Interesting images

\textbf{\textsuperscript{18}F-FDG PET/CT aids the diagnosis of adult onset Still’s disease in a patient with fever of unknown origin}

\textbf{\textsuperscript{18}F-FDG PET/TAC ayuda en el diagnóstico de la enfermedad de Still del adulto en un paciente con fiebre de origen desconocido}

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\textbf{A R T I C L E   I N F O}

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A 28-year-old male patient was presented with pain and restriction of left hip movement since 18 months, mild to moderate intermittent fever since 8 months and generalized bodyache since 1 month. His physical examination revealed axillary lymphadenopathy and hepatomegaly. His hemoglobin was 9.5 gm/dl (normal 12–16 gm/dl) and total leukocyte count was 14,200/mm\(^3\) (normal 4000–11000/mm\(^3\)) with 62\% neutrophils. Other inflammatory markers were raised [ESR-105 mm in 1 st hour, CRP-81.5 mg/dl, ferritin-1487 ng/ml (normal values <25 mm in 1 st hour, <2 mg/dl and 50–150 ng/ml respectively)]. Screening for infectious disease was negative (sterile blood and urine culture, negative for malaria and RK-39 antigen and normal widal titer). Bone marrow examination revealed normal cellular morphology. Liver and kidney function tests were normal. His rheumatoid factor (RF) and anti-nuclear antibody (ANA) were negative. Biopsy from the axillary lymph node showed reactive hyperplasia. In view of suspicion of the inflammatory disease and as a part of a work-up for pyrexia of unknown origin (PUO), the patient was referred to our department for \textsuperscript{18}F-FDG PET/CT study.

Whole body \textsuperscript{18}F-FDG PET/CT images revealed diffusely increased \textsuperscript{18}F-FDG uptake in bilateral shoulder joints, bilateral elbow joints, bilateral hip joints and left wrist joint (Fig. 1). Also, bilaterally enlarged \textsuperscript{18}F-FDG avid axillary lymph nodes were noted. The diagnosis of adult onset Still’s disease was made based on Yamaguchi’s criteria which include 4 major (fever, rash, arthritis, and leukocytosis) and 5 minor (sore throat, lymphadenopathy, hepatomegaly/splenomegaly, altered liver function test, and negative for ANA and RA) criteria. Diagnosis requires 5 or more criteria with

\textbf{Fig. 1.} Whole body \textsuperscript{18}F-FDG PET/CT images (A) revealed diffusely increased \textsuperscript{18}F-FDG uptake in bilateral shoulder joints (B–D, arrow), bilateral elbow joints (A, arrow), bilateral hip joints (E–G, arrow) and left wrist joint (A, arrow). Also, bilaterally enlarged \textsuperscript{18}F-FDG avid axillary lymph nodes were noted (H–J, arrow).

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at least 2 major criteria. The patient was put on corticosteroid after which his symptoms improved. Still’s disease is a rare inflammatory disease that presents with various non-specific features like fever, arthralgia, rash, sore throat, arthritis, myalgia, splenomegaly, hepatomegaly, etc. The commonest among these features is fever and patients often present as PUO. Previous reports have showed the value of 18F-FDG PET/CT in evaluation of inflammatory disease and PUO. This is particularly important when other pathologic diseases, which have similar PET/CT findings (18F-FDG activity in lymph nodes, liver and spleen), such as lymphoma, sarcoidosis or tuberculosis are among the differential diagnoses. There are few case reports on 18F-FDG PET pattern in Still’s disease where the authors showed uptake in lymph nodes, liver and spleen and even large vessels. Previous studies have reported increased 18F-FDG uptake in the arthritis of adult onset Still’s disease, in individual joints such as wrist and sacroiliac joints. In our case other than lymph nodes (minor criteria), 18F-FDG PET/CT demonstrated intense uptake in all the major joints of upper limb (bilateral shoulder joints, bilateral elbow joints, and left wrist joint) and in bilateral hip joints suggesting arthritis, fulfilling one of the major criteria for the diagnosis of adult onset Still’s disease and thereby aiding in diagnosis of adult onset Still’s disease in a patient with pyrexia of unknown origin.

Conflicts of interest

None.

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References