CASE REPORT – OPEN ACCESS

International Journal of Surgery Case Reports 51 (2018) 313–317

Contents lists available at ScienceDirect

International Journal of Surgery Case Reports

journal homepage: www.casereports.com

Giant symptomatic gastric lipoma: A case report and literature review

Julia R. Amundson[a], David Straus[a], Basem Azab[a], Sandy Liu[b], Monica T. Garcia Buitrago[b,c], Danny Yakoub[a,c,*]

[a] Division of Surgical Oncology, DeWitt Daughtry Family Department of Surgery, Sylvester Comprehensive Cancer Center, University of Miami Leonard M. Miller School of Medicine, Miami, FL, USA
[b] Department of Pathology, Sylvester Comprehensive Cancer Center, University of Miami Leonard M. Miller School of Medicine, Miami, FL, USA
[c] Sylvester Comprehensive Cancer Center, University of Miami Leonard M. Miller School of Medicine, Miami, FL, USA

ARTICLE INFO

Article history:
Received 13 July 2018
Received in revised form 25 August 2018
Accepted 29 August 2018
Available online 9 September 2018

Keywords:
Gastric lipoma
Resection
Case report

ABSTRACT

INTRODUCTION: Lipomas are uncommon tumors of the gastrointestinal tract; gastric lipomas account for <1% of all gastric tumors encountered (Nickloes and Sutphin [1]). Giant gastric lipomas, defined as ≥10 cm, are exceedingly rare with only 6 cases reported since 1980 (Cappell et al., Termos et al., Singh et al., Ramaraj et al., Rao et al., Priyadarshi et al., Neto et al. [3–9]). We hereby present a case of a giant gastric lipoma that became symptomatic seven years after its initial identification and was excised preserving gastric continuity.

CASE PRESENTATION: Our patient is a 58-year-old African American male with a 3 cm gastric mass incidentally found on CT in 2010. In September of 2017, the patient presented with severe epigastric pain, nausea, and vomiting. Abdominal CT scan revealed an increase in size of the patient's gastric lesion to 7.2 × 10.3 × 7.3 cm. He underwent an exploratory laparotomy with transverse anterior gastrotomy and primary closure. Pathologic examination revealed a 12 cm submucosal, well-circumscribed, non-encapsulated mass comprised of mature adipose tissue without atypia or mitotic figures, consistent with lipoma.

DISCUSSION: The majority of gastric lipomas are asymptomatic, identified on CT scan as round/ovoid masses with low attenuation and homogenous appearance, measuring −80 to −120 Hounsfield units. These findings are nearly pathognomonic. Due to the benign nature of gastric lipomas, circumferential excision with a clear margin of normal tissue is adequate for symptomatic resection. This is the second report of giant gastric lipoma excised with continuity preserving partial gastrectomy, avoiding gastrojejunostomy complications.

CONCLUSION: Fatty tumors are rare in the gastrointestinal tract, yet lipomas must be on the differential when masses are found with Hounsfield units similar to peripheral fat.

1. Introduction

Lipomas are uncommon tumors of the gastrointestinal tract with gastric lipomas accounting for less than 1% of all gastric tumors encountered [1]. As these lesions are typically asymptomatic [2], they have the potential to grow unnoticed until they reach a size, ≥10 cm, when they are classified as giant gastric lipomas at which time they become symptomatic and necessitate management. Giant gastric lipomas are exceedingly rare, with 6 cases reported in the literature since 1980 [3–9].

We hereby present a case of giant gastric lipoma that became symptomatic seven years after initial identification. This work has been reported in line with the SCARE criteria [10].

2. Presentation of case

Our patient is a 58-year-old African American male with a medical history significant for hypertension and a 3 cm gastric mass incidentally found on CT performed in 2010 during hospitalization for symptomatic renal calculi. Five years later, in 2015, he experienced an episode of abdominal pain for which he had a repeat CT abdomen and esophagogastro-duodenoscopy (EGD). These showed a 9.9 × 5 cm subepithelial mass with central umbilication, located in the fundus of the stomach; biopsy showed necrotic fatty tissues that were CD-117 negative on immunohistochemistry. Surgery was recommended in 2015 and the patient declined as his symptoms were mild and intermittent.

* Corresponding author at: Division of Surgical Oncology, University of Miami-Miller School of Medicine, Sylvester Comprehensive Cancer Center/Jackson Memorial Hospital, 1120 NW 14th Street, CRB C232, Miami, FL 33136, USA.
E-mail address: dyakoub@med.miami.edu (D. Yakoub).

