Sarcomatoid Mesothelioma with Osteoid Differentiation

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CASE PRESENTATION

A 75-year-old man presented with 3 months of progressive breathlessness and right-sided chest pain. Initial investigations demonstrated a pleural effusion with extensive pleural calcification and irregular pleural thickening in the right hemithorax (Fig. 1) associated with a markedly elevated serum alkaline phosphatase of 11,209 (reference range, 30–130). An isotope bone scan revealed marked tracer uptake in the right hemithorax (Fig. 2). Video-assisted thoracoscopic surgery and pleural biopsies demonstrated a malignant neoplasm consisting of plump to spindle cells with focal areas of osteoid formation (Fig. 3). The malignant cells were positive for calretinin and Cytokeratin 5/6. After clinical, radiological, and histological review at both thoracic oncology and sarcoma multidisciplinary team meetings a diagnosis of sarcomatoid mesothelioma with osteoid differentiation was made. The patient was started on palliative chemotherapy with cisplatin and pemetrexed. After three cycles of chemotherapy the patient’s condition deteriorated and repeat imaging confirmed significant disease progression (Fig. 4). Chemotherapy was stopped and the patient died 4 weeks later.

This unusual subtype of malignant mesothelioma is well described in the literature.1–5 Reported survival varies from an average of 5.7 months in a series of 10 patients6 to case reports of prolonged survival ranging from 36 to 69 months.1,4 This case is the first to present significant elevation of serum alkaline phosphatase, images of diffuse rather than focal pleural calcification (on follow-up computed tomography) and abnormal tracer uptake on bone scan. Any radiological features of malignant pleural disease in association with pleural calcification should raise suspicion of this rare subtype of mesothelioma.

REFERENCES


FIGURE 1. A, CXR at the time of presentation demonstrating a right pleural effusion and pleural calcification. B, Computed tomography thorax confirms the CXR findings plus irregular pleural thickening.
