

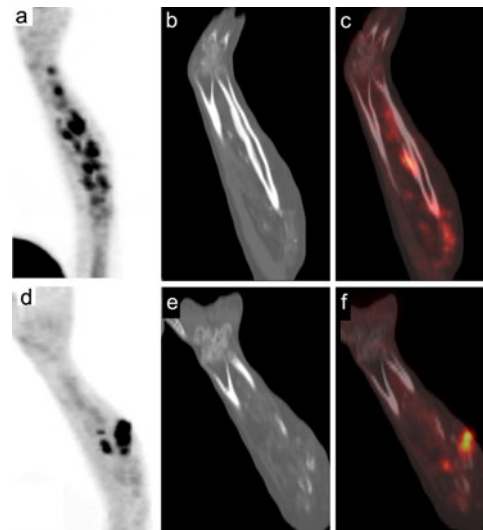
## [<sup>18</sup>F]Fluoride and [<sup>18</sup>F]fluorodeoxyglucose PET/CT in myositis ossificans of the forearm

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Received: 30 January 2011 / Accepted: 7 March 2011 / Published online: 30 March 2011  
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A 20-year-old woman presented with gradually increasing swelling of the left forearm for 3 years with accompanying pain for 2 months. There was no history of trauma to the forearm. Radiographs of the left forearm showed areas of extraosseous calcifications. Magnetic resonance imaging showed multiple nodular lesions with calcification within the muscles of the extensor compartment, suggestive of myositis ossificans (MO). The patient underwent PET/CT scans using [<sup>18</sup>F]fluoride (a–c) and [<sup>18</sup>F]fluorodeoxyglucose (FDG) (d–f) on 2 different days. Multiple areas of dense calcification were seen in the extensor muscles of the left forearm with intense [<sup>18</sup>F]fluoride uptake in the adjacent soft tissues, indicating ongoing osteoblastic activity. FDG uptake was detected in a few of these regions, suggestive of active inflammation (myositis). Biopsy from this region confirmed the presence of extra-osseous bony fragments.

Muscular uptake of FDG can occur in a variety of conditions [1, 2]. MO is a rare benign cause of heterotopic bone formation within soft tissue that may show FDG uptake [3]. It is most common in adolescents and young adults, typically occurs in the limbs and usually presents after local trauma. The diagnosis of MO is challenging in cases without any history of trauma. Scintigraphy has been previously used to monitor lesion maturation [4]. While FDG PET has been described earlier in the diagnosis of MO [5], this case



suggests that [<sup>18</sup>F]fluoride may be more useful in assessing the full extent of disease within the affected muscles.

**Conflicts of interest** None.

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