Digestive bleeding due to jejunal stromal tumor: A train can hide another—A case report

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Abstract

Gastrointestinal mesenchymal tumors (GIST) are the most prevalent sarcoma tumors affecting the digestive tract. GIST originates from Cajal cells located within the digestive tract's wall. These cells play a crucial role in regulating digestive peristaltism as they are considered pacemaker cells. These tumors are especially located in the stomach (60%) but can also be seen in the small bowel (30%), in which jejunal stromal tumors are estimated to reach (40%). In this case report, we describe a jejunal GIST, which was initially discovered due to active bleeding, serving as the primary symptom, along with an underlying small loop intussusception. In our knowledge, GIST causing an intussusception is a rare entity in literature as well as GIST causing active bleeding. For that aim, we present a 36-year-old male patient, presented to our department with melena. An abdominal computed tomography scan was performed, revealing a small bowel intussusception associated with a 2 cm tumor. Despite the imprecise cause of the bleeding, due to the ongoing active hemorrhage, we decided to proceed with an emergency laparotomy, suspecting a tumorous origin of the bleeding. During the surgery, the tumor was located in the jejunum. The affected jejunal segment containing the tumor was resected, and an anastomosis was performed. Pathology examination confirmed a stromal tumor. The postoperative follow-up was uneventful.

Keywords

Gastrointestinal stromal tumors, jejunum, digestive hemorrhage, intussusception

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Introduction

Stromal tumors are gastrointestinal mesenchymal tumors that originate from Cajal cells located within the digestive tract's wall. These cells play a crucial role in regulating digestive peristaltism.¹ as they are considered pacemaker cells inducing the electric signal of the bowel tract. While these tumors are predominantly found in the stomach (60%), they can also occur, though less commonly, in the small bowel (30%), including the jejunal localization, colon (1%), and rectum (5%).²

Gastrointestinal mesenchymal tumors exhibit an extraluminal growth pattern, often protruding outward, which may lead to the invasion of neighboring organs. Occasionally, these tumors can result in complications such as obstruction or intussusception.³

The intussusception is an extremely rare complication in the stomach but is found in one-third of the GIST developed within the small bowel.⁴

In our case study, as we present a rare occurrence of a jejunal gastrointestinal mesenchymal tumor, doubly complicated by hemorrhage and intussusception, we insist that surgery remains the radical solution. In fact, surgery is the curative treatment for GIST tumors with no metastasis to ensure complete resection and to treat a complication such as bleeding. It is noteworthy to insist that lymph node courage is not indicated in GIST.

Case report

A 36-year-old male patient with no medical history presented to our emergency for melena evolving since 24 h. He had also been complaining of diffuse abdominal pain. On physical examination, pulse rate was at 150 ppm; blood pressure at 09/05 mmH. The abdomen was soft. The digital

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Figure 1. CT scan showing small bowel intussusception.

rectal examination showed melena. On biology, he had a hemoglobin level of 4.8 g/dl. After transfusion and stabilization of the hemodynamic state, an esophagogastroduodenoscopy was performed, which did not reveal any lesions that could cause digestive hemorrhage. A colonoscopy was also conducted and yielded normal results. Nevertheless, the patient presented a recurrence of hemorrhaging with a hemoglobin level of 3.7 g/dL. As an emergency measure, an abdominal angiographic computed tomography (CT) scan was conducted to identify the source of bleeding. This revealed a small bowel intussusception related to a 2 cm tumor in the small bowel (Figure 1). Apart from the intussusception, no other anomalies were observed. Although the precise cause of the bleeding was not definitively identified, given the active hemorrhage, we decided to perform an emergency laparotomy, suspecting a tumorous origin of the bleeding. The intussusception was located 20 cm from the duodenojejunal flexure (Figure 2). It was due to a 2 cm endoluminal budding tumor. We resected the jejunum with a margin of 5 cm on both sides of the tumor, and a jejuno-jejunal anastomosis was performed. There was no metastasis or another tumoral localization in the digestive tract on inspection. The jejunal segment containing the tumor was resected, and a jejuno-jejunal anastomosis was performed. Upon examining the specimen, a budding 2 cm tumor was identified, with evidence of blood in the bowel lumen (Figure 3). The postoperative follow-up was uneventful, and the patient was discharged on the fifth day post-operatively.

The pathology examination revealed a stromal tumor with mitotic index <5.

Discussion

Gastrointestinal stromal tumors (GISTs) are the most common sarcoma tumors affecting the gastrointestinal tract, with

Figure 3. At the opening of the resection piece.

Figure 2. Pre-operative view.

an incidence of 10-20 cases per million.⁵ These tumors primarily occur in the stomach (60%), followed by the small intestine (30%), large bowel (5%), and rectum (5%).⁶

Within the small intestine, GISTs are found in the jejunum in 40% of cases and the ileum in 60%.⁷ They typically afflict individuals between 40 and 80 years old.⁸ Symptoms vary based on tumor location and size, as well as their speed of growth, which makes the diagnosis challenging.⁹ Small GISTs are often asymptomatic and discovered incidentally and are often benign or with a low risk of malignity.¹⁰ When symptomatic, patients may experience abdominal pain and bleeding or may present an acute abdomen.5 GIST-related digestive hemorrhages typically manifest as obscure bleeding leading to anemia¹¹ and are rarely characterized by active hemorrhage.

For intussusception, it could be seen that small-size tumors developed endophytically because of the narrowed lumen of the small bowel.¹²

In our case, we serendipitously discovered an intestinal intussusception linked to a small bowel GIST. This





presentation is notably infrequent, given that GISTs tend to displace neighboring structures rather than infiltrate them, owing to their exophytic development.^{4,8}

Furthermore, the tumor was responsible for active bleeding, even though it went unnoticed on the CT scan. Active bleeding in GIST cases is also a rarity.³ To elaborate, as mentioned earlier, GISTs frequently manifest as anemia when symptomatic, primarily due to occult bleeding. The occurrence of associated active hemorrhage is less common and typically portends a worse prognosis.¹³

In our specific case, the hemorrhage was in the foreground, hiding a second complication: the intussusception.

Thanks to the CT scan, the diagnosis of the intussusception was performed, and the nature of the tumor was suspected. The cause of hemorrhage was deducted in front of the absence of another plausible origin.

In fact, a CT scan is the preferred radiological examination for the diagnosis and evaluation of GISTs. It typically reveals an enhancing and hypervascular mass such as found in our patient.

The gold standard treatment for GISTs is surgical resection, with laparoscopic approaches being feasible in our case; laparotomy was preferred in front of the profound anemia and the emergency state. Furthermore, the cause of the bleeding was suspected to be related to the intussusception without any confirmation. However, the laparoscopic approach is possible, particularly for tumors less than 5 cm in size.¹⁴

Conclusion

Our case has shown certainly that the discovery of one complication of gastrointestinal stromal tumors in small bowel enabled us to identify another one, for which the treatment is common, consisting of surgical resection.

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Author contributions

Kammoun Neirouz: Conceptualization; writing—original draft. Trabelsi Mohamed Mehdi: Supervision. Khalfallah Mehdi: Writing—original draft. Guelbi Mohamed: Validation; writing review and editing. Oueslati Annouar: Validation; writing—review and editing. Nouira Ramzi: Validation; writing—review and editing.

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