

Angiolipoma of the stomach presenting with anaemia

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Abstract

Angiolipoma is a morphological variation of the lipoma and is a benign tumour that consists of mature adipose tissue and proliferating blood vessels. It occurs very rarely in the digestive tract, especially the stomach. We report a gastric angiolipoma in a 58-year-old woman admitted for anaemia and melena. Endoscopy showed a large polypoid mass with superficial ulceration in the anterior wall of the gastric antrum. Endoscopic ultrasound showed an about 2 cm sized isoechoic lesion at the third echo layer, with the echogenic portion on the luminal side of the lesion. Laparoscopic wedge resection was performed and histological examination showed that the lesion had encapsulated adipose tissue at the submucosal layer and stromal fibrosis just below superficial ulceration. There were blood vessels with thick walls among the mature fat cells. Therefore, the lesion was diagnosed as an angiolipoma.

Introduction

Angiolipoma is one of the variants of lipoma and is a benign tumour that consists of mature adipose tissue and proliferating blood vessels. It occurs mostly in the subcutaneous tissue of the limbs and trunk and very rarely in the digestive tract. Angiolipoma of the stomach is extremely rare and only two cases have been reported in English journals [1, 2]. We report a gastric angiolipoma in a patient admitted for anaemia and melena.

Case report

A 58-year-old woman presented with dizziness of 5 days duration. She had melena one month prior as well as epigastric discomfort. She had taken medication for hypertension including aspirin. In vital signs, her blood pressure and pulse rate were 150/90 mm Hg and 69/min, respectively. Physical examination revealed pale conjunctiva and no other specific findings. Laboratory tests showed reduced haemoglobin of 5.1 g/dl and haematocrit of 16.6%. Other biochemical tests were within normal ranges. She was hospitalised and transfused with packed red blood cells. Esophagogastroduodenoscopy (EGD) was performed

and it showed a large polypoid mass with superficial ulceration covered with whitish exudates in the anterior wall of the gastric antrum (Figure 1). The mass was hard on palpitation with biopsy forceps. Histological examination showed chronic active gastritis with necrotic debris and granulation tissue. Abdomen computed tomography (CT) showed an approximately 2 cm sized submucosal cystic lesion with diffuse fluid density in the gastric antrum without enhancement after contrast (Figure 2). There were no other abnormalities. Endoscopic ultrasound (EUS) showed an approximately 2 cm sized isoechoic lesion at the third echo layer with the echogenic portion at the luminal side of the lesion (Figure 3). Some of the first and second echo layer above the lesion was detached and the remnant second layer around the lesion was thickened on EUS. Medication including proton pump inhibitor and sucrate gel was administered with stopping aspirin, and melena was not noted anymore.

It was a hard mass with ulcerated overlying mucosa that caused the bleeding. In addition, it did not show typical findings of a benign tumour, such as lipoma on EUS. Therefore, laparoscopic wedge resection was performed 11 days after initial admission. The spec-

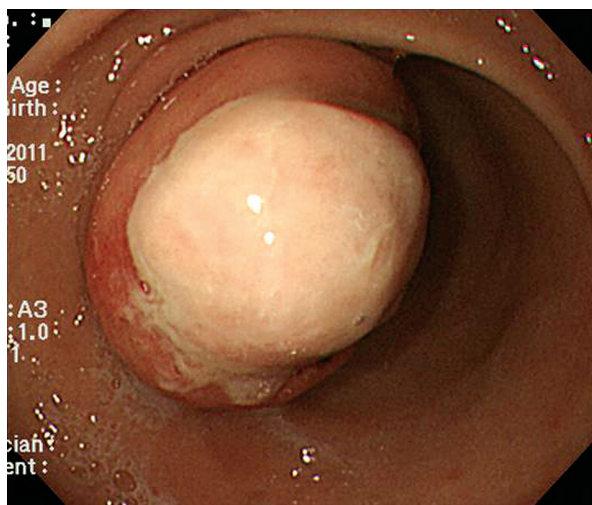


Figure 1. Endoscopic findings showed a polypoid mass with superficial ulceration covered with whitish exudates in the gastric antrum

imen was a subepithelial tumour measuring 1.6 cm × 1.5 cm × 1.4 cm. The cut surface of the mass was yellow and smooth. No necrosis was present. The overlying mucosa was ulcerated. Histological findings showed that the lesion had encapsulated adipose tissue at the submucosal layer and stromal fibrosis below superficial ulceration with detached normal mucosa (Figure 4). In microscopic findings, there were blood vessels with thick walls among the mature fat cells (Figure 5). There were no fibrin thrombi within the blood vessels. There-

