¹⁸F-FDG PET/CT detects systemic involvement in sarcoidosis

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A 37-year-old man was admitted for sudden onset of palpitation and chest X-ray detected a parahilar lung mass. Thoracic CT was suggestive of sarcoidosis (multiple lung nodules and mediastinal nodes) while abdominal ultrasound showed enlarged liver and spleen. Liver and lung biopsies showed sarcoid granulomas. ¹⁸F-fluorodeoxyglucose (FDG) positron emission tomography (PET)/CT was performed for staging and detected the presence of hypermetabolic lung nodules [maximum standardized uptake value (SUV_{max}) 3.7], lymph nodes (cervical, mediastinal, abdominal, inguinal), liver (SUV_{max} 3) and spleen (SUV_{max} 9.7). Moreover, PET/CT documented multiple hypermetabolic cystic lesions at bone level (SUV_{max} 12), involving almost all skeletal segments included in the field of view.

Sarcoidosis is a granulomatous disorder of unknown cause, commonly affecting young and middle-aged adults [1]. Although mostly limited to the lungs, systemic manifestations of sarcoidosis may occur. Cases presenting with heart, central nervous system and eye involvement or pulmonary hypertension are associated with poorer prognosis and systemically treated [2]. Bone involvement is relatively rare (1–14%) [3, 4] and often asymptomatic.

¹⁸F-FDG PET/CT may be helpful for the assessment of active disease sites in sarcoidosis patients, especially to identify extrapulmonary involvement performing a single imaging procedure, and to guide biopsial sampling in cases needing pathological confirmation.

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