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Teaching NeuroImages: Isolated sphenoiditis

An uncommon cause of abducens nerve palsy

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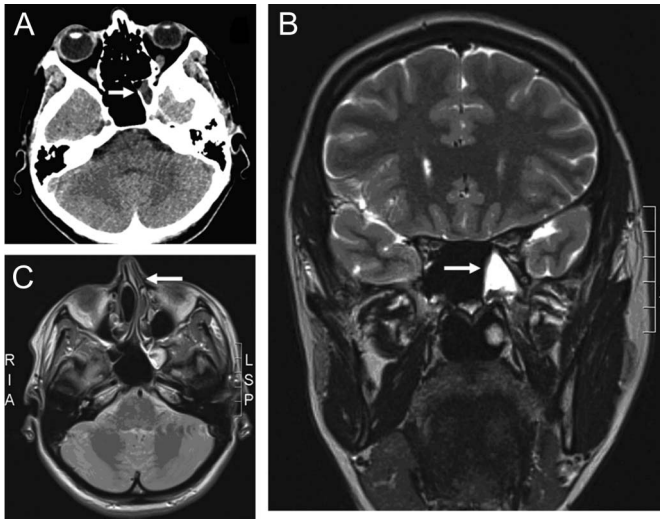
Figure Imaging



(A) Noncontrast brain CT was initially interpreted as normal but shows an unpneumatized left sphenoid sinus. (B) Coronal T2 brain MRI shows hyperintensity in the left sphenoid sinus, consistent with inflammation. (C) Axial fluid-attenuated inversion recovery MRI shows significant deviation of the nasal septum, a predisposing factor to sphenoiditis.

A 35-year-old woman presented with a headache lasting 2 weeks and complained of recent diplopia. Neurologic examination showed limited left eye abduction. Initial brain CT scan was considered normal (figure, A). Brain MRI showed left sphenoiditis (figure, B). The patient was treated with amoxicillin/clavulanic acid and corticosteroids with rapid symptom improvement which deferred endoscopy that could provide a bacteriologic diagnosis.

Isolated sphenoiditis represents fewer than 3% of sinusitis cases and rarely may be complicated by abducens nerve palsy due to the nerve's proximity to the sphenoid sinus at the level of the petrous apex and cavernous sinus.[1] Coronal T2 sequences on brain MRI may facilitate prompt diagnosis.[2]

AUTHOR CONTRIBUTIONS

Apostolos Safouris: study design, data collection, drafting and revising the manuscript. Andrey Bragin: data collection, critical comments during manuscript revision. Chiara Mabiglia: data collection, critical comments during manuscript revision. Nikos Triantafyllou: critical comments during manuscript revision. Marie-Dominique Gazagnes: data collection, critical comments during manuscript revision. Georgios Tsivgoulis: study design, drafting and revising the manuscript.

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DISCLOSURE

The authors report no disclosures relevant to the manuscript. Go to Neurology.org for full disclosures.

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