Teaching *NeuroImages*: Headache with pulsatile tinnitus

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Figure Imaging

CT reconstructions dramatically show an advancing osteoclastic front of bone resorption involving left frontal, parietal, and temporal bones in the acute, lytic phase of Paget disease (A). Cross-sectional images show extension into the petrous bone (indicated) and skull base (B, C). Tc99m-bone scintigraphy confirms increased uptake in these areas (D).

A 62-year-old woman presented with 3 months of insidious-onset, persistent headache focused around the left temple. She had left-sided pulsatile tinnitus and the affected area was warm to touch. Neurologic examination, including hearing, was normal with no objective bruit. A minimally elevated alkaline phosphatase (282 U/L) was the only blood abnormality. Imaging (figure) revealed osteoporosis circumscripta: the acute lytic phase of Paget disease. Although frequently asymptomatic, associated bone pain may present as headache. The vascularity of the petrous lesion explains the tinnitus. Treatment with anti-resorptive agents modestly improved the headache and may prevent ensuing neurologic complications attributed to the proliferative phase.¹

DISCLOSURE

Dr. Armstrong reports no disclosures. Dr. Downer has received funding for travel from eV3 Neurovascular Inc. Dr. Anslow receives publishing royalties for *Neurological Case Histories* (Oxford University Press, 2007). Dr. Evans reports no disclosures. Dr. Ebers serves on the editorial boards of the *International Multiple Sclerosis Journal* and *Multiple Sclerosis* and as Section Editor for *BMC Medical Genetics*; has received funding for travel or speaker honoraria from Bayer Schering Pharma, sanofi-aventis, Roche, and UCB; has served as a consultant to Biopartners, Bayer Schering Pharma, Howrey LLP, Heron Health, and Eli Lilly and Company; and receives research support from Bayer Schering Pharma, the Multiple Sclerosis Society of the United Kingdom, and the Multiple Sclerosis Society of Canada Scientific Research Foundation.

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Disclosure: Author disclosures are provided at the end of the article.

Neurology®

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Neurology 2011;76:e82

DOI 10.1212/WNL.0b013e3182181067

This information is current as of April 25, 2011

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