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MR in diffuse angiomas.

V Wagle, I McCutcheon, D Melanson, R Ethier and L E Roy

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REFERENCES

1. Zimmerman R, Leeds NE, Naidich TP. Carotid-cavernous fistula associated with intracranial fibromuscular dysplasia. *Radiology* 1977; 122:725-726
2. Mettinger KL, Ericson K. Fibromuscular dysplasia and the brain: observations on angiographic, clinical and genetic characteristics. *Stroke* 1982; 13:46-57
3. Bellot J, Gherardi R, Poirier J, Lacour P, Debrun G, Barbizet J. Fibromuscular dysplasia of cervico-cephalic arteries with multiple dissections and a carotid-cavernous fistula: a pathological study. *Stroke* 1985; 16:255-261
4. Hieshima GB, Cahan LD, Mehringer CM, Bentson JR. Spontaneous arteriovenous fistulas of cerebral vessels in association with fibromuscular dysplasia. *Neurosurgery* 1986; 14:454-458
5. Bradac GB, Bender A, Curio G, Debrun G. Report of two cases of spontaneous direct carotid-cavernous fistula. Diagnosis and therapeutic considerations. *Neuroradiology* 1985; 27:436-439
6. Debrun CT, Lacour P, Caron JP, Hurth M, Comoy J, Keravel Y. Detachable balloon techniques in treatment of cerebral vascular lesions. *J Neurosurgery* 1978; 49:635-649

MR in Diffuse Angiomatosis

Angiomatous malformations of the CNS have been classified as capillary telangiectasis and as venous, arterial, and cavernous an-

giomas [1]. In this instance, a 37-year-old man presented with leg weakness and slight mental deterioration over a 3-year-period. Angiography showed large vessels and diffuse angiomatosis that seemed to involve every part of the brain except the cerebellum (Fig. 1). MR revealed large arteries, veins, and sinuses, suggesting an underlying increase in the capillary bed (Fig. 2). The cerebellum was clearly not involved. Our working diagnosis is that of capillary telangiectasis on the basis of the angiographic and MR findings. A direct biopsy was not performed since it entailed serious risk to the patient. Biopsy of a branch of the external carotid artery proved inconclusive.

Although our diagnosis is radiologic, considering the unusual radiologic features, we felt there was a need to document this case. We would welcome comments from the readers of *AJNR* on the frequency of such diffuse vascular lesions [2-4].

V. Wagle
I. McCutcheon
D. Melanson
R. Ethier
L. E. Roy

Montreal Neurological Hospital and Institute
Montreal, QC, Canada H3T 2H1

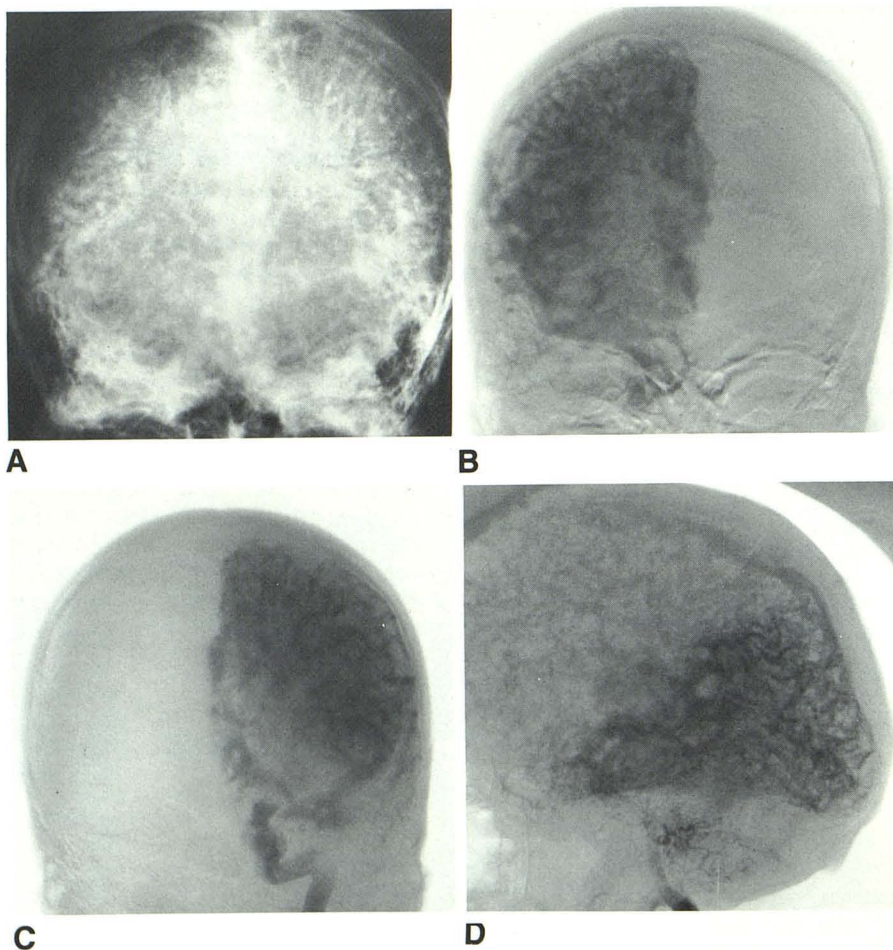
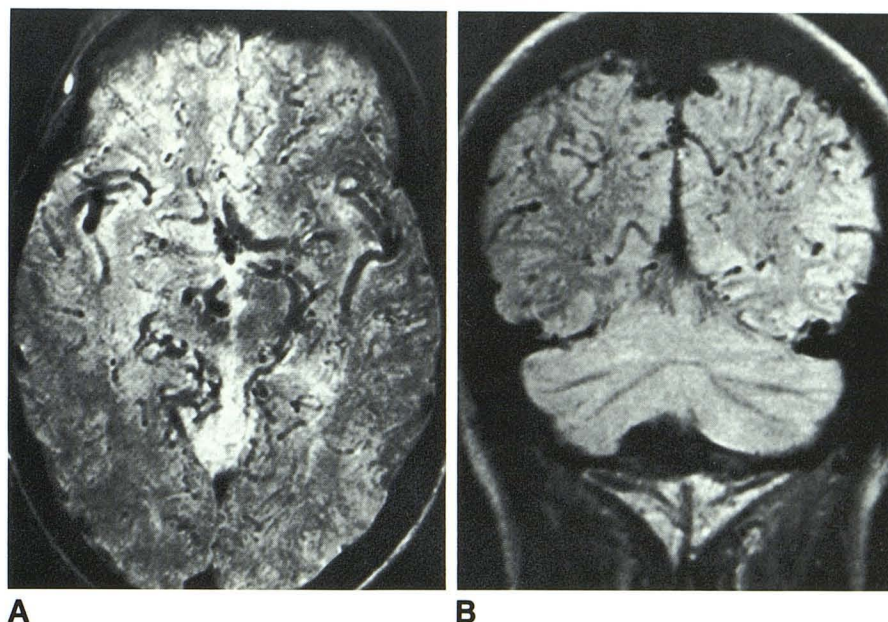


