

Gastrointestinal Stromal Tumourmetastasis in Lymph Node: A Case Report

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Abstract

Background: GIST are the tumours originating in the gastrointestinal tract with a high malignant potential and the chance to metastasize and recur. They are widely studied due to their distinctive biologic behavior, clinicopathological manifestations, molecular mechanisms and treatment modalities. They can affect any part of gastrointestinal tract or extraintestinal sites. Most GISTs stain positive for KIT, CD117 and doctamin-1(DOG-1). Tumor resection along with Imatinib therapy is said to be mainstay of the treatment.

Case Presentation: Here by presenting a case of a male aged 60 years operated for cholecystectomy and intraoperatively found to have a solitary nodule over the stomach, which was later found out to be GIST metastasis to a lymph node on histopathology.

Conclusion: GIST has a low incidence and rare tendency to metastasize to lymph node; therefore it is important to study clinical importance to lymph node in this malignancy. Lymph node dissection should therefore be kept in mind during resection of GIST.

Keywords: *Gastrointestinal Stromal Tumour, Interstitial cells of Cajal, Metastasis*

Introduction

The Gastrointestinal Stromal Tumor (GIST) is a rare mesenchymal tumor of gastrointestinal (GI) tract. The tumour has a peak inclination towards metastasis to liver along with recurrence in the peritoneum. Primary lymph node involvement or metastasis is rare.¹ It can affect any part of the gastrointestinal tract and may also be seen to involve the extraintestinal sites.² The origin of this tumour is the Interstitial Cells of Cajal. The incidence of GIST is about 10-20 patients per million and occurs mostly in patients aged more than 5th decade of life.¹

Mainstay of the treatment being tumor resection; lymph node dissection being rarely done due to the rarity of its involvement.¹

Case Presentation: A 60 year old male presented to surgery OPD with the chief complaints of pain in abdomen since 15 days, progressive in nature. Clinical findings revealed pain in right hypogastric and epigastric region. CECT Abdomen was suggestive of calculus cholecystitis with empyema for which pig tail catheterization was done. Elective Cholecystectomy was planned considering the possibility of Chronic Cholecystitis. A solitary nodule on the greater curvature of stomach was accidentally discovered intraoperatively while Cholecystectomy procedure, for which wide local excision was done. Gall bladder and nodule specimens were submitted for histopathological examination. The nodule was well delineated, globular, brown, tissue piece measuring 2 X 2 cm. On cut section, white, homogenous areas were seen.

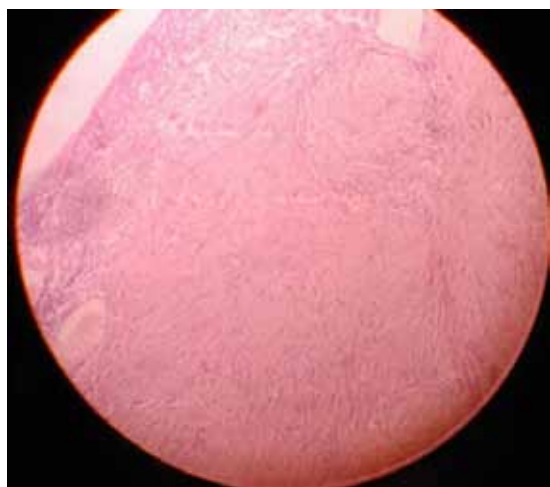
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On microscopy, lymph node architecture is

completely effaced by neoplastic element with smooth muscle differentiation arranged into whorl like pattern showing moderate nuclear atypia, pleomorphism and hyperchromasia and also mitosis with condensation of lymphoid follicle towards the periphery.



Discussion

GIST are rare tumours of the gastrointestinal tract. These tumours are mostly seen in 6th and 7th decades of life; mainly in the stomach.¹ Majority of the patients stay 'silent' until the tumor attains a larger size.² Common manifestations being pain in abdomen, anorexia, weight loss, vomiting manifesting depending upon the size of tumor.²

80% GISTs are located in the gastrointestinal; remaining seen in omentum, mesentery, gall bladder and urinary bladder.² Out of these, 60% are found in the stomach.

The diagnosis of GIST are made up by histology and immunohistochemistry findings. The histological variants of GISTs include spindle (70%), epitheloid (20%) and mixed (10%).⁶

Most GISTs stain positive for KIT, CD117 and anoctamin-1 (DOG-1). The major oncogenic pilot for GISTs are mutations in KIT and PDGFRA.⁵

The main factors determining the malignant ability of the tumor are the size of the tumor, site, rate of mitotic activity, C-Kit and PDGFRA genotype; also predicting the prognosis.⁴ Tumor resection has been said to be the mainstay of the treatment along with Imatinib therapy.⁴

Even after resection, metastasis and recurrence are not uncommon in these patients. Most common sites being liver and peritoneum.¹

Kubo N et al; reported a case of 68 year old male with weight loss and anorexia and gastroscopy disclosed a tumor mass with ulceration over the upper body of the stomach. On histopathology, GIST was confirmed. Computed Tomography (CT) findings revealed primary gastric tumor, right mediastinal tumor and a left axillary mass. On dissected and histopathological examination, it showed spindle cells and also positive immunohistochemical stains for C-Kit, said to be a metastasis of GIST.^{4,5,6}

In our study, we have seen a 60 year old male being operated for Cholecystectomy and accidentally diagnosed to have solitary nodule over the curvature of stomach. The histopathological findings revealed GIST metastasis to lymph node. The patient was later given Imatinib therapy and follow-up was done for recurrence.

Conclusion

GIST has a low incidence and rare tendency to metastasize to lymph node; therefore it is important to study clinical importance to lymph node in this malignancy. Lymph node dissection should therefore be kept in mind during resection of GIST.

Ethical Clearance: Taken from institutional ethics committee.

Source of Funding: Self.

Conflict of Interest: Nil.

References

1. Shafizad A et al. Lymph Node Metastasis in Gastrointestinal Stromal Tumor (GIST): to Report a Case. *Iran J Cancer Prev.* 2014; 7(3):1714.
2. Zhao X, Yue C. Gastrointestinal stromal tumor. *J Gastrointest Oncol* 2012;3(3):189-208.
3. Emre Canda A et al. Gastrointestinal stromal tumor of the stomach with lymph node metastasis; *World Journal of Surgical Oncology* 2008, 6:97
4. Kubo N, Takeuchi N. Gastrointestinal stromal tumor of the stomach with axillary lymph node metastasis: A case report. *World J Gastroenterol* 2017; 23(9): 1720-1724
5. Mehren Mand Joensuu H. Gastrointestinal Stromal Tumors. *J Clin Oncol* 36:136-143.
6. Parab T et al. Gastrointestinal stromal tumors: a comprehensive review. *J Gastrointest Oncol* 2019;10(1):144154.