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Case Study

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GASTROINTESTINAL STROMA TUMOR: CASE REPORT

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ABSTRACT

Gastrointestinal stromal tumor (GIST) is the most common mesenchymal tumor of the gastrointestinal tract, yet it represents less than 5% of all sarcomas. Its main sites of involvement are at the level of the stomach and small intestine. Next, the case of a 59-year-old male patient is presented who presents a gastrointestinal stromal tumor with clinical and radiological characteristics of this pathology.

KEYWORDS: stroma tumors, intestinal neoplasm.

CASE PRESENTATION

The case of a 59-year-old male patient from the city of Quetzaltenango, Guatemala, who attends the emergency service of the Hospital Regional de Occidente, with a history of abdominal pain of three months of evolution, is presented, exacerbated in the last two weeks, accompanied by abdominal distention and vomiting on two occasions.

On physical examination, the patient found a heart rate of 71 beats per minute, a respiratory rate of 16 breaths per minute, a blood pressure of 140/90 mmHg, and a temperature of 37.2 degrees Celsius. The mucous membranes were hydrated and there were no alterations on cardiopulmonary examination. At the abdominal level, the patient presents marked abdominal distension with the presence of decreased abdominal sounds and pain on palpation at the epigastrium and left hypochondrium, no other alterations are found on physical examination.

The patient is admitted for laboratory tests and an abdominal ultrasound is requested from the radiology service.

At the time of performing the ultrasound, the liver, gallbladder, pancreas and spleen were observed without any alteration, at the epigastric level the presence of an amorphous, heterogeneous image with partially defined borders was observed (Fig. 1).

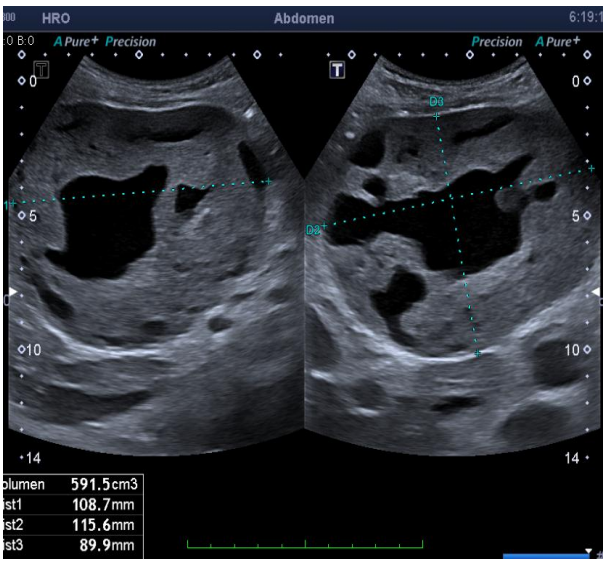

Fig. 1: Ultrasound showing an amorphous, heterogeneous image with partially defined edges, with solid characteristics, with anechoic areas inside that correspond to areas of necrosis or cystic degeneration.

Secondary to the previously described ultrasound, an abdominal tomography is performed to better characterize the findings. (Fig. 2, a and b)

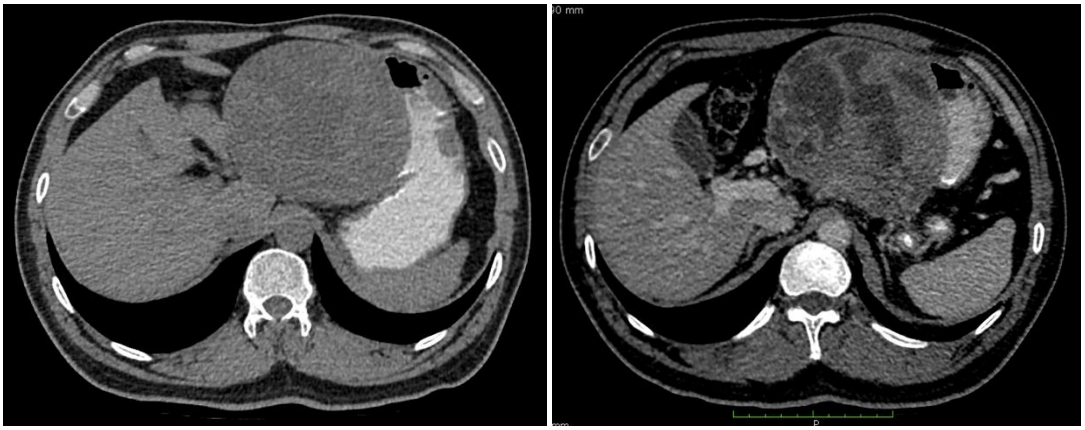

Fig. 2: Abdominal tomography in axial section (a) simple with oral contrast medium where the distended gastric chamber is observed with hypodense areas in its interior that are not adequately defined, (b) the application of intravenous contrast medium is visualizes thickening of the gastric chamber mucosa, with heterogeneous enhancement of the same.

A trucut biopsy of the lesion is carried out, where a histopathology result is subsequently received which reports a high-risk gastrointestinal stromal tumor, the patient is referred to the oncology service where treatment with chemotherapy is performed, unfortunately the patient undergoes a poor short-term prognosis, where he died of complications three months after his diagnosis.

