



## A Rare Cause of Anemia Aetiology: Gastrointestinal Stromal Tumours

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### ABSTRACT

Gastrointestinal stromal tumours (GIST) are rare neoplasms originating from the interstitial cajal cell in the gastrointestinal tract. Herein, we presented a 51-year-old male patient with GIST which we investigated the aetiology of iron deficiency anaemia and found the tumour.

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### Introduction

Gastrointestinal stromal tumours (GIST) constitute 1-2% of gastrointestinal system tumours.<sup>1</sup> The predominant localization of GISTs seems to be the stomach and small intestine, but GISTs may develop any level of the gastrointestinal tract and sometimes in the omentum, mesentery, and peritoneum. In our case, iron deficiency anaemia associated with GIST was considered suitable for the presentation because of its rare occurrence.

### Case Report

A 51-year-old male patient was evaluated by abdominal ultrasonography at an external centre eight months ago with pain in the right upper abdomen. The patient with cholelithiasis had a laparoscopic cholecystectomy operation. The

patient was re-evaluated in another centre with complaints of weakness, fatigue, swelling in the right upper abdomen and weight loss of 12 kg in the last six months. Because of iron deficiency anaemia, he received iron treatment after transfusion of 2 units of erythrocyte suspension. Upper gastrointestinal system endoscopy and colonoscopy had no abnormal findings. The non-contrast abdominal CT revealed duodenal wall thickening. His complaints continued to increase. In the patient's physical examination, the vital signs were unremarkable. His conjunctiva was pale, and there was fullness in the epigastric region. The haemoglobin value was 7.5 mg/dL, consistent with iron deficiency anaemia. MR enterography investigated small bowel diseases because the patient's endoscopic evaluations were normal. A



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mass lesion of approximately 13.5x15.5x16 cm in size at the level of the 3-4th part of the duodenum was detected. The mass had a connection with the intestinal lumen and was monitored for air and fluid levels in its central unit. Contrast-enhanced abdominal CT showed diffuse wall thickening in a 14 cm segment in the distal part of the duodenum. An exophytic mass, approximately 14x8 cm, was observed with cavitation in the centre. Combined MR and CT evaluations reported that the mass lesion described was consistent with GIST, a malignant mass. We referred the patient to the general surgery department. Biopsy was taken from the mass during the operation, and pathological examination resulted in a high-grade malignant mesenchymal tumour. Morphological and immunohistochemical findings were interpreted as compatible with GIST. We referred the patient to the oncology department, and they started imatinib treatment as preoperative chemotherapy.

## Discussion

18% of cases are asymptomatic and diagnosed during CT scans, endoscopic procedures or surgical procedures.<sup>2</sup> GISTs can be identified on ultrasound examination of the abdomen, computerized tomography (CT) scanning, magnetic resonance imaging (MRI), and positron emission tomography (PET). The definitive diagnosis of GIST is made by histopathological examination and immunochemistry.

Symptoms such as nausea, vomiting, early satiety, abdominal pain, and rarely a palpable mass can be seen in GIST cases. The most common clinical finding is gastrointestinal bleeding resulting from mucosal ulceration.<sup>3,4</sup> Chronic bleeding can lead to anaemia. In patients with iron deficiency anaemia, the underlying gastrointestinal system losses should be investigated.

Treatment of GIST includes surgery, endoscopic therapy, and chemotherapy. Standard

endoscopic procedures do not mean that there is no gastrointestinal disease. Other small bowel diseases such as GIST, which are rare, should also be investigated.

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## Conflict of interest

The authors declared that there are no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

## Authors' Contribution

Study Conception: HS; Study Design: HS; Supervision: HS, AK; Materials: HS, EB, TD; Data Collection and/or Processing: SHA; Statistical Analysis and/or Data Interpretation: HS, AK; Literature Review: HS, AK; Manuscript Preparation: HS; Critical Review: HS.

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