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Lower Extremity Pseudomyogenic hemangioendothelioma on Bone Scintigraphy and PET/CT

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Legend

Radiograph of the right femur shows multiple scattered lucent lesions throughout the femur, most of which appear cortically based (white arrows in Figure 1A). MRI of the right knee demonstrates non-specific enhancing cortical based lesions in the femur and tibia (white arrows in Figure 1B). Biopsy of the right anterior tibial lesion (tibial lesion in Figure 1B) reveals an epitheloid vascular proliferation; immunohistochemistry demonstrates ERG-, CD31 (x 400, Figure 2) and FLI-1 positive staining, consistent with pseudomyogenic hemangioendothelioma. MDP bone scan shows several foci of activity centered on the periosteum of the right femur, right tibia and right foot as well as abnormal increased uptake in the right patella (black arrows in Figure 1C). On FDG-PET scan multiple mild-to-moderate FDG avid foci in right femur, patella, and calcaneus are seen (black arrows in Figure 3), whereas the lesions in right femur and patella are CT “cold”, the FDG avidity in the calcaneus corresponds to a lytic lesion on CT (white arrow, Figure 3). Of note, the MDP avid lesions in the tibia are not FDG avid and CT negative, but contrast-enhancing on MRI.¹⁻¹¹

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Figure 1.

Figure 2.

Figure 3.