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Celebrating 35 Years of the AJNR

March 1987 edition

Internuclear Ophthalmoplegia:
MR-Anatomic Correlation

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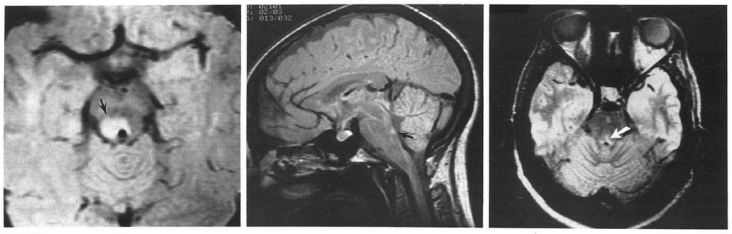
Internuclear ophthalmoplegia is a gaze disorder characterized by impaire on the side of a lesion involving the medial longitudinal fasciculus with nystagmus of the abducting eye. Eleven patients with internuclear ophtl (nine with clinical multiple sclerosis, two with clinical infarction) underwent with spin-echo techniques on a 1.5-T system. Nine patients also had CT. focal or nodular areas of high signal intensity on T2-weighted images in t the medial longitudinal fasciculus in 10 of 11 patients. In one of four p internuclear ophthalmoplegia who had MR after intravenous gadolinium-D hancing ring lesion was seen in the region of the medial longitudinal fascicu TR/TE images, indicating active blood-brain-barrier disruption, which con this patient's recent-onset internuclear ophthalmoplegia. CT failed to show in all nine patients examinec. This report demonstrates the superiority of M ating gaze disorders attributable to brainstem dysfunction, such as internucl moplegia, and correlates MR findings with the relevant neuroanatomy of longitudinal fasciculus.



Internuclear ophthalmoplegia (INO) is a disorder of eye movement, characterized by impaired adduction on the side of a lesion involving longitudinal fasciculus (MLF) with dissociated nystagmus of the abducting eye (Fig. 1) [1, 2]. In young patients, this syndrome is most commonly caused by multiple sclerosis (MS) [1, 3–6]; in fact, INO is the most common oculomotor manifestation of MS [3]. The same eye-movement disorder in an older age group is usually attributed to cerebrovascular disease. MR is a highly sensitive imaging technique for detecting MS plaques [7–10], and it has become the technique of choice for

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The Role of Dural Anomalies in Vein of Galen Aneurysms:
Report of Six Cases and Review of the Literature

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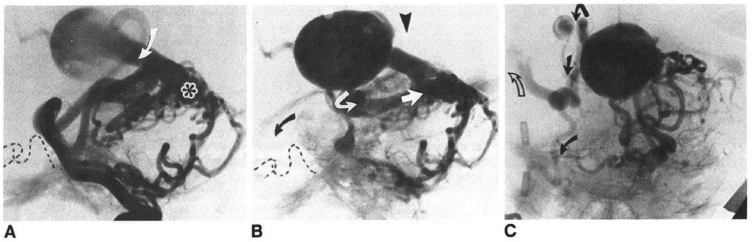
It is proposed that the vein of Galen aneurys to an increased flow (usually caused by a c either directly into the vein of Galen aneurys associated with obstruction of a dural sinu venous obstruction is to the vein of Galen, t obstructive (noncommunicating) hydrocephal drainage from the rest of the brain will be unal is from the vein of Galen aneurysm, the l communicating type of hydrocephalus. The d the magnitude of the arteriovenous shunt. E may be related to the retrograde venous en the healthy brain. Careful attention should be p of the lesion because the types of dural vene case to case. The term "vein of Galen aneur term "vein of Galen ectasia."



Since concluding our research in miniatu children [1], we have been involved in the aneurysm (VGA). We report six cases associated dural anomalies. Careful analys deep-seated arteriovenous malformations (AVMs) without VGA raises several questions.

The purpose of the present paper is to contribute to the angioanatomic analysis of the VGA, to discuss what may be the primary developmental defect, and to consider the relationship between the anomalies encountered and the clinical outcome of the disease.

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Case Reports

Case 1

A 4-kg newborn girl presented with cardiac failure. Vertebral angiography demonstrated a VGA with agenesis of the straight sinus and high-flow venous collateral circulation from the VGA to the torcular (Fig. 1). There was angiographic evidence of arterial steal, but there was no retrograde venous drainage into the cortical veins or sinuses.

Case 2

A 7-kg infant boy presented with an increase in head circumference. A vertebral angiogram showed a VGA with agenesis of the straight sinus and moderately high-flow collateral circulation from the VGA to the lateral and cavernous sinuses (Fig. 2). Angiographically, no arterial steal was demonstrated, but retrograde venous drainage into the cortical veins was noted.