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NEUROLOGICAL PICTURE

Spontaneous intracranial hypotension in adolescence

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A 16-year-old boy presented with a 4-week history of sudden onset and progressively worsening occipital headache. Symptoms were exacerbated on sitting and standing, and initially alleviated with recumbency and on extensive neck flexion. There was no medical or familial history. He was a keen line skater, regularly executing back flips on a skating ramp. However, there was no history of trauma sustained preceding the onset of headache.

On admission, neurological, fundus and general examinations were normal.

Magnetic resonance imaging (MRI) showed elongation of the cerebellar tonsils extending 10 mm past the posterior border of the foramen magnum (fig 1) and bilateral subdural hygromas (fig 2). A diagnosis of spontaneous intracranial hypotension (SIH) was reached. An MRI of the spine with gadolinium-contrasted views did not show cerebrospinal fluid leakage.

Despite adequate bed rest and analgesia, symptoms failed to resolve. An autologous lumbar epidural blood patch was carried out leading to convalescence and discharge a week later. Follow-up at 6 months showed an entirely normal MRI of the brain (figs 3 and 4), and continued resolution of symptoms.

SIH is an uncommon but important diagnosis of postural headaches in children. A spontaneous cerebrospinal fluid leakage is the typical cause, mainly resulting from occult dural tears or ruptured fragile arachnoid cysts.¹ Effective treatment is available. However, the risks of treatment for the variety of conditions that may mimic SIH, such as meningitis, subarachnoid haemorrhage and Chiari type I malformations, are significant.² Hence, it is important to recognise this condition to avoid diagnostic delay and to expedite the appropriate treatment.

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Figure 1 T1-weighted sagittal magnetic resonance imaging of the brain showing general descent of the brain and sagging of the cerebellar tonsils through the foramen magnum and expansion of the sellar contents.

Figure 2 T2-weighted axial magnetic resonance imaging of the brain showing bilateral subdural hygromas.

Figure 3 T1-weighted sagittal magnetic resonance imaging of the brain showing return of the cerebellar tonsils to normal.

Figure 4 T2-weighted axial magnetic resonance imaging of the brain showing no evidence of previous bilateral subdural hygromas.