GIST REVEALED BY SMALL BOWEL VOLVULUS: CASE REPORT

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ABSTRACT

Gastrointestinal stromal tumors (GISTs) are the most common mesenchymal tumors of the gastrointestinal tract; the clinical presentations of GIST are highly variable according to their site and size; gastrointestinal bleeding, abdominal pain and mass related symptoms.

We present a rare case of a small bowel volvulus revealing a jejunal GIST, who benefited from a surgical cure followed by adjuvant chemotherapy.

Keywords: Gastrointestinal stromal tumor, volvulus, small bowel, chemotherapy.

1. INTRODUCTION

"Gastrointestinal stromal tumors (GISTs) are the most frequent mesenchymal tumors (representing 80%), accounting for 1 - 3% of malignant tumors" (1)."They are developed from Cajal's interstitial cells or one of their precursors and typically express the KIT+ (95% of cases). An oncogenic mutation in the KIT or platelet derived growth factor receptor alpha (PDGFRA) genes, which codes for receptor tyrosine kinases, is found in approximately 85% of adult GISTs" (2).

GISTs represent 1% of tumors of the digestive tract. They are located in 60% in the stomach and 20% in the small bowel(3).

The clinical manifestations of GIST depend on the size of the tumor, its location and the invasion of the tumors. They are often asymptomatic; the main symptom is gastrointestinal bleeding, a non-specific abdominal pain or a palpable mass (4).

2. CASE PRESENTRATION :

We report the case of a 45 year old patient, with no previous pathological history, who consults the emergency room for an occlusive syndrome (obstipation), colicky abdominal pain and vomiting.

Clinical examination found an abdominal distension with tympanism, and the rectum was empty in the rectal examination. Patient was hemodynamically stable.

CT scan findings : A small bowel obstruction upstream of a voluminous parietal mass of a jejunal bowel with well-limited exophytic development and polylobed contours, containing large calcifications intensely and heterogeneously enhanced after injection measuring 65x35x88mm (TxAPxH), suggesting a GIST.

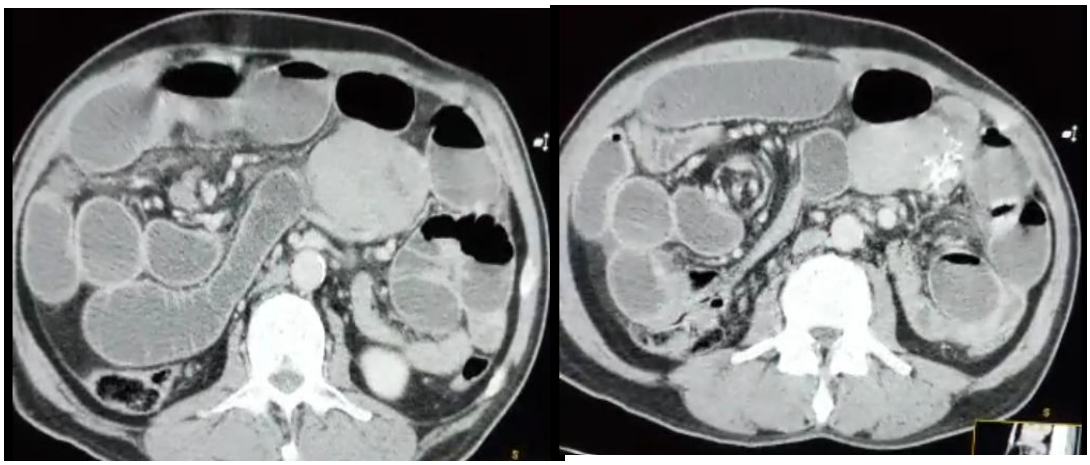

Figure 1: CT Scan showing the GIST and the Whirlpool sign.

The patient was admitted to the emergency operating room after conditioning, a median laparotomy revealed distension of the small bowel due to a volvulus around a large mass in the jejunum (figure 2, figure 3). A complete resection of the tumor and intestinal anastomosis was performed (figure 4). The resected mass was 12x9x7 cm, and resection margins were negative.

