Primary undifferentiated sarcoma in the thorax: a rare diagnosis in young patients

Dear Editor,

A 30-year-old man was admitted to the thoracic surgery department of a tertiary hospital for investigation of a thoracic mass. Having previously received treatment for pneumonia, he presented with a two-week history of progressively increasing pain in the right hemithorax—and a more intense signal on T2-weighted sequences, without enhancement. In addition, RL can be diagnosed on MRI scans by identifying perirenal lymphatic collections with inversion of the corticomedullary signal intensity (6), as depicted in Figure 1—B,C,D.

To suggest a diagnosis of RL, as well as to devise a treatment strategy and to prevent complications, it is essential to understand the radiological aspects of the disease and to differentiate it from other conditions that mimic cystic kidney disease. Although the combination of RL and renal failure is rare, knowledge of that association is also important to prevent comorbid conditions that can evolve with this complication, such as obesity and high blood pressure.

Sarcomas represent a heterogeneous group of tumors derived from mesenchymal cells (1–3). They account for 1% of all neoplasms and occur mainly in the extremities (in 60% of cases), gastrointestinal tract (in 25%), retroperitoneal space (in 20%), and the head and neck region (in 4.1%). Primary sarcomas of the thorax are exceptionally rare, accounting for only 0.2% of lung cancers and only 5% of all the thoracic neoplasms. Such sarcomas can involve the lungs, mediastinum, pleura, and, mainly, the chest wall. The presence of sarcoma in any other part of the body must be ruled out, because metastasis to the chest is much more common than is primary sarcoma of the thorax (4–7).

The most common histological types of primary sarcomas are angiomysarcoma, leiomyosarcoma, rhabdomyosarcoma, and sarcomatoid mesothelioma (8). In the chest wall, the most common primary sarcomas are Ewing’s sarcoma, primitive neuroectodermal tumor, malignant fibrous histiocytoma, chondrosarcoma, osteosarcoma, synovial sarcoma, and fibrosarcoma (8). Radiologically, these tumors typically present as large, heterogeneous masses. However, their appearance can vary from an intrabronchial...

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Figure 1. CT scan showing a primary sarcoma in the right hemithorax. A: CT scout image showing opacification of the right hemithorax. B: Coronal CT reconstruction with heterogeneous enhancement (arrow). C: Axial CT slice showing contralateral mediastinal deviation.

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409
Dear Editor,

A previously healthy 22-year-old female sought medical attention, complaining of productive cough and hoarseness. She reported no other respiratory or constitutional symptoms. Physical examination revealed discrete stridor. For diagnostic clarification, computed tomography (CT) of the chest was performed. The CT scan showed grouped, branching centrilobular opacities, with the “tree-in-bud” aspect, suggesting distal bronchial filling. The trachea and left main bronchus presented irregular internal contours, with nodular thickening of the walls (Figure 1), together with a discrete increase in the density of the mediastinal fat adjacent to those changes. Sputum examination was conducted and was positive for tuberculosis, confirming the clinical and radiological suspicion of tracheobronchial tuberculosis. Specific treatment was started and resulted in resolution of the findings.

In patients with tuberculosis, tracheal involvement is relatively uncommon, occurring in only 4% of those with the endobronchial form of the disease\(^{(1)}\). Tracheobronchial tuberculosis mainly affects younger, female patients, its incidence peaking in the third decade of life. The disease can affect the greater part of the thorax as one of the differential diagnoses; the differentiation between sarcoma subtypes is only possible through pathological examination of the biopsy sample\(^{(8)}\).

Therefore, although it is a rare neoplasm, primary sarcoma must be considered among the diagnoses of thoracic tumors, especially when a large heterogeneous mass is identified in a young patient without evidence of malignancy in another part of the body.

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Tuberculosis: tracheal involvement

Figure 1. A: Axial CT slice showing irregular narrowing of the tracheal lumen (arrows). B: Axial CT slice showing centrilobular opacities, with a tree-in-bud aspect, in the lower lobe of the left lung, suggesting bronchial filling. C,D: Coronal and oblique coronal reconstructions showing irregular internal contours, together with parietal thickening (arrows), in the trachea and the left main bronchus.

Figure 2. Undifferentiated sarcoma. Hematoxylin-eosin staining (×100).