https://doi.org/10.1016/j.ijscr.2018.08.061

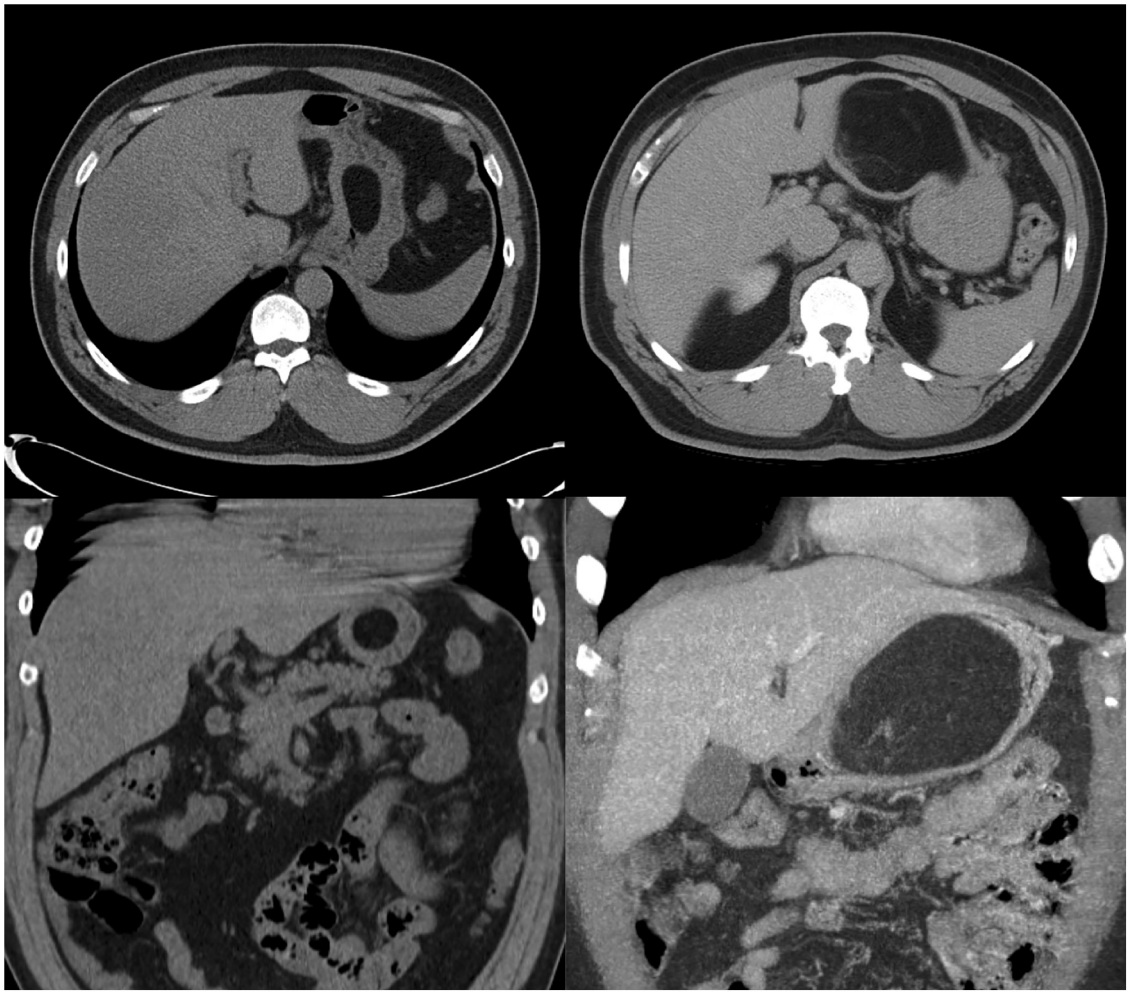

Fig. 1. CT images demonstrating interval increase in size from 2010 (Left) to 2017 (Right) of large, low-attenuation gastric mass.

In September of 2017, the patient presented to the hospital emergency room with severe epigastric pain, nausea, and vomiting. He also endorsed anorexia, alternating bowel habits, and dark stool. He was hemodynamically stable and afebrile. On physical examination, his abdomen was soft and non-distended with mild tenderness in the epigastrium.

Abdominal CT scan revealed interval increase in size of the patient's gastric lesion from 3 cm in 2010 to $7.2 \times 10.3 \times 7.3$ cm. The mass measured predominately fat density with surrounding fat stranding and a posterior ill-defined soft tissue component [Fig. 1].

Upon admission, the patient underwent EGD with endoscopic ultrasound (EUS) and biopsy. The EGD revealed a large, submucosal, non-circumferential mass with no bleeding. However, stigmata of recent bleeding (ulcer) was found in the fundus [Fig. 2]. EUS revealed an oval intramural/subepithelial, isoechoic lesion in the fundus likely originating from the submucosa measuring 50 mm in thickness and 90 mm in diameter with well-defined outer endosonographic borders. Fine needle aspiration and biopsy were performed. The fine needle aspiration consisted of benign gastric and squamous epithelium only while the biopsy showed small fragments of mature adipose tissue and gastric epithelium.

The patient underwent an exploratory laparotomy and a 6 cm transverse anterior gastrotomy was made, through which the mass was clearly visible and everted. A linear stapler was fired below the mass to excise it with another stapler load used to repair the gastrotomy. The staple line was buttressed by over-sewing and an omental patch was fixed on it using an absorbable suture. The tumor was soft and fleshy, measuring approximately 12 cm in its greatest dimension [Fig. 3A,B].

Pathologic examination revealed a 12 cm submucosal well circumscribed, non-encapsulated mass comprised of mature adipose tissue without atypia or mitotic figures, consistent with lipoma [Fig. 4A,B]. Immunohistochemical stain for MDM2 was negative [Fig. 4B]. Fluorescence in situ hybridization for MDM2 (12q15) gene amplification was also negative. The overlying gastric mucosa showed acute and chronic inflammation and was negative for Helicobacter Pylori immunostain. The patient had an uneventful post-operative hospital course and was discharged on post-operative day 5. At three week follow-up he was tolerating a regular diet with no complications. He will return to clinic in one year for a final follow-up visit.

Discussion

Lipomas are slow-growing, benign, fatty tumors enclosed by a thin fibrous capsule and are the most commonly encountered soft-tissue tumors in general. They are derived from mesenchymal origin and develop in virtually all organs throughout the body, including the gastrointestinal tract where they present as submucosal fatty tumors. The most common gastrointestinal tract locations for lipoma are the colon, ileum and jejunum [11]. Fatty lesions found in the gastrointestinal tract can be simple lipomas or have mixed histology representing angiolipoma or fibrolipoma, both of which are also benign. Other fatty tumors include lipoblastoma which occurs exclusively in infants/children, hibernomas comprised of brown fat, atypical lipomatous tumors which are low-