Teaching NeuroImages:

Vanishing calvarium in Gorham disease

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Figure 1 Brain neuroimaging

Head CT demonstrates focal calvarial thinning without new bone formation (A, B). The lesion has hyperintensity on T2-weighted imaging (C), enhances after gadolinium administration, and lacks a corresponding soft tissue mass (D).

A 46-year-old man had tenderness at the left occiput, without neurologic symptoms, for 5 years. Head CT and MRI (figure 1) disclosed focal calvarial thinning without a soft tissue mass, and normal brain parenchyma. A PET scan did not suggest malignancy. Histologic examination demonstrated dilated vascular channels and abundant fibrous tissue without osteoclasts or malignant cells (figure 2).

Figure 2 Pathologic images

On histologic examination, abundant fibrous tissue (■) and dilated vascular channels (●) with hemorrhage have replaced most of the normal bone trabeculae (▲).

Gorham disease is characterized by proliferation of the vasculature of the bone in the early stage, followed by gradual osteolysis and fibrous replacement.^{1,2} MRI may help determine the stage of the disease.² In our case, the lack of prominent vessels may indicate a later stage of disease.

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