Endoscopic full-thickness resection of a gastric subepithelial tumor

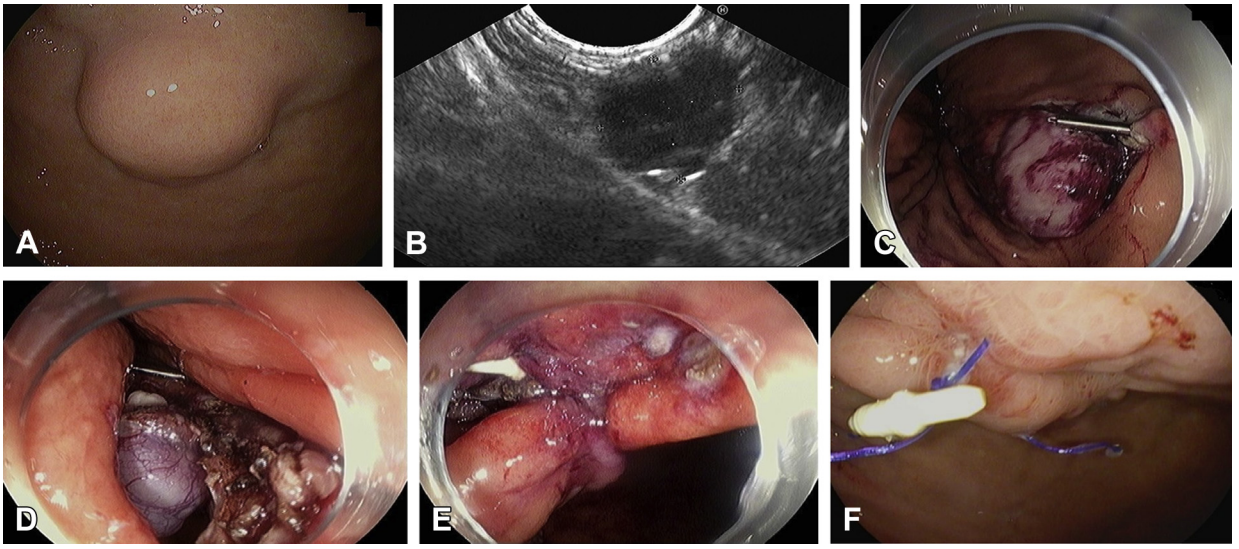

Figure 1. A, Endoscopic appearance of gastric subepithelial tumor. **B,** EUS view showing submucosal tumor arising from the muscularis propria. **C,** After circumferential incision to dissect the tumor. **D,** After resection. **E,** After defect closure with an overstitch. **F,** A 2-month follow-up EGD showing well-healed resection site.

Incidental subepithelial tumors are found in about 1 in 300 upper endoscopies. EUS-guided FNA can aid in establishing a diagnosis, but it cannot provide appropriate information about malignant potential because of the absence of a histologic mitotic count. In a small subset of patients, FNA is inconclusive. Inconclusive diagnosis and lack of prognostic histologic features can submit patients to continued endoscopic surveillance. We present a case of a full-thickness resection (FTR) of a gastric subepithelial nodule followed by endoscopic suturing to close the defect (Video 1, available online at www.VideoGIE.org).

An 81-year-old man was found to have an incidental gastric body nodule during upper endoscopy for GERD (Fig. 1A). EUS revealed a 1.5-cm × 1.4-cm subepithelial tumor arising from the submucosa and muscularis propria (Fig. 1B). Cytologic analysis from FNA showed spindle cells, and immunostains were positive for CD34 and CD117, suggestive of a GI stromal tumor. The decision was made to perform endoscopic FTR after discussion with the patient about risks, benefits, and alternatives. Using an IT nanoknife (Olympus Optical Co, Tokyo, Japan), we performed a 360° circumferential mucosal incision defining the boundaries of the subepithelial nodule (Fig. 1C). The 360° incision was then extended deeper into the muscularis propria along the line of the initial incision. Finally, with an IT nanoknife, we completed the 300° full-thickness incision. We intentionally avoided the last 60° of the serosal layer to prevent migration of the resected specimen into the peritoneum. Hemostasis was achieved for bleeding vessels encountered during dissection by coagulation forceps. A 4-cm full-thickness defect was seen when the mesenteric fat was visualized endoscopically. The remaining pedicle was resected with a hot snare and retrieved with a Roth net (Fig. 1D). The defect was closed by 2 series of running nonabsorbable sutures by use of the endoscopic suturing device (Fig. 1E). A helix device was used to facilitate suturing. Pathologic examination of the nodule confirmed an FTR of the gastric subepithelial tumor. CT of the abdomen with enteric contrast material confirmed adequate closure of the resection site. The patient was discharged after a 23-hour observation period. A 2-month follow-up endoscopy showed hyperplastic tissue at the suture site without any residual nodule (Fig. 1F).

This technique of endoscopic FTR for gastric subepithelial nodule and closure by use of an endoscopic suturing device can be safe and can provide a definitive diagnosis with malignant risk stratification, eliminating the need for continued endoscopic surveillance.

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

DISCLOSURE

All authors disclosed no financial relationships relevant to this publication.

Bhavtosh Dedania, MD,* *Division of Gastroenterology, Hepatology & Nutrition,* **Tejal Mistry, MD,*** *Department of Internal Medicine,* **Jamie Buryanek, MD,** *Department of Pathology,* **Shashideep Singhal, MD,** *Division of Gastroenterology, Hepatology & Nutrition, University of Texas Health Science Center at Houston, Houston, Texas, USA*

*Drs Dedania and Mistry contributed equally to this article.

https://doi.org/10.1016/j.vgie.2017.11.008

***VideoGIE* Quiz**

Think you can outsmart *VideoGIE*? Try your luck with our new Quiz series. Using cases published in *VideoGIE*, we post questions designed to improve the education of our fellows. Go to http://www.videogie.org to submit your answer, and keep checking back for more quizzes!