

CASE REPORT

Gastric Metastasis from Ovarian Adenocarcinoma Presenting as a Submucosal Tumor without Ulceration

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Metastatic gastric cancer is extremely rare and gastric metastasis from ovarian adenocarcinoma has rarely been reported. All of the previously reported metastatic lesions presented as an ulcerative lesions. We report a case of 49-year-old woman in which gastric metastasis from ovarian adenocarcinoma presented as a submucosal tumor without ulceration on endoscopic examination. Gastrointestinal stromal tumor was suspected on endoscopic ultrasound (EUS) examination. It was confirmed histopathologically as metastatic ovarian adenocarcinoma after endoscopic submucosal dissection (ESD) with enucleation. Submucosal tumor of the stomach in patients with ovarian carcinoma should not be overlooked and ESD with enucleation may be a viable option when EUS with fine needle aspiration is not available. (*Gut and Liver* 2009;3:211-214)

Key Words: Ovarian adenocarcinoma; Gastric metastasis; Submucosal tumor

INTRODUCTION

Although metastatic gastric tumors are uncommon, gastric metastasis from ovarian carcinoma is extremely rare because malignant cells from the ovary usually spread through the intraperitoneal cavity.¹⁻³ Here, we report a case of gastric metastasis from ovarian adenocarcinoma presented as a submucosal tumor without ulceration. This case was confirmed histologically after endoscopic submucosal dissection (ESD) with enucleation.

CASE REPORT

A 49-year-old woman presented to our department for evaluation of a gastric mass. Fifty-two months previously, she had undergone a total abdominal hysterectomy with bilateral salpingo-oophorectomy and pelvic lymph node dissection for serous ovarian adenocarcinoma and anterior resection for colon metastasis. After the surgery, she was given nine cycles of adjuvant Paclitaxel and Carboplatin chemotherapy. Her CA-125 level returned to normal following completion of chemotherapy and she was in good condition for 44 months until her serum CA-125 level increased to 160.1 U/mL (reference value 35 U/mL). An F-18 fluorodeoxyglucose positron emission tomography (FDG-PET) scan revealed a high-uptake lesion in the wall of the gastric antrum and presacral area (Fig. 1). Abdominal CT showed pelvic fascia thickening, although there was no evidence of gastric metastasis or carcinomatosis peritonei.

Upon review, she denied melena, hematemesis, hematochezia or abdominal discomfort. Subsequent endoscopic examination was performed and showed a 2.5×2.5 cm sized submucosal tumor (SMT) covered with normal gastric mucosa at antrum (Fig. 2). Endoscopic ultrasound (EUS) examination demonstrated that the lesion was invaded to the proper muscle layer and was surrounded by a well-demarcated hypoechoic rim with an intact mucosal layer (Fig. 3), which was consistent gastrointestinal stromal tumor (GIST). We performed an ESD with enucleation for the entire lesion without complication using hook knife because the patient did not want surgical resection

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Received on March 5, 2009. Accepted on April 10, 2009.

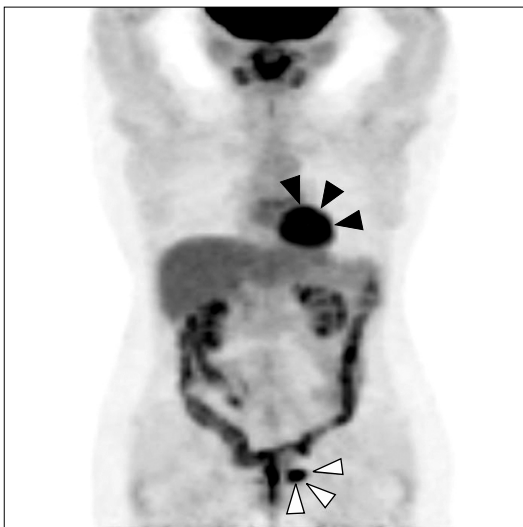


Fig. 1. An F-18 fludeoxyglucose positron emission tomography (FDG-PET) scan revealed a high-uptake lesion in the wall of the gastric antrum (arrowheads) and presacral area (white arrowheads).

