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Gastric Liposarcoma a Rare Disease with Vague Presentation

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1. Abstract

Liposarcoma is one of the most common soft tissue sarcomas in adults, and it is rarer when it presents as primary liposarcoma of the stomach. Herein we report a case of patient with gastricliposarcoma who underwent surgery after a gastric outlet obstruction. Preoperative histopathological diagnosis was not established. We discuss the gross diagnosis, management and the outcome.

2. Introduction Case Presentation

A 52-year-old female known case of hypothyroidism and bronchial asthma. The patient was complaining of epi-gastric abdominal pain for the last two months before the presentation, increased for the last week associated with nausea and vomiting, no history of fever, constipation, hematemesis, or weight loss. Upon examination: vital signs were within normal Abdominal examination revealed epigastric mild to moderate tenderness, otherwise unremarkable Labs: white blood count (WBC) 14.5 x10, hemoglobin (Hgb) 15.9 g/dl, liver function test (LFT), were within normal Ultrasound (U/S) was done in another hospital and wasnegative for gall bladder stones. Ct abdomen was done showed There are few nonspecific upper abdominal lymph nodes (the largest measures 0.7 cm in short axis along with the gastrohepatic and porta hepatic groups as well as few small mesenteric lymph nodes with no other significant enlarged lymph nodes; these are nonspecific, but they are likely reactive. The remaining small bowel loops and large bowel loops are grossly unremarkable. No sign of obstruction.

Upper GI endoscopy was done and showed: After histopathology result metastatic work up was done, and it was negative for metastatic evidence. The patient has seen post op in the clinic, and she was doing well.

3. Discussion

Liposarcoma is the most common soft tissue sarcoma and accounts for 15% to 20% of all mesenchymal malignancies that usually affect the extremities and retroperitoneum [1]. Gastric liposarcomas are extremely rare. It was first described in 1941 by Abrams et al. Less than 40 cases of gastric liposarcoma have been published in English in the literature to date [2]. The rare occurrence of gastric sarcomas, assessed by some authors to represent 1 to 3% of gastric malignant tumors [3]. Most of the liposarcomas are usually located in the antrum or lesser curvature [4]. The peak incidence for gastric liposarcomas is in the 6th and 7th decades of life. The etiology remains unclear; however, some patients have a positive family history for any soft tissue tumor that suggests genetic factors may play a role in the origin of gastric liposarcomas [5]. Gastric liposarcomas originate from undifferentiated mesenchymal cells in the submucosal and muscular layers of the stomach wall, and an exophytic growth is typical [2]. Fatty tumors are rare in the gastrointestinal tract. Differentiating benign from malignant neoplasms is sometimes difficult because of morphologic features. Liposar-

coma is histologically defined as a tumor composed of lipoblasts. They are classified histologically, into five subtypes, each with its own unique characteristics and behaviors. Well-differentiated liposarcoma is the most common subtype and usually starts as a low-grade tumor. Low grade tumor cells look much like normal fat cells under the microscope and tend to grow and change slowly. Myxoid liposarcoma is an intermediate to high grade tumor. Its cells look less normal under the microscope and may have a high-grade component. Round cell mostly occurs on the limbs, with excessive proliferation of small, rounded cells. Pleomorphic liposarcoma is the rarest subtype and constitutes a high-grade tumor with cells that look very different from normal cells. Dedifferentiated liposarcoma occurs when a low-grade tumor changes, and the newer cells in the tumor are high grade [6]. The well-differentiated type has a low risk of metastasis, and the myxoid and pleomorphic types have a higher risk of metastasis. The myxoid subtype, which includes round cells, has a particularly higher risk of metastasis and recurrence after surgery [7]. The clinical manifestations of gastric sarcomas vary in terms of the size of the tumor, its location and growth pattern, the presence or absence of ulceration, or pyloric stenosis. The most frequently encountered clinical symptoms are atypical dyspepsia manifestations, sometimes with abdominal pains, anorexia, loss of body weight, culminating in hematemesis and melaena [3]. The final diagnosis is mostly based on a histopathological examination of the resected specimen. Endoscopic biopsies may fail because the submucosa remains intact if the tumor is not ulcerating. Upper Gi endoscopy, endoscopic ultrasound, and CT scan is important diagnostic tools. The endoscopic ultrasound is claimed to be the most useful diagnostic tool for this neoplasia that originate from the submucosa, and to exclude other diagnosis. CT scan is important as well for the diagnosis as well as assessment of distance metastasis. The presence of a well- circumscribed fatty dense tumor within the submucosa with enhanced areas supports the diagnosis [8]. CT can also exclude any potential secondary lesions and lymphadenopathy. A relation between CT findings and histopathological type was reported: well-differentiated liposarcomas show a classic heterogeneous density, liquid cystic changes are typical for myxoid type and round cells, and pleomorphic types are characterized by a non-specific solid structure [8,9]. Differential diagnosis includes lipoma, stromal tumor (gastrointestinal stromal tumor), lymphoma, peritoneal liposarcoma, or hepatic metastasis adjacent to the stomach [10,11].

