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Cold tuberculous abscess identified by FDG PET

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We report FDG PET of two cases of cold abscess due to *Mycobacterium tuberculosis*. Case 1 had colon cancer; FDG PET showed high FDG uptake in the colon lesion and low uptake in the inguinal lesion. The latter was a tuberculous cold abscess confirmed by CT/MRI and biopsy. Case 2 received radiotherapy for lung cancer and presented with suspected vertebral metastasis. Further studies revealed tuberculosis of the vertebra and a tuberculous cold abscess in the iliopsoas muscle. FDG PET showed moderate uptake in the third lumbar spine and low uptake in the abscess center of iliopsoas lesion. Both tuberculous cold abscesses showed moderate FDG uptake in the capsule and low uptake in the center. These features are unique compared with non-tuberculous abscess and typical tuberculosis lesions, which are characterized by high FDG uptake. Pathologically, tuberculous cold abscess is not accompanied by active inflammatory reaction. Our findings suggested that the FDG uptake by tuberculous lesion varies according to the grade of inflammatory activity. The new diagnostic features of tuberculous cold abscess may be useful in the evaluation of such lesions by FDG PET.

Key words: FDG, PET, tuberculosis, abscess, inflammation