

Laparoscopic management of gastric outlet obstruction due to gastric lipoma: A case report.

Murtaza Akhtar, Kanhaiya Chandak, Kanav Kumar

From Department of Surgery, NKP Salve Institute of Medical Sciences and Research Centre, Nagpur, Maharashtra, India

Correspondence to: Murtaza Akhtar, 2A, Achraj Tower 1, Chaoni, Nagpur, Maharashtra, India. E-mail: murtazaakhtar27@gmail.com

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ABSTRACT

A gastric lipoma is a rare entity and accounts for 2–3% of all benign gastric lesions. It is a diagnostic challenge. We present a case of a 35-year-old male who presented with intermittent attacks of pain in abdomen, vomiting, and dyspepsia. Upper gastrointestinal (GI) endoscopy showed a polypoidal lesion in the antrum prolapsing into the duodenum. Contrast-enhanced computed tomography abdomen showed a 5 cm × 3 cm × 3 cm, oval, smooth fat density lesion in the posterior wall of the antrum near the pylorus confirming the diagnosis of submucosal gastric lipoma with gastric outlet obstruction. Laparoscopic gastrostomy with removal of submucosal lipoma was done with uneventful post-operative recovery. The patient gained 10 kg weight after 18 months of follow-up without any GI symptoms. In conclusion, gastric lipomas are rare benign tumors of the stomach which may mimic malignancy.

Key words: Gastric lipoma, Gastric outlet obstruction, Laparoscopic gastrostomy, Stomach neoplasm

Gastrointestinal (GI) lipomas are rare and they occur more frequently in the colon (60–75%) and in the small intestine (31.2%) [1-5]. Only 5% of lipomas are found in the stomach, which account for <1% of all gastric tumors and 2–3% of all the benign tumors of the stomach [2,3,5]. The differential diagnosis includes GI stromal tumor, leiomyoma, fibroma, neurilemmomas, adenomyoma, Brunner's gland adenoma, and heterotropic pancreas [2]. A case of submucosal lipoma presenting as gastric outlet obstruction mimicking malignancy treated laparoscopically is presented here.

CASE REPORT

A 35-year-old male presented with intermittent attacks of pain in abdomen, vomiting, and dyspepsia mimicking symptoms of gastric outlet obstruction. Routine blood investigations were normal. Upper GI endoscopy showed a polypoidal lesion in the antrum prolapsing into the duodenum without mucosal ulceration. Endoscopic excision using upper GI endoscopy was attempted which failed due to broad base (Fig. 1). Contrast-enhanced computed tomography (CT) abdomen showed a 5 cm × 3 cm × 3 cm, oval, smooth isodense (–70 HU–120 HU) fat density lesion (Fig. 2) in the posterior wall of the antrum near the pylorus prolapsing in the pylorus causing gastric outlet obstruction. Laparoscopic gastrostomy was done. Incision given over the mucosa of post-wall of stomach and the yellow tumor popped out of the incision and was enucleated in the first attempt of dissection (Fig. 3). Grossly, the mass was composed of yellow adipose tissue. Histopathology was suggestive of a lipoma. Post-operative

recovery was uneventful. The patient gained 10 kgs weight after 18 months of follow-up without any GI symptoms.

DISCUSSION

Curveilhaer (1842) was the first to describe a gastric lipoma. There have been only 220 cases of gastric lipomas described in literature [2,5,6]. The etiology remains controversial, and it may be an acquired condition or an embryological disorder. They are submucosal or rarely subserosal in origin. They are most commonly located in the posterior wall of the antrum (75%) [2]. They are usually single but can also be multiple. The tumor is composed of well-differentiated adipocytes with a fibrous capsule. It should also be distinguished from a gastric liposarcoma which is even rarer, with only 15 cases reported in literature. It is characterized by a family history of lipomatosis, fixity of gastric mucosa, or ulceration. Due to infiltration, the enucleation of a liposarcoma is difficult, and on palpation of the excised specimen, it is firm consistency [7,8].

Lipomas of the GI tract are predominantly found in patients in their fifth or sixth decade and are more commonly seen in women. The above case presented in a 35-year-old. Due to its presentation in the fifth or sixth decade, a probability of malignancy always exists and it mimics gastric malignancy of the antrum. The symptoms depend on the location and the size of the tumor. Most of the gastric lipomas are small, asymptomatic, and detected as incidental findings on radiological evaluation or endoscopic examination of the upper GI tract. The most common symptoms are dyspepsia, epigastric pain, upper GI bleeding, obstruction,



Figure 1: Gastric lipoma on upper gastrointestinal endoscopy



Figure 2: Appearance on computed tomography scan

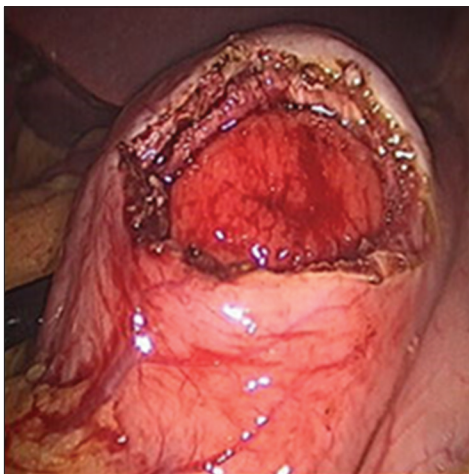


Figure 3: Gastrotomy revealing the lipoma before removal

and intussusceptions [3-6,9]. GI bleeding is usually due to venous stasis and mucosal ulceration. Intermittent obstruction is more common with pre-pyloric tumors as the mass prolapses through the pyloric canal. Due to contraction of the underlying muscularis propria, there is a progressive tendency for the large soft submucosal mass to extrude into the lumen. Complete outlet obstruction can rarely be the initial manifestation. When

obstructive symptoms accompany signs of chronic upper GI hemorrhage in elderly patients, the condition may be mistaken for a malignant growth.

On barium examination, extramucosal tumors including lipomas reveal a smooth filling defect with a “bull’s eye” appearance indistinguishable from other mesenchymal tumors. On upper GI endoscopy, the tumor appears as a smooth, yellowish submucosal mass with or without ulceration. Classical signs that help in identifying these tumors as lipomas are as follows: The tenting sign (the overlying mucosa is easily retracted with biopsy forceps), the cushion sign (the forceps produce a soft indentation on the surface of the lipoma), and naked fat sign (there is protrusion of fat through the overlying mucosa after multiple biopsies). CT is a highly specific tool that can contribute to diagnosis [2-6,9]. On CT, it appears as a homogenous well-defined oval mass that is isodense (–70 HU–120 HU) that corresponds to a lipoma. However, CT scan is not accurate in determining the layer of the gastric wall it is located in and cannot differentiate it from a liposarcoma. Endoscopic ultrasound provides more accurate findings of submucosal tumors regarding their size, shape, and location inside the gastric walls.

Gastric lipomas do not have malignant potential; however, synchronous gastric carcinomas have been rarely described. The treatment modalities for gastric lipomas have changed in parallel with the advances in endoscopic and imaging techniques. The treatment of choice for gastric lipomas is still controversial, but resection is the best choice for symptomatic tumors. It includes tumor enucleation, partial resection, or other endoscopic and minimally invasive procedures. Laparoscopic route is used for tumors up to 6 cm in diameter [2]. Role of upper GI endoscopy is limited as they only reveal gastric mucosa.

CONCLUSION

In summary, an accurate diagnosis of gastric lipoma, which can be reached with a combination of endoscopic and imaging diagnostic techniques, is very useful in choosing the appropriate less mutilating minimal invasive procedures of management.

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