A case of primary gastric choriocarcinoma and a review of the Japanese literature

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Abstract: A 63-year old woman who had experienced melena for 2 weeks was admitted to Tokyo University Hospital. Gastric adenocarcinoma was diagnosed endoscopically and histologically, and a total gastrectomy was performed soon thereafter. Pathological examination of the resected stomach revealed choriocarcinoma of the stomach. Although chemotherapy was administered after surgery, she died 3 months after admission. Autopsy confirmed the diagnosis of primary gastric choriocarcinoma, a rare, but highly malignant tumor. It is characteristic, macroscopically it forms a necrotic mass with bleeding, and microscopically it often consists of adenocarcinoma and choriocarcinoma. Since its prognosis is extremely poor, we must take into account the possibility of primary gastric choriocarcinoma when a hemorrhagic gastric tumor with necrosis is found.

Key words: gastric choriocarcinoma, gastric adenocarcinoma, human chorionic gonadotropin

Introduction

Choriocarcinoma is a highly malignant tumor arising from trophoblastic cells of the uterus. Ectopic choriocarcinoma has also been reported in the gonads, mediastinum, and retroperitoneum, usually as part of a teratomatous lesion. In the gastrointestinal tract, it rarely occurs in the stomach. To date about 120 cases of primary gastric choriocarcinoma have been reported. However, about 80 of these are documented in Japanese. Furthermore, the clinical features of primary gastric choriocarcinoma are not well known. Therefore, we report this case of primary gastric choriocarcinoma in a Japanese female and review the Japanese literature.

Case report

A 63-year-old woman who had experienced melena for 2 weeks visited our hospital in August, 1990. Physical examination showed severe anemia. Her pulse was 106/min and blood pressure, 102/55 mmHg. She had operation scars from a cholecystectomy, performed in 1952, and myoma nucleation, performed in 1974. Laboratory data on admission included a red blood cell count of 15.1 × 10^6/mm^3, hemoglobin 4.6 g/dl, hematocrit 15.3%, total protein 5.5 g/dl, and albumin 3.3 g/dl.

Endoscopic examination of the stomach showed an elevated lesion located on the lesser curvature near the esophagus-cardia junction (Fig. 1). It was endoscopically diagnosed as gastric choriocarcinoma, a rare, but highly malignant tumor. It is characteristic, macroscopically it forms a necrotic mass with bleeding, and microscopically it often consists of adenocarcinoma and choriocarcinoma. Since its prognosis is extremely poor, we must take into account the possibility of primary gastric choriocarcinoma when a hemorrhagic gastric tumor with necrosis is found.

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Endoscopic examination of the stomach showed an elevated lesion located on the lesser curvature near the esophagus-cardia junction (Fig. 1). It was endoscopically diagnosed as gastric cancer with a huge, well organized clot on the top. The endoscopic biopsy specimen from its elevated margin revealed adenocarcinoma.

The patient received a 4000-ml blood transfusion; however her anemia did not improve. On the 15th hospital day, an emergency gastrectomy was performed because of hematemesis. The tumor was found to have barely invaded the serosa and to have metastasized to perigastric lymph nodes (H_0P_S_1N_1, Stage II, according to the classification of The General Rules for the Gastric Cancer Study in Surgery And Pathology of Japanese research society for gastric cancer).

The resected tumor was 4.5 × 3 × 0.3 cm in size (Fig. 2). It was centrally depressed and peripherally elevated and part of its margin formed a hemorrhagic and necrotic mass. Microscopic examination revealed two different types of tumor tissue. One was adeno-
carcinoma with varying degrees of differentiation occupying a large area of the tumor, and the other was choriocarcinoma, which occupied the peripheral, hemorrhagic, and necrotic area (Figs. 3, 4). Most of the adenocarcinoma portion had a medullary and papillary pattern. The choriocarcinoma consisted of multinucleated, giant cells and large polygonal cells with clear cytoplasm. The former seemed to be syncytiotrophoblasts and the latter, cytotrophoblasts. Histologically, metastatic lymph nodes were adenocarcinoma. Human chorionic gonadotropin (HCG) was detected immunohistochemically in the choriocarcinoma cells, but not in the adenocarcinoma cells.

After the diagnosis of gastric choriocarcinoma was made, the HCG level was measured. The serum HCG level was 530,000 IU/ml, and urine level was 100,000 IU/ml. Abdominal computed tomography (CT) scan revealed multiple low density areas suggesting liver metastases. Although methotrexate and actinomycin D were administered, the patient died of disseminated intravascular coagulation (DIC) syndrome on the 88th hosp-