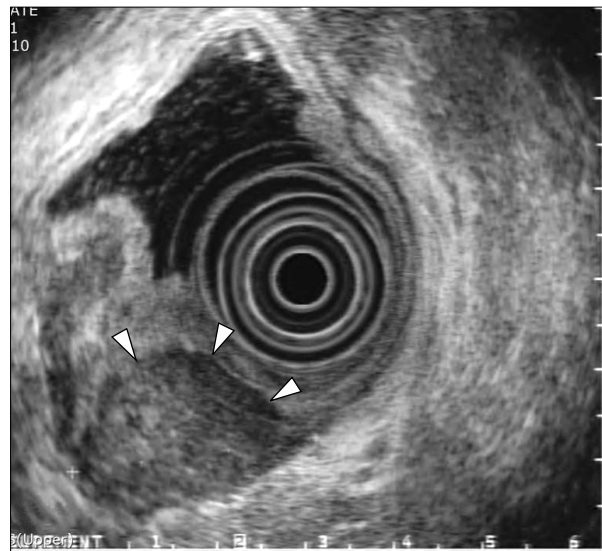


Fig. 3. Endoscopic ultrasound revealed a 2.5-cm inhomogeneous semicircular mass (white arrows) originating from the muscularis propria that is surrounded by a demarcated hypoechoic rim.

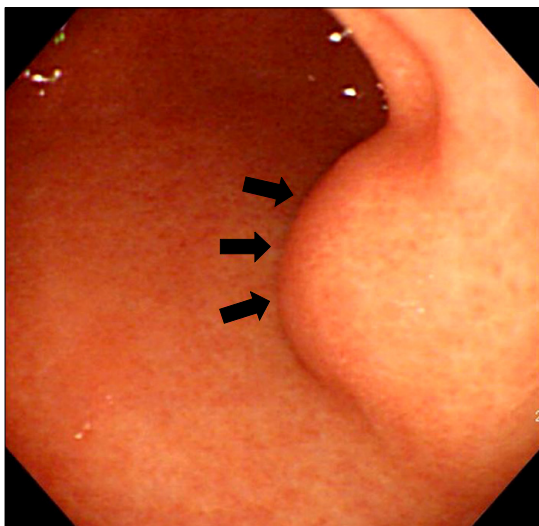


Fig. 2. The initial gastroscopy showed a 2.5x2.5-cm submucosal tumor covered with normal gastric mucosa on the posterior wall side of the proximal antrum (arrows).

(Fig. 4). Histopathologic examination revealed submucosal growth of the papillary tumor originating from the previous ovarian carcinoma (Fig. 5). The patient is currently receiving chemotherapy (Docetaxel and Cisplatin) and is in good condition without any additional metastasis for 18 months.

DISCUSSION

Metastasis to the stomach from ovarian carcinoma is a

rare clinical event,¹⁻³ as ovarian carcinoma usually seeds through the peritoneum and carcinomatosis peritonei is the most common form of distant metastasis after curative resection or chemotherapy. However, as described here, ovarian carcinoma may metastasize to other organs including the stomach through the blood stream without any evidence of peritoneal metastasis. Although the stomach receives a rich blood supply, there has been no report to clarify gastric metastasis from distant organs hematogenously.

Metastatic gastric tumor usually presents as an ulcerated lesion on the luminal side and appears as a volcano or mass.^{4,7} Here, we report a metastatic gastric tumor originating from an ovarian carcinoma, presented as an SMT, reminiscent of GIST. There has been a report of a metastatic gastric tumor originating from ovarian carcinoma presented as a bleeding lesion, which was diagnosed easily with EGD, and metastasis was confirmed with surgical resection.³ However, surgical intervention is an invasive procedure and it can be a burden for the patient. Therefore, a less invasive diagnosis is required.

Another option for the histopathologic diagnosis of SMT-like lesions is an EUS-guided fine needle aspiration of the lesion. This technique has shown high sensitivity and specificity in many studies,^{8,9} although the equipment is not available in most institutes in Korea. When EUS-guided aspiration biopsy is not available, ESD with enucleation may be a viable second option because it is less invasive than surgical intervention and can be per-