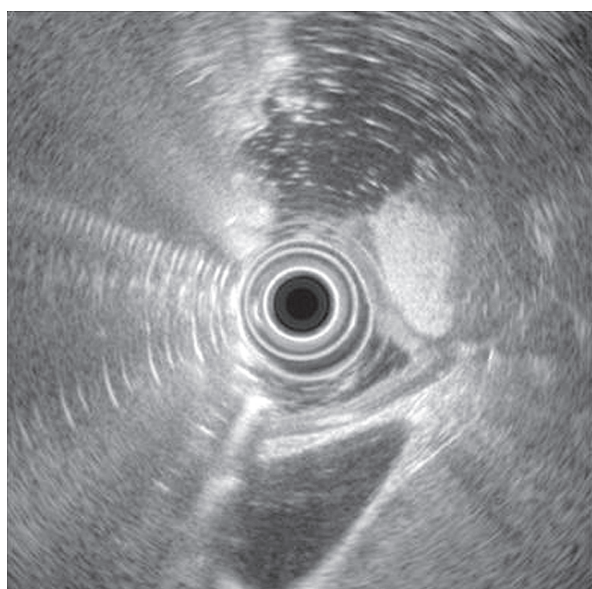


Figure 3. Endoscopic ultrasound showed a 2 cm sized isoechoic lesion at the third echo layer with echogenic portion on the luminal side of the lesion

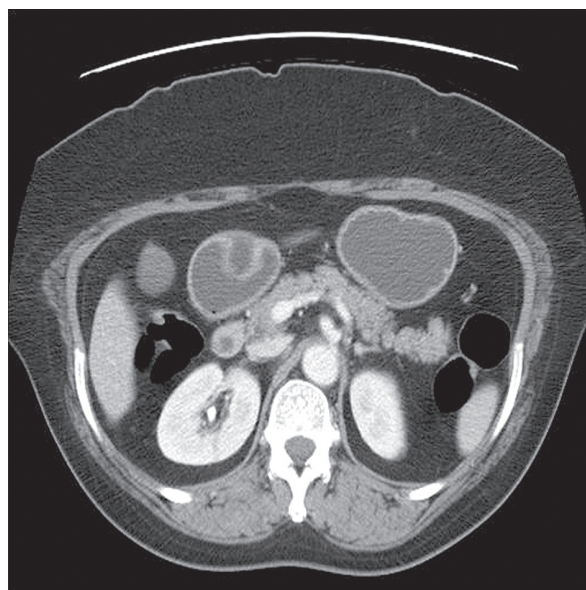


Figure 2. Post-contrast abdomen CT showed a submucosal lesion with diffuse fluid density in the anterior wall of the gastric antrum

fore, the lesion was diagnosed as an angiolipoma. The patient had no specific complications of operation and was discharged 6 days after surgery.

Discussion

Lipoma accounts for less than 1% of subepithelial lesions of the stomach and is frequently observed in

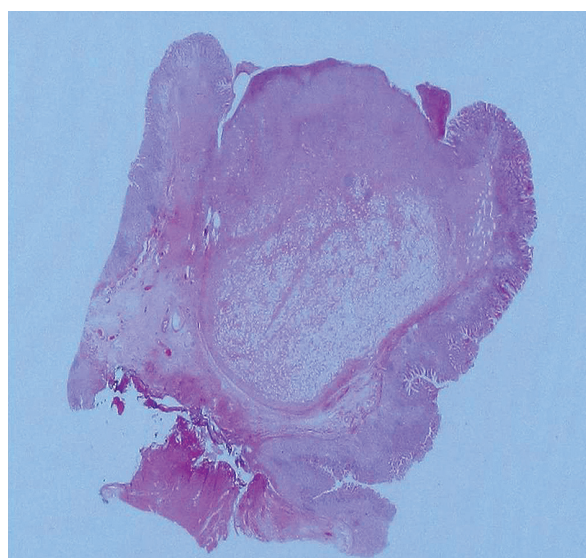


Figure 4. Photomicrography of resected specimen showed that the lesion had encapsulated adipose tissue at the submucosal layer and stromal fibrosis below superficial ulceration with detached normal mucosa (H + E, 15×)

the colon [3, 4]. The antrum is the most common site in cases of the stomach. A yellow hue in endoscopy and pillow or cushion sign when pressed with biopsy forceps are characteristic findings that are often observed. The EUS shows an echogenic mass at the third layer. These are very characteristic findings in the diagnosis of lipoma.

