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Intracranial hypotension syndrome following chiropractic manipulation of the cervical spine

Received: 27 August 2006

Accepted in revised form: 30 August 2006

Published online: 25 October 2006

Sir,

We read with interest Morelli et al.'s [1] article, "Intracranial hypotension syndrome following chiropractic manipulation of the cervical spine", in the August 2006 issue of *The Journal of Headache and Pain*. We would like to take this opportunity to emphasise the following point.

It is now recognised that most cases of intracranial hypotension result from spontaneous CSF leaks [2]. CT myelography with iodinated contrast has been shown to be the study of choice to accurately define the location and extent of a CSF leak [3, 4]. Radionuclide cisternography has been used extensively in the evaluation of spontaneous intracranial hypotension but is of relatively limited usefulness. Spinal MRI is not the primary diagnostic modality for detection of dural leak because it is not particularly effective in localising the CSF leak. It can detect indirect spinal manifestations of intracranial hypotension such as dilated epidural veins, dural enhancement, extrathecal CSF collections and syringomyelia [3, 4].

In this case report, the authors did not use CT myelography (gold

standard) or radionuclide cisternography for showing dural leak and fistula. They mentioned that total spine MR imaging performed with myelographic sequences documented an arachnoid cyst of the third cervical root and suggested the presence of a dural leakage. They showed this finding in Figure 2. However, I cannot see any objective imaging finding of dural leak or fistula in this image. I only noted small meningeal diverticula. The presence of meningeal diverticula is not an objective dural leak finding. We see many silent meningeal diverticula during routine lumbar or cervical MR examination. Also, the authors said that Figure 2 is an axial contrast enhanced image. To me, this look likes an axial T2 image without contrast enhancement (CSF and fat are bright).

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References

1. Morelli N, Gallerini S, Gori S et al (2006) Intracranial hypotension syndrome following chiropractic manipulation of the cervical spine. *J Headache Pain* 7(4): [Epub ahead of print] PMID: 16897619
2. Mokri B, Krueger BR, Miller GM, Peipgras DG (1991) Meningeal gadolinium enhancement in low pressure headaches [Abstract]. *Ann Neurol* 30:294–295
3. Mokri B (2004) Low cerebrospinal fluid pressure syndromes. *Neurol Clin* 22:55–74
4. Schievink WI (2006) Spontaneous spinal cerebrospinal fluid leaks and intracranial hypotension. *JAMA* 295:2286–2296