Pedunculated Gastrointestinal Stromal Tumor Presenting As A Mobile Intra-Abdominal Lump

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Citation

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Abstract

Gastrointestinal stromal tumors are rare malignancies of the gastrointestinal tract. We report a case of a 65-year-old female, who presented with abdominal pain and a mobile lump in left upper abdomen. On exploration, a pedunculated mass of 11 x 10cm was found to be arising from the greater curvature of the stomach. The mass was excised with a wedge of stomach. Pathological evaluation diagnosed it as gastrointestinal stromal tumor. This type of presentation of gastrointestinal stromal tumor of stomach as mobile intra-abdominal lump is very rare and poses diagnostic problems.

INTRODUCTION

Gastrointestinal stromal tumor (GIST) is a rare visceral sarcoma arising in the gastrointestinal tract wall. This tumor arises in the muscularis mucosa and muscularis propria layers anywhere from esophagus to the rectum.[1] The most common anatomical sites of origin are the stomach (40-60%), small intestine (30-40%), colon and rectum (5%).[2] In this report we present a rare case of GIST arising from the greater curvature of the stomach as a pedunculated mass and presenting as a mobile intra-abdominal lump.

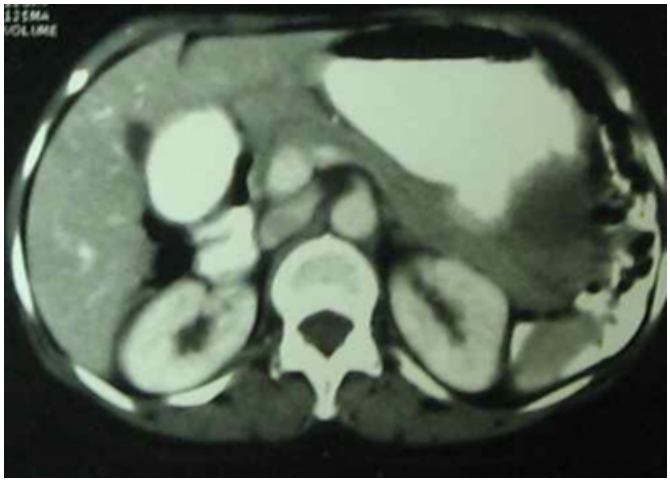
CASE

A sixty-five-year-old lady presented with pain at left upper abdomen for the last 3 months. Pain was dull aching, intermittent and there was no radiation. There were no urinary or bowel complaints. There was loss of appetite and significant weight loss during this period. A firm, 10 x 10cm oval, freely mobile, non-tender lump was palpable in the left hypochondrium and lumbar area. Clinically, the lump was thought to be arising from either the mesentery or the omentum.

Ultrasonography of the abdomen revealed a hyperechoic mass in relation to splenic flexure and descending colon. CECT of the abdomen showed an 11 x 8 x 8cm well defined mass in the upper abdomen displacing the colonic loops medially. In one section, the mass was abutting the greater curvature of the stomach. (Figure 1) There were no enlarged lymphnodes or ascites. Based on findings of CECT of the abdomen, upper GI endoscopy was done; however, there was no growth in the stomach and mucosa was normal.

Figure 1

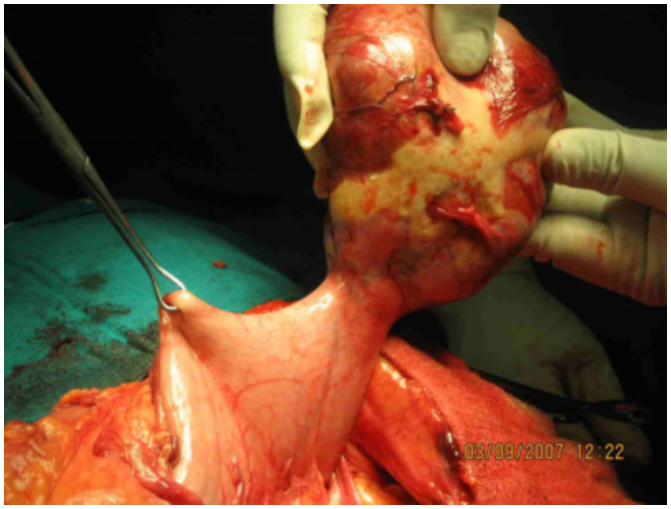
Figure 1: CECT of the abdomen showing a mass abutting the greater curvature of the stomach



There was a diagnostic dilemma and the possibility of a mass arising from the stomach, mesentery or omentum was kept up. The patient was taken for exploratory laparotomy. An 11 x 10cm oval pedunculated mass was found in the lesser sac, attached to the greater curvature of the stomach by a small 1.5cm stalk (Figure 2). The mass was excised along with a 2cm wedge of stomach. The patient had an uneventful postoperative recovery.

