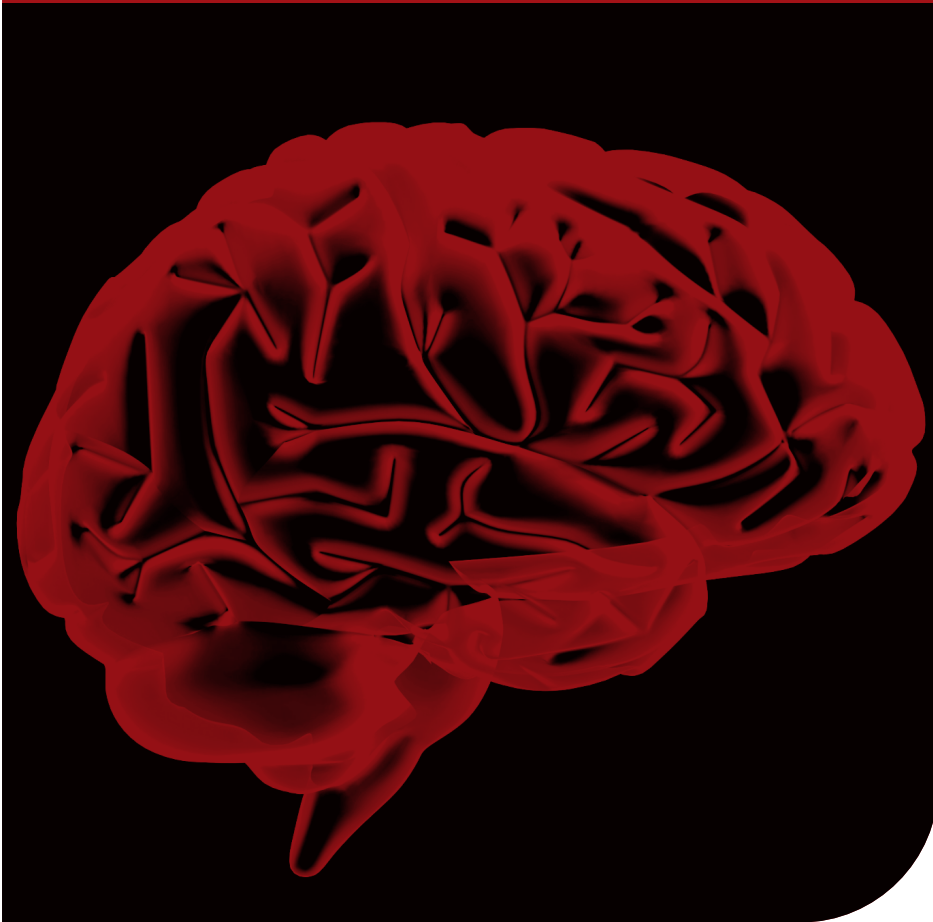


ISSN 0028-3886

Nov-Dec 2010 / Vol 58 / Issue 6



www.neurologyindia.com

Neurology India

Official Publication of the Neurological Society of India

Bilateral transtentorial herniation and isolated fourth ventricle: A scientific note

Sir,

In transtentorial herniation, downward shift of the uncus occurs through the tentorial incisura and often leads to death. The treatment is decompression.^[1] Bilateral uncal herniation is typically seen in brain death.^[2] Transtentorial herniation can cause occipital infarcts resulting in visual loss.^[3] A 9-year-old boy was born at 29th week of gestation as he had placental insufficiency. He needed resuscitation and suffered intraventricular hemorrhage in the early postnatal period. After ventricular drainage, he underwent ventriculo-peritoneal shunt implantation—initially, supratentorially; and later, infratentorially—because of the isolated and enlarged fourth ventricle. Altogether, he had undergone 33 interventions for various obstructive and infective complications. At



Figure 1: Coronal T2-weighted image (5 mm slice thickness) revealed bilateral transtentorial herniation

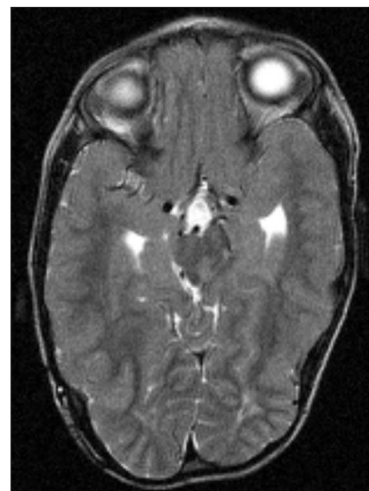


Figure 2: Axial T2-weighted image (5 mm slice thickness) demonstrating bilateral brainstem compression and subsequent torquation


this visit, he was ambulant with retarded cognitive functions (developmental age, 3-4 years). He used to get recurrent partial complex seizures of temporal semiology. Cranial magnetic resonance imaging (MRI) scan revealed bilateral transtentorial herniation [Figure 1] with brainstem compression [Figure 2]. Herniated unci resulted in pressure gradient causing the isolation of the infratentorial subarachnoid spaces.^[4] Possibly, he could survive the bilateral transtentorial herniation as there was no ischemic brainstem injury.^[4] To the best of our knowledge, this is the first demonstration of such phenomenon in a living person.

**Laszlo Novak, Istvan Pataki¹, Andrea Nagy¹,
Ervin Berenyi²**

*Departments of Neurosurgery,
¹Pediatrics, and ²Biomedical Laboratory and Imaging Science,
University of Debrecen,
Medical and Health Sciences Center, Hungary
E-mail: lnovak@dote.hu*

References

1. Mori K, Ishimaru S, Maeda M. Unco-parahippocampectomy for direct surgical treatment of downward transtentorial herniation. *Acta Neurochir (Wien)* 1998;140:1239-44.
2. Lovblad KO, Bassetti C. Diffusion-weighted magnetic resonance imaging in brain death. *Stroke* 2000;31:539-42.
3. Tanaka R, Miyasaka Y, Yada K, Mukuno K. Bilateral homonymous hemianopsia due to tentorial herniation, with sparing of central vision: Case report. *Neurosurgery* 1992;31:787-90.
4. Hussain SI, Cordero-Tumangday C, Goldenberg FD, Wollman R, Frank JI, Rosengart AJ. Brainstem ischemia in acute herniation syndrome. *J Neurol Sci* 2008;268:190-2.

Access this article online	
Quick Response Code:	Website: www.neurologyindia.com
	
	DOI: 10.4103/0028-3886.73758

Accepted on: 06-08-2010