Metastatic Leiomyosarcoma Presenting as Dyspnea and Restrictive Lung Physiology

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Introduction: Leiomyosarcoma is an aggressive smooth muscle malignancy. When originating in the uterus, it is often initially diagnosed as benign fibroids and revealed to be leiomyosarcoma upon pathologic examination following hysterectomy. Metastasis to the lung is common early in the disease course however pulmonary symptoms on presentation is atypical. We report a case of metastatic leiomyosarcoma of uterine origin presenting as dyspnea and restrictive lung disease. Case Description: A 46-year-old black female, never smoker, with a past medical history of hypertension and obesity presented to an outpatient clinic with a 6-month history of progressive dyspnea on exertion, chest pain, and chronic cough. Family history was significant for an aunt with breast cancer. Physical exam was significant for hypertension, tachycardia, normal saturation, and clear lung sounds. Cardiac workup demonstrated normal stress test and echocardiogram. Pulmonary function testing demonstrated severe restrictive physiology with a total lung capacity of 35% of predicted. Subsequent CT showed multiple nodular opacities throughout both lungs. Biopsy of a right lower lobe nodule revealed metastatic smooth muscle neoplasm. Follow-up CT of the abdomen and pelvis showed multiple large uterine masses with calcifications measuring up to 17 cm in diameter. Patient was then referred to gynecologic oncology for evaluation of chemotherapy and possible hysterectomy. Follow-up CT chest three months after initial presentation was significant for interval development of lower lobe pulmonary fibrosis. Discussion: Uterine leiomyosarcoma most commonly presents with uterine bleeding, abdominal pain, or urinary symptoms. While uterine leiomyosarcomas do regularly metastasize to the lungs, presenting primarily with pulmonary symptoms have not been well described previously. In this case, the exact etiology of the restrictive lung physiology is not clear. Radiographic evidence of fibrosis was seen on follow up CT however, this was rather minimal and only seen well after her initial presentation. The fibrotic changes here likely represent lymphangitic spread. Without additional tissue diagnosis though this is purely speculation. Further understanding this degree of restrictive physiology may help better guide treatment. Hysterectomy in patients with metastatic uterine leiomyosarcoma remains controversial and may not be appropriate when concurrent restrictive lung physiology is present.

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