Figure 2

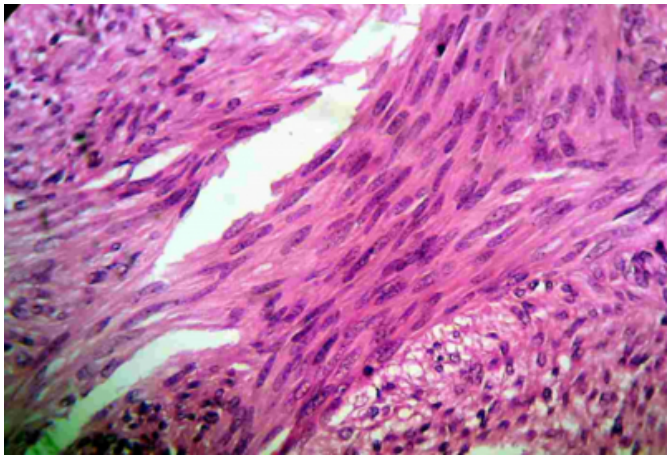
Figure 2: Pedunculated mass arising from greater curvature of the stomach



Histopathological examination of the specimen revealed fascicles of spindle-shaped cells with elongated nuclei on H&E stain (Figure 3). On immunohistochemistry, the tumor was positive for CD 117 and CD 34. Based on this, the diagnosis of gastrointestinal stromal tumor was made.

Figure 3

Figure 3: H&E stain (x100) showing spindle-shaped cells with elongated nuclei



DISCUSSION

In the past, gastrointestinal stromal tumors were classified as leiomyomas, leiomyosarcomas and leiomyoblastomas, but it is now evident that GIST is a separate tumor entity. Though GIST can originate anywhere in the GI tract, stomach (40-60%) and small intestine (30-40%) are the most common locations.[2] The most common symptom at presentation is bleeding. Bleeding may take place either into the abdominal cavity or into the gastrointestinal lumen. The patients may also have various symptoms such as abdominal pain, early satiety, bloating, obstruction or they present with an abdominal tumor with no symptoms. Between 10-25% of patients have metastasis at time of initial presentation.[1]

It is considered that GIST probably originates from the interstitial cells of Cajal (ICC) or their precursors, as they closely simulate the ICCs morphologically and immunophenotypically. Cells of Cajal are the pacemaker cells of the GI tract and control gut motility.[3] Association of GIST with tyrosine kinase receptor, KIT, was a significant step in the understanding of these tumors. Gain-of-function mutations in the KIT gene play an early and important role in the development of GIST. Most (95%) GISTs stain positively in immunostaining for the KIT protein (the CD117 antigen, an epitope of the KIT).[4] Activating mutation was detected also in platelet-derived growth factor receptor alpha (PDGFRA) in some GISTs. PDGFRA, like KIT, belong to the family of type III receptor tyrosine kinase. GISTs are now diagnosed by either presence of c-kit immunoreactivity (positive for CD117 antigen) or the presence of activating mutations in KIT or PDGFRA.[5]

Surgical resection is the mainstay of treatment and the goal of surgery is to completely resect the tumor and to achieve negative margins. GISTs metastasize only rarely to local regional lymph nodes, and thus lymphadenectomy is warranted only for evident nodal involvement.[6] Size of the tumor and the mitotic count are the two main factors which predict the chances of recurrence and the prognosis.[5] Imatinib mesylate is a specific competitive inhibitor of the KIT receptor tyrosine kinase and it is the standard treatment of metastatic GIST. Patients who are at high risk of tumour recurrence should probably be considered as candidates for imatinib therapy, although this has not been evaluated in clinical trials.[2]

In this case, the tumor presented as a mobile intra-abdominal lump and posed problems in diagnosis prior to exploratory laparotomy. This form of presentation of GIST of the stomach is rare and only isolated case reports are present in the literature.[7,8]

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