CASE REPORT

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A Gastroesophageal Junction Tumor Misdiagnosed as a Gynecologic Oncology Case

Jinekolojik Onkoloji Olgusu Olarak Karıştırılan Gastroözefageal Bileşke Tümörü

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Abstract

Choriocarcinoma can sometimes resemble adenocarcinoma. The best method to differentiate them is immunohistochemical staining with cytokeratin-7 and beta-human chorionic gonadotropin (β-HCG) antibodies. In this case, we present a 57-year-old patient who had been in menopause for six years and had an elevated β-HCG level. The patient was diagnosed with a choriocarcinoma case that appeared similar to adenocarcinoma.

Keywords: Adenocarcinoma, β-HCG, choriocarcinoma, gastroesophageal junction tumor

Öz

Koryokarsinom bazen adenokarsinom gibi görünebilir. Bunları ayırt etmedeki en iyi yöntem sitokeratin-7 ve beta-insan koryonik gonadotropini (β-HCG) antikorlarıyla yapılan immünohistokimyasal çalışmadaki pozitif boyamadır. Bu olguda kliniğimize başvuran 57 yaşındaki 6 yıldır menopozda olan ve β-HCG değeri yüksek olan hastanın adenokarsinom gibi görünen koryokarsinom olgusu sunulmuştur.

Anahtar kelimeler: Adenokarsinom, β-HCG, gastroözefageal bileşke tümörü, koryokarsinom

Introduction

Elevated beta-human chorionic gonadotropin (β-HCG) levels in men or postmenopausal women are indicative of malignancy (1). Choriocarcinoma is a rapidly growing, highly metastatic malignant tumor that secretes β-HCG. Most choriocarcinomas are associated with pregnancy. Non-gestational choriocarcinomas are very rare, with the most common site of development being the gastrointestinal system, particularly the upper gastrointestinal tract. In this report, we present a case of a gastroesophageal junction tumor resembling adenocarcinoma in a patient who had been in menopause for six years, presented with abdominal pain, and had elevated β-HCG levels.

Case Report

A 57-year-old woman presented to the Obstetrics and Gynecology Emergency Department of University of Health Sciences Turkey, İstanbul Bağcılar Training and Research Hospital with complaints of abdominal pain. Her medical history revealed that she had had three normal deliveries, had been in menopause for six years, and had only undergone an appendectomy. She had no other medical

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conditions and was not taking any regular medications. A transvaginal ultrasound performed in the emergency department, along with pelvic Doppler ultrasound and pelvic magnetic resonance imaging, showed normal uterus and ovaries, with no pathology detected in the adnexa. However, massive fluid was observed in the front and back of the uterus. Laboratory tests revealed a β-HCG level of 250, and the patient was admitted to the ward for close monitoring.

During the patient's follow-up in the obstetrics and gynecology care unit, a catheter was placed by interventional radiology to drain the massive fluid observed in the front and back of the uterus.

In laboratory tests, the β-HCG levels were consistently high, ranging as follows: 228/023/368/434/377/394/465/522/549/557/623/643/652.

Imaging revealed widespread omental cake in the peritoneum. In the tru-cut biopsy, histopathological sections of the material showed atypical cells with prominent nucleolated eosinophilic (Figures 1 and 2) epithelioid cytoplasm and high mitotic activity (Figures 3 and 4), which formed neoplastic infiltration in a fibrous desmoplastic stroma. No specific findings were observed in the case, except for CK7 expression and p53 mutation. Immunohistochemical studies showed the following results in the neoplastic cells: BerEP-4 (-), Calretinin (-), WT-1 (-), LCA (-), SATB2 (-), CK20 (-) (Figure 5), CK7 (+) (Figure 1), PAX-8 (-), PR (-), ER (-), CK5/6 (-), HMB45 (-), S100 (-), HEPPAR (-), AFP (-), CEA (-), p53 mutant (loss of expression) (Figure 6), Napsin-A (-), TTF-1 (-), Chromogranin A (-).

During the patient's follow-up, due to widespread abdominal pain, the general surgery clinic performed an endoscopy, which revealed a mass lesion starting at the distal gastroesophageal junction (tm?) (Figure 7).

