Spontaneous intracranial hypotension presenting as a chronic daily headache

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DESCRIPTION

A 51-year-old male was referred by his general practitioner with a 9-month history of chronic daily headache, affecting the frontal and vertex areas of the head. T1-weighted MRI with gadolinium enhancement showed diffuse pachymeningeal enhancement (figures 1 and 2). He subsequently had a lumbar puncture, and the opening pressure was 3.5 cm in the cerebrospinal fluid (CSF), confirming intracranial hypotension. The CSF constituents were normal. When the history was revisited, it was noted that the patient had for the first 2 months postural-related headaches; however, over time, it turned into a chronic daily headache. The patient was also an avid golfer, which could have been the precipitant of a dural sleeve tear leading to low intracranial pressure. The reduction in CSF pressure results in traction on the anchoring and supporting structures of the brain, resulting in a headache. In the upright position, this traction is exaggerated, hence the postural component of the headache. However, during the course of the illness, the orthostatic component may disappear, and a chronic daily headache may develop¹ (as in this case).

Investigations for spontaneous intracranial hypotension include MRI of the brain with gadolinium enhancement to assess for the typical features of

Figure 1 T1-weighted MRI with gadolinium enhancement in axial orientation showing diffuse symmetric dural thickening over the cerebral hemispheres (arrows). There was no evidence of pial enhancement or enhancement within the brain parenchyma.

Figure 2 T1-weighted MRI with gadolinium enhancement in coronal orientation showing diffuse symmetric dural thickening over the cerebral hemispheres (arrows). There was no evidence of pial enhancement or enhancement within the brain parenchyma.

this syndrome, which are diffuse pachymeningeal enhancement (see figures 1 and 2 above), 'sagging' of the brain, tonsillar descent and posterior fossa crowding.² Treatment for spontaneous intracranial hypotension includes conservative measures such as bed rest, oral or intravenous rehydration to restore CSF volume and oral caffeine intake.³ When conservative measures fail or in patients with severe headache, an epidural blood patch may be used.³

Learning points

- ▶ Spontaneous intracranial hypotension is an underdiagnosed condition that should be considered especially in young and middle-aged patients with chronic daily headache.
- ▶ Thorough history taking is essential in patients who present with headache in order to identify potential causes.

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REFERENCES

- 1 Grimaldi D, Mea E, Chiapparini L, *et al*. Spontaneous low cerebrospinal pressure: a mini review. *Neurol Sci* 2004;25(Suppl 3):S135.
- 2 Sun-Edelstein C, Lay CL. Pathophysiology, clinical features, and diagnosis of spontaneous low cerebrospinal fluid pressure headache. In: Basow DS, ed. Waltham, MA: UpToDate, 2012.
- 3 Sun-Edelstein C, Lay CL. Treatment and prognosis of spontaneous low cerebrospinal fluid pressure headache. In: Basow DS, ed. Waltham, MA: UpToDate, 2012.

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