Teaching NeuroImages: Osteolytic intraosseous meningioma causing transcalvarial herniation

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Figure 1 Imaging showing a lytic lesion of right parietal bone with transcalvarial herniation

(A) Axial bone-window CT scan showing a lytic right parietal skull lesion. (B) Coronal T2-weighted MRI scan showing transcalvarial herniation.

A 69-year-old man presented for focal seizures characterized by dysarthria, confusion, left hand paresthesia, and hemifacial contractions. He had a 3-year history of episodes of epigastric burning, followed by confusion, olfactory hallucinations, and déjà vu. Head CT scan showed a lytic lesion of right parietal bone (figure 1A). MRI highlighted transcalvarial herniation of

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Figure 2 Macroscopic and microscopic features of the lesion

(A) Herniated brain tissue visible under a thin layer of skull. (B) Histopathologic examination revealing meningioma (asterisks) infiltrating the bone layer (arrow).

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precuneus gyrus (figure 1B), suggesting a congenital or posttraumatic skull defect or an osteolytic lesion. After surgical repair and excision of adjacent injured brain tissue, histopathology revealed osteolytic meningioma (figure 2). Intraosseous meningioma is extremely rare, may cause transcalvarial herniation by osteolysis,¹ and can be revealed by histopathology.

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Name	Location	Contribution
Aurora Semerano, MD	IRCCS San Raffaele Scientific Institute, Milan, Italy	Study concept, clinical assessment, analysis and interpretation of the data, drafting/revising the manuscript
Antonino Giordano, MD	IRCCS San Raffaele Scientific Institute, Milan, Italy	Study concept, clinical assessment, analysis and interpretation of the data, drafting/revising the manuscript

Appendix (continued)

Name	Location	Contribution
Mariarosa Terreni, MD	IRCCS San Raffaele Scientific Institute, Milan, Italy	Neuropathologic study, analysis and interpretation of the data, revising the manuscript
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Massimo Filippi, MD	IRCCS San Raffaele Scientific Institute and Vita-Salute San Raffaele University, Milan, Italy	Study concept, analysis and interpretation of the data, revising the manuscript, study supervisor

Reference

1. Hong B, Hermann EJ, Klein R, Krauss JK, Nakamura M. Surgical resection of osteolytic calvarial lesions: clinicopathological features. *Clin Neurol Neurosurg* 2010;112:865–869.

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