A Case Report: Small Intestinal GIST

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Introduction

Gastrointestinal Stromal Tumor (GIST) is the most common (80%) mesenchymal tumor of the alimentary canal, representing 1-3% of gastrointestinal malignancies [1]. GISTs are usually found in the stomach or small intestine but can occur anywhere along the GI tract and rarely have extra-GI involvement [2]. The majority of GISTs present at ages 50-70 years with no clear gender predilection [3]. GISTs are uncommonly seen in patients younger than 40, however, cases in children and young adults have been reported [4]. GISTs are thought to arise from interstitial cells of Cajal (ICC), They are typically defined as tumors whose behavior is driven by mutations in the Kit gene or PDGFRA gene [1] and recognition of KIT protein expression (CD 117) as a reliable diagnostic marker of disease.

Case Report

The patients, 60 years old man, normotensive, non-diabetic, from middle class socio-economic background presented with vague abdominal pain, repeated attack of pallor and something feeling in central abdomen. He had no history of haematemesis and or melaena, cough or breathlessness, chest pain or palpitation and urinary complains. He never experienced jaundice and his bowel habit was normal.

On clinical examination, the patient was ill looking, anaemic, well oriented and co-operative with average built and nutrition. He was not icteric and no bony tenderness, lymphadenopathy and any organomegaly. He had an ill defined mobile rounded mass about 10×8 cm at umbilical region soft to firm in consistency non tender and not fixed with overlying skin. He had no ascites. Others systemic examination revealed no abnormality.

Peripheral blood film showed hypochromic and and normocytic red blood cells, mature WBC and normal platelets count (Figure 1). He tested negative for HBsAg, anti HCV and stool OBT.

Ultrasoundography of whole abdomen revealed heterogenous mass (11.47×8.9×7.1 cm) suggestive of GIST originating from small intestine, no evidence of metastasis.

CT scan of whole abdomen revealed heterogenous mass (11.47×8.9×7.1 cm) suggestive of GIST originating from small intestine, no evidence of metastasis (Figure 2).

CT guided FNAC showed cellular material composed of spindly cells arranged in large sheets, clusters and singly. These cells show mild pleomorphism, compatible with spindle cell neoplasm.
A biopsy sample will be investigated under the microscope. Microscopically, GISTs have a broad morphological spectrum. Three main histological subtypes have been best widely accepted and they are spindle cell type (most common, 70%), epithelioid type (20-25%), and mixed spindle cell and epithelioid type. In general, GISTs have a wide variation ranging from hypocellular to highly cellular with higher mitotic rates [9]. Immunohistochemically, the vast majority of GISTs (95%) are strongly and diffusely positive for KIT (CD117), which makes the KIT to be a very specific and sensitive marker in the differentiating GIST from other mesenchyma tumors in the GI tract [10]. Other markers which can be expressed by GISTs include h-caldesmon, SMA, S100, desmin, Vimentin, and cytokeratins 8 and 18. Recently other CD markers for GISTs are reported including CD10 [11], CD133, and CD44 [12].

Although GISTs are the most common mesenchymal tumor of the GI tract, a variety of other tumors should be included in the differential diagnosis. Accurate recognition of GIST is obviously important as the treatment differs according to the tumor type. The main differential diagnoses include smooth muscle tumors, schwannoma, desmoid fibromatosis, inflammatory myofibroblastic tumor, inflammatory fibroid polyp, solitary fibrous tumor, synovial sarcoma, follicular dendritic cell sarcoma, glomus tumor, and melanoma.

The risk of relapse of GISTs is estimated based on mitotic rate, tumor size, tumor site, surgical margins and the status of tumor rupture. Tumor size and mitotic count are considered to be the most useful and best prognostic factors [13].

### Conclusion

The rapid expansion of molecular and clinicopathological knowledge of GIST has given this disease a promising future. Molecular testing of GISTs should be performed for treatment selection and assessment of disease progression. The cause of GIST is still unknown; therefore, little has been done preventively. However, with gradual understanding the molecular mechanisms of GIST, the etiology will be elucidated eventually.

### References


