ISSN: 0975-833X

Available online at http://www.journalcra.com

International Journal of Current Research
Vol. 16, Issue, 05, pp.28304-28306, May, 2024
DOI: https://doi.org/10.24941/ijcr.47146.05.2024

INTERNATIONAL JOURNAL OF CURRENT RESEARCH

RESEARCH ARTICLE

GASTROINTESTINAL STROMAL TUMOUR OF ILEUM A RARE CASE REPORT – COMMON TUMOUR AT UNCOMMON LOCATION

***Dr. Vina Dhurve**

Assistant Professor, Mahatma Gandhi Institute of Medical Sciences, Sevagram, Maharashtra, India

ARTICLE INFO

Article History:
Received 20th February, 2024
Received in revised form
25th March, 2024
Accepted 14th April, 2024
Published online 30th May, 2024

Key words:

Malignant GIST, C-kit, Vimentin, Immunohistochemistry.

***Corresponding author:**
Dr. Vina Dhurve

ABSTRACT

Gastrointestinal stromal tumours (GIST) are the common mesenchymal tumour of gastrointestinal tract which origin from interstitial cell of cajal (ICC) or its precursor cell. These tumours arise rarely from structure other than stomach like ileum, mesentery etc. This is a case report of 65-year-old female with malignant GIST arising in ileum part of intestine. On surgery a large 10 x 9 x 6 cm intraluminal bowel mass, with other small nodules resembling lymph node present on and adjacent to it. Histopathology study of mass confirmed to be the malignant GIST which show positivity for IHC like C-kit, Vimentin, SMA. We report this case due to very rare occurrence of GIST in ileum location.

Citation: ***Dr. Vina Dhurve.*** **2024.** "Gastrointestinal stromal tumour of ileum a rare case report – common tumour at uncommon location.*". International Journal of Current Research*, 16, (05), 28304-28306.

INTRODUCTION

Gastrointestinal stromal tumours are rare heterogenous population of tumour with frequency of approximately 1:1,00,000 per year.[1] Patient typically present at the elderly age group of 50 to 80 year.[1,2] The most common site of involvement is stomach followed by small intestine then rectum, colon and oesophagus.[1,2,3,4] GIST have symptoms like well circumscribed nodule or abdominal mass, pain, intestinal obstruction, anaemia, GI bleeding and fatigue.[1,2,4] On histology it shows mostly spindle cell, epithelioid cell and combination of both types.[1] The treatment part for GIST is surgical resection by open or laparoscopic technique and chemotherapy if tumour is not localised.[1] Here we report a rare case of Gastrointestinal stromal epithelial tumour in ileum which was diagnosed and treated in our rural hospital.

CASE REPORT

A 65 year old female patient came to surgery OPD with complaint of right iliac pain for 2 months. The patient develops pain of insidious onset and gradually progressive in nature. On USG it shows ill-defined heterogeneously enhancing solid cystic mass of approximate size 10.2 x 9.1 x 8.2 cm in pelvis (Figure 1).

The lesion is invading small bowel loops, posterior bladder wall with maintained fat plane. Also, multiple lesions largest of size 2.3 x 1.6 cm along the pelvic peritoneum, anterior abdominal and omentum was seen? neoplastic aetiology had been suggested. On MRI it shows same findings. Routine laboratory data on admission revealed WBC count of patient was 10,600/mm^3, C-reactive protein levels 15 mg/l and ESR was 68 mm/h. Other biochemical parameters and liver function tests were normal. In surgery exploratory laparotomy with abdomino-perineal pull through of tumour was performed by gynaecology and surgery team. Biopsies were taken. Specimen was sent to histopathology section in pathology department for further diagnosis. We received specimen labelled as intraluminal bowel mass was a single tubular tissue piece measuring 20 cm in length. There is presence of mesentery on one side and attached multinodular mass on the other end measuring 10 x 9 x 6 cm. Mass is soft to cystic in consistency. On cutting open, there was presence of mass which is in connection with the mass seen on the external surface. Cut surface is grey white, areas of haemorrhage and necrosis are seen. Rest of the specimen appears normal. Received multiple fibrofatty tissue pieces labelled as lymph nodes/satellite nodules also some were isolated from mass in which largest measuring 1 cm in diameter.

