

FACT OR FICTION?

There are highly significant differences on brain MRI between patients with spinal CSF leak and patients with Chiari 1 malformation.



FACT!

Measures of midbrain sagging discriminate Chiari 1 malformation from SIH and may help to prevent misdiagnosis and unnecessary surgery.



Differentiation of Chiari malformation type 1 and spontaneous intracranial hypotension using objective measurements of midbrain sagging. Houk, Jessica L, Timothy J. Amrhein, Linda Gray, Michael D. Malinzak, and Peter G. Kranz. Journal of Neurosurgery (published online ahead of print 2021). <https://doi.org/10.3171/2021.6.JNS211010>.

FACT OR FICTION?

Spinal CSF leak is ALWAYS characterized by an orthostatic headache (head pain that worsens upon standing).



FICTION!

This is not universally the case. Some patients do not present with positional headache at all, and for those who do, the positional aspect often diminishes with time. In addition, not all positional headaches are due to spinal CSF leak.



Spontaneous Intracranial Hypotension: 10 Myths and Misperceptions
Peter G. Kranz, MD; Linda Gray, MD; Timothy J. Amrhein, MD
Headache 2018. First published: 24 May 2018
<https://doi.org/10.1111/head.13328>

FACT OR FICTION?

Accidental dural puncture will **ALWAYS** heal by itself and needs no treatment.



FICTION!

Accidental dural puncture is associated with long-term morbidity including persistent headache in parturients. This challenges the current definition of post-dural puncture headache as a self limiting condition.



Niraj, G et al. "Persistent headache and low back pain after accidental dural puncture in the obstetric population: a prospective, observational, multicentre cohort study." *Anaesthesia* vol. 76.8 (2021): 1068-1076. doi:10.1111/anae.15491

FACT OR FICTION?

Spontaneous intracranial hypotension (SIH) secondary to a cerebrospinal fluid (CSF) leak can have a severe impact on the quality of life of patients and their families.



FACT!

A moderate or greater impact on quality of life was scored in 54% of the respondents for mobility, 39% for self-care, 84% for usual activities, 88% for pain, and 45% for depression or anxiety.



Cheema S, Joy C, Pople J, et al. "Patient experience of diagnosis and management of spontaneous intracranial hypotension: a cross-sectional online survey." *BMJ Open* 2022;12:e057438. doi: 10.1136/bmjopen-2021-057438

FACT OR FICTION?

More than one procedure may be needed to address spinal CSF leak.



FACT!

While a fraction of patients do well with a single epidural blood patch, in practice, more than one procedure may be needed for many patients. Furthermore, rebound intracranial hypertension, or elevated CSF pressure, is not uncommon after epidural patching or surgical repairs, and may require medication or other intervention.



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FACT OR FICTION?

A negative brain MRI excludes intracranial hypotension/SIH.



FICTION!

Several studies show that the diagnosis of SIH should not be excluded based on a negative brain MRI. At least 25% of patients with spontaneous intracranial hypotension have normal imaging and over half have a normal lumbar puncture opening pressure. In instances where brain imaging is negative, further testing with spinal imaging should be pursued if SIH is suspected.



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Headaches Due to Low and High Intracranial Pressure. Deborah I. Friedman MD. *Headache* August 2018, Vol.24, No.4
DOI: 10.1212/CON.0000000000000623