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EDITÖRE MEKTUP
LETTER TO THE EDITOR

PET/CT positive in a case with eosinophilic granuloma

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Eosinophilic Granuloma (EG), is a rare form of Langerhans Cell Histiocytosis having benign course (1). Usually it occurs with a single organ involvement and it is seen more frequently in children under 10 years of age (2). Especially it is established as lytic lesions in the head and vertebral bones in the skeletal system. Certain diagnosis is provided by surgery because of the similarity of its radiographic images to the malignant pathology (3). Although it is a rare and benign disease, it has high SUV max value in PET/CT. This case is reported because of this.

A 36-year-old male patient was admitted with chest pain which has started for 15 days. His physical examination was normal. There was no pathology in his biochemistry except rise of LDH levels. He was farmer. There was a slight expansion in posterior of the fourth rib in right hemithorax of the lung on chest radiograph (Figure 1). 28x16 mm in size (SUVmax: 8) mass was detected on the right scapula neighborhood

in the posterior localization of the fourth rib in the F-18 fluorodeoxyglucose (F-18, F-18 FDG) positron emission tomography/computed tomography (PET/CT) examination (Figure 2).

Protein electrophoresis, and bronchoscopy was also performed simultaneously to the patient, both of them were normal. Transthoracic fine needle aspiration was performed to the lesion in order to diagnose and it was commented as suspicious plasmacytoma. In order to treat and confirm the diagnosis, the mass was removed with surgical excision by thoracic surgery clinic. In the operation 3x3 cm in size mass unrelated to the lungs,

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Figure 1. Anteroposterior chest X-ray show a slight expansion in posterior of the 4. rib in right hemithorax.

was seen in the posterior localization of the fourth rib and in front of scapula, then third, fourth and fifth ribs were partial excised. Reconstruction surgery was not considered because the scapula had closed the defect occurred. Immunohistochemical studies performed on pathological specimens and it was determined that S-100 and CD were diffuse positive, CD1 A was focal positive, LCA was negative. The diagnosis of eosinophilic granuloma was confirmed. The patient was discharged from the hospital to be monitored at regular intervals.

Eosinophilic granuloma is the benign and localized form of LCH that has the least symptoms in group. It is characterized by single or multiple bone or lung lesions (4). The bone involvement of EG may be sometimes asymptomatic but localized pain and swelling in the affected area are frequently observed. The most common involvements observed are skull (27-28%), ribs (8-25%) and pelvis (8-10%) (5).

The radiographic appearance of EG is as lytic bone lesions. Therefore it can be mix with metastatic lesions. Bone scintigraphy (BS), 18F-FDG PET/CT (Flor18-fluorodeoxyglucose Positron Emission Tomography/Computed Tomography), CT (Computed Tomography) and MRI (magnetic resonance) are the most commonly used imaging methods for determination of bone

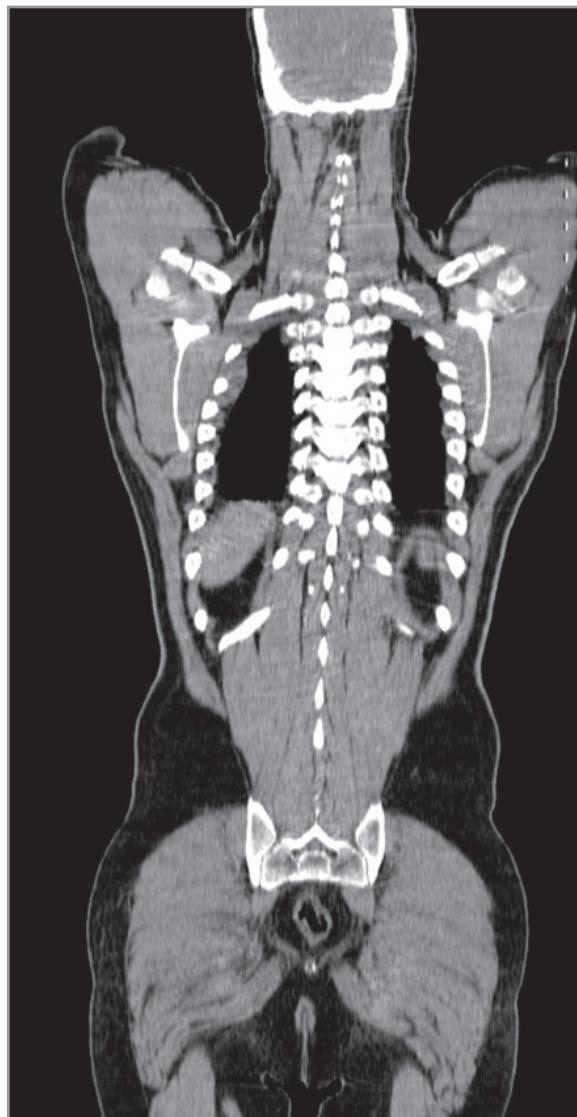


Figure 2. Positron emission tomography/computed tomography (PET/CT) show well detected mass [28x16 mm in size (SUVmax: 8)].

metastasis (6). There is no consensus about which of these tests will be preferred for the diagnosis of bone metastases.

It was reported in a meta-analysis that the accuracy of determination the metastasis with PET and MR imaging was significantly higher than with BS and CT imaging (7). However, it should be taken into consideration that PET/CT may be false positives in some cases as in our patient. Especially for the patients with a single lesion, final diagnosis must be verified by the histopathological examination in terms of probability of benign pathologies.

CONFLICT of INTEREST

None declared.

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