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Case Report

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Mesenteric GIST: A case report

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Abstract

Gastrointestinal stromal tumours (GIST) are rare tumours arising from the mesenchyme of gastrointestinal tract, mainly in the stomach and small intestine. Mesenteric GISTs are rarely reported as they constitute less than 1% of GIST. Good surgical clearance ensures good survival. Imatinib therapy postoperatively improves survival. Here, we report such a rare case of GIST arising from mesentery of small bowel presenting as an abdominal lump.

Keywords: Gastrointestinal stromal tumors, Mesenteric GIST, Surgical resection, Imatinib.

INTRODUCTION

Gastrointestinal stromal tumors (GISTs) are mesenchymal tumors of gastrointestinal tract arising from the interstitial cell of Cajal. GISTs comprise 1% to 3% of all malignant GI tumors [1]. The term was coined by Mazur and Clark in 1983, and later on it was observed that these tumors overexpress tyrosine kinase receptors due to mutation in genes C-kit (CD117 or CD34). A population-based study using the most up-to-date diagnostic criteria has estimated an annual incidence of GISTs of approximately 15 cases/million [1]. It is mostly seen in patients older than 50 years, with a male preponderance. Most of the tumors are seen in the stomach and rarely in the mesentery. Complete resection ensures better chances of survival [1]. Imatinib, a tyrosine kinase inhibitor drug, has a major role to play postoperatively, as there is a lack of response of GIST to radiotherapy or chemotherapy.

CASE REPORT

A 45-year-old male presented to the Medicine department of Assam Medical College and Hospital, Dibrugarh with a 2-month history of abdominal discomfort and fullness. Physical examination showed a pulse rate of 88/min, blood pressure of 130/80 mmHg, and respiratory rate of 18/min. Abdominal examination revealed a palpable mass over the right hypochondrium, not moving with respiration. Abdominal ultrasound showed a heterogeneous hyperechoic lesion with necrotic areas in the subhepatic region displacing the IVC posteriorly and compressing the right ureter leading to mild hydronephrosis on right side (Fig. 1). CECT abdomen showed a relatively well-defined thick walled subtly enhancing SOLwith central necrotic areas measuring 9.9x7.4x6.4 cm in the subhepatic region, with maintained fat plane of lesion and surrounding structures, features suggestive of mesenteric GIST (Fig. 2). A NECT hypodense non-enhancing lesion measuring 1.9x1.3 cm was also seen in segment II of liver. Explorative laparotomy showed the tumour to be unresectable, with extensive adhesions. Histopathology of the tumor revealed GIST (low grade) (Fig. 3 and 4). The patient was started on Imatinib 400 mg daily and has improved clinically.

DISCUSSION

Most GISTs (60% to 70%) arise in the stomach; 20% to 30% originate in the small intestine, and less than 10% in the esophagus, colon, and rectum. GISTs can also occur in extra-intestinal abdominal or pelvic sites such as the omentum, mesentery, or retroperitoneum including the pancreas [3]. GIST present as lump in abdomen, pain due to tumor necrosis or rupture and sometimes as acute abdomen mimicking mesenteric cyst [4]. Abdominal ultrasound and CT scan are the main diagnostic investigations. On CT scan, mesenteric GIST appears as a well-defined lobular mass showing heterogeneous contrast enhancement with areas of hypodensity [5]. Surgery is the mainstay of treatment. Investigators at the M.D. Anderson Cancer Center

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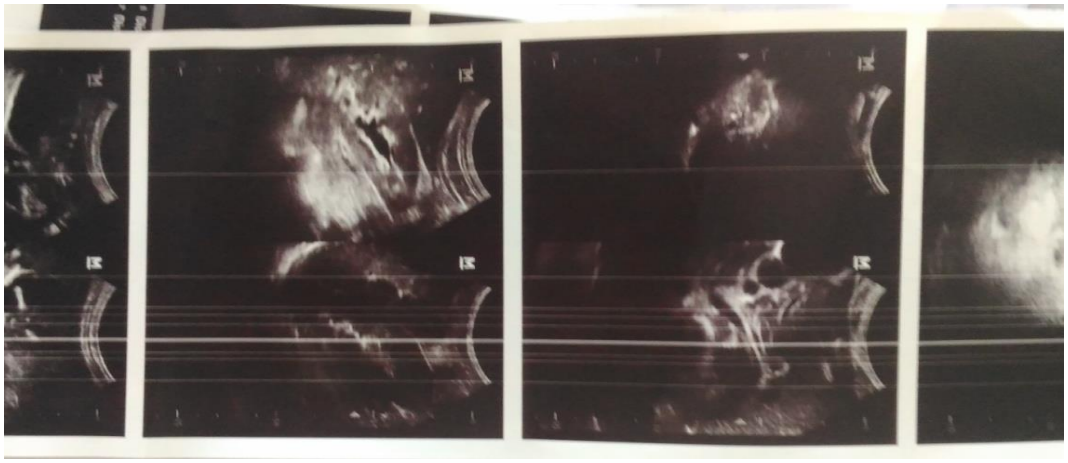

Figure 1: Abdominal ultrasound showed a heterogeneous hyperechoic lesion with necrotic areas in the subhepatic

