Case Report

Thoracic Intramedullary Cavernous Malformation With Posttraumatic Hematomyelia: Case Report and Literature Review

Melissa J. Armstrong, MD,* Lotfi Hacein-Bey, MD,*†‡ Michael J. Schneck, MD,*‡ Russ P. Nockels, MD,‡ and José Biller, MD*‡

Although intramedullary spinal cord cavernous malformations are now well described, there have been, to our knowledge, no prior reports focusing on presentation after trauma. We report a patient with a thoracic intramedullary cavernous malformation presenting with hematomyelia and acute neurologic deterioration after spinal chiropractic manipulation. A review of previously published case reports then identifies additional cases of deterioration after spinal cord trauma or exertion. Traumatic injury and exertion may be uncommon but real causes of hematomyelia in intramedullary cavernous malformations of the spinal cord. The frequency of such presentations is estimated to be 1.37% to 4.79%. **Key Words:** Cavernous malformation—cavernous angioma—cavernous hemangioma—spinal cord—intramedullary—trauma—chiropractic—hematomyelia—hemorrhage.
© 2005 by National Stroke Association

Although rare, intramedullary cavernous malformations of the spinal cord have been widely reported in the literature, with well over 100 cases now described. These lesions have also been previously called cavernomas, cavernous hemangiomas, and cavernous angiomas, with the most recent literature suggesting that "cavernous malformation" is the most appropriate term.[1] Discovery of cavernous malformations has increased with the advent of magnetic resonance imaging (MRI), but the natural history is still unclear. We present a patient whose thoracic intramedullary cavernous malformation was found after acute neurologic deterioration occurring subsequent to chiropractic manipulation. Given the close temporal relationship between chiropractic manipulation and the abrupt worsening of neurologic status, we propose that trauma from manipulation may have contributed to hemorrhage of the cavernous malformation.

From the Departments of *Neurology, †Radiology, and ‡Neurological Surgery, Loyola University Medical Center, Stritch School of Medicine, Maywood, Illinois.

Received December 27, 2005; revised January 4, 2006; accepted January 10, 2006.

Address correspondence to Melissa J. Armstrong, MD, Department of Neurology, Loyola University Medical Center, 2160 S First Ave, Maywood, IL 60153. E-mail: marmstr@lumc.edu.

1052-3057/$—see front matter

© 2005 by National Stroke Association

doi:10.1016/j.jstrokecerebrovasdis.2006.01.003

Case Report

A 66-year-old man with a history of low back pain and left leg sciatica after a motor vehicle accident 3 years previous to this admission presented with sudden inability to walk after chiropractic manipulation. He reported that for 1 week before the manipulation, he had increased left leg weakness. After receiving a chiropractic treatment that included whole spine manipulation, electrical stimulation, and thoracic "thumps," he experienced acute onset of upper back pain, inability to walk, and worsening of left leg weakness.

Examination showed left leg weakness, worse proximally, decreased sensation from the T4 to T11 der-

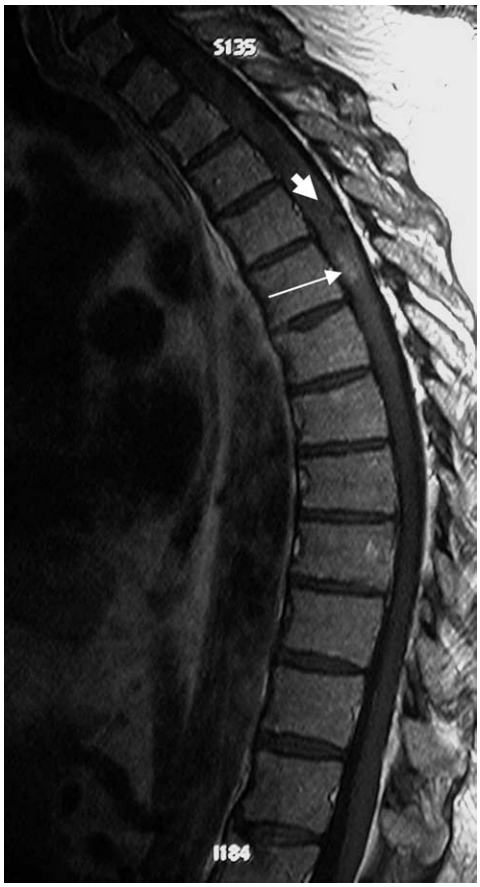

Figure 1. *MRI of thoracic spine, sagittal T1 sequence. Intramedullary lesion with dark rim and bright center (*arrowhead*) is present around posterior columns at T4 to T5 level, highly suggestive for cavernous malformation. Slightly inferiorly, at T5 level, intramedullary hyperintensity is noted (*thin arrow*), consistent with subacute blood.*

matomes bilaterally, decreased sensation to pinprick distally in both lower extremities without a clear dermatomal distribution, decreased vibratory sense throughout both lower extremities, decreased position sense in the left lower extremity, hyporeflexia in the lower extremities, bilateral Babinski's signs, a positive Romberg's sign, and ataxic gait. MRI of the spine was obtained at that time (Figs 1 and 2). Spinal cord angiography, obtained before surgery, was unremarkable.

The patient underwent posterior laminectomies of T3 to T7 and microsurgical gross total excision of the lesion. Ultrasonography and monitoring of motor and somatosensory evoked potentials were used. Intraoperative findings included a highly echogenic area near the T4 level with blue discoloration of the dorsal spinal cord. There was evidence of microvascular proliferation, blood of varying chronicities, and hemosiderin in the spinal cord. Pathologic findings of reactive gliosis and hemosiderin deposition with many vessels showing abnormal diameters and thickened walls were consistent with the diagnosis of cavernous malformation. MRI of the brain showed no evidence of associated intracranial cavernous malformations. The patient was neurologically unchanged after operation and is currently undergoing rehabilitation.

Discussion

Well over 100 cases of intramedullary cavernous malformations of the spinal cord have now been reported in the literature. The most recent comprehensive review was published in 1999, where 117 cases from the English and non-English language literature were reviewed.[2] In that review, the median age of presentation was 47 years, with a range of 12 to 88 years in 47 men and 69 women. Cavernous malformations were found most commonly in the thoracic cord, with 30% of cases involving the upper thoracic cord and 24% located in the lower thoracic cord. The mean duration of pretreatment symptoms in those cases reported since MRI has been available was 32 months, with a range of 1 week to 528 months.[2]

Three patterns of neurologic presentations were described, echoing the 4 presentations described 7 years

Figure 2. *MRI of thoracic spine, sagittal T2 sequence. Again, intramedullary lesion, which is highly suspicious for cavernous malformation, is present at T4 to T5 (*arrowhead*). Slightly inferiorly, at T5 level, intramedullary subacute blood is noted (*thin arrow*), with intramedullary edema extending further inferiorly.*

Download English Version:

https://daneshyari.com/en/article/2712096

Download Persian Version:

https://daneshyari.com/article/2712096

Daneshyari.com