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A CASE OF GASTROINTESTINAL STROMAL TUMOR IN A 92-YEAR-OLD MAN: DIFFICULT DIAGNOSIS TO SUCCESSFUL THERAPY

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ABSTRACT

Small bowel neoplasms are rare and often diagnosed late. This case report highlights the diagnostic difficulty and acute complications of a gastrointestinal stromal tumor (GIST). A 92-year-old male patient was admitted to the hospital because of melena that started a month ago. No remarkable findings were noted inendoscopy and colonoscopy examination. Due to the unavailability of an endoscopic capsule, enterotomography was performed, which showed an exophytic lesion in the jejunum loop causing segmental subocclusion, suggestive of GIST. A 10-cm segmental enterectomy was performed, followed by entero-enteroanastomosis. Pathological examination confirmed the diagnosis of GIST. The patientrecovered well after surgery.

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INTRODUCTION

Malignant neoplasms of the small intestine are extremely rare and account for 2%–3% of the gastrointestinal neoplasms on an average. More than 40 different histopathological types of neoplasia occur in the small intestine, but approximately 95% of the malignant cases are adenocarcinomas, gastrointestinal stromal tumors (GISTs), carcinoids, or lymphomas. The diagnosis of such tumors is often delayed because the patients usually present with nonspecific symptoms that occur as acute complications of the disease [4]. The current report presents a case of GIST— a rare, slow-growing tumor, accounting for less than 1% of all tumors of the gastrointestinal tract [3]—that was detected upon examination of a patient presenting with melena.

Case Presentation

A 92-year-old man was hospitalized for recurrent episodes of melena a month ago. He underwent endoscopy and colonoscopy for an etiological definition at hospitals in the city. During colonoscopy, he developed hemodynamic instability with unspecified arrhythmia. He was referred to a tertiary hospital because the cause of anemia could not be determined. The patient was hospitalized pale, with no significant findings on physical examination andwith a hemoglobin count of 6.1 mg/dL. Another endoscopic examination performed at this hospital helped establish the diagnosis of esophagitis caused by *Candida spp.* and atrophic pangastritis. Colonoscopy revealed no evidence of bleeding. As the patient continued to have melena and the institution did not have an endoscopic capsule or enteroscopy, enterotomography was chosen. The findings showed an exophytic lesion in the ileal loop suggestive of a GIST, which was causing segmental subocclusion (Figure 1). The patient required urgent surgery due to hemodynamic instability and severe anemia requiring blood transfusion. Laparoscopy was performed, which identified a loop with a fixed lesion in the pelvis, making the procedure impossible by laparoscopic approach. Exploratory laparotomy was performed, and a mass (approximately 5 cm in diameter) was found in the small intestine wall, located 40 cm from the Treitz's angle. A 10 cm segmental enterectomy was performed (Figure 2), followed by entero-entero anastomosis. Fusocellular neoplasia measuring 5.0 cm in its largest diameter was diagnosed, with mild nuclear pleomorphism and necrosis on anatomopathological examination. Histological findings were compatible with GIST. Considering the

size of the tumor (5 cm) and the number of mitoses (<2), the neoplasm was considered likely to be benign (Figure 3). Immunohistochemistry was performed using the following method: histological sections of material were fixed in formaldehyde, embedded in paraffin, dewaxed, and hydrated. Antigen recovery was performed at 121 °C and 18 psi water vapor pots. Secondary antibody (DOG1) was used and the reaction was amplified with polymer and stained with diaminobenzidine (Figure 4).

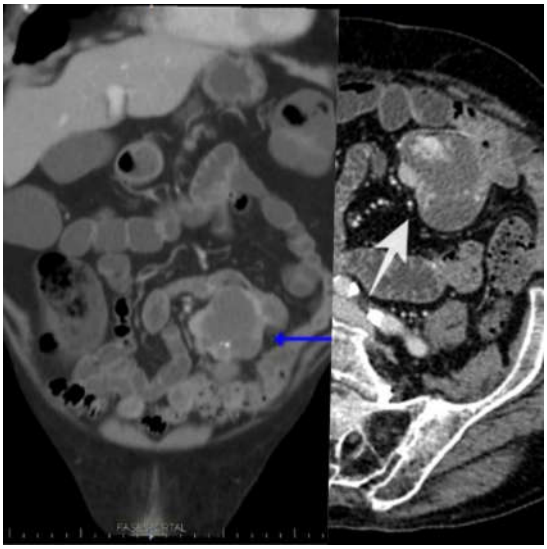

Figure 1. On the left, computed tomography-coronal section, portal phase. The arrow identifies the solid and heterogeneous lesion that originated in the posterior and inferior wall of the jejunum, in the left inframesocolic region. On the right, computed tomography- axial section, portal phase. It is possible to identify a solid and heterogeneous lesion (arrow) originating in the posterior wall of the jejunum, with foci of contrast enhancement. Its limits are well defined.

