

Diffuse Pleural Myeloid Sarcoma Mimicking Malignant Mesothelioma



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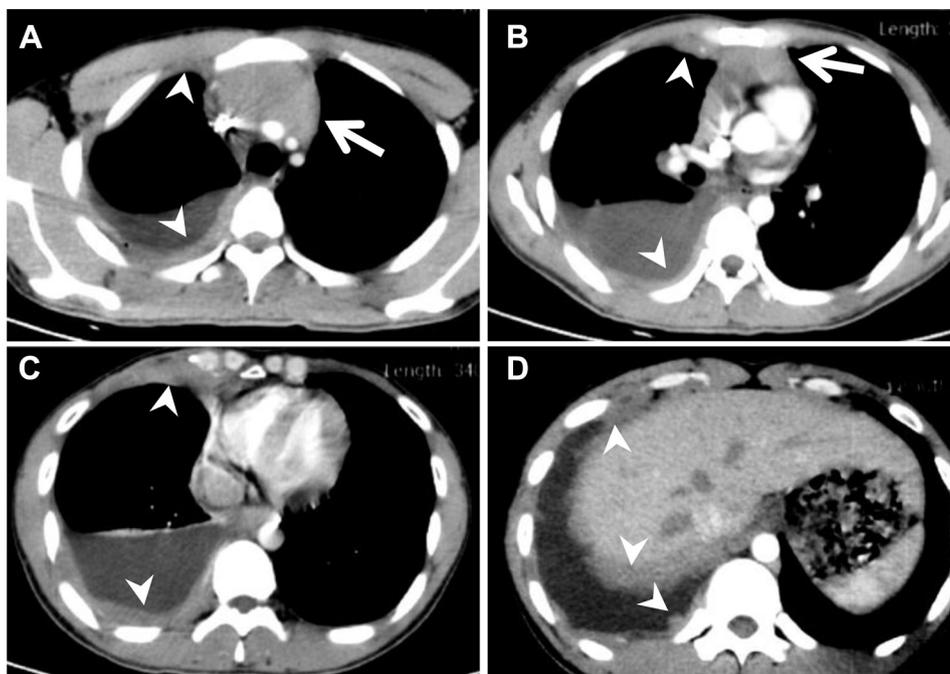


Figure 1. Chest enhanced computed tomography at different levels of the thorax (A-D) showed an ill-circumscribed tumor (arrows) of the mediastinum encasing the vessels and diffuse thickness of the right pleura (arrowheads) with effusion.

A 23-year-old male was referred to our hospital because of a 2-month history of cough and chest discomfort. Chest enhanced computed tomography (CT) (Fig. 1) showed an ill-circumscribed tumor of the mediastinum encasing the vessels and diffuse thickness of the right pleura with effusion. Fluorine 18-labeled fluorodeoxyglucose (FDG) positron emission tomography (PET)/CT showed increased FDG uptake by the mediastinal tumor and a thickened right pleura (Fig. 2). There were large pericardial and right pleural effusions. Right pleural malignant mesothelioma with mediastinal involvement was suspected. The patient underwent CT-guided biopsy of the mediastinal tumor. Photomicrographs revealed

tumor cells positive for vimentin, leukosialin, myeloperoxidase, and leukocyte common antigen, which were consistent with myeloid sarcoma.