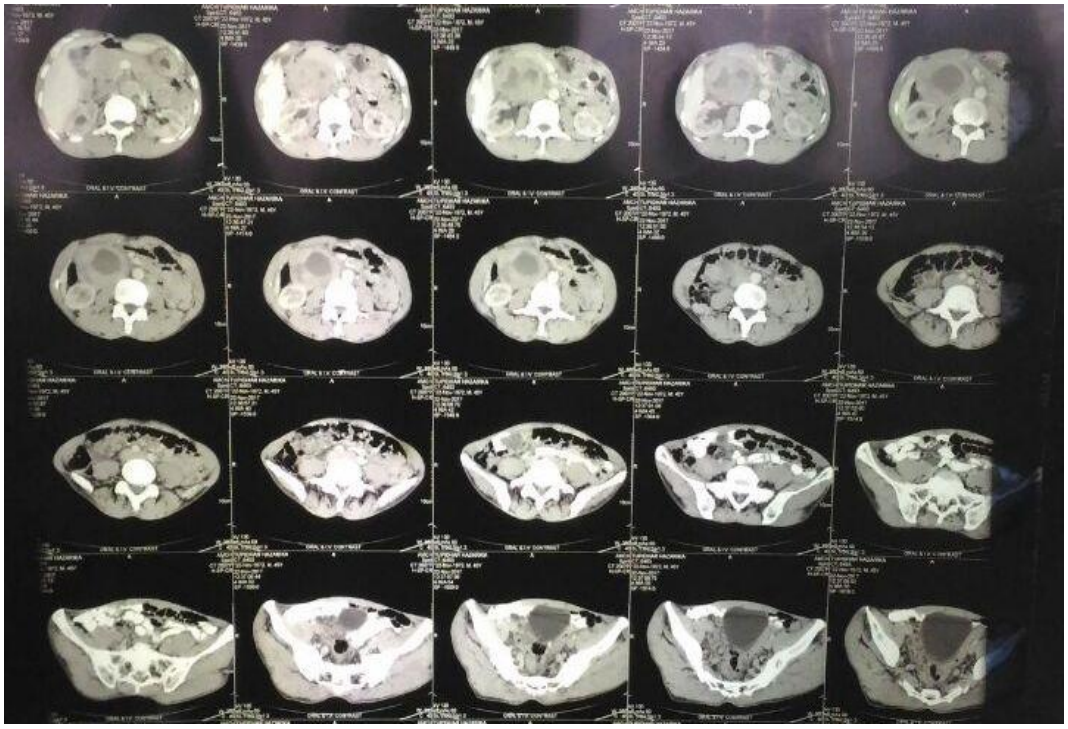

Figure 2: CECT abdomen

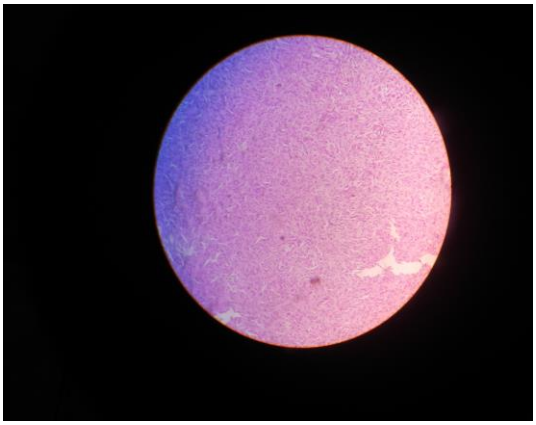

Figure 3: Histopathology of the tumor

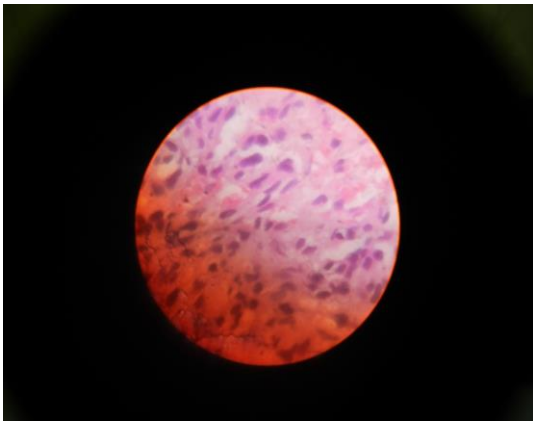

Figure 4: Proliferation of bland spindle cells, with pale, eosinophilic cytoplasm.

reported that smaller tumor size (<5 cm), complete surgical resection without tumor rupture, and low histologic grade of tumor were significant favorable prognostic factors. Ninety-five percentage of GIST are C-Kit positive (CD117 or CD34) while 5% are PDGFRA-positive [6]. Administration of imatinib in the postresection (adjuvant) setting has the potential to delay tumor recurrence, especially for patients who present with very large tumors and who are likely at very high risk of disease recurrence and metastatic spread [7]. The malignant potential of GIST varies, with benign tumours having a 5-year survival of 95% in contrast to the malignant type where it is 21% [2].

CONCLUSION

Mesenteric GIST is a rare condition.It presents as an abdominal mass and can be mistaken for other lesions. It can sometimes present as acute abdomen, too. Mesenteric GIST is an important differential diagnosis in cases of mesenteric growths. Large mass (>5 cm), incomplete resection margins and central necrosis are all poor indices for survival and result in high recurrences.

Conflict of Interest

The authors declare no conflict of interest.

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