

# Plasma cell myeloma in the distal appendicular skeleton

Alex S Hong<sup>1</sup>

Senthil Muthian<sup>2</sup>

Lalita Banerjee<sup>3</sup>

Author details can be found  
at the end of this article

**Correspondence to:**  
Alex S Hong;  
alex.hong1@nhs.net

A healthy 58-year-old man was referred to the orthopaedic clinic with a 1-month history of isolated worsening right forearm pain. Physical examination was unremarkable apart from some tenderness over the right proximal ulna and radial shaft. Initial X-ray imaging demonstrated lytic lesions in the right proximal ulna and radial shaft, and biopsy of the radial lesion confirmed plasma cell myeloma. Further X-ray monitoring revealed substantial cortical destruction (Figure 1a). Chemotherapy with daratumumab, bortezomib, thalidomide and dexamethasone was given. He had a good response to the chemotherapy and bone remodelling ensued (Figure 1b).



**Figure 1.** a. Lytic lesions on conventional X-ray, with near-complete cortical destruction and loss of almost a third of the radial shaft. b. X-ray taken 2 months later, following chemotherapy, showing bone remodelling with complete serpiginous reformation of the cortex and medullary cavity within the lytic lesion of the right radial shaft. New bone formation was also noted in the lesion of the right proximal ulna. No discernible pathological fractures were seen.

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Plasma cell myeloma is a haematological malignancy which typically affects regions of active haematopoiesis. In adults, haematopoiesis is largely localised to the axial skeleton (Hrabovský et al, 2015), so plasma cell myeloma of the appendicular skeleton is less common (Collins, 2004). Non-operative management with chemotherapy may promote successful bone formation (Tosi, 2013), even in the presence of significant lytic bone destruction.

**Author details**

<sup>1</sup>Department of Medicine, Maidstone and Tunbridge Wells NHS Trust, Maidstone, Kent, UK

<sup>2</sup>Department of Orthopaedics, Maidstone and Tunbridge Wells NHS Trust, Maidstone, Kent, UK

<sup>3</sup>Department of Haematology, Maidstone and Tunbridge Wells NHS Trust, Maidstone, Kent, UK

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