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Teaching Neuro*Images*: Meningoencephalocele and CSF leak in chronic idiopathic intracranial hypertension

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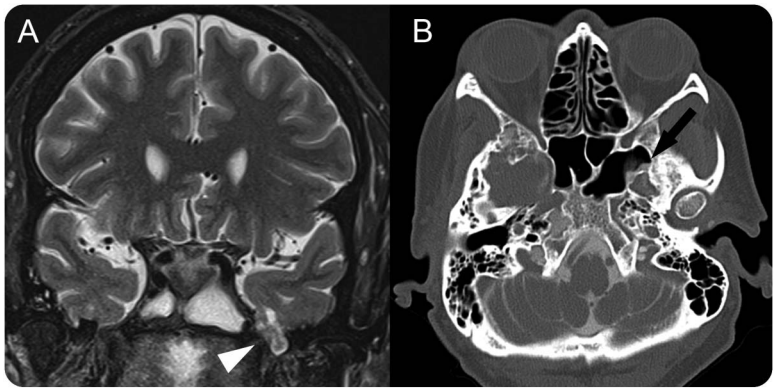
Figure MRI and CT cisternogram



(A) Coronal T2 MRI shows bilateral meningoencephaloceles with herniating of temporal lobe and surrounding CSF on the left (arrowhead). (B) CT cisternogram shows intrathecal contrast extending through a punctate osseous defect in the lateral aspect of the left sphenoid sinus consistent with site of CSF leak (arrow).

A 63-year-old woman with epilepsy and chronic headaches was admitted for status epilepticus. A lumbar puncture revealed increased opening pressure of 320 mm H_2O and bacterial meningitis. MRI brain demonstrated a partial empty sella, tortuous optic nerve sheaths, flattening of the optic papillae, and numerous prominent arachnoid granulations, consistent with chronic idiopathic intracranial hypertension (IIH), as well as bright CSF signal and brain parenchyma within a left meningoencephalocele (figure, A). A CT cisternogram confirmed communication of the subarachnoid space of the meningoencephalocele with the left sphenoid sinus through a small osseous defect (figure, B). While most CSF leaks are related to trauma, IIH is increasingly recognized as a cause of spontaneous leaks.[1,2] While the increased opening pressure may have been due to her acute meningitis, her headache symptoms and MRI findings are suggestive of longstanding intracranial hypertension. Monitoring and medical treatment of IIH must accompany surgical repair to avoid recurrence.[2]

AUTHOR CONTRIBUTIONS

Donald McCorquodale: clinical evaluation, image review and formatting. Tina M. Burton: clinical evaluation, chart review, image review and formatting. Blair Winegar: diagnostic imaging, imaging interpretation, critical revision of manuscript. Stephan Pulst: clinical evaluation and critical revision of manuscript.

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DISCLOSURE

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