Gestational trophoblastic neoplasm (GTN) is prone to pulmonary metastasis. Although most pulmonary metastatic lesions respond with chemotherapy, some lesions do not resolve and persist on radiologic investigations. A 25-year-old woman was referred for persistent pulmonary metastatic lesion of GTN. Here, we present a case of chemoresistant choriocarcinoma metastatic to lung managed by video-assisted thoracoscopic surgery.

Key Words: Gestational trophoblastic neoplasm, Thoracic surgery, Video-assisted

Gestational trophoblastic neoplasm (GTN) tends to hematogenous metastasis, especially to the lungs. After several courses of chemotherapy, residual pulmonary lesions have to be managed with further treatments.

The role of surgery for pulmonary metastasis is not fully defined. Thoracotomy sometimes has played a role in the management of pulmonary metastasis. Prior series have reported a wide range for the rate of surgery for pulmonary metastasis in choriocarcinoma ranging from 1% to 17%.

As a result of advances in surgical technique, resection of pulmonary metastasis can be accomplished in a less invasive manner with thoracoscopic surgery. We present a case of chemoresistant choriocarcinoma metastatic to lung managed by video-assisted thoracoscopic surgery.

Case report

The patient is 25-year-old gravida 2 para 0 women. She had a past history of two spontaneous abortions. She visited a local clinic in 1/25/2005 for amenorrhea for 7 weeks. Her serum β-human chorionic gonadotropin (β-hCG) was 311 mIU/mL. On pelvic ultrasonography, she had a normal appearance of uterus, fallopian tubes, and ovary. Based on the
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Fig. 1. (A) Positron emission tomography showing pulmonary metastasis of left upper lobe. (B) Chest computerized tomography showing pulmonary metastasis.

Fig. 2. (A) Low power view of microscopic finding shows diffuse hemorrhage and necrosis of the tumor (×40). (B) The tumor is composed of cytotrophoblast and syncytiotrophoblastic giant cells with irregular arrangement (×200). (C) Immunohistochemical stain for β-hCG highlights the cytoplasm of the syncytiotrophoblastic giant cells (hCG ×400).

In the patient’s history, an ectopic pregnancy was suspected. She received 50 mg/m² methotrexate on 1/28/2005 and was then offered a uterine curetage. The pathologic result of endometrial curetage was consistent with endometrial polyp. Her serum β-hCG rose to 291 mIU/mL over the next 2 weeks. We checked the serum β-hCG weekly and gave the methotrexate injected twice. It rose to 504 mIU/mL on 5/3/2005. She was referred to SAMSUNG Medical Center for further evaluation and treatment. On presentation to the gynecologic oncology service, positron emission tomography (PET) and computerized tomography (CT) scan of the chest revealed intense focal increased fluoro-D-glucose (FDG) uptake in uterine cavity and two hypermetabolic pulmonary nodules in both upper lungs, suspected metastatic nodule (Fig. 1). The size of two nodule was 2 cm, 1.8 cm respectively. But, no specific abnormalities were found in pelvis MRI. Her serum β-hCG was 620 mIU/mL. On admission, the patient was treated with 5 cycles of etoposide, methotrexate, actinomycin D, cyclophosphamide, and vincristine (EMA-CO) regimen as chemotherapy. Her β-hCG showed the nadir after 2 cycles of chemotherapy and thereafter con-