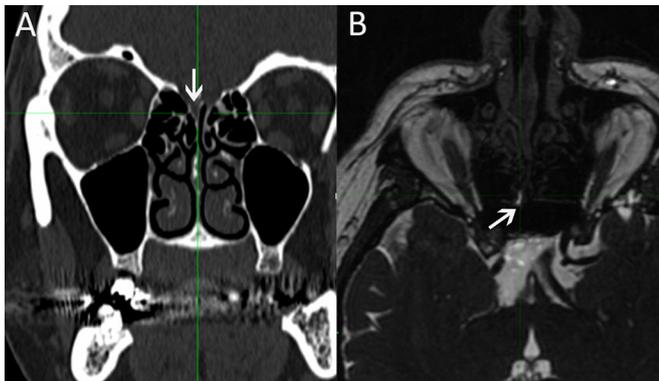


# Unilateral rhinorrhoea associated with cerebrospinal fluid leak

A 56-year-old postmenopausal obese woman presented with a 6-month history of right-sided rhinorrhoea. There was no history of head trauma or surgery. On clinical examination drops of clear fluid were falling from her right nostril when bending forward (online supplementary video 1). Nasal endoscopy identified no pathology. The fluid was positive for beta-2 transferrin. There was no evidence of papilloedema and the opening pressure was normal.<sup>1</sup> Imaging demonstrated a right cribriform plate defect (figure 1). Endoscopic repair of the leak was performed. Subsequently, headache, nausea and tinnitus emerged.

The patient was diagnosed with idiopathic intracranial hypertension (IIH) presenting solely with cerebrospinal fluid (CSF) rhinorrhoea. Presumably the leakage relieved intracranial pressure (ICP), preventing the demonstration of the classic IIH symptoms. In such patients it is often only after dural repair that intracranial hypertension becomes evident. In our patient a postoperative lumbar puncture confirmed the increase of ICP. Thus, a ventriculoperitoneal shunting was performed.

Spontaneous cerebrospinal fluid (sCSF) leak is a rare condition. It occurs in the absence of trauma or surgery and is usually



**Figure 1** (A) Coronal view of CT of the head showing right cribriform plate defect (white arrow). (B) Axial T2-weighted MRI scan demonstrating cerebrospinal fluid leak from the right cribriform plate (white arrow).

secondary to IIH.<sup>2</sup> Elevated ICP is believed to cause gradual skull base thinning.<sup>3</sup> This procedure results in the formation of a defect over a pneumatized space, anteriorly over nasal cavities or paranasal sinuses and laterally in the area of the temporal bone. Anterior sCSF presents with clear rhinorrhoea. Diagnostic confirmation of CSF leak is based on the beta-2 transferrin assay. High-resolution CT scan and MRI are required to localise the site of defect. The endoscopic endonasal approach is considered the standard of care and has a high success rate.

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**Funding** The authors have not declared a specific grant for this research from any funding agency in the public, commercial or not-for-profit sectors.

**Competing interests** None declared.

**Patient consent** Obtained.

**Provenance and peer review** Not commissioned; internally peer reviewed.

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► Additional material is published online only. To view please visit the journal online (<http://dx.doi.org/10.1136/postgradmedj-2018-136078>).



**To cite** Koltsidopoulos P, Skoulakis C, Papageorgiou E. *Postgrad Med J* Epub ahead of print: [please include Day Month Year]. doi:10.1136/postgradmedj-2018-136078

Received 25 August 2018

Revised 4 September 2018

Accepted 8 September 2018

*Postgrad Med J* 2018;0:1.

doi:10.1136/postgradmedj-2018-136078

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