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Letters to the Editor

Mesenteric gastrointestinal stromal tumor

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Dear Editor,

Gastrointestinal stromal tumors (GIST) are the most common mesenchymal neoplasms of the gastrointestinal tract (1) and account for only 2% of all neoplasms of the digestive system (2). The incidence is 0.6 to 1.8 per 100,000 inhabitants. The median age at diagnosis is 63 to 67 years, and no gender-related differences are observed. The primary origin of the tumor is most commonly the stomach (50-60%), followed by the small intestine (20-30%), large intestine (10%), esophagus (5%), and omentum, mesentery, and retroperitoneum (5%) (2).

Case report

A 71-year-old woman came to the emergency room for increased abdominal circumference, discomfort of 1 month's duration, and a decrease in the amount and consistency of stools, but no change in bowel movement frequency. The patient's relevant history included allergy to penicillin, hypertension, dyslipidemia, and intrinsic asthma.

The physical examination revealed a large, hard, painful abdominal tumor; the laboratory workup was normal and the tumor markers were negative.

The abdominal ultrasound and the abdominal and pelvic computed tomography (CT) scan showed normal adnexa, linear endometrium, and the presence of a solid mass of 17.6 x 17.6 x 11 cm. The origin could not be determined.

The patient underwent scheduled surgery via infraumbilical medial laparotomy in the gynecology department. The tumor was approximately 20 cm, arising from the mesentery and adherent to a small intestine loop and to the sigmoid colon (Fig. 1). The on-duty surgeon was notified, and immediately performed tumor excision with intestinal resection of 50 cm and suturing of sigmoid colon without intact serosa. Seven days later, the patient presented acute abdomen and underwent emergency resection and T-T anastomosis to treat perforated sigmoid colon. Subsequent progress was favorable and the patient was discharged 17 days after the second operation.

Pathology confirmed fusiform cell proliferation with occasional mitosis, but no atypias. The tumor cells were positive to vimentin and CD117 (C-Kit). At the time of writing, 1 1/2 years after the surgery, the patient is asymptomatic and receiving adjuvant treatment with imatinib mesylate.

Discussion

Most GIST (69%) are diagnosed by the symptoms; however, some are incidental radiographic findings (21%) and the remainder are observed during an autopsy (10%). The overall 5-year survival for patients with GIST is 50%, because more than half of the tumors recur within the first 2 years (primarily in the abdominal cavity) and tend to be multiple.

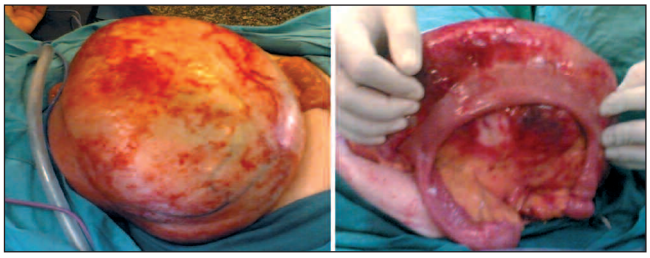

Fig. 1. Tumor arising from the mesentery and infiltrating the small intestine loop.

The immunohistochemical profile of the tumor cells resembles that of interstitial cells of Cajal because they are positive for CD117 (C-kit membrane recipient), CD34, and vimentin, among others (1,3).

In 65% of GIST, the tumor mechanism is based on gain-of-function mutations of c-kit receptor tyrosine kinase, which gives this type of cell its malignancy potential. In the other 35%, the mutations occur in the platelet-derived growth factor alpha-receptor (PDGFRA) gene (4).

A computed tomography (CT) scan with oral and intravenous contrast is the most useful technique for the initial assessment, complementary studies, and subsequent follow-up. The tumor presents as a solid mass with hypoechoic enhancement.

Once the tumor has been determined to be resectable, treatment consists of complete (R0) tumor excision with disease-free resection margins. On occasions, neighboring organs must be sacrificed because the overall survival is higher than that observed in patients who undergo more conservative surgery (3). Resectable peritoneal metastasis, a frequent finding, should be excised. Extensive resection of enlarged regional lymph nodes has not been proven to increase survival because tumor spread by this route is virtually nonexistent.

At present, imatinib mesylate can be used as an alternative treatment in cases of nonresectable GIST (5) or as adjuvant or neoadjuvant therapy, as the preliminary ASCO/07 results of the American College of Surgeons Oncology Group [ACOSOG] Z9001 study have shown that recurrence-free survival is increased in patients with c-kit-expressing GIST tumors larger than 3 cm who are treated with imatinib 400 mg/day for 1 year, despite the fact that no scientific evidence of higher overall survival is yet available (6).

When the tumor is nonresectable and medical treatment is possible, response can be assessed by a follow-up CT scan 4 to 6 months after treatment is started. In such cases, the response is considered to be favorable if the largest diameter of the tumor has decreased by more than 10% or its density has decreased by 15%.

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