Diagnostic and Interventional Endoscopy

Video Article

Unexpected Diagnosis: Gastric Adenocarcinoma Mimicking a Subepithelial Lesion

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OBJECTIVE

Gastric adenocarcinoma is one of the most common malignancies worldwide, typically presenting as ulcerated or infiltrative lesions during endoscopy. On the other hand, its manifestation as a subepithelial lesion (SEL) is exceptionally rare making diagnosis difficult. Recognizing malignant potential in SELs with atypical clinical or endoscopic features is crucial to avoid delays in diagnosis and treatment. We present an uncommon case of gastric adenocarcinoma manifesting as a SEL in the gastric corpus. This case emphasizes the importance of considering malignant etiologies in the differential diagnosis of SELs, particularly in patients with atypical clinical or endoscopic features.

METHODS

Fujinon EG580-UR radial ultrasonic endoscopy 12 MHz (Fujifilm Corporation, Tokyo, Japan), Fujinon EG-760R gastroscope (Fujifilm Corporation, Tokyo, Japan), DualKnife (Olympus Medical Systems, Tokyo, Japan), Adrenalin, hydroxyethyl starch (HES), and Indigo carmine solution.

RESULTS

A 59-year-old female patient was referred to our center after presenting with stool occult blood positivity at an external clinic center. Written informed consent was obtained from patient who participated in this study. Endoscopic examination revealed a SEL (measuring 2 × 2 cm) with a superficial clear ulcer in the gastric corpus (Figure 1A and B).

An evaluation with 12 MHz radial EUS Fujinon EG580-12 MHz (Fujifilm Corporation, Tokyo, Japan), performed with water infusion, demonstrated a SEL originating from the muscularis mucosa (second layer) and submucosa (third layer). The lesion measured 20 mm. It was with well-defined but irregular borders. It exhibited a hypoechoic and heterogeneous structure. Disruptions in mucosal integrity were observed at the level of the lesion. The muscularis propria layer appeared intact in the region of interest. Based on these findings, a preliminary diagnosis of high-grade neuroendocrine tumor (NET) or gastrointestinal stromal tumor (GIST) was considered, and endoscopic resection was planned.

For endoscopic submucosal dissection, a Fujinon EG-760R gastroscope was used. A cap-assisted technique was applied. There was an approximately 2 cm clean ulcer in the area. Loss of pit pattern was seen. The lesion was marked circumferentially, and a submucosal injection was performed to lift the area. After an initial mucosal incision, submucosal dissection was performed using a DualKnife (Olympus Medical Systems, Tokyo, Japan). Hemostasis was maintained throughout the procedure. The lesion, including the fibrotic ulcerated base with irregular microvasculature, was completely resected (Figure 1C). The defect was managed to support healing. During dissection, no significant vascularity was noted. The base had a fibrotic ulcer with irregular microvasculature. No signs of invasion were observed at the base. The resected specimen measured 3 × 2 cm, with a 2 cm elevated lesion and a partially ulcerated area (Figure 1D). Histopathological examination revealed intestinal-type adenocarcinoma with positive surgical margins at the base. The base of the lesion showed fibrosis and irregular microvasculature. Immunohistochemical analysis showed CD10 (+), CDX2 (+), and focal CK20 (+), confirming the diagnosis.

Further evaluation with FDG-PET (Fluorodeoxyglucose Positron Emission Tomography) imaging showed no evidence of metastasis. Subsequently, the patient underwent laparoscopic total gastrectomy with Roux-en-Y esophagojejunostomy and D2 lymph node dissection. No tumoral lesions were observed. Microscopic evaluation revealed reactive changes and mild fibrosis in the described ESD scar area, with no evidence of malignancy. Dissection of lymph nodes from perigastric, D2, and 11D stations revealed reactive lymphoid hyperplasia without metastatic involvement (0/14). Immunohistochemical analysis confirmed epithelial markers (pancytokeratin) positivity in the ESD scar area. The final diagnosis excluded malignancy. The patient is now under close follow-up.

