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IMAGE OF THE MONTH

False-positive axillary lymphadenopathy due to silicone granuloma on FDG PET/CT

Chirag N. Patel · Ruth E. Macpherson · Kevin M. Bradley

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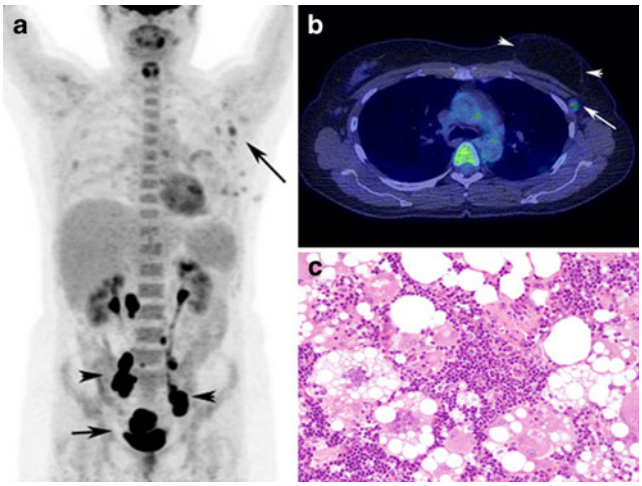
A 50-year-old woman with a left breast implant following mastectomy for breast carcinoma 14 years previously underwent ^{18}F-FDG PET/CT to stage a newly diagnosed cervical carcinoma. The MIP image (a) demonstrates a markedly FDG-avid primary cervical tumour (short arrow) and extensive FDG-avid pelvic and para-aortic lymphadenopathy (arrowheads). In addition, there is a cluster of FDG-avid left axillary lymph nodes (long arrow) which were suspicious for nodal metastatic disease from the new cervical or previous breast carcinoma. The axial fused PET/CT image (b) confirms a FDG-avid axillary lymph node (arrow) and left breast "Becker implant" in situ (arrowheads) which is a double-lumen prosthesis consisting of a fixed outer silicone component and expandable inner saline-filled lumen. Subsequent fine-needle aspiration of a left axillary node (c) shows refractile material within the extracellular spaces and multinucleate foreign body giant cells in keeping with silicone granuloma [1].

Granuloma formation is a natural host reaction to foreign material and is commonly found following direct silicone injections into the breast or extracapsular silicone implant rupture [2]. Granulomas are usually found within the breast parenchyma, but silicone may migrate to local lymph nodes and other distant sites including the pleura, ribs, upper arm musculature and even within the abdomen [3]. Silicone lymphadenopathy has been reported in a small number of patients in the absence of apparent implant rupture suggesting that "gel bleed" of silicone may also cause these reactions [4, 5]. False-positive FDG uptake is well-recognized in granulomatous processes and as such, silicone granulomas may be mistaken for nodal metastatic disease in patients with breast carcinoma on FDG PET/CT.



Conflicts of interest None.

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C. N. Patel (✉) · R. E. Macpherson · K. M. Bradley
Department of Nuclear Medicine, Churchill Hospital,
Old Road, Headington,
Oxford OX3 7LJ, UK
e-mail: chiragpatel@doctors.org.uk