Angiolipoma is a morphological variation of the lipoma and accounts for 5–17% of total lipoma [5, 6]. There are two types of angiolipoma and they can be distinguished according to the presence of the capsule. Angiolipoma consists of mature fat cells and vascular cells, and the percentages of these two cells vary. In subcutaneous angiolipoma, fibrin thrombi in the vessels can often be observed. However, thrombosis is rarely seen in patients with angiolipoma of the gastrointestinal tract. Patients with subcutaneous angiolipoma often feel pain. In contrast, the symptoms of angiolipoma of the GI tract are indigestion, ileus, intestinal obstruction, intussusceptions, and bleeding [1, 7–12]. Gastric angiolipomas are extremely rare, and only two cases have been reported to our knowledge [1, 2]. Two previous cases of gastric angiolipoma were presented with anaemia and bleeding. Therefore, surgery was performed in those cases.

The angiolipoma in our case was also presented with anaemia and melena. It was hard and non-movable at palpation with biopsy forceps in endoscopy. It also showed central ulceration. It can be assumed that the angiolipoma were toward the gastric lumen and pushed the overlying mucosa. It can cause superficial ulceration and bleeding. Fibrosis was formed from this process. In addition, the patient had taken aspirin.

It was reported that the finding of angiolipoma on abdominal echo was a mass with a central hyperechoic part surrounded by a peripheral hypoechoic part [7]. Abdomen CT often shows angiolipoma as a low and iso-dense lesion in the pre-enhanced CT, but is seen as a high-density mass in the post-enhanced CT due to its fat component. The lesion in our case on EUS showed both hyperechoic and isoechoic part. The reason for these findings is that the tumour had stromal fibrosis on the luminal side. Dense fibrotic tissue can show a bright hyperechogenicity, like a gallstone. The lesion had the adipose tissue below fibrosis. Because of higher echogenic fibrotic tissue, the lipoma portion of the lesion showed a relative isoechoic feature on EUS. The muscularis mucosa, the second echo layer on EUS, was thickened due to recurrent stimulus by angiolipoma in EUS. The angiolipoma in our case was not enhanced on abdomen CT. Because the overall density of the lesion on CT can vary according to the ratio of the ingredients, non-enhancement may occur. Therefore, the CT findings

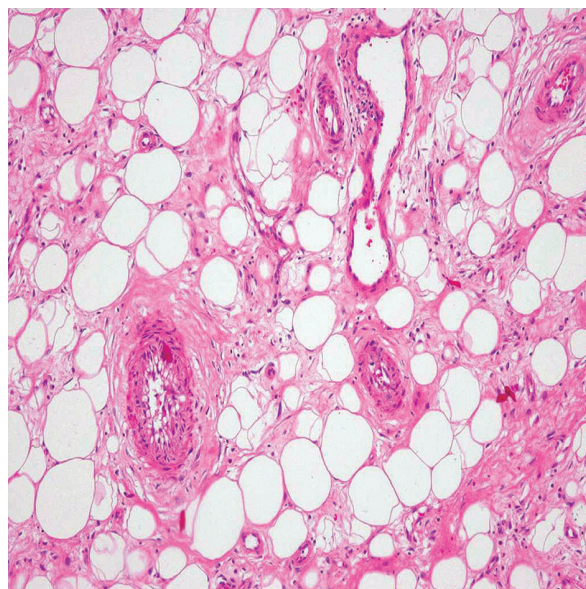


Figure 5. Microscopic finding showed blood vessels with thick walls among the mature adipose tissue. There were no visible fibrin thrombi within blood vessels (H + E, 100×)

in our case were not contrary to previous cases of angiolipoma. However, it was difficult to distinguish it from other subepithelial lesions, certainly before resection.

Conclusions

We found an unusual subepithelial mass in a patient admitted for anaemia and melena. Laparoscopic wedge resection was performed and the pathologic diagnosis was a gastric angiolipoma. Therefore, we report this case to show that a benign subepithelial lesion such as an angiolipoma can present as a hard mass with ulceration.

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