A Rare Image of a Pulmonary Nodule Revealed on FDG-PET Scans

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A 49-year-old man with well-controlled diabetes was admitted to our hospital for medical examination concerning a nodular lesion with a diameter of approximately 2 cm with a well-defined margin at the S3 region of the left lung. Fluorodeoxyglucose (FDG)-positron emission tomography (PET) scans (Picture 1) and PET-CT (Picture 2) revealed partially intense FDG uptake with a maximum standardized uptake value of 5.1 in the nodule. Biopsy of the nodule was performed as a video-assisted thoracoscopic surgery to establish diagnosis. The resected specimen disclosed that the majority of the nodule was necrotic (Picture 3). The histological findings were established as epithelioid cell granuloma with caseous necrosis (Picture 4). Furthermore, the bacteriological examination stained with Ziehl-Neelsen disclosed the existence of acid-fast bacteria.

FDG-PET scan is a useful method for the detection of malignancy, however it is not confirmatory for the detection of only malignant diseases. In particular, it is well known that the epithelioid cell granuloma can demonstrate an in-
tense FDG uptake (1). However, it is rare that FDG-PET scans revealed partial intense FDG uptake in the nodule. In the present case, it is of interest that the findings of FDG-PET scans were consistent with the pathological findings.

Reference