

Residents and Fellows: Teaching Images in Headache

True Transsphenoidal Meningoencephalocele

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A 64-year-old Caucasian woman with a history of thyroid and lung cancer and no prior headaches presented to our clinic with positional headaches. Her headaches started 2 months prior to presentation with a severe pressure sensation at the vertex initially only when bending over. There were no other associated features. The pain was rated at 7 out of 10, occurring 5-6 days of the week.

Neurologic examination was unremarkable. Imaging revealed a sphenoid sinus cyst suggestive of sphenoid meningoencephalocele (figure). Six weeks later, she reported severe pressure sensation at the vertex with no positional features. She reported 2 episodes of clear rhinorrhea in the week before surgery. She underwent endoscopic resection of the meningoencephalocele with skull base repair. Pathologic examination found inflamed sinonasal tissue with glial tissue consistent with meningoencephalocele. Her headaches resolved immediately after surgery.

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Sphenoid meningoencephaloceles may be congenital, traumatic, surgical, or due to intracranial hypertension.¹⁻³ Symptoms include recurrent bacterial meningitis, symptomatic intracranial hypotension, CSF rhinorrhea, or paranasal sinus obstruction. There are 2 types of transsphenoidal encephalocele: intrasphenoidal and true transsphenoidal. The former are confined by walls of the sphenoid sinus while the latter protrude into the nasal cavity or nasopharynx. In the absence of trauma or surgery, a congenital cause is thought to be most likely for this patient.

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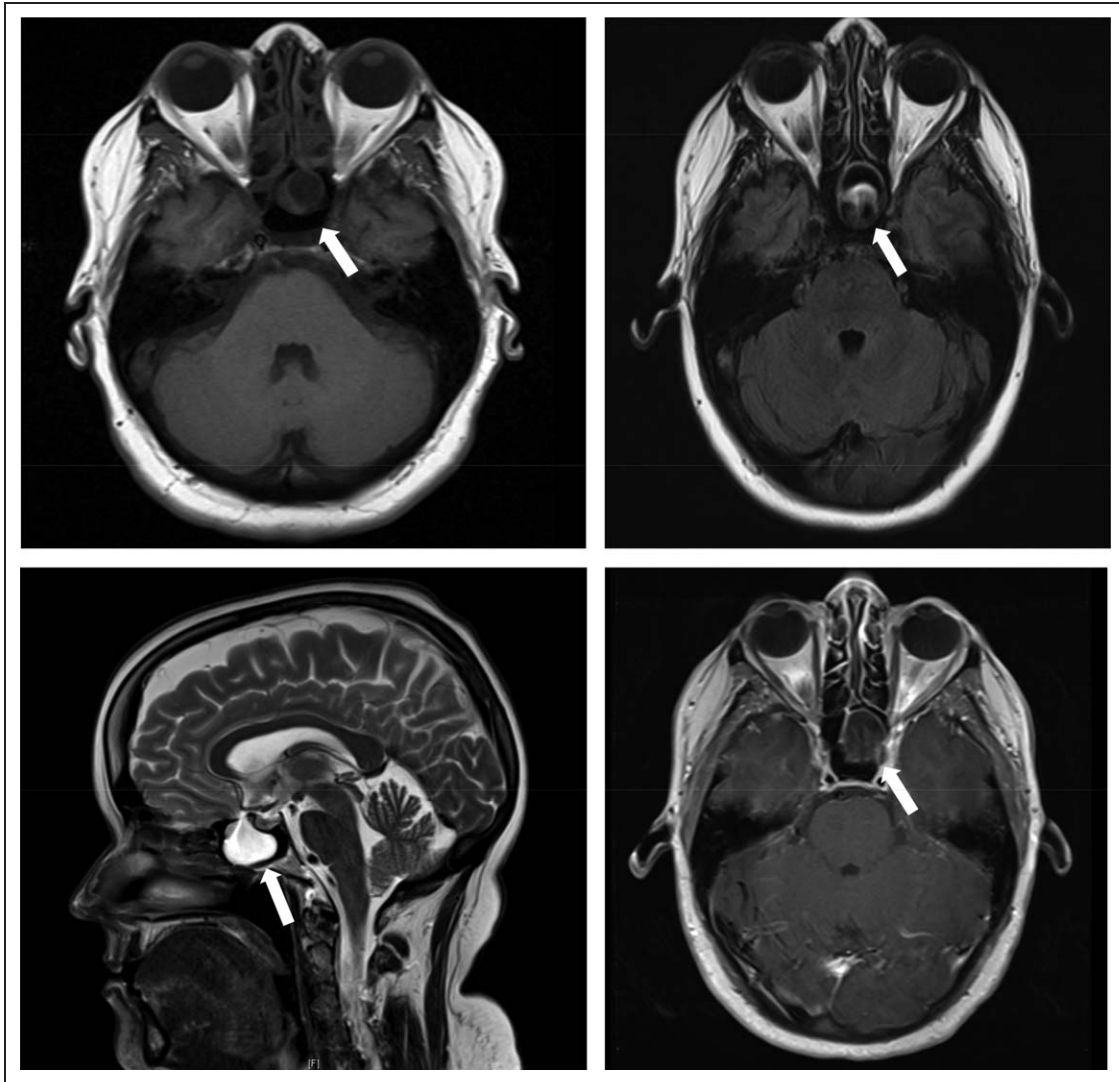


Fig. 1.—Brain MRI. (Top left) Axial T1 image from MRI performed 2 years prior to presentation. Initially read as a mucous retention cyst (arrow). (Top right) Axial FLAIR obtained after presentation. Gray matter soft tissue can be seen protruding into the posterior aspect of the herniation (arrow). (Bottom left) Sagittal T2-weighted image reveals a sphenoid sinus meningoencephalocele (arrow). (Bottom right) Axial T1 contrasted image. Gray matter soft tissue is again noted within the sphenoid cavity (arrow).