

En bloc resection of a large symptomatic duodenal lipoma by endoscopic submucosal dissection



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A 64-year-old woman presented to our department because of 2 months of postprandial abdominal discomfort, intermittent melena, and symptomatic anemia. Her anemia symptoms consisted of chest pressure, fatigue, and dizziness. Laboratory test results showed normocytic anemia (hemoglobin 9.0 g/dL). She underwent EGD, which revealed a smooth, soft, cylindrical mass measuring around 10 cm extending from the second portion to the third portion of the duodenum (Fig. 1); the ampulla was not involved (Fig. 2, *white arrow*). At the most distal end of the mass, there was a Forrest type 2B ulcer (Fig. 3). CT confirmed the mass location and showed radiologic features consistent with a lipoma (Fig. 4, *white arrows*). This was followed by EUS, which revealed that the lesion was hyperechoic, originating from the submucosal layer (Fig. 5, *white arrows*). The patient refused surgical intervention; thus, endoscopic submucosal dissection (ESD) was performed (Video 1, available online at www.VideoGIE.org). An electrocautery unit (ERBE VIO 300D, Tuebingen, Germany) was used, with ENDOCUT Q mode and FORCED COAG mode, 40W. A Dual knife, Hook Knife, and IT knife (all from Olympus, Tokyo, Japan) were used. Endoscopic resection of the mass

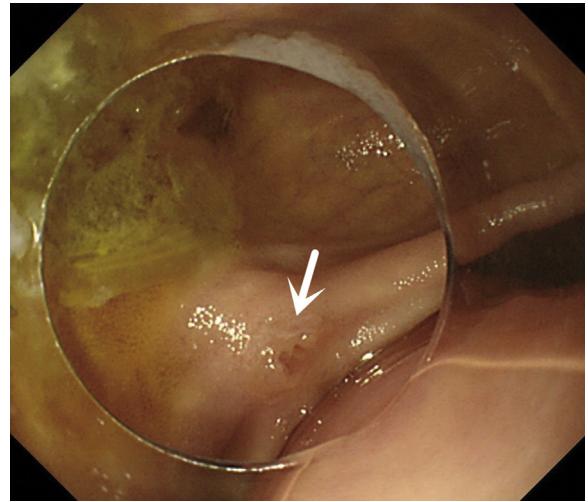


Figure 2. EGD view showing no involvement of the ampulla.

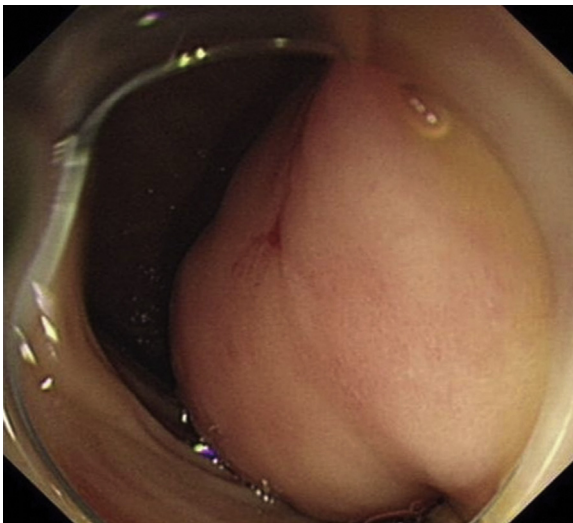


Figure 1. Gastroduodenoscopic view showing a huge cylindrical mass in the duodenum, with a smooth surface and soft texture.

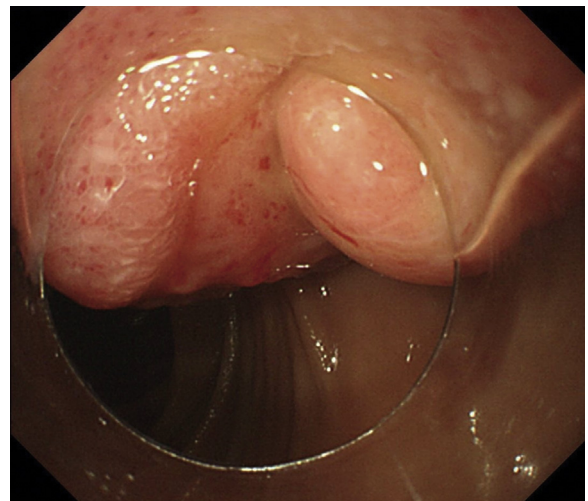


Figure 3. A Forrest type 2B ulcer at the most distal end of the mass.

Written transcript of the video audio is available online at www.VideoGIE.org.

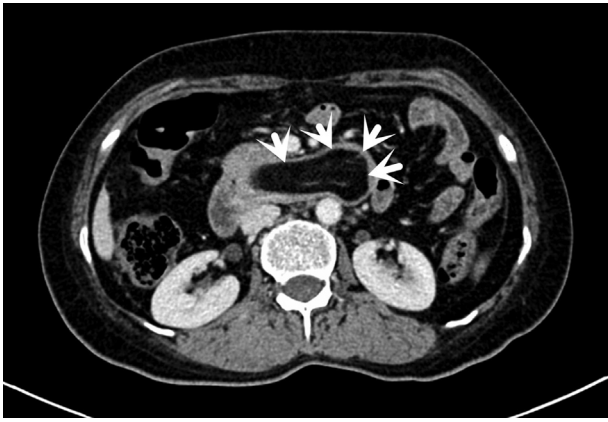


Figure 4. Abdominal enhanced CT showing a low-density lesion protruding from the descending part to the ascending part of duodenum.

