

INTRASOSEOUS HEMANGIOMA OF THE LEFT PARIETAL BONE

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Background: A 26-year-old male presented with pain in his left tibia. Ultrasonography revealed no abnormalities. Tc-99m-bonescan was requested to rule out stress fracture. The scan confirmed the presence of a left tibial stress fracture, as well as an enhancing lesion in the left parietal bone. The patient had no neurological symptoms.

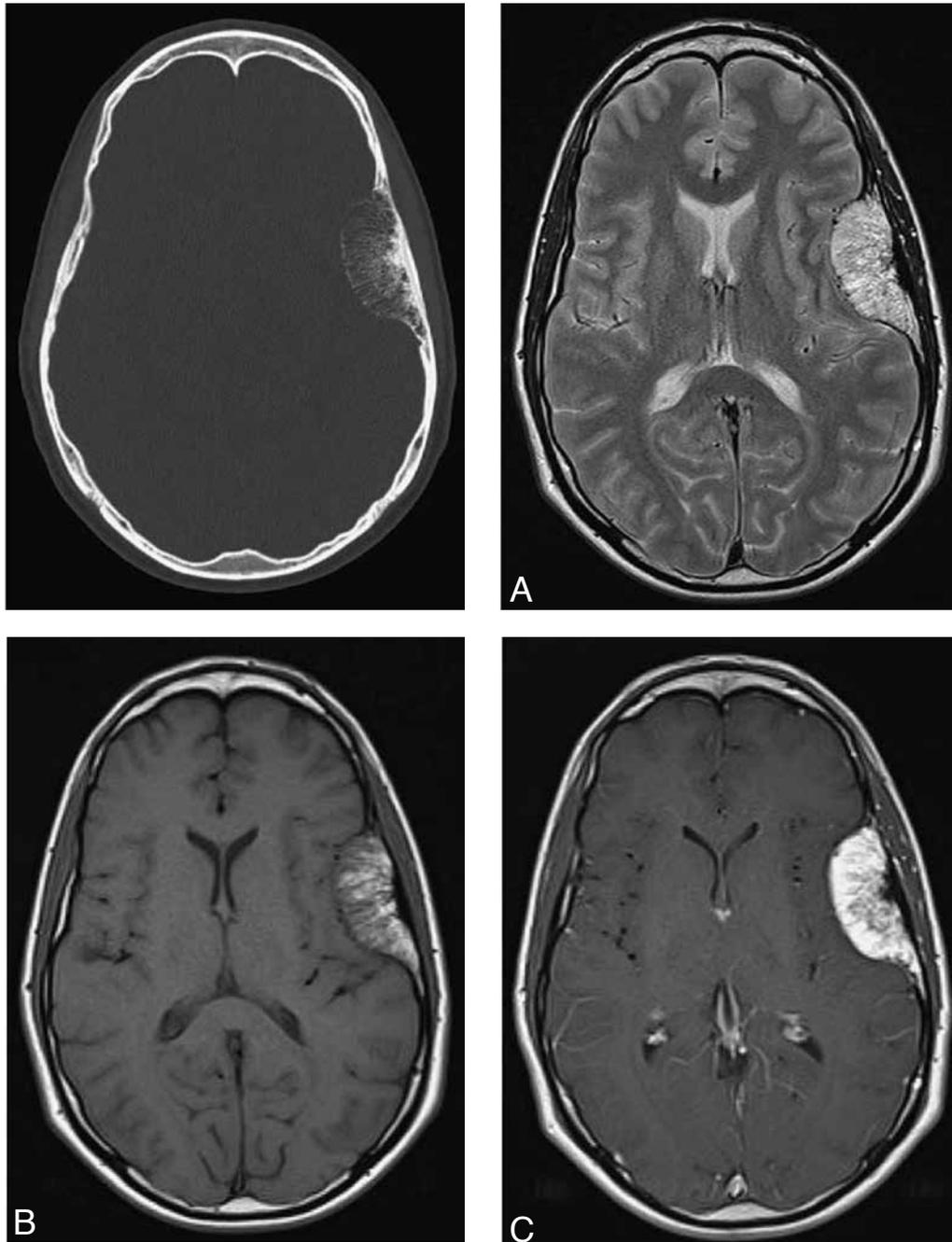


Fig.

1	2A
2B	2C

Work-up

On contrast-enhanced CT scan of the skull (Fig. 1), an ovoid lesion in the left parietal bone is seen. The lesion affects the inner table and grows intracranially, displacing normal brain tissue. The lesion has a 'Sunburst'-appearance or honeycomb appearance of trabeculae radiating perpendicular to the skull and shows diffuse contrast-enhancement.

On MRI of the skull (Fig. 2, A: T2-weighted image), a hyperintense, perpendicularly striated lesion with dural tail sign is demonstrated. T1-weighted image (B) shows a mottled, mixed hyperisointense lesion, deviating but not invading the adjacent brain tissue. Gadolinium-enhanced T1-weighted image (C) shows enhancement by the lesion.

Radiological diagnosis

Based on the typical CT findings (Sunburst-appearance with sclerotic lesional border) and signal intensity on MRI images, the diagnosis was made of an *intraosseous hemangioma of the left parietal bone*, originating from the tabula interna and expanding intracranially.

Differential diagnosis includes osteosarcoma, which can present with a similar but often more irregular 'Sunburst'-appearance and is characterized by an aggressive periosteal reaction, seen as a Codman's triangle.

Because of the benign, slow-growing nature of skull hemangiomas and absence of symptoms, the patient received no treatment.

Discussion

Osseous hemangiomas represent 0.7% of all osseous neoplasms. Contrary to hemangioma of the vertebral column, osseous hemangioma of the skull is an infrequent finding, and presents mostly as calvarial lesions. They can occur at any age, but

are predominantly seen in middle aged women. Most frequently it occurs in the frontal and parietal regions. It is often detected as a slow growing, palpable and sometimes painful lump on the head, representing its typical involvement of the tabula externa and outward growth.

The radiographic examination of choice is CT scan, showing a 'Sunburst' or honeycomb appearance, representing thin bony trabeculae separating the soft vascular tissue. Contrast-enhanced images can be useful to show a typical focal enhancement in the early phase and diffuse enhancement during the later phase. MRI is performed complementary to CT in order to confirm the diagnosis and evaluate the extent into adjacent soft tissues.

This case is very unusual as the hemangioma originates from the inner table, growing purely inward and deviating brain tissue.

The patient did not have any symptoms related to the hemangioma and showed no visible or palpable lump of the cranium. Although surgical excision or radiation therapy are commonly used in symptomatic patients, the lesion in our patient was an incidental finding without associated symptoms and was not treated for at this moment.

Bibliography

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