Unusual Presentation of a Young Male Diagnosed With a Perforated Gastrointestinal Stromal Tumor (GIST) in the Jejunum With a Previous History of Multiple Myeloma (MM)

Hadi hemaidan, BSc; Ahmad Anbar, MD; Sami Hemaidan, BSc; Tarek Ibrahim, MD; Ammar Hemaidan, MD
Advanced Medical Research Center, Florida State University, University of Florida School of Health Sciences,

Background

- Despite being the most common mesenchymal neoplasms of the gastrointestinal tract, Gastrointestinal Stromal Tumors (GIST) are rare tumors that count for less than 1% of all GI tumors.
- They can occur anywhere along the GI tract, most commonly in the stomach or small intestines.
- The average age of diagnosis is 65-69 years.
- They are considered non-hereditary or sporadic, but some studies suggest increasing the frequency of additional malignancies in patients with (GIST). However, this relationship remains unclear and needs further exploration.

Case Presentation

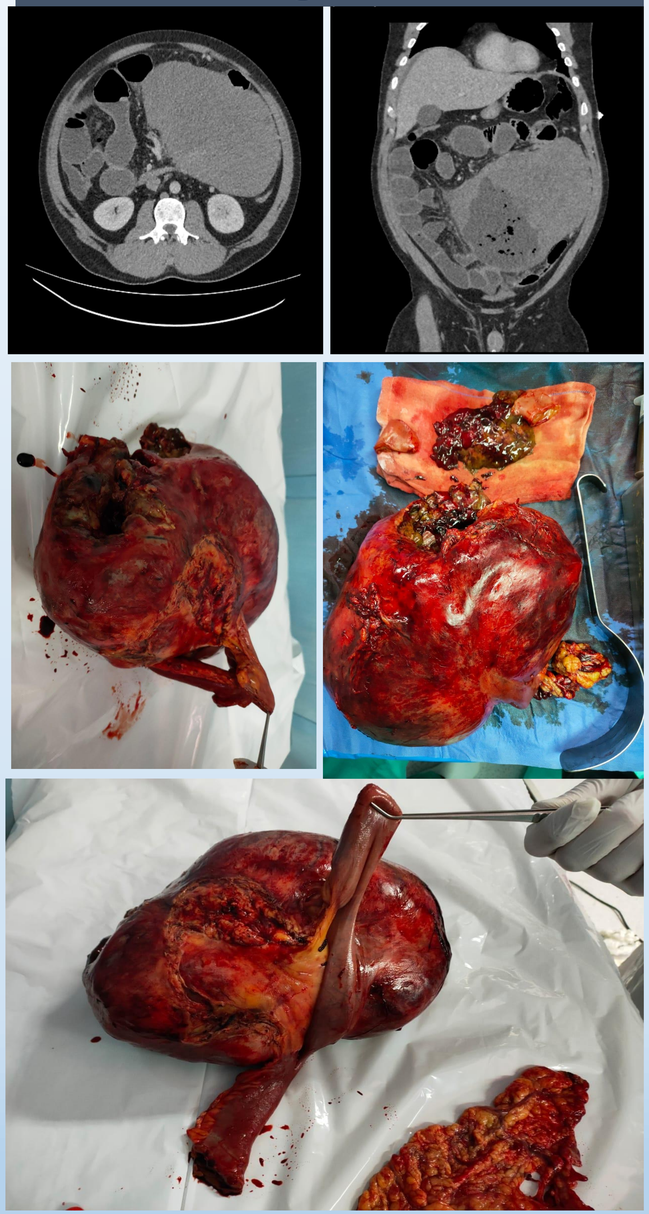
2022 A 44-year-old male patient presented to the emergency room with Severe abdominal distension, abdominal pain, and vomiting.

A physical exam showed signs of bowel obstruction and possible perforation with an acute abdomen.
CT. Scan showed small bowel obstruction and peritonitis.
Surgical exploration revealed a large abdominal perforated mass originating from the proximal jejunum, with adhesions to the root of the mesentery, urinary bladder, small bowel, transverse, descending, and sigmoid colons.
The mass was surgically removed with resection of about 30 cm of the small bowel, and re-anastomosis of the jejunum was performed.
Postoperatively, the patient was admitted to the ICU for three days to control cardiac arrhythmia. He was discharged from the hospital ten days later.
Pathology confirmed the diagnosis of GIST.
Currently, the patient is receiving chemotherapy and doing well.

In 2016 This patient was a healthy 38 years when he presented complaining of weakness, fatigue, and back pain; he was diagnosed with Multiple Myeloma.
Remission was achieved using chemotherapy and autologous bone marrow transplantation.

In 2020 He was diagnosed with a **relapse** of multiple myeloma by bone marrow biopsy. Since then, he has been receiving DRd (Daratumumab, Revlimid®, and dexamethasone).

Figures



Discussion

- Due to the rarity of (GISTs), there is no sufficient evidence for its co-occurrence with other primary neoplasms.
- There are reports of co-existing GIST with adenocarcinomas within the GI tract or distant organs.
- In a single case series of 43 patients with GIST, 6 (14%) had an additional primary tumor, five within the GI tract.
- In a more extensive population-based study with 6,112 GIST patients, 1,047 (17.1) had additional cancers.
- Despite that, so far, only **one case of Multiple Myeloma (MM)** was reported in a patient with GIST in 2007 in Greece, which ended with the patient's death six months after the diagnosis of (MM).
- This is the **first reported case** of GIST occurrence in a patient with Multiple Myeloma (MM).

Conclusion

- This case highlights the relationship between GIST and other primary neoplasms at a young age.
- It also highlights the association with hematological malignancy.
- It is unclear whether the GIST was due to genetic association, environmental exposure, or chemotherapy.
- In patients with GISTs, clinicians should look for tumors within or outside the GI tract, which could significantly affect the prognosis.
- Further studies are needed to explain the high occurrence of other neoplasms in patients with GIST.

References

- https://pubmed.ncbi.nlm.nih.gov/20380900
- /https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4545693/
- https://pubmed.ncbi.nlm.nih.gov/17461509/
- A meta-analysis https://pubmed.ncbi.nlm.nih.gov/31196495/
- https://pubmed.ncbi.nlm.nih.gov/33554950/
- KIT mutation was found to be more prevalent in patients with other primary malignancies https://pubmed.ncbi.nlm.nih.gov/25564173/
- The possibility of a syndrome https://pubmed.ncbi.nlm.nih.gov/20043105/
- MEN1 A with GIST https://pubmed.ncbi.nlm.nih.gov/33452231/