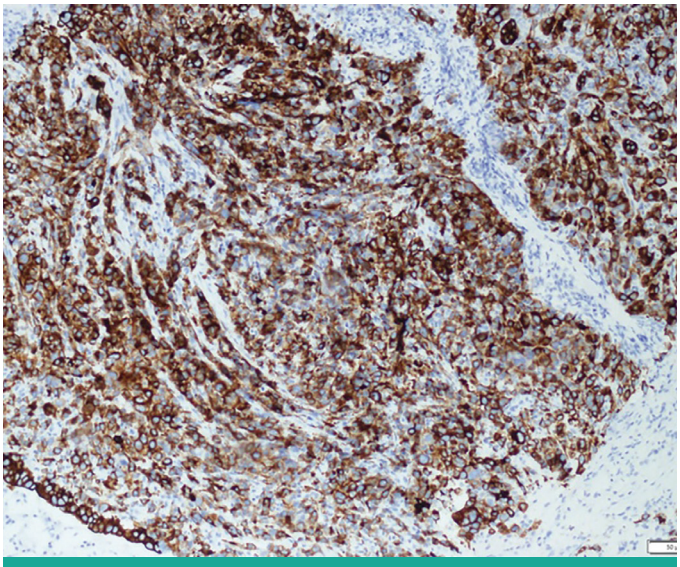

Figure 1. Positive immunoreactivity with CK-7, x10 (immunohistochemical staining with cytokeratin-7 and β-HCG antibodies showed positive staining, confirming the choriocarcinomatous nature of the tumor)

CK-7: Cytokeratin-7, β-HCG: Beta-human chorionic gonadotropin

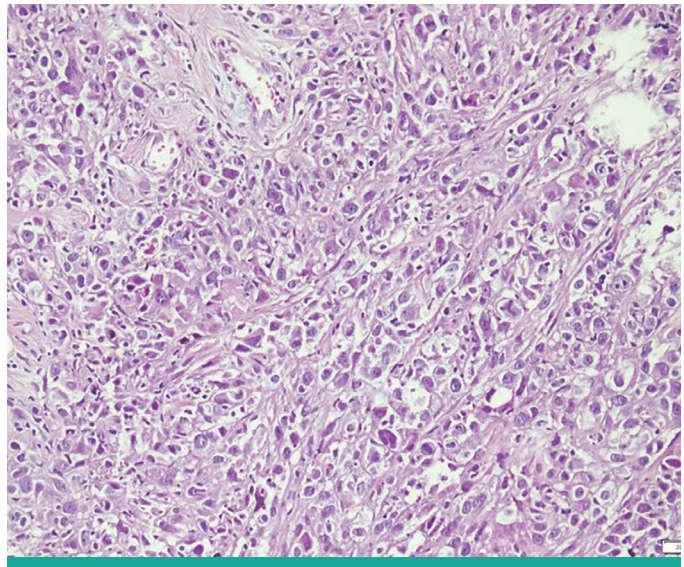

Figure 2. H&E x20–prominent nucleolated, eosinophilic cytoplasm, and epithelioid-looking tumor cells were observed

H&E: Hematoxylin and eosin

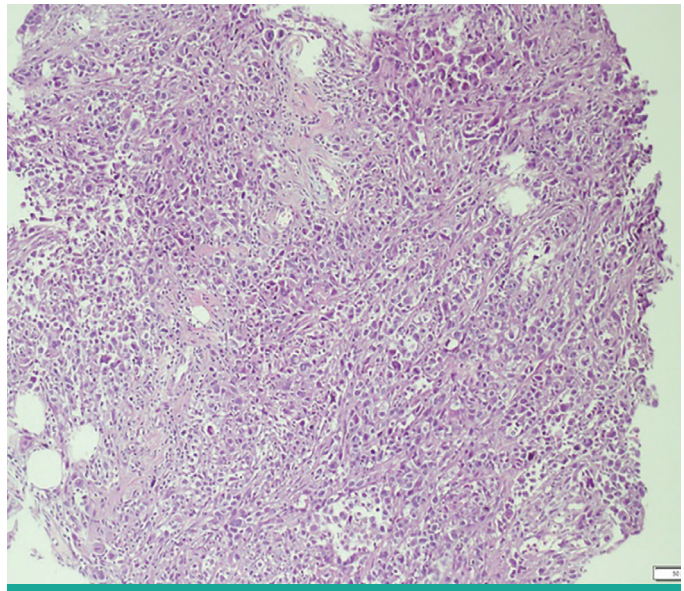

Figure 3. H&E x10–neoplastic infiltration formed by atypical cells was observed within the fibrous desmoplastic stroma

