

A Huge Gastric Gastrointestinal Stromal Tumor in 45 Year Old Ethiopian Patient

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Abstract

Background: Gastrointestinal stromal tumors (GISTs) are soft tissue sarcomas that arise from specialized interstitial cells of cajal (ICCs) in the walls of GI tract. Although stomach is the commonest site of origin the size of commonly encountered GISTs are small. Here we report a case of biggest gastric GIST weighing 20 kilograms ever reported in 45 years old Ethiopian patient.

Case Presentation: A 45 years old Ethiopian patient presented with an abdominal pain and a progressive abdominal distension of one year duration. Physical examination revealed a chronically sick looking patient with a pale conjunctiva and distended abdomen. There was a huge mass filling the whole abdomen. Abdominal U/S revealed a huge heterogeneous mass filling whole abdomen with some free fluid collection in the peritoneal cavity. CT scan showed a complex mass filling the whole abdomen arising from the greater curvature of stomach posteriorly with calcifications and minimal ascites.

Surgery revealed a mass arising in the stomach attached to transverse colon and spleen with minimal ascites. The mass was excised with sleeve of stomach, part of transverse colon and spleen. The patient had smooth postoperative course and was discharged on the 7th postoperative day and followed for 3 months. Biopsy revealed the mass to be a gastrointestinal stromal tumor.

Conclusion: GISTs though rarely can present as a huge intra-abdominal mass.

Keywords: Gastric; GISTs; Intra-Abdominal Mass; Huge

Introduction

GISTs are tumors that arise from walls of gastrointestinal tract from specialized cells of interstitial cells of Cajal (ICCs) or precursors to these cells [1]. There were isolated reports of extra intestinal GISTs in literature. The stomach is the commonest site of origin followed by small intestine [2].

GISTs usually occur in adults and are very rarely in children and the young. Small tumor may cause no symptoms but some people may experience pain, nausea, vomiting, loss of appetite and weight loss. Occasionally swelling in the abdomen and bleeding do occur resulting in anemia, weakness and tiredness [1].

Genetic changes or mutations are responsible in the occurrence of GISTs in both sporadic and familial types. In about 80% there is a mutation in the KIT gene, and about 10% of cases are associated with a mutation in the PDGFRA gene. A small number of affected individuals have mutations in other genes [1,3].

Case Presentation

A 45 years old male Ethiopian patient who was in a good state of health a year ago presented with abdominal pain and progressive abdominal swelling. The burning epigastric abdominal pain was initially considered to be peptic ulcer disease and treated with ulcer medications but the patient noticed a progressive abdominal swelling. The swelling was initially epigastric but later involved the whole abdomen.

He had a significant but unquantified weight loss. There were no loss of appetite but had early satiety. He became progressively weak and were unable to do his day to day activities. There were no history of hematemesis or Melina. There were no family history of similar illness.

On examination at presentation he is chronically sick looking with distended abdomen (Figure 1). His vital signs were with in normal limits. The pertinent finding were a pale conjunctiva and huge non tender abdominal mass filling the whole abdomen.



Figure 1: Abdominal distention in a 45 year old with huge gastric GIST.

Investigations with Ultrasound and CT scan revealed complex intra-abdominal mass with some ascites. Moreover, CT scan suggested that the complex mass which had calcifications arising from stomach and is attached to transverse colon and spleen. Upper GI endoscopy showed the mass to be extra-mucosal.

Ultrasound guided FNA suggested spindle cell neoplasm. So, with an assessment of intra-abdominal mass surgical exploration was decided and the patient explored.

Laparotomy revealed a huge mass arising from greater curvature of stomach attached to transverse colon and spleen and flattening pancreas. The mass was excised with a sleeve of stomach, part of transverse colon and spleen. There were no evidenced of lymph node involvement or metastasis but there was moderate ascites. The mass weighed 20 kilograms (Figure 2).



Figure 2: A huge gastric GIST after resection.

The patient was transfused with 2 units of blood intra-operatively and transferred to ward. The patient had a smooth postoperative course and were discharged on 7th postoperative day.

Biopsy and histologic section showed the tissue to be composed of proliferation of bland spindle cells with perinuclear vasculations arranged in a long fascicles set in alternating myxoid and hyalinized stroma with areas of nuclear palisading and osseous metaplasia of 4/50 HPF mitosis. The surgical margins were free. All these finding were suggestive of gastrointestinal stromal tumor. The patient were linked to oncology side for adjuvant imatinib.

The patient were followed for 06 months and showed a remarkable improvement and weight gain.

Discussion

GISTs are the most common non epithelial neoplasms involving the gastrointestinal tract, but mesenchymal tumors only constitute approximately 1 percent of primary gastrointestinal cancers [1].

Our patient is just 45 years of age but studies show GISTs occur mainly after the age of 60 and are quite rare before the age 40. Ryosuke Miyazakia, *et al.* reported that among 7 patients with huge GISTs measuring ≥ 20 cm most (71%) were males and abdominal fullness and pain were the most common complaints as in our patient [4-6].

There were reports of ulcerations of GI mucosa resulting in GI bleeding as well as rupture in to the peritoneal cavity with hemo-peritoneum in patients with big GISTs [7].

Large GISTs may appear more complex on CT due to necrosis, hemorrhage, or degenerating components as in our patient [8].

Nodal involvement is quite rare in GISTs and there were no lymph node involvement in our patient as well. There were no evidences of peritoneal and distant metastasis although there were reports of such metastasis in some huge GISTs as reported by Shuichi Fukuda, *et al.* One study by Armed Forces Institute of Pathology (AFIP) showed gastric GISTs greater than 10 cm and a low mitotic rate of less 5/50 HPF as in our patient have 11% risk of metastasis [9].

Complete surgical resection with negative margins was possible in our patient. This is in accordance with the recommendation of 2010 guidelines for management of gastric GISTs by NCCN. The NCCN guideline recommends resection of all symptomatic masses and those greater than or equal to 2 cm in size [3].

Conclusion

Although rare gastric GISTs should be considered in the differential diagnosis of huge intra-abdominal masses. Wide local excision of such a mass with adjacent involved structures is required for a better outcome.

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Author's Contribution

BK is the author and the surgeon who operated up on patient. HWG is the consultant GI surgeon at department

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Availability of Data and Materials

All the necessary information is mentioned in text of case report.

Ethical Approval and Consent to Participate

Ethical approval were gained from the hospital for the report.

Consent to Publication

Consent to publish were gained from the patient.

Competing Interests

No competing interest to disclose.

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