ORIGINAL RESEARCH PAPER
Volume-6 | Issue-12 | December-2017 | ISSN No 2277 - 8179 | IF : 4.176 | IC Value : 93.98
INTERNATIONAL JOURNAL OF SCIENTIFIC RESEARCH

A CASE REPORT OF GASTROINTESTINAL STROMAL TUMOUR ARISING FROM JEJUNUM.

Medical Science

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ABSTRACT

GIST is the most common mesenchymal neoplasm of gastrointestinal tract. Most patient present in 5th to 7th decade as abdominal mass.They originates from gastrointestinal pacemaker cells are characterized by over expression of tyrosine kinase receptor KIT. Prognostic factor for GIST are tumor size and mitotic rate. (1). Surgery is the standard treatment for primary resectable GIST.(2). Development of tyrosine kinase inhibitor has changed the management of unresectable malignant cases. New tyrosine kinase inhibitor, imatinib mesylate which inhibit c-kit receptor is highly effective against gist.(3)

KEYWORDS

INTODUCTION

GIST indicate a distinct group of gastrointestinal sarcomas. GIST are most common mesenchymal tumour. With advent of immunohistochemistry and electron microscopy, it appear that gist have both myogenic and neurogenic component. 94% GIST express CD117 antigen, a product of c-kit proto oncogene Interstitial cell of cajal, which also stain for CD117 and CD34 is negative for desmin and s-100 and has both smooth muscle and neural component is thought to be the cell of origin of GIST. These cells function as the GI tract pacemaker regulate intestinal motility. Some GIST do arises from mesentery and omentum suggestive an origin in multipotent mesenchymal stem cells.(4)

CASE REPORT

A 45 years old female presented with for abdominal lump since 20 days. On examination, lump of size 12*10 cm2 present over abdomen which was freely mobile and nontender. CT scan suggestive of large irregular asymmetrical heterogeneously enhancing soft tissue density lesion arising from small bowel loop causing luminal narrowing and aneurismal dilatation of bowel loop. Lesion compressing anterior abdominal wall and posteriorly inferior vena cava.

In surgery, Midline laparotomy incision was kept.Large tumor present involving jejunal loop.Resection of tumor with involved jejunal loop done. Anastomosis of jejunal loop done with PDS 3-0 in single layer with interrupted stitches.

Histopathological examination shows highly cellularity, tumour cells arranged in facicular and nested pattern separated by medium sized blood vessels. Tumour cells are spindle in shape having blunt ended oval nuclei and pale eosinophilic cytoplasm.

Findings are suggestive of gastrointestinal stromal tumour :

- Spindle cell type.
- Mitotic rate : 1/ hpf or 50/50 hpf(grade 2)
- Necrosis absent.

- Overlying mucosa shows ulceration .
- Tumour is 0.1 cm away from one mucosal margin but infiltrating underlying intestinal wall.
- CD117 – positive in most of the tumour cell.
- CD34 – positive (blood vessels are positive).

DISCUSSION:

GIST originates from the interstitial cells of Cajal (ICC) or their precursors. Size of the tumor and the mitotic count are main factors which predict the chances of recurrence and the prognosis. 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. Surgery is the mainstay and the goal of surgery is to completely resect the tumor and to achieve negative margins. Imatinib mesylate (first generation) is a specific competitive inhibitor of the KIT receptor tyrosine kinase and it is the standard treatment of metastatic GIST. Second generation tyrosine kinase inhibitors(sunitinib, nilotinib, and regorafenib) are effective in improving progression free survival but not overall survival. (5)

GIST should also be considered in the differential diagnosis of large abdominal masses. Extra mucosal gastric GISTS are rare and can present as mass abdomen. GISTs most commonly involve the muscularis propria of the intestinal wall and extend to involve extramural, mural, and intra luminal surfaces of the small intestine. The extramural component of GISTs may be extensive such that the bulk of the tumour is outside the organ of origin. GIST are best treated by surgical resection. For metastatic GIST, Imatinib is the standard treatment for metastatic GIST.

To diagnose GIST, physical examination and history is important. Then further, CT scan, MRI or endoscopic ultrasound and biopsy can be done. If cancer is found, then immunohistochemistry and mitotic rate should be done.

In our case, the tumour was resectable. So we have done laparotomy and the tumor with jejunal loop was excised and the anastomosis done with PDS 3-0. Post operatively we have started imatinib for 3 years.

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