



ROBOTIC EXCISION OF HETEROTOPIC LIVER MASQUERADING AS A GIST OF THE STOMACH

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INTRODUCTION

-Gastrointestinal stromal tumors (GISTs) are rare, representing less than 5% of all gastrointestinal neoplasms. They begin in cells called Interstitial Cells of Cajal (ICC), which help with motility throughout the GI system. GISTs are often asymptomatic, largely due to their submucosal location. These tumors are typically diagnosed based off computed tomography or endoscopy. The mass seen in this case resembled many of the findings that come with GISTs without the pathological confirmation on biopsy. Tumors like these are frequently resected by minimally invasive techniques, with robotic surgery most recently making more challenging resections of these tumors more feasible.

GIST

- The clinical presentation of Gastrointestinal Stromal Tumors (GIST) vary widely in location, can involve any portion of the GI tract, and prognosis. Over half of the GISTs occur in the stomach. Approximately 30% of GISTs are detected in the jejunum or ileum, 5% in the duodenum, 5% in the rectum, and less than 1% in the esophagus. ¹

-About 80% of GISTs have mutated KIT and 5% mutated PDGFRA.... Surgery is the standard treatment of local GIST. Tyrosine kinase inhibitor imatinib is the standard treatment for metastatic disease. ²

-GISTs are among a list of several GI mesenchymal tumors. That list includes leiomyomas, schwannomas or in this patient's case heterotopic mass of liver. We must be careful in determining differential diagnoses of these tumors. We have effective therapies for GIST in the form of Tyrosine Kinase Inhibitors (imatinib, sunitinib, and regorafenib) which are also very expensive. Genetic analysis along with proper biopsy are supremely necessary for these patients. ³

CASE PRESENTATION

-Here we will present the case of a 27-year-old female with a pre-operative diagnosis of gastric GIST. She presented three months pre-operatively to an outside emergency department with shortness of breath and was found to have an unprovoked pulmonary embolism. The patient was taking rivaroxaban at that time. On outside hospital imaging, she was incidentally found to have a mass along the greater curvature of the stomach. After an esophagogastroduodenoscopy, endoscopic ultrasound, and a repeat computed tomography scan of the abdomen, there was evidence to suggest the mass was an exophytic gastric GIST. After these findings, she was referred to our care to evaluate for surgical resection.

-Intra-operatively, the lesion was found along the posterior aspect of the fundus adjacent to the superior pole of the spleen. First, the short gastric vessels were taken down to widely identify the mass. At this point, it was noted that the mass was abutting the pancreas, spleen, and stomach without evidence of invasion. The mass was resected in an R0 fashion without any need for resection of surrounding structures. Although many of the preliminary findings suggested that this could be a GIST, the final pathology was consistent with extrahepatic liver parenchyma without evidence of malignancy.

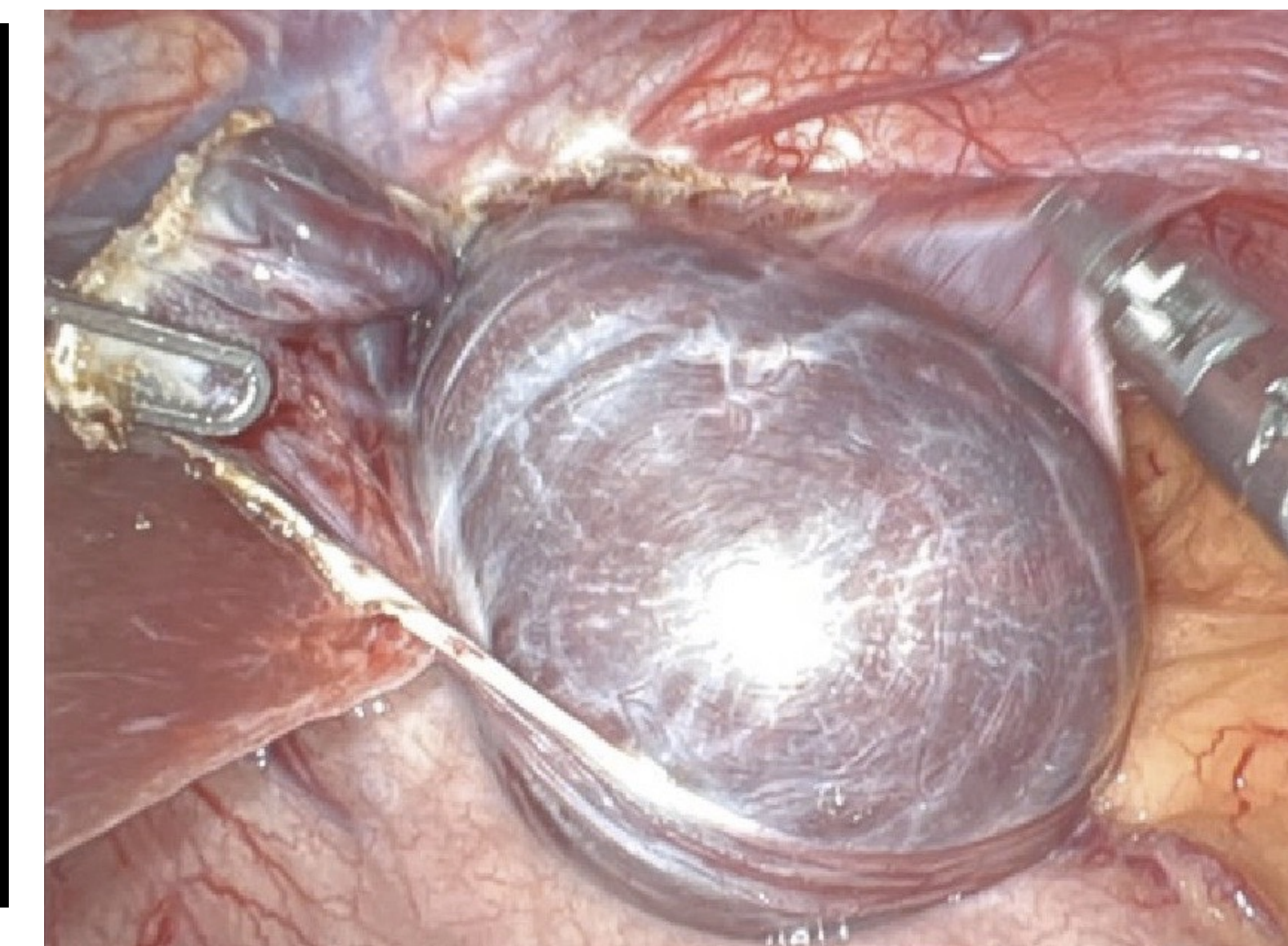


Fig 1) Abdominal CT scan 1 month prior to surgery

Fig 2) Intra-operative picture of tumor while mobilizing

CONCLUSION

-At our patient's post op visit two weeks later, she expressed no complaints, and was responding very well to surgery.

-Although many of the preliminary findings suggested that this could be a GIST, the final pathology was consistent with extrahepatic liver parenchyma without evidence of malignancy. Excision would have been deemed necessary regardless of findings due to the mass abutting the pancreas, spleen, and stomach as mentioned earlier. Post-operative care vary widely depending upon findings.

-As mentioned earlier, this case is a great example of why it is important to keep a broad differential diagnosis in the management of tumors which have not been proven by biopsy or genetic testing prior to surgical resection.

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