Differential diagnosis of gastric liposarcoma includes gastric stromal tumors, peritoneal carcinomatosis, peritoneal liposarcoma, carcinoma engulfing perivisceral fat, hepatic metastasis adjacent to the stomach, lymphoma and primary tumor of the omentum [12]. Overall mortality rates range from zero for atypical lipomatous tumor of the extremities to nearly 80% for tumors occurring in the visceral sites and retroperitoneum [6]. The treatment method of choice is surgical removal. The type of resection depends on the location and size of the tumor and varies from a small excision to total gastrectomy. A wide resection margin to ensure R0 is highly recommended, as well. Lymphadenectomy seems not to be necessary because of a lack of lymph node involvement. Currently, there is no evidence of efficacy of chemotherapy or radiotherapy even though few reported patients have been treated with these methods [13].

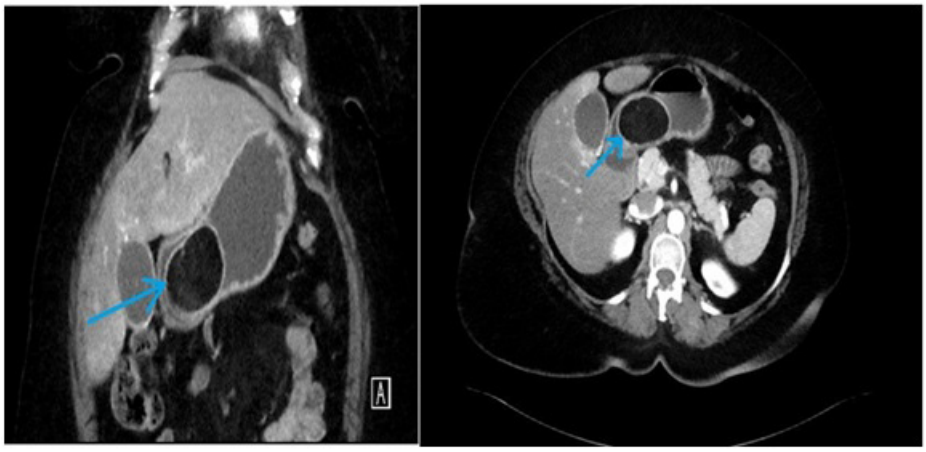

Figure 1: There is a 6 x 3.8 x 3.5 cm well-defined submucosal fat-attenuation gastric mass seen arising fromthe lesser curvature of the gastric antrum with no associated gastric wall thickening, enhancing component, or exophytic extension. This mass is causing minimal luminal narrowing with no significant gastric outlet obstruction. The remaining stomach is unremarkable.

