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Jejunal GIST in aged woman presenting as twisted right ovarian tumor: A case report

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Abstract

Gastrointestinal Stromal tumors are rare tumors of GI tract. Small ones are usually symptom-free, but big ones present with interesting clinical feature and create a diagnostic dilemma. A 70-years-old woman on antihypertensive drug and T4 supplement for hypothyroidism for four years was admitted to the surgical unit for acute right pelvic pain, nausea, and vomiting. A twisted right ovarian tumor was the most suspected preoperative diagnosis. The preoperative diagnosis could not be confirmed due to limitations. Laparotomy performed conjointly with gynecologist revealed a big exophytic jejunal tumor, 0.5 m distal to treitz ligament adherent to greater omentum. No ascites and suspicious metastatic deposits were found in the abdomen. Ovaries and uterus were found atrophic. Excision of the tumor was performed along with distal omentum, and jejunum (5 cm proximally and distally). Post-operative period was uneventful. Histopathology and immunohistochemistry confirmed the diagnosis: Jejunal GIST of submucosal origin, Grade-I, Stage II, CD117 positive and mitotic rate 5/50 HPF. There was no nodal involvement, and the findings were compatible with intermediate risk for recurrence. She is taking imatinib 400 mg/day, and there is no sign of recurrence on clinical, USG and CT evaluation after one year.

Keywords

jejunal gist; twisted ovarian tumor; diagnostic dilemma

Abbreviations

GISTs: Gastrointestinal stromal tumors; USG: Ultrasonography; CT: Computed tomography; GIT: Gastrointestinal tract; AR: Aortic regurgitation; LVEF: Left ventricular ejection fraction

Introduction

GIST is a neoplasm of smooth muscle interstitial pacemaker cells of Cajal. It comprises 1-3% of all GIT neoplasms [1,2]. 60%-70% of GISTs arise from the stomach, 20%-25% from the small intestine, 5% from colon and rectum, <5% from the esophagus and 95% are solitary. The expression of CD117 (a transmembrane tyrosine kinase receptor from interstitial cells of Cajal) has emerged as an essential defining

feature of GIST, found in at least 95% of cases [3]. Small GISTs are found incidentally on investigations or at laparotomy done for other reasons. Big tumors present with a painful lump, gastrointestinal tract bleeding, peritonitis, intestinal obstruction, intussusception where the diagnosis is made at laparotomy [4,]. Due to nonspecific symptoms, preoperative diagnosis of GIST is difficult. We managed a case of jejunal GIST presenting with acute pelvic pain where preoperative diagnosis could not be confirmed. Interesting clinical presentation and reasonable outcome of the disease encourages us to report it as a case of clinical interest.

Case Report

A 70-year-old woman on antihypertensive drug and T4 supplement for hypothyroidism for four years was admitted in the surgical unit with acute right lower abdominal pain and vomiting. On clinical examination, she was found dehydrated, anemic, malnourished and afebrile. Her pulse rate was at 100 bpm, BP: 100/80 mm of Hg. The abdomen was mildly distended. Palpation of the right lower abdomen confirmed a tender, firm, moderately mobile solid mass of about 11 cm x 9 cm. Bowel sound was present. Hb was 6.5 gm/dl and CA-125: 14.2 u/ml. Serum electrolytes, serum creatinine, INR, T3 T4 TSH, RBS, urine R/E and X-ray chest were normal. Echocardiogram showed: AR Gr-II, LVEF 60%. Sonologist performed abdominal doppler USG, and the findings were suggestive of a right ovarian tumor (Figure 1).

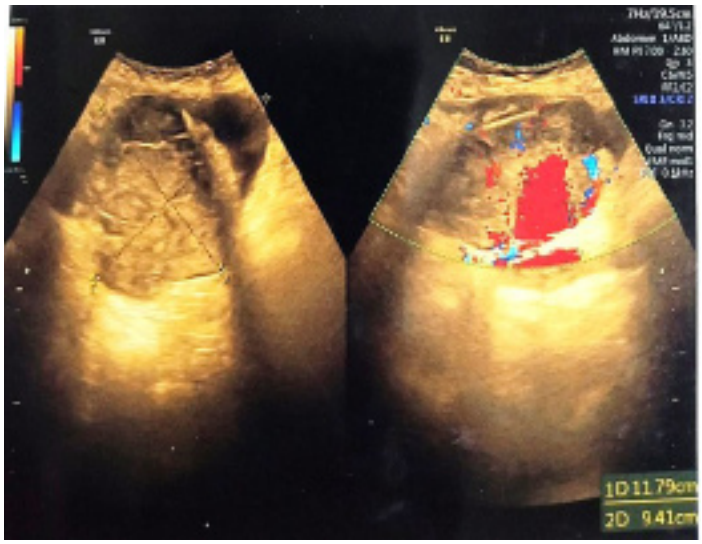

Figure 1: USG abdomen shows a complex mostly solid mass in the lower abdomen.

