

CASE REPORT

Pulmonary Vein Thrombosis After Metastatic Liposarcoma

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Pulmonary vein thrombosis has been described in several patients including those with malignancy, pulmonary veno-occlusive disease, fibrosing mediastinitis, and after lung transplantation. 1-5 Although liposarcoma frequently metastasizes to the lungs, to our knowledge pulmonary venous (tumor) thrombosis with lung infarction has not been previously mentioned as part of this disease. We report a case of liposarcoma with pulmonary metastases with secondary pulmonary venous (tumor) thrombosis and infarction, presenting 3 years after diagnosis of the original tumor. **Key words: metastatic liposarcoma, pulmonary vein thrombosis.**

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1. CASE REPORT

A 40-year-old woman was admitted with productive cough and progressive dyspnea. Three years earlier, she was diagnosed with liposarcoma in her right flank, documented by CT scan-guided biopsy. Since then, she had thirty-five sessions of chemotherapy with open tumor resection, and her last session of chemotherapy was about 2 months ago.

Because of complicated metastatic sarcoma (involving the lung and pleural cavity), she underwent 30 additional sessions of radiotherapy over the last 3 months. She also reported severe fatigue and peripheral cyanosis with occasional hemoptysis. At the time of hospital admission, she had mild respiratory distress, a blood pressure of 90/65 mm Hg, a respiratory rate of 24, a pulse of 100 per minute (regular), and a temperature of 38.3°C.

Physical examination revealed a systolic ejection murmur at the upper left sternal border and cyanotic extremities. Pulse oxymetry showed O₂ saturation of about 61%. While she produced 10 liter/min of oxygen using a cannula, the saturation rose to 82%. Because of

severe respiratory distress, respiratory acidosis and progressive loss of consciousness, she was quickly intubated and placed on ventilatory support.

A multidetector spiral CT scan of the chest revealed left inferior pulmonary vein thrombosis, multiple metastatic pulmonary nodules, left pleural effusion, diffuse bony metastasis, and mediastinal lymph adenopathy.

Trans thoracic echocardiography revealed mobile vegetation in the left atrium with forward movement toward the left ventricle and moderate mitral regurgitation. We could not perform transesophageal echocardiography because of her poor condition. The patient was initially anticoagulated with intravenous unfractionated heparin

and monitored with aPTT. Before changing from heparin to warfarin, she suffered cardiac arrest and died from metastatic liposarcoma. Postmortem examination was not performed.

2. DISCUSSION

Symptoms of pulmonary venous thrombosis are usually nonspecific, including dyspnea, cough, chest discomfort or hemoptysis (1, 2).

Pulmonary vein thrombosis is most commonly associated with bronchogenic carcinoma and also may complicate metastatic sarcoma and chondrosarcoma.

Predisposing factors that may contribute to thrombosis in pulmonary veins include a paraneoplastic hyper-



FIGURE 1. Chest CT shows (1) new thrombosis of the main branch of the pulmonary vein, (2) pulmonary infarction, and (3) large left pleural effusion.

coaguable state and stasis due to mechanical compression (tumor size effect) of the veins with resultant to the endothelial damage. (1) [Remark 1]. Systemic embolization from metastatic tumors invading a pulmonary vein has been reported. (1). A venous or atrial myxoma or angiosarcoma could cause similar filling defects in a main pulmonary vein. Pulmonary vein thrombosis presenting with systemic embolization has been described (3). Recently, through the use of thoracic CT angiography with venous phase, the sensitivity and specificity of detecting pul-

monary vein thrombosis has increased.

Thrombectomy has been successfully used for thrombosis after lobectomy, but there is little data on thrombectomy for pulmonary vein thrombosis due to malignancy. Anticoagulation had been attempted in a case report series with various outcomes (3).

Conflict of interest: none declared.

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