H&E: Hematoxylin and eosin

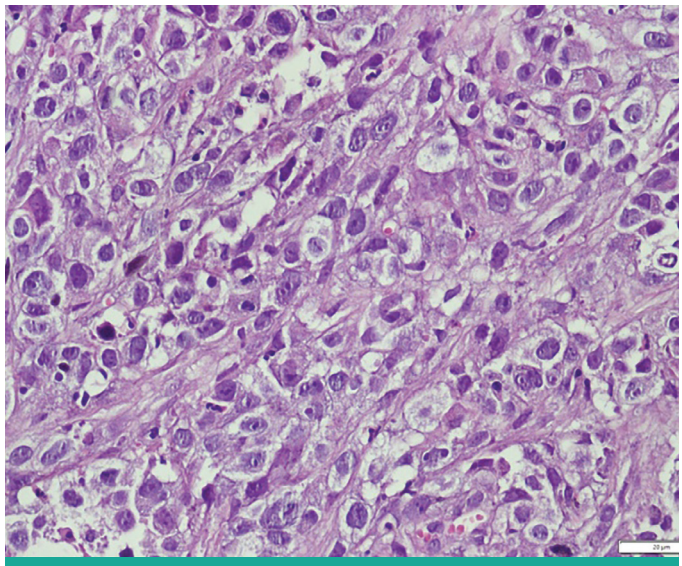

Figure 4. H&E x40–tumor cells with high mitotic activity were observed

H&E: Hematoxylin and eosin

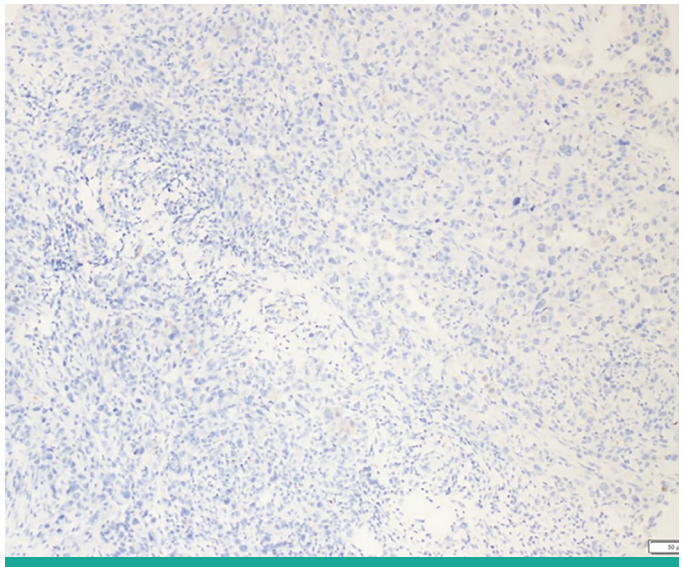

Figure 5. Negative immunoreactivity with CK20, x10, which aided in the differential diagnosis

Endoscopic biopsy taken from the stomach at the cardia junction showed adenocarcinoma infiltration.

After a tumor was observed at the gastroesophageal junction, the patient was referred to the general surgery department. In the general surgery department, pain palliation was provided, but as the patient's condition worsened, she was transferred to the intensive care unit. The patient was followed up in the intensive care unit for one week and unfortunately passed away.

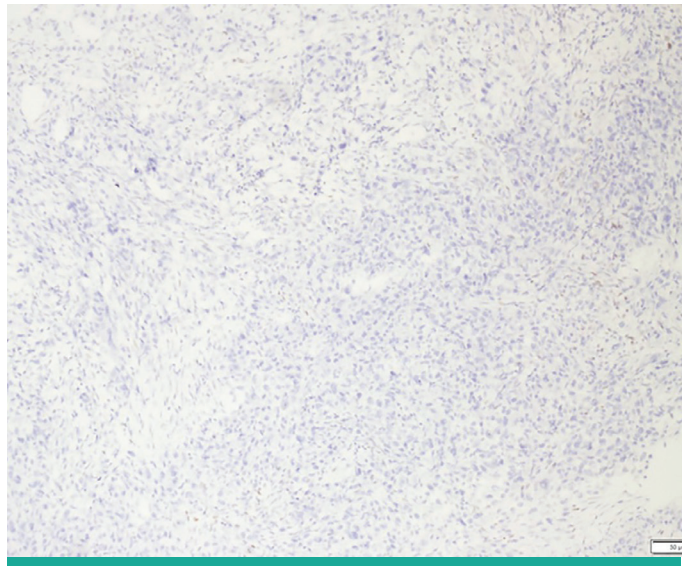

Figure 6. Loss of expression with p53 (mutant), x10

The patient's relatives were informed that the patient's diagnosis and management would be presented as a case report for scientific purposes, and written informed consent was obtained from the patient's relatives.

Discussion

Choriocarcinoma is a malignant tumor with a poor prognosis, typically located in the uterus and ovaries in women, and as a component of a malignant mixed germ cell tumor in the testes in men. Extragenital involvement is rare but can occur in the mediastinum, retroperitoneum, liver, and stomach.

Additionally, choriocarcinomas may initially resemble adenocarcinomas. In several cases, tumors that were first evaluated as gynecological malignancies were later identified as tumors of the gastroesophageal system (2). However, to our knowledge, no case has been reported in which a tumor initially diagnosed as adenocarcinoma was subsequently identified as primary gastric choriocarcinoma (PGC), as in our case.