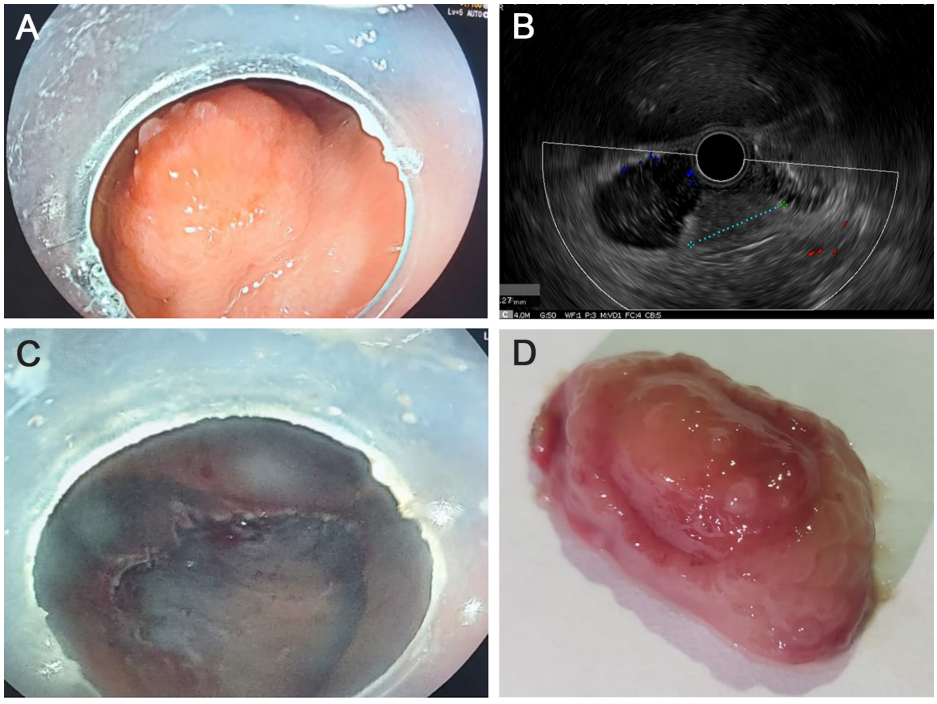

Figure 1. (A) Endoscopic view of the lesion. (B) Endoscopic ultrasound (EUS) image of the lesion. (C) Post-dissection view of the lesion base. (D) Excised specimen of the lesion.

CONCLUSION

Subepithelial lesions in the gastric tract are benign in nature, with common diagnoses including GISTs, lipomas, and leiomyomas. Although rare, SELs can occasionally contain malignant pathologies, including adenocarcinoma. While these lesions are generally asymptomatic, larger SELs or those with specific characteristics such as rapid growth, irregular borders, or ulceration may raise suspicion for malignancy such as lymphoma, GIST, metastasis, and NETs.[1]

Gastric adenocarcinoma is among the most common malignancies worldwide, typically presenting as ulcerated or infiltrative lesions visible during endoscopy. However, its presentation as a SEL is exceptionally rare. This uncommon presentation may lead to delays in diagnosis and treatment, as the lesion can mimic benign subepithelial tumors, both in endoscopic appearance and clinical behavior.[2]

EUS (Endoscopic Ultrasonography) is the most important tool for evaluating SELs. EUS is mandatory to nonınvasively collect the target's information and opt candidates for further evaluation.[3,4] It helps determine the size, echogenicity, relationship with layers, and border of the lesion. Biopsies taken from the surface epithelium are often insufficient.[4] ESD is used as both a diagnostic and therapeutic method. It allows for complete resection and facilitates histopathological analysis of the lesion.[5]

This case emphasizes the importance of EUS in evaluating the malignant potential of SELs and the effectiveness of ESD as both a diagnostic and therapeutic method.

Data Availability Statement: The data that support the findings of this study are available on request from the corresponding author.

Informed Consent: Written informed consent was obtained from patient who participated in this study.

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Video 1: https://youtu.be/23ADQiKaI6c.

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