The anatomopathological examination complement found a tumor whose immunohistochemical profile was in favor of a GIST of the small bowel, with a high risk of recurrence according to Miettinen's prognostic classification (small bowel, size >10cm, mitosis <5).

Outcomes were uneventful through the patient was referred to Oncology department where he received a cure of Imatinib.

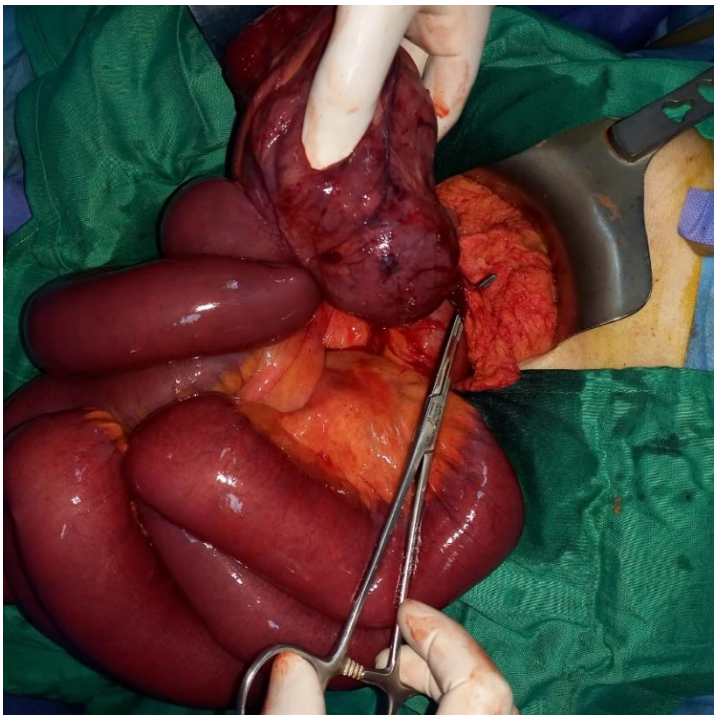

Figure 2: Surgical photo showing the flange between the mass and the left colic angle.

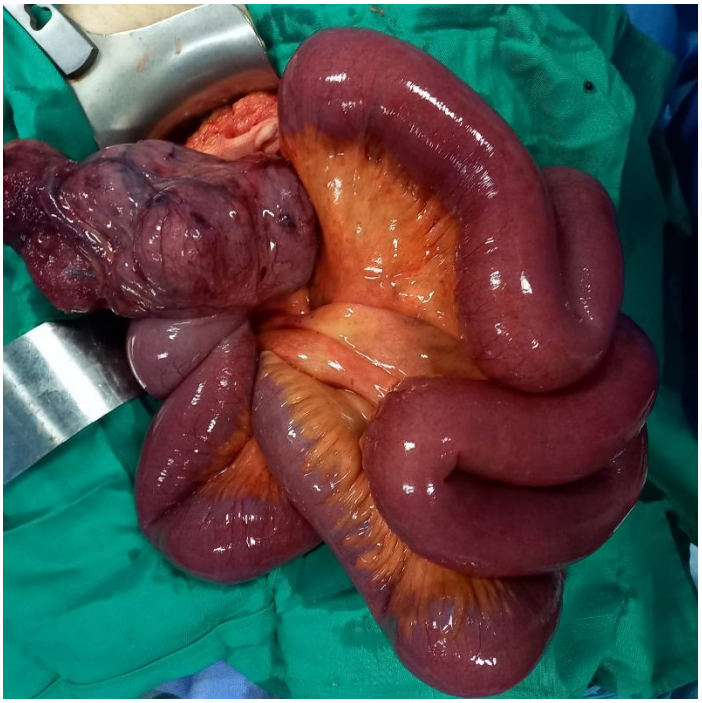

Figure 3: Large mass of the jejunum obstructing the bowel.

