

Exertional but Not Postural Headache Resulting from Spontaneous Intracranial Hypotension

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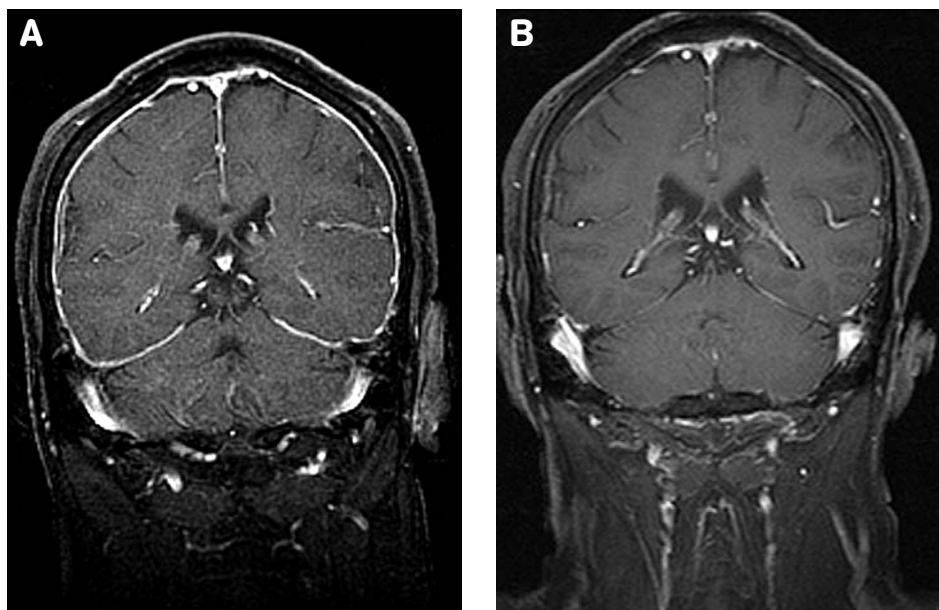


Figure. Diffuse pachymeningeal enhancement was shown in the first MRI study (A), which disappeared two months later (B).

A 78-year-old man presented with severe headache for 2 weeks. The headache happened suddenly, thunder-clap-like, over his vertex down to occipital region without any accompanying nausea, vomiting, phonophobia, or photophobia. The headache was described as bursting but not pulsatile and it was not related to postural change. He mentioned that his headache would worsen by exertion or other Valsalva-like maneuvers such as straining at stools or coughing.

Past history included untreated hypertension and

chronic obstructive pulmonary disease treated with xanthium 400 mg per day. Previously, he had also suffered an intermittent mildly tension-type headache over right temporal region for at least 4 years before this episode. This type of headache was controlled by over-the-counter or non-steroidal anti-inflammatory agents. On admission, neurological examination results were normal without papilledema or neck rigidity.

Because his headache was very intense and characterized by acute-onset, subarachnoid hemorrhage and/or

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symptomatic exertional headache were tentatively diagnosed. MRI and MRA showed lacunar infarctions at bilateral thalami and lentiform nuclei. However, no aneurysm or posterior cranial fossa lesions could be found. Diffusion-weighted images were normal. To our surprise, diffuse pachymeningeal gadolinium enhancement was noted (Fig. A), which was suggestive of a possible pachymeningitis or spontaneous intracranial hypotension (SIH).

As stated earlier, the patient's headache did not have postural components; however, a subsequent lumbar puncture documented a low CSF opening pressure (50 mmH₂O) fulfilling the criteria of low CSF pressure (60 mmH₂O) proposed by the International Classification of Headache Disorders, 2nd edition (ICHD-II)⁽¹⁾. The CSF was clear and the analysis revealed WBC 1/ul, RBC 107/ul, protein 60 mg/dl and glucose 67 mg/dl. The patient was then treated with IV hydration and his headache resolved gradually. Follow-up MRI 2 months

later showed disappearance of the meningeal enhancement (Fig. B).

SIH is frequently under-diagnosed because of its protean manifestations⁽²⁾. Patients with SIH may present with some atypical findings such as postural dizziness, exertional headache or mental decline⁽³⁾. MRI with contrast might be considered to rule out SIH if unusual headache patterns are presented.

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