

Large benign gastric mass complicated by bleeding in cirrhotic patient: A case report

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Introduction:

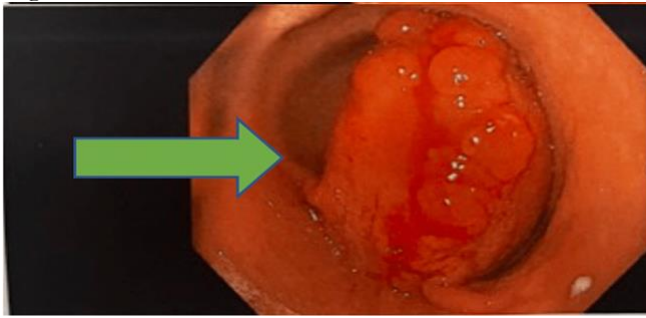
Benign masses in the stomach and duodenum are only 5-10% of all stomach tumors and 10-20% of duodenal tumors.¹ There are three main different classifications of stomach benign masses divided into epithelial, mesenchymal, and others such as inflammatory pseudotumor, Peutz-Jeghers polyps, and cystic tumors.¹ Epithelial masses consist of hyperplastic polyps, and adenomatous polyps. Mesenchymal masses consist of leiomyoma, leiomyoblastoma, neurogenic, vascular, and lipoma.¹ Most benign stomach tumors remain asymptomatic for a very long time and when symptoms occur, the symptoms differ depending on the tumor size, location, and complications such as bleeding.¹ The most common symptom the patients have are bleeding, abdominal pain and discomfort, nausea, and weight loss.¹ In terms of diagnosing the gastric tumors and performing a biopsy, the most widely used technique is esophagogastroduodenoscopy.² In the last few years, endoscopic ultrasonography has been proven to diagnose submucosal tumors.¹ Endoscopic Ultrasound is the best modality of evaluating the depth of involvement of the stomach wall and finding out the involvement of the peri gastric lymph nodes.³ Endoscopic ultrasound is the only method that can identify the intramural nature of the tumor, with a diagnostic precision of 92%.⁴ The most important consideration about a large benign gastric mass is treatment. The treatment options for benign stomach tumors are wide and varied by pathology.^{1,3} The options could range from endoscopic resection for small, well defined lesions to pancreatoduodenectomy in periampullary tumors.^{1,5} One of the most dangerous and common

complications of benign tumors is bleeding.¹ Recently, with the development of laparoscopic surgeries, intraorgan surgery have achieved better results compared to open surgery.¹ Also, if a patient has other underlying diseases such as liver cirrhosis, resection of upper gastrointestinal cancer in cirrhotic patients leads to poor postoperative outcomes.^{6,7} The severity of the liver cirrhosis is the primary determinant of the postoperative outcomes.⁷ This case report highlights the importance of different kinds of options for resecting a large benign gastric mass to consider better prognosis avoiding bleeding and other complications.

Case description:

The patient is a 68 years old Puerto Rican Female with a past medical history of right nephrectomy secondary to renal cell carcinoma, liver cirrhosis, portal hypertension, pulmonary hypertension, hypothyroidism, diabetes mellitus type 2, and obstructive sleep apnea, who presented to the emergency department due to concerns of hemoptysis/rust-colored sputum. Patient reported that she had blood-tinged sputum early in the morning when she woke up for the past 2 days. Patient recalled that she had similar episodes in the past and was hospitalized. Patient reported that when she was hospitalized, she was on a long-term course of steroids. Patient's lab was notable for pancytopenia, creatinine of 1.83, and glucose of 191. An upper endoscopy was scheduled, and the findings showed a large gastric mass in the pre pyloric stomach (Figure 1). The large gastric mass located in the pre pyloric stomach had significant bleeding. (Figure 1).

Figure 1: Benign gastric mass



Arrow shows an endoscopic image of 44mm (in maximum thickness) and 56mm in diameter sized benign gastric mass with severe bleeding in the pre-pyloric stomach.

Grossly, this mass was suspected to be a gastrointestinal tumor and biopsy was taken through the endoscope. The Esophagogastroduodenoscopy (EGD) biopsy showed a benign gastric mucosa with no evidence of metaplasia or dysplasia. A computerized tomography (CT) scan also showed a large gastric mass. After the EGD biopsy showed a benign gastric mucosa, the patient was scheduled for an upper endoscopic ultrasound to perform a deep biopsy. A round intramural subepithelial lesion was found in the antrum of the stomach and lesion was hyperechoic and heterogenous.

The lesion appeared to originate from the deep mucosa (layer 2) and submucosa (layer 3). The lesion measured 44mm (in maximum thickness). The diameter was measured 56 mm in diameter. The outer endosonographic borders were well defined and suggested a lack of invasion. Three passes of 22 gauge ultrasound biopsy needle were made using a trans gastric approach. Also, there was diffuse abnormal echotexture in the visualized portion of the liver. This was characterized by a lobulated appearance, confirming the diagnosis of liver cirrhosis. The left gastric vein and splenic vein were dilated with varicosities and added to complexity to the treatment approach. Biopsy of the pathology showed a benign gastric mucosa with areas of chronic inflammation, superficial erosions and hemorrhage, no evidence of metaplasia or dysplasia. Patient was recommended to general surgery for surgical intervention.

Conclusion:

This case report presented underscores the complexity of managing a large benign gastric mass, particularly when complicated by severe bleeding, liver cirrhosis and proximity to the left gastric and

splenic veins. Endoscopic techniques, including the ultrasound-guided biopsies, play a very important role in diagnosing a gastric tumor. However, to treat and manage the gastric tumor, it is important to consider the tumor size, location, and the presence of complications like bleeding. Smaller lesions can be resected with endoscopic resection, but large masses often need surgical interventions.

Author Contributions:

All authors contributed equally to the conception and design, acquisition of data, or analysis, interpretation of data, manuscript preparation and review.

Potential Conflicts of Interest Disclosures:

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