Juxtacortical Hemangioma
Joseph Junewick, MD FACR
07/03/2010

History
Child with lower extremity pain and discoloration.

Diagnosis
Juxtacortical Hemangioma

Discussion
Osseous hemangiomas most commonly involve the skull and vertebral. Vertebral hemangiomas usually have a striated appearance. Occasionally vertebral hemangiomas cause neurologic symptoms from spinal cord compression, particularly if these lesions extend into the posterior elements or surrounding soft tissues, expand bone, or fracture. Calvarial hemangiomas arise in the diploic space and are most frequent in the frontal or parietal region. At radiography and CT, a calvarial hemangioma commonly appears as a lytic lesion with a pattern of radiating, weblike or spoke-wheel, trabecular thickening. Osseous hemangiomas in other locations may also have radiating trabecular thickening, a honeycomb pattern or "hole-within-hole" appearance. Bone lysis with a linear and/or circular components suggests a vascular lesion. However, these serpentine vascular channels are recognized more easily with CT and MR imaging. Characteristically, these channels have low signal intensity on T1-weighted images and very high signal intensity on T2-weighted images because of slow blood flow. Periosteal or cortical hemangiomas occur most frequently in the anterior tibial diaphysis and can present as a nonspecific region of bone destruction. Cortical hemangiomas may predispose the bone to fracture, and periosteal reaction may accompany these lesions.

Findings
MR-Axial T1 and T2, coronal IR and axial and coronal post-gadolinium T1 images of the right leg demonstrate tibial periosteal T2 and post-gadolinium hyperintensity with cortical scalloping.

Reference
Disclaimer
This teaching site is partially funded by an educational grant from GE Healthcare and Advanced Radiology Services, PC. The material on this site is independently controlled by Advanced Radiology Services, PC, and GE Healthcare and Spectrum Health have no influence over the content of this site.

Content Download Agreement
The cases and images on this website are owned by Spectrum Health. Permission is granted (for nonprofit educational purposes) to download and print materials to distribute for the purpose of facilitating the education of health professionals. The authors retain all rights to the material and users are requested to acknowledge the source of the material.

Site Disclaimer
This site is developed to reach healthcare professionals and medical students. Nothing this site should be considered medical advice. Only your own doctor can help you make decisions about your medical care. If you have a specific medical question or are seeking medical care, please contact your physician.

The information in this website is provided for general medical education purposes only and is not meant to substitute for the independent medical judgment of a physician relative to diagnostic and treatment options of a specific medical condition.

The viewpoints expressed in these cases are those of the authors. They do not represent an endorsement. In no event will Advanced Radiology Associates, PC, Spectrum Health Hospitals (Helen Devos Children's Hospital) or GE Healthcare be liable for any decision made or action taken in reliance upon the information provided through this website.