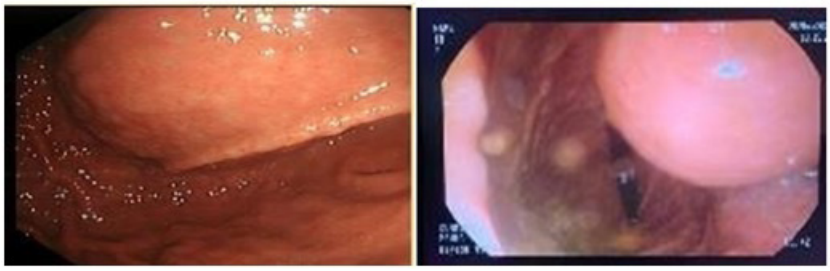

Figure 2: Esophagus: normal mucosa and Z line.
Gastric: filled with fluid with small food particles were suctioned, the finding showed submucosal lesion originating from incisura going to duodenum with intermittent obstruction. Biopsies were taken for histopathology. Duodenum: normal mucosa in first and second part, normal looking ampulla of vater. After that, the patient underwent endoscopic ultrasound (EUS), which showed hyperechoic lesion mostly Lipoma with a size of 7 cm X 5 cm. The histopathology report of the biopsy that was taken through the upper GI endoscopy was: Ulcer site with very few atypical cells. So, the plan was to proceed to surgery, the patient prepared, and the patient underwent distal gastrectomy with gastrojejunostomy.

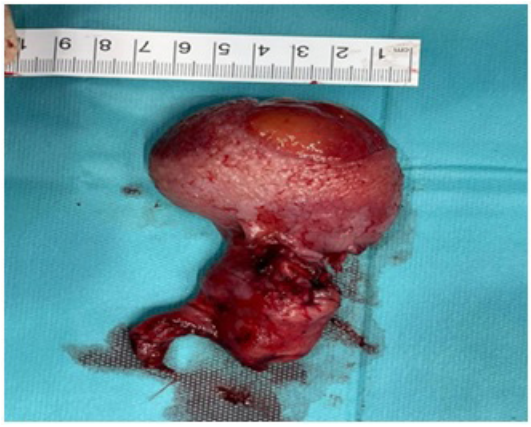

Figure 3: Gross specimen of the submucosal gastric mass Histopathology of the specimen came as following:
LIPOMATOUS TUMOR WITH FOCAL ATYPIA AND INCREASED VASCULATURE and margins were negative.

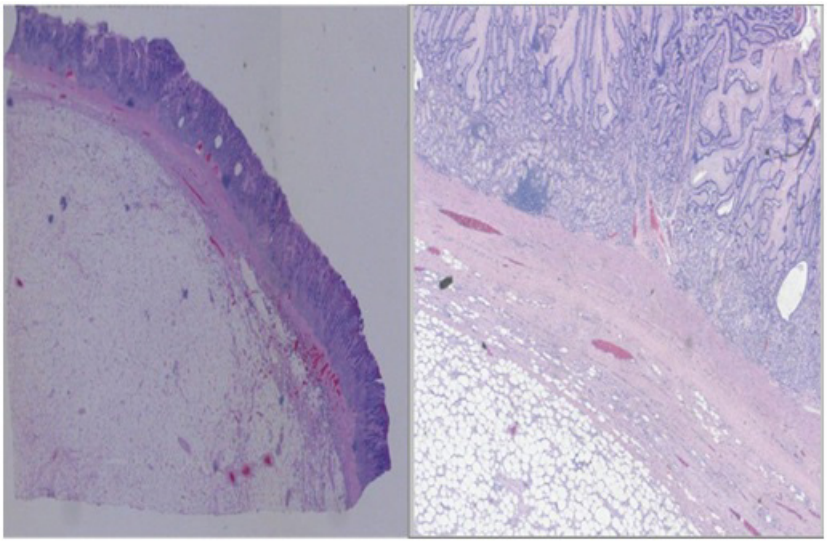

Figure 4: A histological microscopic slide of the gastric layers exhibits the invasive submucosal lesion. Stain: hematoxylin and eosin; magnification: ×200. After histopathology result metastatic work up was done, and it was negative for metastatic evidence. The patient has seen post op in the clinic, and she was doing well.

4. Conclusions

Although gastric liposarcoma is a rare disease, it has a good prognosis. This case is presented on account of its rarity and the acute on top of chronic presentation. Thus, it is best advised to thoroughly discuss the differential diagnosis for a gastric submucosal mass in order to plan for the best treatment. Preoperative diagnosis of liposarcoma is still challenging. A wide margin of resection is advisable to achieve the negative margin and decrease the possibility of early recurrence

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