The gynecologist suspected twisted right ovarian tumor and advised transvaginal USG for better information. However, the patient showed unwillingness for it. MRI of the abdomen was suggested for a more detailed information. The patient could not afford due to financial limitation. Thus, the diagnosis could not be confirmed. We explained the situation to the patient, and she gave her consent for the operation. After preoperative resuscitation, we performed laparotomy by right lower para-median incision conjointly with gynecologists and found a solid exophytic jejunal mass of 11 cm x 8 cm x 9 cm size in the right lower abdomen adherent with greater omentum. There was no ascites and suspicious metastatic deposits in the abdomen. The tumor, excised along 5 cm of the jejunum (proximally and distally) and distal omentum is showed in (Figure 2).

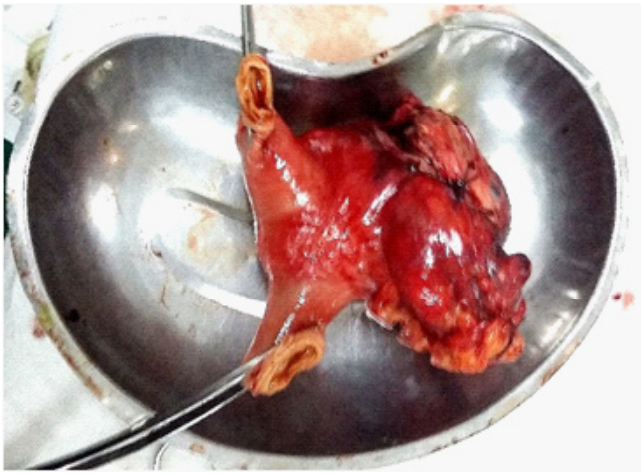

Figure 2: Excised Jejunal GIST with a portion of jejunum, and omentum.

Gut continuity was maintained by an end -to -end anastomosis. Post-operative period was uneventful, and the patient was discharged on the eighth postoperative day. Histopathology and immunohistochemistry confirmed the diagnosis: Jejunal GIST of submucosal origin, Grade-1, Stage II with positive CD117. Mitotic rate was 5/50 HPF, and there was no nodal involvement. The findings were compatible with intermediate risk for recurrence. (Figure 3). She takes imatinib 400 mg/day. One year later, she is found symptom-free with no sign of recurrence (Figure 4).

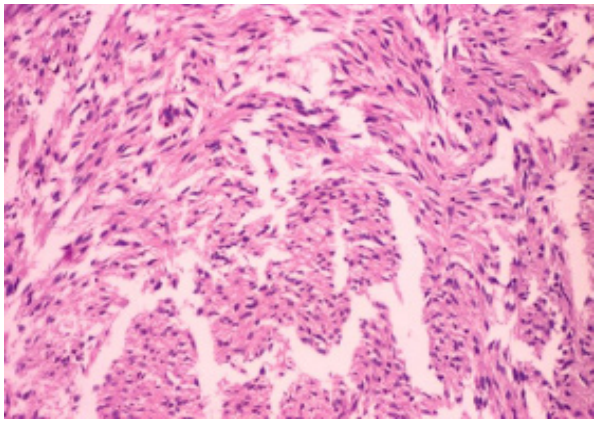

Figure 3: Microscopic view of Jejunal GIST of spindle cell predominance

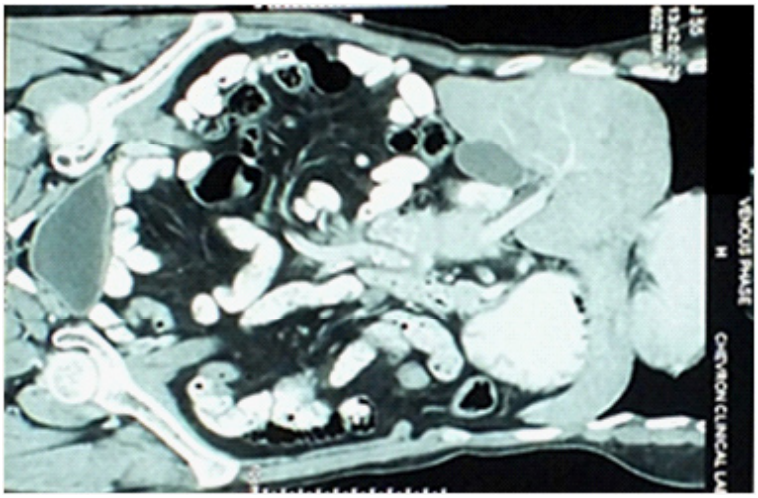

Figure 4: Post-operative follow-up CT abdomen shows no recurrence of the tumor and free passage of contrast through the GIT

