CASE REPORTS

GISTs AS A CAUSE OF MASSIVE BLEEDING

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This report describes two cases of GIST with bleeding as the predominant symptom. The first case comprised a patient with a gastric carcinoma and bleeding of the digestive tract. The second patient was diagnosed with mesenteric carcinoma and peritoneal cavity bleeding. Both patients underwent emergent surgical intervention. The first patient was subjected to gastric resection, while the latter to mesentery resection. The postoperative period proved uneventful. The excised specimens were evaluated at the Department of Pathomorphology, Institute of Oncology in Warsaw. The patients were directed to the Department of Soft Tissue Neoplasms, Institute of Oncology for registration and further treatment.

Key words: GIST, digestive tract bleeding, peritoneal cavity bleeding

GIST, a mesenchymal neoplasm that results from overexpression of the KIT protein, likely results from dysregulation of Cajala’s cells, which are responsible for peristalsis. Characteristically, GIST are positive for CD117 membrane receptor expression (1, 2, 3) GISTs appear in the stomach (60%), small intestine (20-30%), seldom in the oesophagus and large intestine, rarely in other locations not in contact with the wall of the digestive tract (omentum, radix of mesentery). Primarily, clinical symptoms depend on tumor localization. Specifically, tumors in the oesophagus are characterized by dysphagia, tumors in the stomach are characterized by bleeding and stenosis and tumors in the small and large intestine are characterized by perforation and obstruction. Large tumors are often palpable and surgery is the only curative treatment modality (4-11).

In this paper, we present the clinical workup and treatment of 2 patients with massive bleeding secondary to GIST (gastrointestinal stromal tumor). The first tumor was located in the stomach with bleeding to the lumen of digestive tract and the second tumor was located in the radix of the small intestine mesentery with bleeding into the peritoneal cavity.

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1. A 46 y.o. male was admitted for a massive upper GI bleed with symptoms of hypovolemic shock. His blood pressure was undetectable and his pulses were absent. We could not perform a gastrofiberscopy because of the time of admission. After conducting several laboratory tests, the patient was transported to the operating room. The abdominal cavity was opened by a “Mercedes” incision and a small curvilinear subserosal tumor (5x10 cm) was observed. The tumor perforated the serosal layer. Examination of the abdomen showed no lymphadenopathy, metastases to the liver or other pathologies. Subtotal resection of stomach in the margin of healthy tissues was performed. Continuity of the digestive tract was restored by performing a Roux-Y loop. Post-operative treatment was complicated by liquid in the left pleural cavity treated by punctures. The patient was discharged from the hospital on the 18th day without liquid in the pleural cavity.
Histopathological examination showed a spindle-shaped neoplasm – stromal tumor (GIST). Satellite tumors were also CD117+ and were diagnosed as GIST. This patient was the send to the Cancer Center Institute in Warsaw, Department of Soft Tissue and Bones Sarcomas for further treatment and placement in the GIST Registry.

2. A 53 y.o. male was admitted to the clinical ward for an abdominal tumor. USG examination showed a large tumor (138x56 mm) on the left side of the abdomen and two hyperechogenic changes in the liver, which were found to be metastases. Also, the USG showed a large amount of free liquid in the peritoneal cavity. CT examination showed large tumoral changes localized to the hypogastric area with a size of 7x16x15 cm, which was associated with the small intestine and likely a GIST. Additionally, some focal changes in the liver were found to be metastases. Gastrofiberoscopy showed no pathology. Initially, the patient did not agree to an operation. The family tried to move the patient to another hospital. After seven days, the patient’s condition worsened. His blood pressure decreased to 90/70 and his waist measurement increased.

The patient was operated on and shortly after opening, 2 liters of blood were observed in the abdomen. Bleeding was caused by a tumor of the small intestine mesentery. The tumor infiltrated the radix of the mesentery, horizontal part of the duodenum and the upper mesenteric artery. The tumor was excised totally with preservation of the ileocolic vessels. The horizontal portion of the duodenum was resected and anastomosed end to end.

The vitality of intestine was appropriate and after 3 days, a second look laparotomy was performed, which again revealed proper vitality of the small intestine. The patient was discharged from the hospital after a week.

Histopathological examination confirmed the diagnosis of GIST of the small intestine mesentery with CD117 (+) spindle-shaped cells. The patient was transferred to the Cancer Center Institute.

REFERENCES


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The Authors of the study presented two cases of gastrointestinal stromal tumors (GIST) responsible for massive bleeding, which required emergent surgical intervention. The Authors mentioned an important issue concerning gastrointestinal stromal tumors (GIST). Mazur and Clark were the first to use the above-mentioned nomenclature in 1983 describing gastric tumors, which were immunohistochemically different from Schwannoma and Leiomyoma neoplasms. Most medical data concerning the above-mentioned problem appeared during the past ten years.

Gastrointestinal stromal tumors comprise a heterogeneous and under-recognized group of mesenchymal tumors.

Clinical symptoms in patients with stromal tumors are atypical and depend on tumor size. Patients complain of abdominal pain, digestive tract bleeding episodes, intestinal obstruction and anemia. For large tumors, a pathological mass can be palpable.

In some patients, stromal tumors are asymptomatic and are usually diagnosed accidentally during imaging examinations or laparotomy performed for other reasons. In female patients, stromal tumors might pose diagnostic difficulties and imitate reproductive organ neoplasms.

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