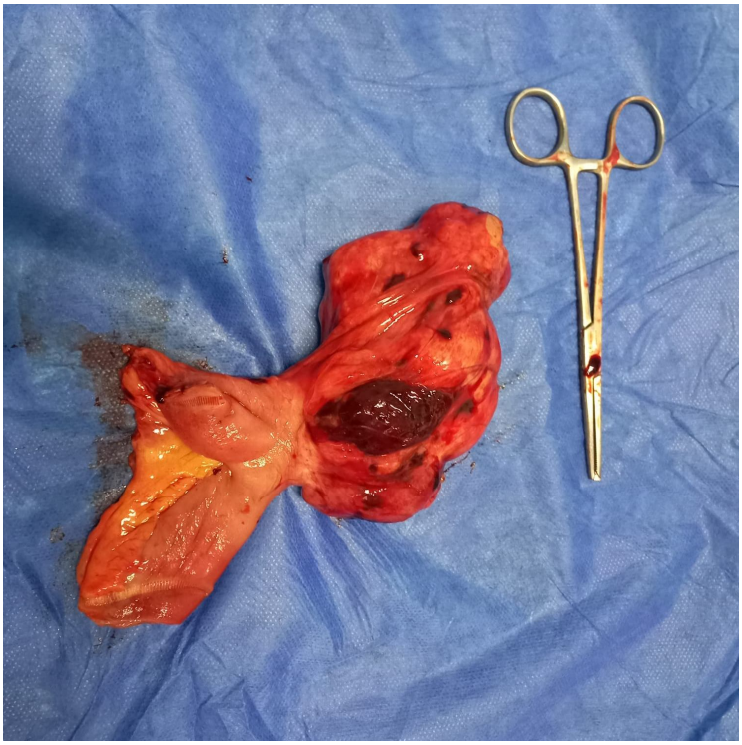

Figure 4: Complete resection of the jejunal mass.

3. DISCUSSION

GISTs are located in the bowel in 20 to 30% of cases, the jejunum being the most common location (5). They can arise at any age with a peak at 60 years with a sex ratio of 1(6).This was the case of our patient who presented a jejunal mass.

The diagnosis of GIST can be challenging. The symptoms are often nonspecific, the depend on the localization and the size of the tumor; the most common revealing sign is gastrointestinal bleeding (50%), abdominal pain (20-50%), or they can be asymptomatic in 20% of cases (7). In our case, it was revealed by a volvulus of bowel.

“Different imaging methods can lead to diagnosis of GIST, abdominal ultrasound is often the initial test employed in the investigation of a patient with abdominal pain or mass, the tumour discovered is frequently so large as to render the organ of origin unidentifiable” (8).

“CT scan is the method of choice for diagnosis and staging in most patients; it will usually provide the size of the tumor and its rapport with the surrounding organs and structures” (8).

“Surgery forms the mainstay of treatment as the only curative modality for localized intestinal GISTs and involves segmental resection” (4).

Imatinib was the first targeted therapy to be approved for the treatment of GIST. Imatinib inhibits several receptor tyrosine kinases, and has become the treatment of choice for advanced GIST, substantially improving survival time and delaying disease progression in many patients.

"Sunitinib has been approved for treatment of patients with imatinib-resistant GIST or those who are intolerant of the drug" (9).

4. CONCLUSION

GIST is a tumor that remains difficult to diagnose due to its non-specific symptoms.

The slow progression of the tumor and the lack of diagnosis methods make an early diagnosis difficult.

In our case it was revealed by a volvulus, a rare complication that constitutes a therapeutic emergency.

Treatment of intestinal GIST is based on surgery, which is the only curative treatment.

Adjuvant chemotherapy (Imatinib) in advanced forms with a high risk of recurrence is often started a few weeks after surgery and continued for three years (10).

Consent

As per international standard or university standard, patient(s) written consent has been collected and preserved by the author(s).

Ethical Approval:

As per international standard or university standard written ethical approval has been collected and preserved by the author(s).

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COMPETING INTERESTS

The authors declare that they have no ties of interest in relation to this article

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