Fig.1. Gross image of intraluminal bowel mass 10 x 9 x 6 cm. On cutting open it shows grey white areas with haemorrhage and necrosis

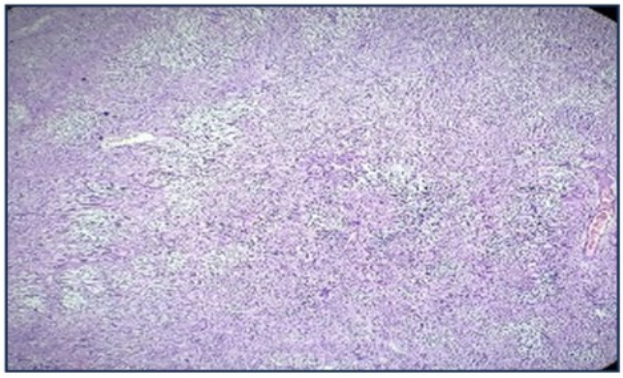

Fig.2. On histopathology tumour show epithelioid pattern with cells arrange in short fascicles and whorl of spindle cells

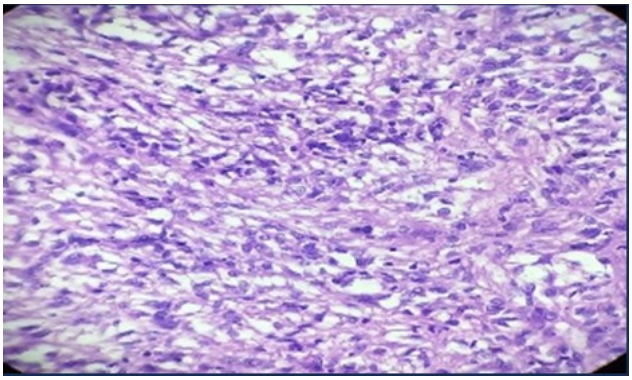

Fig.3. High power view show spindle cell with pale eosinophilic cytoplasm arranged in epithelioid pattern with prominent mitosis and nuclear atypia

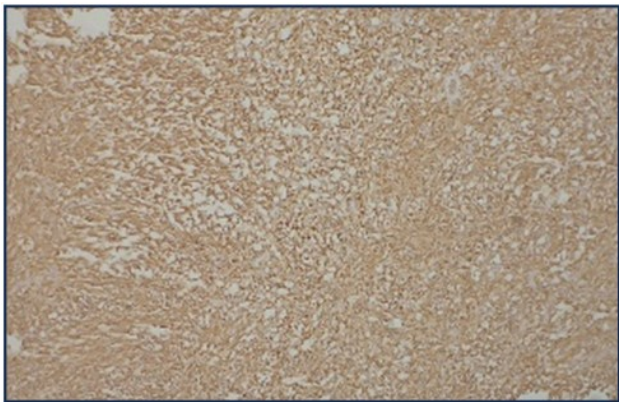

Fig.4. Immunohistochemistry slide shows positivity for vimentin marker

On microscopy it shows short fascicles and whorls of spindle cell with pale eosinophilic cytoplasm, ovoid nuclei, syncytial cell border. Tumour showing epithelioid pattern with prominent mitosis and nuclear atypia (figure 2&3). Diagnosis of suspect gastrointestinal stromal tumour was given. There was multiple satellite nodule present on the serosal surface adjacent to the tumour as well as away from the tumour. IHC was advised C-kit, vimentin, SMA was done.The immunohistochemical profile also supported the above diagnosis. Tumour express positivity for C-Kit, Vimentin, SMA(figure 4). The post-operative course was uneventful and the patient was discharged. Patient was treated accordingly with chemotherapy and was in regular follow up in our hospital.