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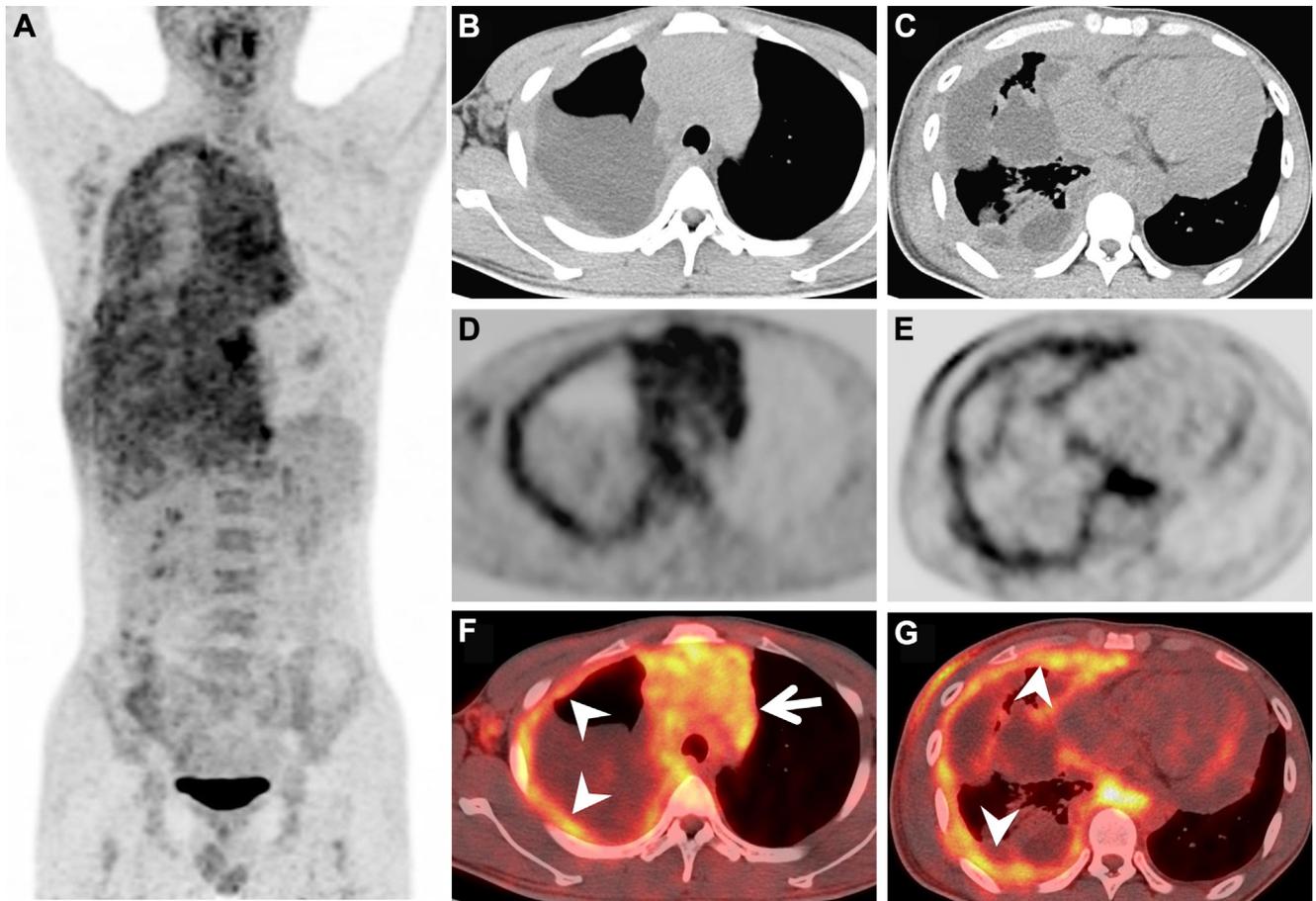


Figure 2. Maximum intensity projection positron emission tomography (A), transverse CT (B and C), corresponding positron emission tomography (D and E) and fused (F and G) images showed the fluorodeoxyglucose-avid mediastinal tumor (arrow) and diffuse fluorodeoxyglucose uptake by the right thickened pleura (arrowheads). There were large pericardial and right pleural effusions.

Myeloid sarcoma is an uncommon localized tumor formed by primitive myeloid cells at an extramedullary site, and it may precede, follow, or occur in the absence of systemic acute myeloid leukemia.¹ It appears to be more common in the infant and pediatric age groups and less common in adults. Myeloid sarcoma presents as either a single tumor or multiple tumors. It can occur at nearly every anatomic site. In adults, the most common sites of involvement are the skin, the central nervous system, bone, and the lymph nodes.^{1,2} FDG PET/CT is useful for early disease detection, staging, and assessment of treatment response.³⁻⁸ Cribe et al. reported that FDG PET scans revealed more than twice as many patients with extramedullary disease than are found by clinical examination.⁹ In this case, the diffuse pleural and mediastinal involvement was unusual for myeloid sarcoma. Although rare, myeloid sarcoma should be considered in the differential diagnosis of diffuse pleural thickness and abnormal FDG accumulation along with malignant and nonmalignant

processes, including malignant mesothelioma and tuberculosis.

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