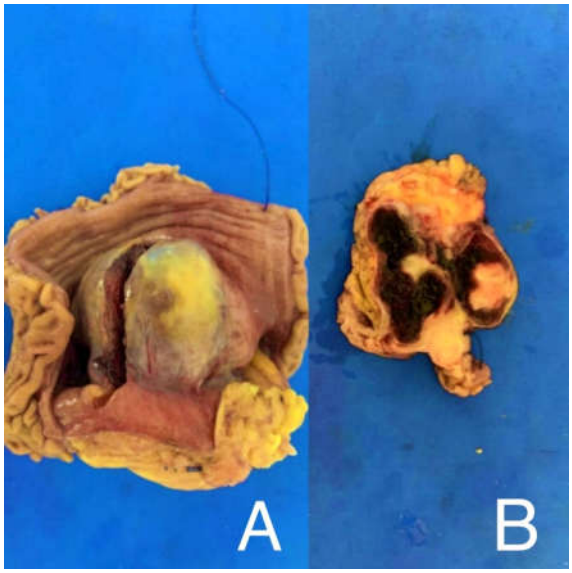

Figure 2. A) Section of small intestine, sectioned - jejunum; B) Small intestine segment, with extensive hemorrhagic area

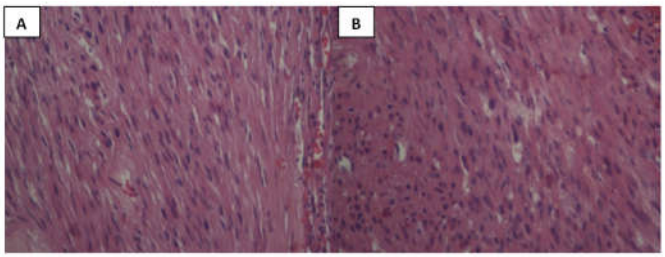

Figure 3. A and B - Benign fusocellular neoplasm morphologically compatible with GIST (HE 400X)

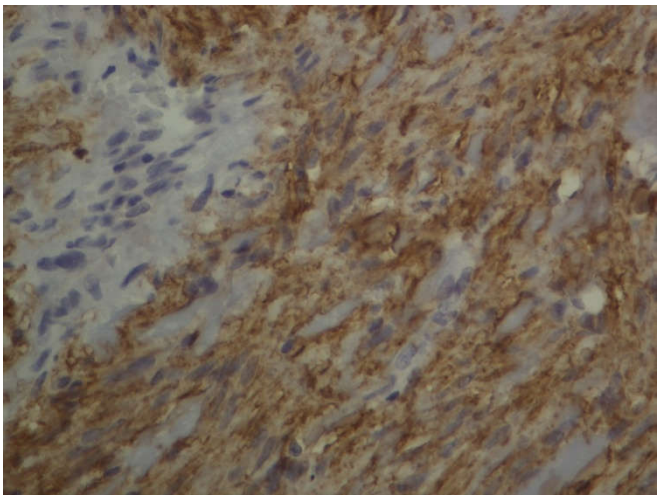

Figure 4. Diffuse positivity for the anti-DOG1 antibody observed, stained in brown (polymer technique, 400X)

The patient progressed satisfactorily and was discharged on the 4th postoperative day, asymptomatic, and was referred for outpatient follow-up. In compliance with the Declaration of Helsinki and the Brazilian ethical standards, the reported case was approved by the Research Ethics Committee of the Clinical Hospital of the Federal University of Triângulo Mineiro, according to Resolution no. 466/2012, which deals with research in humans (approval no. 4.394.582).

DISCUSSION

The report presented the case of a male patient who had melena for at least a month and had previously been hospitalized twice due to gastrointestinal bleeding. However, the etiology was not determined with endoscopy and colonoscopy examinations. The source of bleeding remains unidentifiable in 10%–15% of patients with upper gastrointestinal bleeding. This is because the lesion is either obscured by a blood clot (Dieulafoy lesion) or healed before the endoscopy [5]. Enterotomographic examination helped visualize the GIST. Most GISTs originate in the stomach (60%) or the small intestine (30%). They can also originate in the duodenum (4%-5%), colon and appendix (1%-2%), esophagus (1%), and occasionally outside the gastrointestinal tract [8]. In this case, the tumor was found in the jejunum. Approximately 70% of patients with GIST are symptomatic, 20% are asymptomatic, and 10% are diagnosed at autopsy [8]. Symptomatic GISTs tend to be large, with an average size of 6 cm. The symptoms are commonly due to the location, mass effect, and intraluminal bleeding. Large tumors can cause vague abdominal discomfort, pain, distension or early satiety. Erosions in the gastrointestinal tract can lead to significant hemorrhage causing hematemesis and melena, as in the case of the patient in question, or anemia due to occult bleeding [3].

Hemorrhage from the small intestine is uncommon, but is responsible for most gastrointestinal bleeds that persist or recur without an obvious etiology after high endoscopy, colonoscopy, and radiological evaluation of the small intestine. In the past, if no source of bleeding was found after endoscopic evaluation, bleeding was considered obscure. However, more recently it has been proposed that the term obscure be used only if patients do not have a source of bleeding identified after a complete examination of the entire digestive tract, including the small intestine. Most cases previously referred to as obscure are now more correctly categorized as suspected bleeding from the small intestine [1]. Tumors in the small intestine, including GISTs, are the frequent cause of obscure and occult bleeding [6]. Other etiologies include vascular lesions classified endoscopically by Yano-Yamamoto. The treatment of choice is surgical, as in the case in question. Despite age, he had symptomatic anemia that was difficult to control. The approach depends on factors that are assessed individually, including tumor size, location, extent, and experience of

the surgeon. For tumors larger than 2 cm, segmental resection is recommended with no regional lymphadenectomy, as nodal metastases are rare. The goal is complete resection with an intact pseudocapsule, prioritizing neoplasia-free resection margins. During resection, care must be taken to avoid rupture, which increases the risk of disease recurrence [2].

CONCLUSION

We conclude that in places where an endoscopic capsule [1] or an enteroscopy areunavailable, the use of enterotomography could be useful in visualizing the site of bleeding in the small intestine.

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