

Case of the Month—July 2005

Focal-Intense FDG Uptake in Pseudotumor of the Lung

History

A 57-year-old female presented with a CT scan showing an ill-defined 5-cm mass in the left upper lobe of the lung. The appearance of the mass was worrisome for malignancy (Figure 1). A whole-body FDG-PET scan was requested for further evaluation.

Findings

The FDG-PET study demonstrated a focus of intense uptake corresponding to the left upper lobe lung mass seen on CT (Figure 2). The maximum SUV of this uptake was 9.4, well above the 2.5 value considered to be a threshold for malignancy. No other abnormality was identified. The findings of the PET study were highly suspicious for malignancy.

Follow-up

In light of the PET findings, the patient had CT-guided needle biopsy that revealed pseudotumor of the lung.

Discussion

Pseudotumor is a non-neoplastic

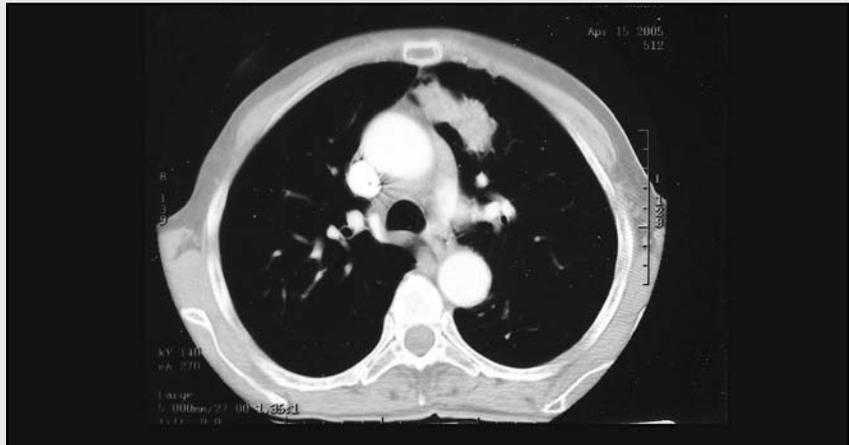


Figure 1

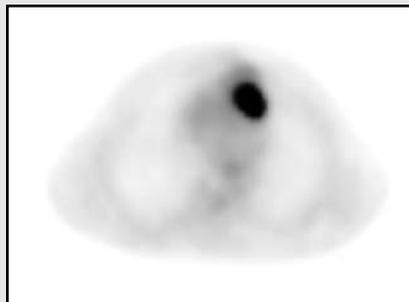


Figure 2

lung mass of uncertain etiology. Histologically it is composed of a variety of inflammatory cells. The pathogenesis seems to be an inflammatory process in the face of a disturbed immunologic reaction. Although FDG-PET is

very sensitive for detecting malignant lesions, false positive cases have been reported due to infection/inflammation.

The importance of the PET scan in this case was in determining that the ill-defined lung mass seen on CT was in fact metabolically active, while also serving as a guide for the follow-up biopsy. A positive PET warrants further evaluation, while a negative scan has a high negative predictive value.

Copyright 2005 New England PET Imaging System

www.nepetimaging.com

NEPET at Holy Family Hospital
70 East Street
Methuen, MA 01844
(978) 689-4738

NEPET of Greater Lowell
Lowell General Hospital Cancer Center
295 Varnum Avenue
Lowell, MA 01854
(978) 458-9872

NEPET at Elliot Hospital
One Elliot Way
Manchester, NH 03103
(603) 663-2370

Massachusetts Mobile PET, P.C.
at Anna Jaques Hospital
25 Highland Avenue
Newburyport, MA 01950
(888) 560-4738

Massachusetts Mobile PET, P.C.
at Merrimack Valley Hospital
140 Lincoln Avenue
Haverhill, MA 01830
(888) 560-4738