Interesting image

Increased $^{18}$F FDG uptake in an unusual localization of giant cell tumor of the tendon sheath

Incremento de la captación de $^{18}$F FDG en una localización inusual de un tumor de células gigantes de la vaina tendinosa

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A 63-year-old woman was diagnosed with malignant melanoma after surgical excision of right foot lesion. Subsequently, the patient was referred for 18-fluoro-2-deoxyglucose ($^{18}$F-FDG) imaging for the purpose of staging. PET/CT revealed a soft tissue density mass with a high $^{18}$F-FDG uptake in the popliteal fossa (Fig. 1). Additionally, MRI was performed revealing a regular contoured mass at the same area (Fig. 2). According to the clinical and imaging findings, the patient underwent surgical operation; giant cell tumor of

![Fig. 1. Sixty minutes after the injection of 351.5 MBq (9.5 mCi) $^{18}$F-FDG (Monrol, Izmir, Turkey). Images were obtained using PET/CT (Gemini-TOF-Philips, Holland). The emission scans were obtained for 1.5 min per bed position, and transmission scans were obtained with low-dose CT using 50 mA and 120 kVp. PET/CT scan demonstrated increased $^{18}$F-FDG uptake (SUVmax 7.8) corresponding to a soft tissue density in the intercondylar area of the left femur (A: axial CT slices; arrow B: axial PET/CT fusion images; arrow C: coronal PET/CT slices and D: sagittal PET/CT fusion images).](image-url)
The tendon sheath (GCTTS) was demonstrated histopathologically (Fig. 3).

FDG-PET is a metabolic, noninvasive imaging modality for staging and detecting distant metastasis of melanoma. Nevertheless, accumulation of $^{18}$F-FDG occurs in both benign and malignant soft tissue mass like GCTTS. GCTTS was described as soft tissue tumors and usually arises in the hand. GCTTS is also known as localised villonodular tenosynovitis; typically it does not involve the larger joints and very rarely is placed intra-articularly. GCTTS arising from anterior cruciate ligament has been reported in a few cases in the literature to the best of our knowledge. In this case we presented FDG avid GCTTS on the localization of femoral insertion site of anterior cruciate ligament in a patient with malignant melanoma; this is the very rare localization for GCTTS. Though $^{18}$F-FDG uptake is not specific to tumor, focal intense $^{18}$F-FDG uptake, on the outside of typical metastatic localization in a patient with known primary tumor, deserves further evaluation to investigate an unexpected secondary malignancy.

References