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CLINICAL VIGNETTE

Recurrent Anemia and GI Stromal Tumor

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Introduction

GI stromal tumors are rare forms of soft tissue malignancy of the digestive tract. Presenting symptoms are vague including nausea, vomiting, abdominal discomfort, weight loss or early satiety. Bleeding is the most common symptom, attributed to erosion of the gastrointestinal tract lumen. Our patient had persistent anemia without other remarkable symptomatology, where workup eventually revealed the diagnosis of a GI stromal tumor.

Case Report

A 74-year-old male with history of hypertension, hyperlipidemia, non-insulin-dependent diabetes, and osteoarthritis presented with progressive weakness. The patient was previously healthy and independent but during hospitalization, was found to be in hemorrhagic shock with hemoglobin down to 6 from baseline of 13. GI and hematologic workup was negative for the cause of anemia. The patient was discharged to a skilled nursing facility (SNF) for rehabilitation due to deconditioning, with plan for ongoing outpatient follow-up. While at the SNF, the patient demonstrated only modest improvement, with plateau in rehabilitation, and was eventually discharged home with increased caregiving assistance. He represented back to the hospital with weakness and inability to walk. Subsequent CT demonstrated a 6.1 x 5.1 cm mesenteric mass in the duodenum. Endoscopic ultrasound biopsy confirmed a Gastrointestinal stromal tumor (GIST). Given the extent and size, the patient was started on neoadjuvant chemotherapy with imatinib with reduction in size of the tumor from 6cm to 2cm. He underwent surgical excision of tumor and continues on adjuvant treatment for at least a year with oncology followup. His anemia has stabilized and functional status has improved remarkably.

Discussion

This case of recurrent weakness due to persistent anemia ultimately resulted in the diagnosis of a GI

stromal tumor. Although GI bleeding can be one of the common symptoms of such malignancy, the tumor diagnosis is not characteristically on the differential for GI bleeding.

GI Stromal tumors are most common in the stomach and small intestine, but can involve other areas of the alimentary tract. They account for <1% of primary GI malignancies, although actual frequency may still be variable¹⁻². Clinical features vary depending on the location, size and aggressiveness of the tumor. Many mesenchymal GI tumors are asymptomatic and diagnosed incidentally on imaging or endoscopy performed for another purpose.

The clinical presentation of GISTs can be vague and often nonspecific. Symptoms may include bloating, early satiety, pain, or nausea. In a series of cases with leiomyomas and leiomyosarcomas, the most major presentations included GI bleeding (40%), abdominal mass (40%) and abdominal pain (20%)³⁻⁴. Due to the often vague complaints, approximately 50% of GISTs have already metastasized at the time of diagnosis. The majority of metastases at presentation are intra-abdominal to the liver, omentum or peritoneal cavity; and metastases to lymph nodes or extra-abdominal sites are rare. CT is recommended for screening and staging purposes⁵⁻⁶. Upper endoscopy may sometimes be necessary to characterize the mass further and endoscopic ultrasonography can be used to distinguish leiomyomas from other submucosal tumors⁷. The consensus for treatment is to consider all GISTs including those that appear benign to have malignant potential.

Surgery remains the treatment of choice for localized GIST and resection is recommended for small tumors ≤ 2 cm⁸⁻⁹. Although surgery is potentially curative for resectable GISTs, patients may still experience disease recurrence. Larger tumors or higher risk patients may benefit from adjuvant or neoadjuvant therapy. Imatinib mesylate, an oral tyrosine kinase inhibitor has dramatically changed GIST therapy.

Imatinib can delay recurrence in many cases and is recommended for patients with marginally resectable tumors and those with resectable tumors with risk for morbidity or involvement of other organs⁹. A multicenter landmark trial recommended imatinib as therapy in those with larger, resected, localized GIST with risk for relapse¹⁰. Adjuvant imatinib for one year may have impact on disease control rates, but these benefits change when imatinib is discontinued. Furthermore, neoadjuvant therapy can be recommended for large, locally unresectable or metastatic disease or if surgical morbidity can be improved by reducing the size of the tumor preoperatively^{9,11}.

This case illustrates how on-going evaluation for unresolved symptoms can lead to the appropriate diagnosis. The initial evaluation of persistent anemia and GI bleeding should still be approached in the standard manner with most common causes being considered. However, when a symptom persists with a cause unidentified, atypical conditions as part of the differential diagnosis should be considered. Furthermore, rehabilitation in a skilled nursing facility plays a unique role in the transition of care. Clinical care balanced with rehabilitative services, social support, and the interdisciplinary approach can profoundly affect outcome and reveal nuances about a patient's history that otherwise would not be obvious. Thus, it is important to investigate atypical presentations of conditions if an individual does not demonstrate the expected improvement with treatment or rehabilitation.

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