

Pulmonary metastatic choriocarcinoma presenting as hemodynamically unstable patient with hemothorax

Hemodinamik olarak kararsız hemotoraklı hasta gibi kendini gösteren pulmoner metastatik koryokarsinom

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ABSTRACT

Spontaneous hemothorax is an uncommon condition which may be related to malignancies. Choriocarcinoma is a malignant trophoblastic tumor which frequently metastasizes to the lungs. In this article, we report a 23-year-old female patient who presented with massive hemothorax as a result of underlying choriocarcinoma.

Keywords: Choriocarcinoma; hemothorax; pulmonary metastasis.

ÖZ

Spontan hemotoraks malignitelerle ilişkili olabilen, yaygın olmayan bir durumdur. Koryokarsinom sıklıkla akciğerlere metastaz yapan malign bir trofoblastik tümördür. Bu yazıda, altta yatan koryokarsinom sonucu masif hemotoraks ile başvuran 23 yaşında bir kadın hasta sunuldu.

Anahtar sözcükler: Koryokarsinom; hemotoraks; pulmoner metastaz.

The main cause of hemothorax is trauma to the chest.^[1] Spontaneous hemothorax occurs less frequently and might have various causes such as coagulopathy, rupture of pleural adhesions, and neoplasm.^[1] Choriocarcinoma is a malignant trophoblastic neoplasm with rich vascularity that frequently metastasizes to the lungs.^[1] The main symptoms of pulmonary metastatic choriocarcinoma include hemoptysis, dyspnea, pleuritic pain, and cough.^[2] In this study, we report a case of a young patient with pulmonary metastatic choriocarcinoma initially presenting as spontaneous hemothorax.

CASE REPORT

A 23-year-old female patient presented with sudden-onset left-sided chest pain without any history of trauma. She denied history of cough, hemoptysis, or pleuritic chest pain. It was noted from her history that she had amenorrhea for three months, approximately seven months before her current presentation. Soon after her presentation, she deteriorated clinically, with tachycardia (120 bpm) and hypotension (systolic blood

pressure was 70 mmHg). Plain chest X-ray demonstrated pleural fluid collection in the left side (Figure 1a). The chest computed tomography (CT) scan performed an hour later showed increased amount of pleural fluid with extravasation (Figure 1b). The scan also showed poorly-marginated multiple lung nodules in both lungs which had a possibility of being pulmonary metastatic lesions (Figure 1c). We suspected that the cause of her hemothorax was rupture of a metastatic lung nodule, and the patient immediately underwent video-assisted thoracoscopic surgery as she was clinically unstable at the time, with a distinct focus of bleeding shown in the CT scan. During the operation, we found that she was bleeding from a ruptured lung nodule (Figure 2). Histopathology of the lung specimen confirmed the nodule to be malignant gestational trophoblastic tumor, specifically choriocarcinoma. Postoperative pelvic CT and pelvic magnetic resonance imaging revealed a 3 cm necrotic and hemorrhagic mass in the uterine fundus. The patient subsequently underwent endometrial curettage and received multi-agent chemotherapy consisting of etoposide, methotrexate, actinomycin,



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Figure 1. (a) Preoperative chest X-ray showing left pleural effusion. (b) Computed tomography demonstrating pleural effusion with extravasation and (c) multiple poorly-margined lung nodules.

cyclophosphamide, and vincristine. A written informed consent was obtained from the patient.

DISCUSSION

Spontaneous hemothorax is not a common condition.^[3] The most common cause of spontaneous hemothorax is pneumothorax as bleeding may result from the rupture of vascularized adhesions or vascularized bullae. Less common causes of spontaneous hemothorax include coagulopathy, vascular rupture, and neoplasm.^[3] The most common malignancies associated with spontaneous hemothorax are soft-tissue tumors such as sarcomas, angiosarcomas, and hepatocellular carcinomas.^[3] There have been reports of patients with choriocarcinoma presenting with hemothorax, and these patients had presented with progressive shortness of breath due to hemothorax caused by malignant pleural effusion.^[4,5] Although malignant pleural effusion might lead to hemothorax, the patient in this report developed sudden-onset chest pain and hemothorax caused by rupture of a metastatic lung lesion. In addition, hemodynamic instability due to active bleeding is a rare condition.

Trophoblastic tumors such as choriocarcinomas display three major characteristics of trophoblastic tissue: the tendency to invade blood vessels, rapid proliferation, and rich vascularity.^[2] These features account for the hemorrhagic event of metastatic choriocarcinoma such as hemoptysis and hemothorax.^[2,5] Although choriocarcinoma is most frequently preceded by molar pregnancies, some patients may present with symptoms resulting from metastases without any gynecological symptoms.^[2] In this case, the patient had denied any gynecological symptoms but we had noted from her history that she had intermittent vaginal spotting which the patient had thought to be a part of normal menstruation. Episodes of irregular uterine bleeding are often overlooked, so it is important to take detailed reproductive history in such patients.^[5] Therefore, it is worthwhile to note that metastatic choriocarcinoma in the lungs may cause spontaneous hemothorax, particularly in those with multiple lung nodules, and one should consider this as a possibility when a female patient in her reproductive ages presents with spontaneous hemothorax.

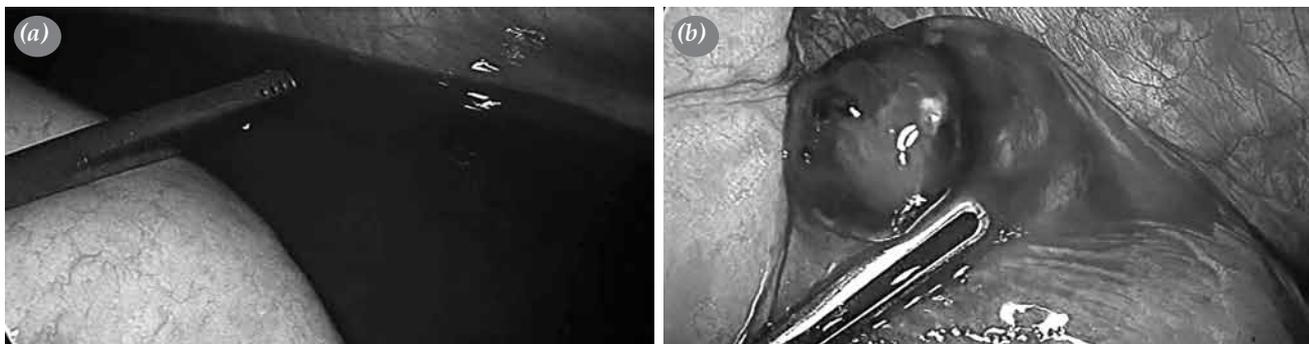


Figure 2. (a) Intraoperative findings showing hemothorax and (b) bleeding from ruptured lung nodule.

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