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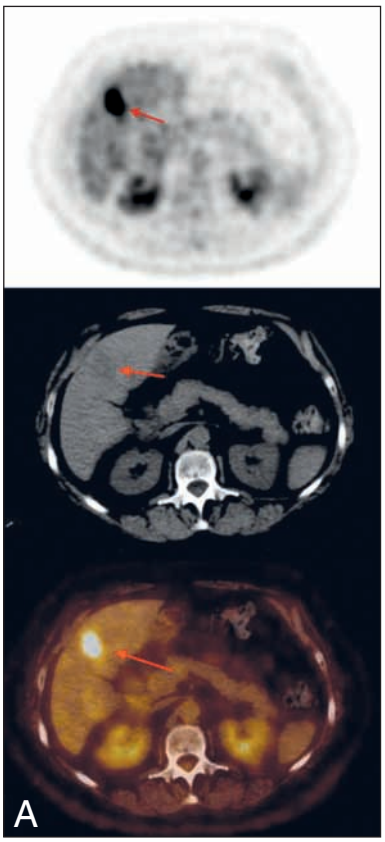
IMAGES IN CLINICAL RADIOLOGY



Focal eosinophilic hepatitis simulating a solitary metastatic lesion on FDG-PET/CT in a patient with history of head and neck cancer

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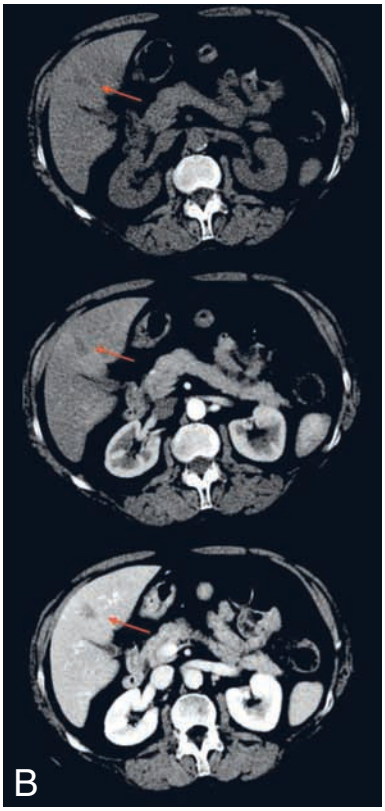
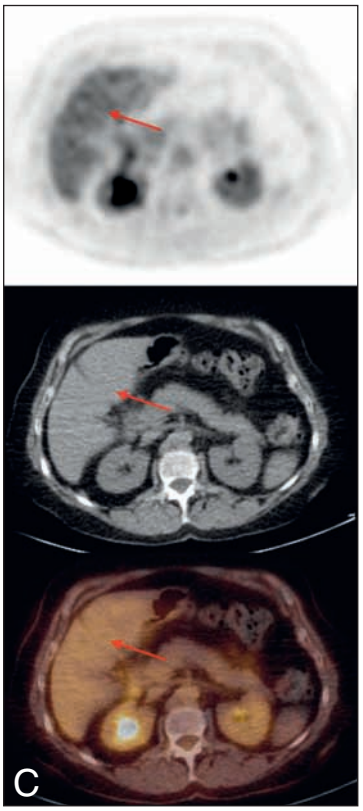
A routine follow-up FDG-PET/CT was performed in a 67-year-old female with a history of head and neck carcinoma. In 2006, a T1 N0 M0 squamous cell carcinoma of the mouth floor had been resected. Subsequent clinical and radiological follow-up on regular base showed no evidence of locoregional recurrence or metastatic disease. There was no actual symptomatic disease.

FDG-PET/CT images were obtained from vertex to pelvis and revealed a solitary hypermetabolic focus in the liver, corresponding to a hypodense lesion on non-contrast enhanced CT in segment 4 (Fig. A). A 3-phase contrast-enhanced CT of the liver confirmed the presence of this mass, which appeared to be hypovascular in the portal venous phase (Fig. B). Because metastatic origin was suspected, CT-guided biopsy was performed.

Pathology demonstrated a granulomatous eosinophilic hepatitis, suggestive for an infectious etiology. Unfortunately no responsible micro-organism could be identified. Grocott's methenamine silver stain, used when fungal infection is suspected, was negative. Ziehl-Neelsen stain could not demonstrate acid-fast organisms.

Three weeks post-biopsy, MRI of the liver could not demonstrate any residual lesion in the liver. Diagnosis of inflammatory/infectious pseudotumoral lesion was suggested and a wait-and-see attitude was chosen. As expected, FDG-PET/CT, performed 3 months after the initial finding, showed resolution of the metabolic active hepatic focus; no other new non-physiological metabolic activities were found (Fig. C).





Comment

FDG-PET is a useful tool in the evaluation of many tumors, but because FDG-uptake can also occur in benign inflammatory processes, characterization of the lesion should not be done on the basis of the metabolic activity alone. The combination of the FDG-PET data with anatomic and morphologic findings on the CT will reduce the misinterpretation of a potential benign lesion. A 3-phase contrast-enhanced CT or MRI of the liver, which are known to be highly specific, will further characterize suspicious lesions. But this case in which a hepatic inflammatory pseudotumor simulates metastatic disease on FDG PET/CT stresses the importance of guided biopsy.

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