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Devam Sheth, MD; Mohammed Fahmy, MD; Manuel Bautista, MD; Department of Internal Medicine, Western Reserve Health Education, Youngstown, OH.

Introduction: Sarcoma is a huge family of soft tissue and bony tumours that is seen in all age groups with a variety of histologic patterns. We present here a case of pleomorphic sarcoma of toe that already had a widespread metastasis. In almost all the cases, this tumour presents as a local swelling for couple of months that catches patient’s attention. Also, there is delayed metastasis usually, to one organ system. Instead, the patient presented with symptoms of pulmonary involvement first with widespread metastasis.

Case: A 52-year-old African American male, with no significant past medical history presented with complaints of productive cough with yellow phlegm, nausea and vomiting since 1 week. Review of systems revealed generalized weakness and 20 pound weight loss over few months along with some left toe pain for two weeks after he bumped into a coffee table. He had a 13 pack-years smoking history. Physical examination revealed decreased breath sounds at the left lung base and some swelling, erythema and tenderness of his left toe. Labs revealed a WBC count of 65,000/mcl. X Ray of his foot revealed soft tissue edema and destruction of medial distal hallux suggestive of osteomyelitis. CT Scan of his chest showed an extensive left lower lobe mass with subcarinal adenopathy. Bronchoscopy revealed an exophytic and submucosal mass in left main bronchus on the posterior wall. He was started on broad spectrum antibiotics.

The endobronchial biopsy revealed malignant cells that stained strongly with Vimentin and were negative for Pankeratin, CK5/6, p63, TTF-1, Napsin A, S100, LCA, Synaptophysin, NSE, Desmin, Smooth Muscle Actin and CD34 suggestive of poorly differentiated high grade sarcoma whereas the lymph node biopsy was suggestive of poorly differentiated non small cell carcinoma. Few days later his toe was amputated which revealed a tumor centered at the distal phalanx with complete bone destruction. Histologically, the tumor was composed of large anaplastic neoplastic cells with many bizarre, large multinucleated tumor cells. There was tumor necrosis with atypical mitotic figures. No osteoid or new bone formation was noted. The soft tissue and articular bone/cartilage at the margin of amputation were free of tumor involvement.

Immunohistochemical staining for pankeratin and vimentin was performed on selected sections. The tumor cells show staining reactivity to vimentin, but were completely negative for pankeritin. These findings are most consistent with a pleomorphic undifferentiated sarcoma (previously known as malignant fibrous histiocytoma/MFH).

The tumor cells are morphologically similar to those seen in the patient's recent endobronchial biopsy of the left main bronchus. He also had metastasis to liver, spleen and brain.

Discussion: Pleomorphic sarcoma, previously known as malignant fibrous histiocytoma, is a soft tissue sarcoma seen in adults. Histologically, it contains both fibrocytic and histiocytic cells. In about fifty percent of cases, it arises from lower extremities, especially distal metaphysis. It usually presents as a slow, painless, enlarging mass that comes to attention before distant metastasis. Lung parenchyma is the
most frequent site of metastasis seen in about 80 percent of patients without endobronchial involvement. Widespread metastasis is unheard of. However, our patient presented with obstuctive pulmonary symptoms at presentation due to an endobronchial mass. He also had widespread metastasis. This is an extremely rare presentation of a relatively common soft tissue tumour found in adults. Patient did not want any treatment and opted for hospice care.

Disclosure

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