Clinical vignette

Granulomatosis with polyangiitis granulomata show increased uptake of FDG

We present a case of granulomatosis with polyangiitis (GPA) in which \([^{18}F]\)fluorodeoxyglucose \((^{18}F\text{-FDG})\) PET/CT gave a false-positive result for tumour-like activity before the diagnosis of GPA was made histologically. Our patient, a 73-year-old male, was referred with chest pain. Initial investigations (chest X-ray, CT thorax) revealed two ill-defined opacities in the right upper zone, suspicious for lung cancer. Subsequent FDG-PET/CT findings were consistent with metastases (Fig. 1). Lung biopsy showed a granulomatous vasculitis consistent with GPA. He was PR3-ANCA positive. Although FDG-PET is widely used in oncology, it is less well recognized that FDG accumulates not only in malignant tissues, but also at sites of infection and inflammation as well as in patients with an autoimmune disease [1]. The use of \(^{18}\text{F}\)-FDG PET/CT has been well established in the assessment of large vessel vasculitis, but its potential use in the assessment of granulomatous vasculitis is less well recognized [2]. Two recent case series have highlighted the potential use of \(^{18}\text{F}\)-FDG PET/CT in determining the extent of granulomata in GPA and in selecting a site for biopsy [1, 2]. Our case highlights the importance of remembering that uptake of FDG is not specific for malignancy and occurs in other metabolically active lesions.

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References


Fig. 1 PET-CT image showing a large focus of intense tracer accumulation within the right upper lobe of the lung [maximum standardized uptake value (SUV) 13.9].

This corresponds to a 62 mm bilobar speculated lung nodule. There are further smaller foci of tracer accumulation within the right upper lobe (maximum SUV 1.4) and two in the right middle lobe (maximum SUV 2.9). These correspond to nodules measuring up to 12 mm.