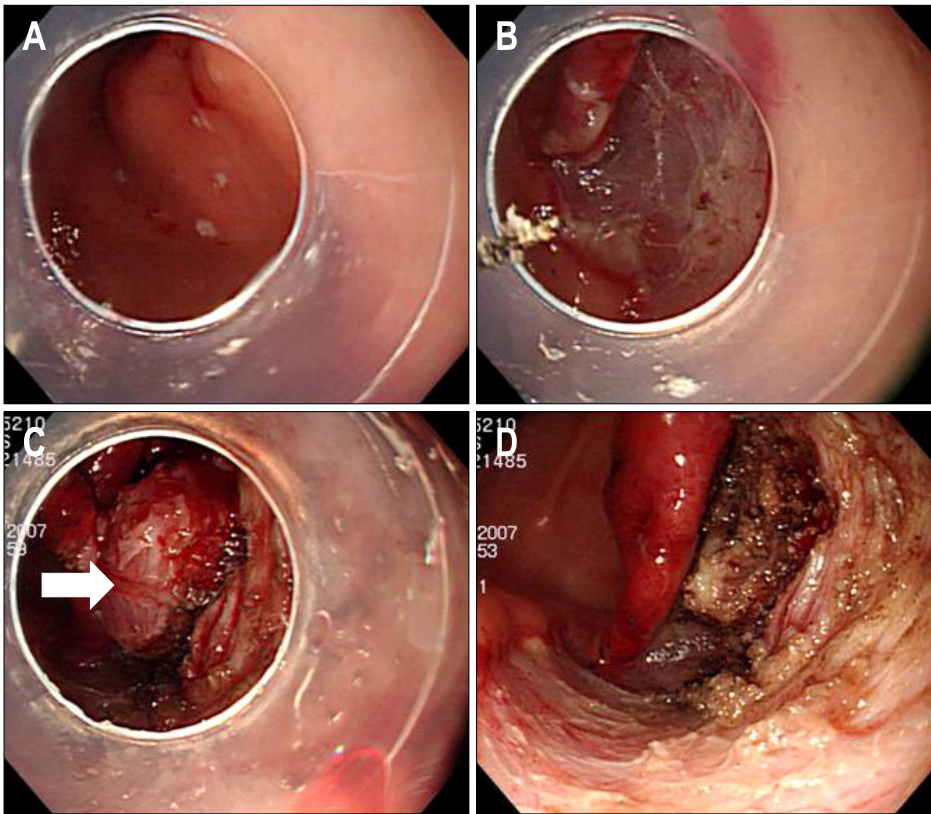


Fig. 4. Endoscopic submucosal dissection was performed using a hook knife. (A) An argon plasma laser was used to mark the area required for dissection. (B) Submucosal dissection was initiated. (C) The lesion (white arrow) was exposed in the middle of the procedure. (D) The lesion was completely removed without complication.

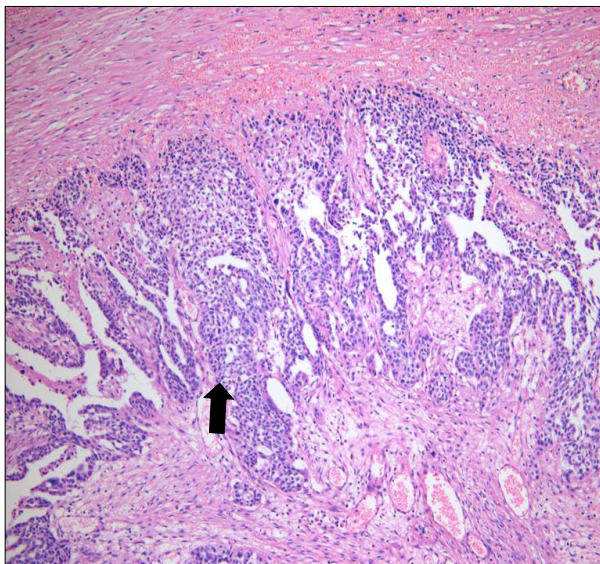


Fig. 5. A photomicrograph of the specimen revealing a papillary carcinoma (arrow) comprising hyperchromatic cells with nest-like structures, which exhibited the same pattern as the original ovarian carcinoma (H&E stain, ×100).

formed in the majority of the institutes in Korea.

In summary, SMT of the stomach in patients with ovarian carcinoma should not be overlooked and ESD with enucleation may be a viable option when EUS with fine

needle aspiration is not available. To our knowledge, this is the first reported case of gastric metastasis of ovarian carcinoma presented as an SMT without ulceration in the English literature.

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