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Vertebral involvement of Erdheim–Chester disease: an unusual mimic of vertebral metastasis

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A 56-year-old woman had experienced occasional high fever and weight loss for 1 year. Results of suggested laboratory tests (eg HLA-B27, sedimentation, brucella agglutination test and haemogram) for diagnosis of infective diseases were within normal limits. Tumour markers were negative. Spinal magnetic resonance imaging showed an enhanced lesion in the T2 vertebral body (Figures 1a and b). Histopathological study of the vertebral lesion revealed the lesion to be non-Langerhans cell histiocytosis consistent with a diagnosis of Erdheim–Chester disease. Low-dose methotrexate was initiated with interferon-alpha therapy, which led to resolution of the symptoms.

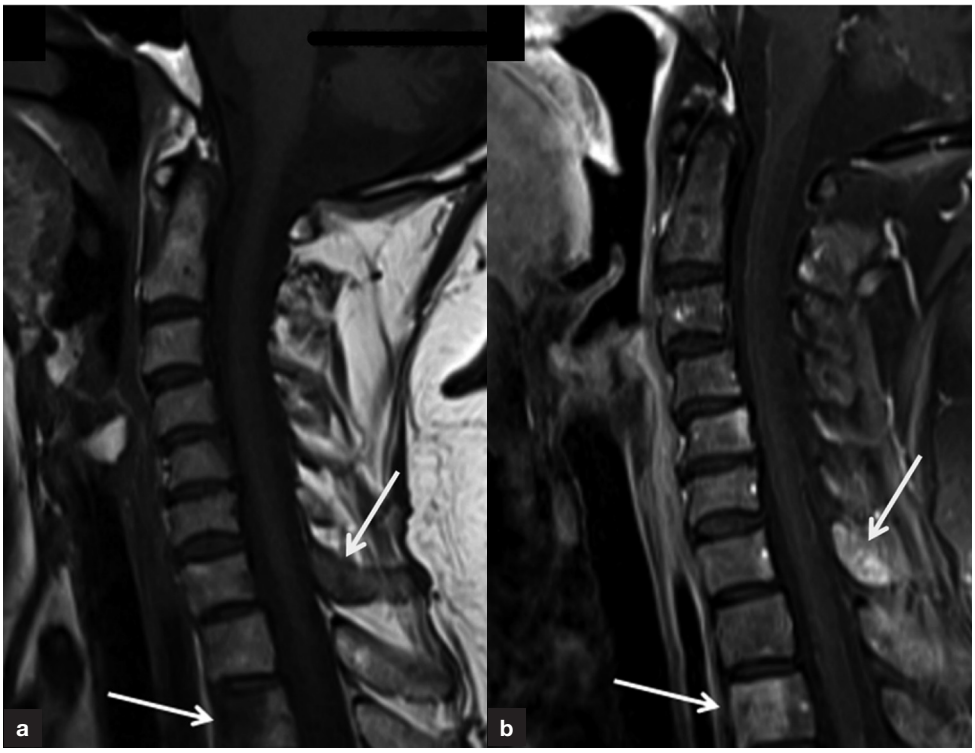

Figure 1. a. Sagittal pre-contrast T1-weighted and (b) post-contrast fat-set T1-weighted magnetic resonance images showing enhanced lesions (white arrows) in the T2 vertebral body and the posterior element of the C1 vertebra.

Erdheim–Chester disease is a rare form of non-Langerhans cell histiocytosis, with about 500 cases reported in the literature (Haroche et al, 2014). Bone lesions in Erdheim–Chester disease include both lytic and osteosclerotic changes (Dion et al, 2006; Bindra et al, 2014). Similar imaging features are seen in conditions such as bone lymphoma, Paget's disease, Langerhans cell histiocytosis, osteomyelitis, metastasis, chondrodysplasia and polyostatic fibrous dysplasia.

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