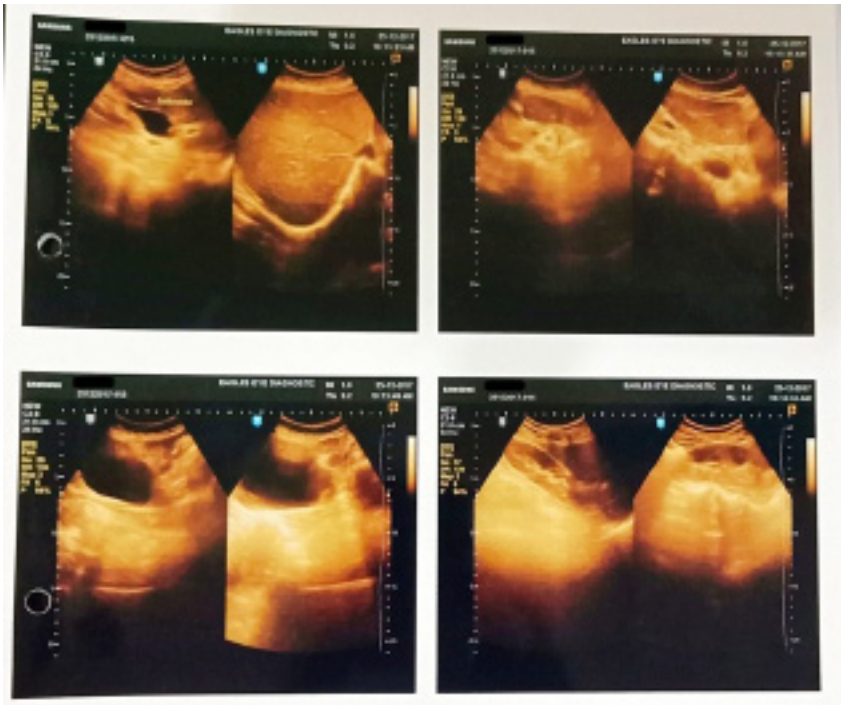

Figure 5: Post-operative follow-up USG abdomen is showing no recurrence of the tumor.

Discussion

Jejunal GIST comprises about 10% of all GIST and may present with acute lower abdominal pain, nausea and vomiting and a tender palpable lump [5]. In the female, it is confused with a twisted ovarian tumor. Abdominal USG is an excellent diagnostic tool, but sometimes findings are equivocal. Trans-vaginal doppler USG has high sensitivity and specificity [6]. But patient sometimes may not agree (due to social custom in some area) to this procedure. In such situation MRI is helpful. It demonstrates the mass in more details than ultrasonography. CT is usually not recommended in ovarian torsion because of high radiation density but it is beneficial to exclude other diagnoses like appendicitis, diverticulitis, intestinalmass [6]. But these investigations may not also be affordable because of fund limitation. Thus, diagnostic difficulty and dilemma arise. Under these circumstances, explorative laparotomy by a conjoint team of surgeons and gynecologist with patient's informed consent may be a time-honored decision. Adequate excision is the recommended procedure whenever possible, with the 5-year survival of 48-65% [7]. Some authors suggest Single Incision Laparoscopic Surgery (SILS) for such cases if facilities are available [8]. Histopathology and immunohistochemistry of the tumor give the conclusive diagnosis and its malignant potential. For tumor with significant malignant potential, post-operative imatinib 400 mg/day for a long period shows better prognosis [9].

Conclusion

Jejunal GIST in the female presenting with acute lower abdominal pain, nausea, vomiting, and palpable mass may mimic a twisted ovarian tumor. Doppler abdominal, transvaginal USG and MRI are the excellent diagnostic tools. However, patient's unwillingness and fund limitation often make diagnosis difficult. In such situations laparotomy by a conjoint team of surgeon and gynecologist is rewarded.

Learning Points

In diagnostic dilemma or unconfirmed preoperative diagnosis of jejunal GIST in the female, surgical intervention by a conjoint team of surgeons and gynecologists can be one of the best practices.

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