Fig. 1.—Arch and selective angiography showing extensive angiomatosis. Arch study (A), right carotid (B), left carotid (C), vertebral (D). Cerebellum is the only spared portion.

Fig. 2.—A and B, MR in axial and coronal planes, SE 30/300 done on 0.5-T Phillips Gyroscan, showing void signals of arterial, venous, and sagittal sinus dilatation. Coronal view shows sparing of cerebellum.



REFERENCES

1. Rubinstein LJ. *Tumours of the central nervous system*. Washington, DC: Armed Forces Institute of Pathology, AFIP Publication, 1972
2. Farrell DF, Forno, LS. Symptomatic capillary telangiectasis of the brainstem without hemorrhage. *AJNR* 1970;20:341-346
3. Crosley CJ, Kim RC, Parisi JE, Collins GH, Sondheimer J. Cerebral capillary telangiectasis in an infant. *Arch Pathol Lab Med* 1982;106:79-80
4. Smith CML, Batcup G, Black JA, Timperley WR. An unusual brainstem capillary telangiectasis in a child. *Clin Neuropathol* 1983;2(3):118-121

Thoracic Spinal Meningioma Associated with Hydrocephalic Dementia

Spinal tumors occasionally cause hydrocephalus [1-11] and dementia [1-4]. We report a case of thoracic spinal meningioma in which both conditions existed on presentation and were reversed after surgical resection of the tumor.

Case Report

A 75-year-old woman was admitted to our hospital with a 2-year history of low back pain, now radiating down both legs. She had increasing difficulty in walking, and some evidence of dementia.

A cranial CT scan showed ventricular dilatation and periventricular hypodensity, consistent with a communicating hydrocephalus (Fig. 1). Metrizamide myelography demonstrated an intradural extramedullary tumor at the level of T12, confirmed on metrizamide-enhanced CT (Fig. 2). On excision, it was proved histologically to be meningioma. The CSF protein was elevated to 1300 mg/dl and the pressure at lumbar puncture was normal during myelography.

Postoperatively, the patient did well. Sixteen months after surgery, cranial CT showed almost complete resolution of the hydrocephalus (Fig. 3); her dementia, walking difficulties, and incontinence were greatly reduced.

Discussion

Many theories have been proposed to explain the hydrocephalic dementia that occurs with spinal tumor, but none has been verified or explains all the clinical observations.

Intracranial symptoms are rare, despite the frequency with which these tumors cause elevated CSF protein levels [5]. Meningeal spread of tumor leads to obstruction of CSF flow [6], but this is unlikely, because most of the reported tumors are benign. Furthermore, surgical removal of the spinal tumor alone improves the intracranial symptoms dramatically [2]. Hydrocephalus secondary to tumor-induced subarachnoid hemorrhage has rarely been documented in the described cases [2]. Tumor-induced secretion of CSF fluid over and above the absorbable amount cannot explain the hydrocephalic dementia, because it has been reported with extradural tumors [5, 7]. Compression by tumor of the spinal venous plexus might lead to hydrocephalus [8], but this does not explain why the syndrome also occurs with small lesions [2]. An elevated CSF protein level or perhaps an unusual protein constituent [9, 10] could cause a generalized "clogging" of the CSF absorptive pathways. Localized arachnoiditis resulting from substances foreign to normal CSF in patients with spinal tumors may also lead to hydrocephalus and dementia [11]. The rapid improvement of intracranial symptoms and signs after spinal tumor removal alone may imply that the arachnoiditis is not self-sustaining but requires continued production of irritative substances to outstrip adaptability of CSF absorptive structures. It seems less plausible, however, that arachnoiditis sufficient to cause hydrocephalus would regress after removal.

Ay-Ming Wang

Hani A. Haykal

Harvard Medical School and Brigham and Women's Hospital
Boston, MA 02115

REFERENCES

1. Neil-Dwyer G. Tentorial block of cerebrospinal fluid associated with a lumbar neurofibroma. *J Neurosurg* 1973;38:767-770
2. Ridsdale L, Moseley I. Thoracolumbar intraspinal tumors presenting features of raised intracranial pressure. *J Neurol Neurosurg Psychiatry* 1978; 41:737-745