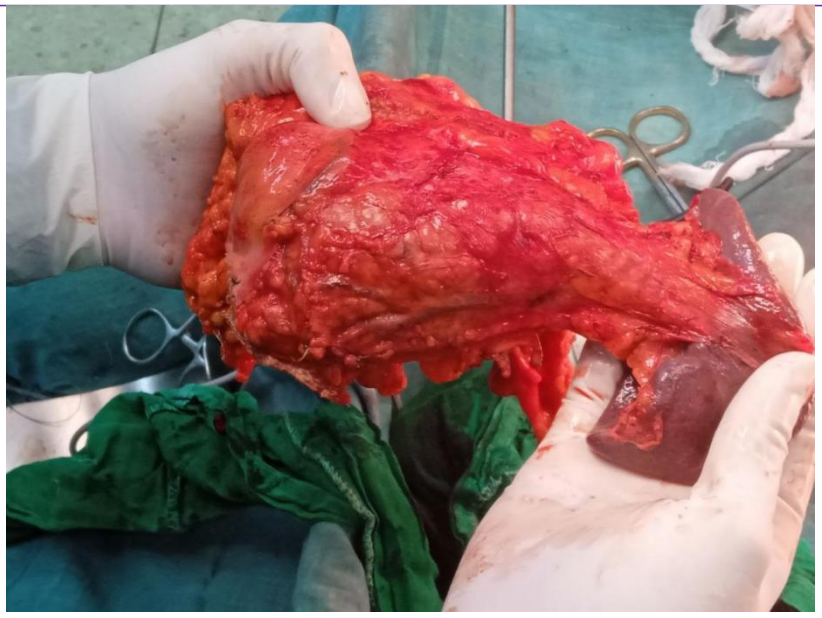

Figure 3. Surgical piece removed during surgery.

The surgical specimen was sent to pathological anatomy, yielding the following results: pleomorphic spindle cell tumor with areas of myxoid degeneration consistent with sarcoma or gastrointestinal stromal tumor.

The patient completed his postoperative period in good general condition and progressing without complications, being discharged a week after surgery. He continues his normal life and visits the office for follow-up.

DISCUSSION

Gastrointestinal stromal tumors (GIST) are a rare group of neoplasms, whose diagnosis should ideally be preoperative (these tumors are not mucosal, which makes the use of endoscopy complicated, except for ulcerated tumors or punctures by fine needle aspiration)[10], for this reason it was decided not to perform endoscopy in the case; They are often discovered in emergency surgeries or due to complications such as perforations and gastrointestinal bleeding or incidentally in abdominal surgeries for another cause or abdominal neoplasms or in autopsies.[10,11] Preoperative diagnosis is important, since it is associated with a better prognosis.[11]

Gastrointestinal stromal tumors are derived from the interstitial cells of Cajal that are found in the

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muscularis propria, between myocytes and nerve fibers, from the esophagus to the anus.[8] As these tumors grow, they compromise the serosa of the organ and then neighboring structures. , do not present a true capsule and generally displace, but do not invade, neighboring structures. This element can be evident in our case study, since the tumor invades part of the body of the pancreas and part of the transverse mesocolon, which makes it unusual. Generally, GISTs, like the rest of the sarcomas, do not tend to spread through the lymphatic route, they only do so in 10 - 15% of cases. They do not present submucosal growth.[5,12]

The ideal treatment for GIST is the surgical approach, with complete tumor resection and obtaining wide margins; For this reason, it was decided to perform atypical resection of the stomach in the case presented, removing the body and tail of the pancreas, spleen and part of the transverse mesocolon, after the invasion of the tumor to these structures. Many of these tumors used to be difficult to diagnose preoperatively; this was often reached after the patient's death. The introduction of ultrasound, Computerized Axial Tomography and digestive endoscopy have facilitated its detection; although the definitive diagnosis with prognostic value is the CD117 immunohistochemical study (95% positivity).[13,14]

The average age of diagnosis is 50 to 60 years. People who have had radiation therapy to the abdomen to treat other tumors may develop gastrointestinal stromal tumors later. These tumors usually grow slowly, but some can grow more quickly and spread to other parts of the body, as in the case presented, which did not spread by metastasis, but rather invaded the body of the pancreas.[15,16]

There is a multidisciplinary consultation for the treatment of these tumors at the National Institute of Oncology and Radiobiology in Havana, Cuba. This consultation is made up of several specialists, who are responsible for evaluating the cases and determining a timely and effective treatment to improve the quality of life of these patients and even provide a cure. This multidisciplinary group is made up of oncologists, surgeons, gastroenterologists, hematologists, imaging scientists, laboratory scientists and pathologists, who work hard for the health of patients.

CONCLUSIONS

Tumors of the gastrointestinal tract are a diagnostic challenge for the general surgeon, due to their non-specific form of presentation, they present with abdominal distention, a feeling of satiety,

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sometimes abdominal pain, with the presence of nausea, vomiting, without peritoneal reaction and are found a palpable mass as in the case presented.

INFORMED CONSENT

The patient was informed about the research and agreed to carry it out.

CONFLICTS OF INTEREST

The authors declare that they have no conflict of interest.

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