DISCUSSION

Mazur and Clark in 1983 introduced the term of stromal tumours to define a group of gastric mesenchymal tumours that were not clearly differentiated by immunohistochemistry and ultrastructure.[2,7] These tumours are now grouped under the umbrella title of gastrointestinal stromal tumours (GISTs).[8] Gastrointestinal stromal tumours are mesenchymal cell derived neoplasm of gut that have relatively rare incidence but have important oncological importance because it provides important insight into cancer biology.[5]In the pathogenesis of GISTs it mainly based on the oncogenic, mutational activation of tyrosine protein kinase (KIT) in >95% of cases and platelet-derived growth factor receptor alpha mutation.[5,4] In Study of N Patel *et al* there were a total of 33,823 patients with a primary site of disease out of which 22,023 (65.1%) were in the stomach, 10,158 (30.0%) were in the small intestine and 1,642 (4.9%) were in the colorectum same result was found with Altintas Y, Bayrak M et al.[1,6]

Rubini P, Tartamella F reported a case of 50year male patient showing intermediate risk- GIST of the ileum with abscess.[5] It's Immunohistochemistry revealed that tumour cells were C-kit Positive.[5] Pathology of GIST is based on the knowledge of spectrum of GIST morphology which is used for the identification and can be supported by molecular diagnosis of KIT and PDGFRA mutations.[5] Though surgical excision remains the gold-standard for curative management, the discovery of imatinib, a tyrosine kinase inhibitor (TKI), has revolutionized the treatment of GIST in 21st century.[7]

CONCLUSION

GIST can present in various ways, these tumours are heterogeneous with respect to patient's demographics area, clinical presentation, tumour size, mitotic count, histologic subtypes and malignant potential of the tumour. So important element for the diagnosis is making clinical suspicion of GIST. Complete surgical excision and adjuvant imatinib therapy is required for successful management. Although these tumours remain of poor prognosis, patients with large size tumours can have positive outcomes.

Financial support and sponsorship Nil.

Conflicts of interest There are no conflicts of interest.

No ethical issue is there.

REFERENCES

1. Altıntas Y, Bayrak M. (2019) Gastrointestinal Stromal Tumor: Diagnosis and Management. Int J Surg Res Pract 6:093. doi.org/10.23937/2378-3397/1410093.
2. Mucciarini C, Rossi G *et al* incidence and clinicopathological features of gastrointestinal stromal tumours. A population based study BMC cancer 20 december2007 volume 230 page 1 to 7.
3. Bardell T, Diedrick. Gastrointestinal stromal tumour: varied presentation of a rare disease. Can J Surg August 2006, Vol. 49, No. 4;286-289.
4. Sasmal P, Sharma R, Patra S, Mishra T, Mishra P, Rout B. Malignant Extra-Gastrointestinal Stromal Tumor of the Mesentery. The Surgery Journal 2019; Vol. 5 No. 3:65-68.
5. Rubini P, Tartamella D F. Primary gastrointestinal stromal tumour of the ileum pre-operatively diagnosed as an abdominal abscess. MOLECULAR AND CLINICAL ONCOLOGY journal 2016; Vol 5: 596-598.
6. Patel N, Benipal B (February 22, 2019) Incidence of Gastrointestinal Stromal Tumors in the United States from 2001-2015: A United States Cancer Statistics Analysis of 50 States. Cureus 11(2): e4120. DOI 10.7759/cureus.412
7. Kanthan, R., Senger, J.-L., Ahmed, S. and Kanthan, S.C. (2014) Gastrointestinal Stromal Tumors in the 21st Century. Journal of Cancer Therapy, 5, 769-796. http://dx.doi.org/10.4236/jct.2014.58086.
8. King D M. The radiology of gastrointestinal stromal tumours (GIST). Cancer Imaging 2005; Vol 5, 150–156.

****