PGC shares characteristics with gastric primary adenocarcinoma. The differentiation theory is the most widely accepted explanation for the pathogenesis of PGC. Histologically, it typically consists of a combination of malignant cytotrophoblasts and syncytiotrophoblasts, often confused with adenocarcinoma cells. Trophoblastic cells are positive for β-HCG in immunohistochemistry, and elevated serum β-HCG levels are observed in most cases. While serum β-HCG has no prognostic significance, it may be useful in evaluating the response to treatment and tumor recurrence.

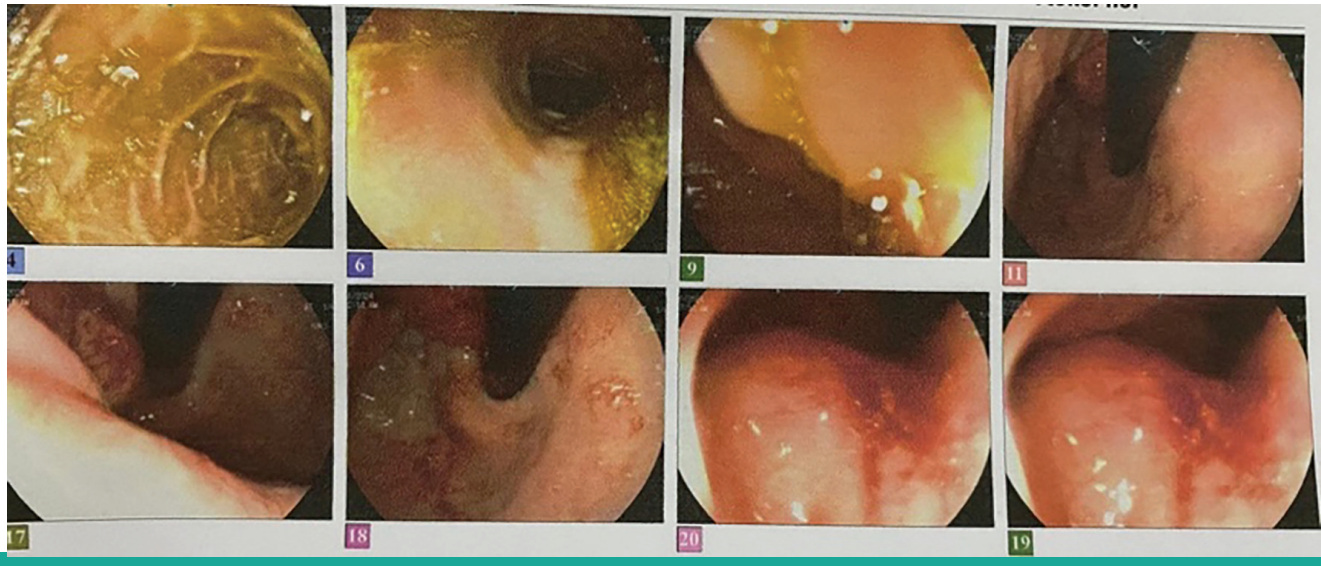

Figure 7. Esophago-gastro-duodenoscopy images showed a hard, friable mass lesion (Siewert 3) approximately 3x3 cm in size, located just distal to the cardioesophageal junction

Moreover, positive staining in immunohistochemical studies with cytokeratin-7 and β-HCG antibodies confirms the diagnosis of choriocarcinoma (3).

The differential diagnosis of PGC includes metastatic trophoblastic tumors from other more common sites. It is crucial to exclude other possible primary lesions and confirm that β-HCG levels normalize after tumor resection. Given that most PGCs are known to have an adenocarcinoma component, the current treatment involves gastrectomy and lymphadenectomy combined with chemotherapy. There is no established chemotherapy regimen specifically for PGC.

The prognosis of PGC is worse than that of adenocarcinoma. Most patients experience early metastasis to the lungs, liver, and regional lymph nodes (4). The survival duration is less than 2 months.

In conclusion, in patients presenting with abdominal pain and a positive β-hCG level in whom pregnancy has been excluded, the possibility of malignancy should always be considered. A multidisciplinary approach should be adopted in the evaluation of malignancy, and both histopathological and endoscopic assessments should be performed.

Ethics

Informed Consent: The patient's relatives were informed that the patient's diagnosis and management would be presented as a case report for scientific purposes, and written informed consent was obtained from the patient's relatives.

Footnotes

Authorship Contributions

Concept: M.E.A., Ö.K.A., Design: M.E.A., E.A., C.T., Data Collection or Processing: M.E.A., E.A., C.T., Analysis or Interpretation: M.E.A., Ö.K.A., E.A., Literature Search: M.E.A., E.A., C.T., Writing: M.E.A.

Conflict of Interest: No conflict of interest was declared by the authors.

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