DISCUSSION

Gastrointestinal stromal tumors (GIST) are extremely rare, since they represent 1 to 3% of intestinal neoplasms, mesenchymal tumors being more common, arising from interstitial box cells that are considered intestinal cellular pacemakers. These tumors were previously referred to as variable leiomyomas, leiomyosarcomas and leiomyoblastomas, due to the difficulty to distinguish them in histopathology, until a characteristic expression of the c-kit and cd 34 antigens was identified.[1,2]

The term gastrointestinal stromal tumor was first used by Mazur and Clark to describe an unusual type of non-epithelial tumor of the gastrointestinal tract that lacked the traditional features of smooth muscle or Schwann cells.[5]

Most GISTs (70% -80%) are benign. There is, however, a continuous series from benign to poor that can be predicted, although not absolutely, according to tumor size and mitotic frequency, which is a measure of the number of myths per high-power microscopic field.[7]

Because it is a generally rare disease compared to gastrointetinal carcinoma, the incidence is estimated to be 0.0015%. They generally appear in patients over 40 years of age with a predisposition to the elderly, they are rarely seen in young people; Regarding gender, a slight presentation is observed in patients of the male gender.[2,4]

Regarding the symptoms, it could be mentioned that small gastrointestinal stromal tumors may not cause symptoms and may grow slowly without presenting serious effects. Gastrointestinal stromal tumors that are generally larger present symptoms such as hematemesis or hematochesia, other symptoms may also be included such as anemia as a consequence of a slow bleeding tumor, abdominal pain, nausea, vomiting, among others.[8]

Gastrointestinal stromal tumor has a specific, evidence-based risk classification for staging using tumor location, size, and mitotic count.[6,7] Presenting a very low risk if the size of the lesion is less than 2 centimeters and it is considered a high risk when it exceeds 10 centimeters. Its most common site is the stomach, and the second most common is the small intestine.[9]

Gastrointestinal stromal tumors comprise the majority of intramural tumors and can vary widely in appearance, from small intraluminal lesions to exophytic masses protruding into the peritoneal cavity, commonly with areas of hemorrhage or necrosis.[3]

The radiological characteristic varies with the location and depending on the size, since these depend on the aggressiveness of the tumor, as well as the time of presentation during the course of the disease. Primary GISTs are typically large, hypervascular, often enhanced on CT, and tend to be heterogeneous due to necrosis, hemorrhage, or cystic degeneration. Ulceration and fistulization in the gastrointestinal lumen are also common features of GIST. Tumor vessels can often be seen within tumors and the origin of the mass can be difficult to identify due to its large size and prominent extraluminal location.[10]

A differential diagnosis of GISTs can include schwannomas, leiomyomas, and solitary carcinoid tumors (type 1), particularly for smaller lesions, however, GISTs can have a wide variety of appearances,

so it should always be included as a diagnosis differential of an intramural lesion.[11]

Among the treatment options, the size of the tumor should always be taken into account, surgical resection is a better option if they are larger than 2 cm, in those with a high risk of recurrence, the application of chemotherapy is necessary after the operation.

CONCLUSION

Gastrointestinal stromal tumor is a known neoplasm in the medical literature, however, it is important to raise awareness about its existence and be vigilant as treating physicians not to go unnoticed the first clinical manifestations, which, although they may be nonspecific, They should awaken an alert signal, since early diagnosis and timely treatment can change the outcome of this pathology.

CONFLICT OF INTEREST: Non Stated

BIBLIOGRAPHY

1. Demetri g. tumores del estroma digestivo in: sleisenger and fordtran. enfermedades digestivas y hepáticas. fisiopatología, diagnóstico y tratamiento. 8ed, madrid, elsevier, 2008; 589–603.
2. gastrointestinal stromal tumor, dr mohammad taghi niknejad https://radiopaedia.org/articles/gastrointestinal-stromal-tumour-1&prev=search&pto=aue
3. Hyunseon c. kang, md, phd •christine o. menias, md •ayman h. gaballah, md, frcr, beyond the gist: mesenchymal tumors of the stomach, rsna, 2013, pag.
4. Muñoz TC, Sabah TS, Navarro RA y cols. Tumores del estroma gastrointestinal (GIST): Revisión de la literatura. Gastroenterología Latinoamericana, 2006; 17(1): 43-51.
5. Xie Hong, MD, PhD ● Haesun Choi, MD ● Evelyne M. Loyer, MD Robert S. Benjamin, Gastrointestinal Stromal Tumor: Role of CT in Diagnosis and in Response Evaluation and Surveillance after Treatment with Imatinib, RadioGraphics, 2006; 26: 481–495.
6. Mayo Clinic Healthy Living, Tumor estromal gastrointestinal, 2020.
7. Guy J. C. Burkill, MRCP, FRCR Mohammed Badran, FRCR Omar Al-Muderis, BSc J. Meirion Thomas, Malignant Gastrointestinal Stromal Tumor: Distribution, Imaging Features, and Pattern of Metastatic Spread, Radiology, 2003; 226: 527–532.
8. Dr. Ignacio Cano Muñoz, 1 Dra. Daly Betzabeht Avendaño Ávalos, 1 Dr. Luis Cuervo Pérez., Tumores del estroma gastrointestinal, Anales de Radiología México, 2011; 1: 48-59.
9. J. M. Sánchez Hidalgo, F. C. Muñoz Casares, S. Rufián Peña, A. Naranjo Torres, R. Ciria Bru, J. Briceño Delgado y P. López Cillero,. Hospital Universitario Reina Sofía. Córdoba, Gastrointestinal stromal tumors (GIST): factors predictive of survival after R0-cytoreduction, Rev. esp. enferm. dig. Madrid dic., 2007; 99(12).
10. Dr. Mohammad Taghi Niknejad y Assoc Prof Frank Gaillard, Tumor del estroma gastrointestinal, radiopaedia.
11. Hyunseon C. Kang, Christine O. Menias, Ayman H. Gaballah, Stuti Shroff, Melissa W. Taggart, Naveen Garg, Khaled M. Elsayes, Más allá del ESENCIAL: Tumores mesenquimales del estómago, radiographics, 33: 6.