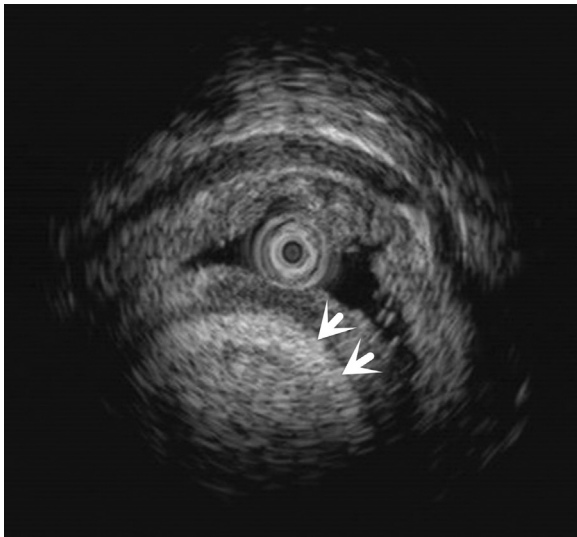


Figure 5. EUS view revealing that the lesion was hyperechoic and originated from the submucosal layer.

was especially challenging because its massive size prevented full visualization of the surrounding duodenum and caused partial occlusion of the duodenum. In addition, the thin duodenum was highly vascularized, and the location of the mass in the second part of the duodenum limited the mobility and stability of the endoscope. After the mass was visualized from several different angles, a semiarched incision was finally made at the proximal base of the lesion, followed by careful dissection. Any intraoperative bleeding was immediately stopped so as not to further compromise visualization. After 4 hours of careful dissection, the lesion was resected en bloc. Unfortunately, the en bloc-resected lipoma was not retrieved because the width of the lipoma surpassed the diameter of the pylorus opening, and only a small piece of the tissue was retrieved, whereas the majority of the specimens fell into the distal duodenum. After resection, the defect measured about 3.0 cm. The resection site was carefully examined without signs of active bleeding or perforation; thus, no clips or stents were used for closure. On

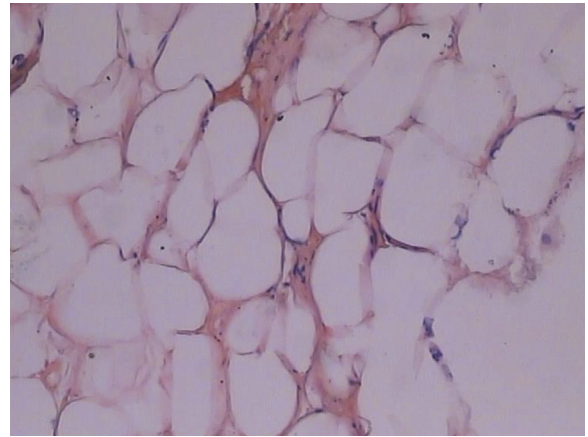


Figure 6. Microscopic view showing that the tumor is mainly composed of mature adipocytes without atypia or mitotic figures consistent with benign lipoma.

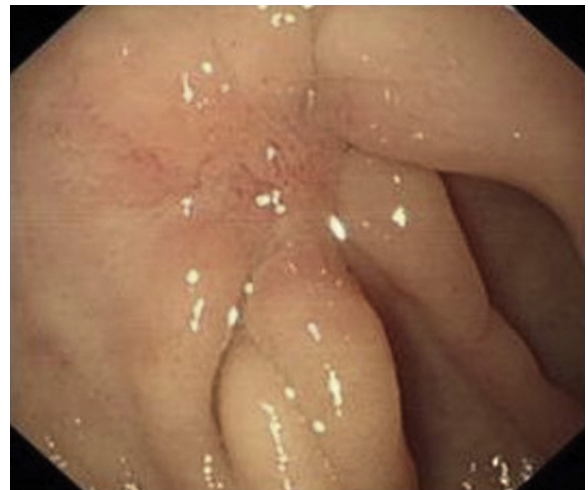


Figure 7. Two months later, EGD view showing the healed resection site.

histologic examination, the retrieved tissue was composed of mature adipocytes without mitotic figures and atypia consistent with benign lipoma (Fig. 6).

The patient's subsequent hospital course was free of adverse events. There was no bleeding, perforation, or sign of intestinal obstruction. She was discharged 3 days later. At her 2-month follow-up visit, EGD showed healing of the resection site (Fig. 7). She remained symptom free 12 months after endoscopic resection without signs of lipoma recurrence, bleeding, or clinical symptoms.

GI lipomas are slow-growing submucosal tumors found throughout the GI tract, and they account for 4% of all benign GI tumors. Of all the GI lipomas, colonic lipomas are the most common (64%), whereas only 4% are duodenal lipomas. The majority of GI lipomas are found incidentally, but they may become symptomatic and present with clinical symptoms such as abdominal pain, intussusception, and, rarely, GI bleeding.¹

Asymptomatic duodenal lipomas may be monitored, but symptomatic duodenal lipomas warrant intervention. Surgery was traditionally the treatment for large symptomatic lipomas; however, endoscopic treatment is now becoming increasingly favored because it is less invasive and carries less morbidity.¹⁻³ Endoscopic techniques such as snare polypectomy, ESD, and endoloop have been reported. Our report shows that endoscopic resection of a giant duodenal lipoma is feasible. Duodenal ESD should be reserved to very experienced endoscopists in a tertiary hospital because of the high risks of perforation and post-operative adverse events.

DISCLOSURE

All authors disclosed no financial relationships relevant to this publication.

Abbreviation: ESD, endoscopic submucosal dissection.

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<http://dx.doi.org/10.1016/j.vgie.2017.03.003>
