Spinal epidural venous angioma causing foraminal enlargement and erosion of vertebral body

Case report

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A case history of a segmental epidural venous angioma is presented. Findings included foraminal enlargement and vertebral body erosion. Routine computerized tomography with contrast enhancement should be helpful in diagnosis of vascular anomalies in patients with radicular symptoms.

KEY WORDS □ epidural mass □ venous angioma □ vertebral body erosion □ foraminal enlargement

THE clinical course of venous angiomas of the spinal canal may resemble that of a tumor if radiological findings such as bone erosion and myelographic mass lesion are present. The following case report illustrates the diagnostic difficulties encountered in lesions of this character.

Case Report

This 65-year-old woman presented with a 6-week history of radiating pain in the right lower abdomen and groin.

Examination. There were occasional dysesthesias spreading into the right anterior thigh. The neurological examination was normal. There was no restriction of straight-leg raising and gait was unimpaired.

Plain x-ray films and tomograms of the thoracolumbar region (Fig. 1 left) revealed an enlarged intervertebral foramen at L1-2 on the right, and erosion of the posterior surface of the L-1 body. Myelography confirmed a smooth epidural mass opposite the L1-2 foramen (Fig. 1 right). A presumptive diagnosis of neurinoma was made. A computerized tomography (CT) scan showed erosion of the L-1 body and foramen without adding further information (Fig. 2). The patient, unfortunately, refused contrast enhancement of the scan.

Operation. A hemilaminectomy of L1-2 with facetectomy and foraminotomy was performed. A large varicosity was covered by and attached to the L-1 nerve root. It was contiguous with the epidural venous plexus and pulsed only with respiration. The varicosity and its tributaries were obliterated with bipolar coagulation and separated from the L-1 nerve root. No arterial blood supply
has remained asymptomatic to date. A postoperative epidural venogram showed a segmental defect in the venous plexus at L-1.

**Discussion**

Epidural arterial and venous malformations causing foraminal enlargement are exceedingly uncommon. Djindjian, et al., described two extensive epidural arteriovenous malformations causing bone erosion, and Bradac, et al., reported one such case. The lack of typical serpiginous intradural myelographic defects as well as the pure radicular nature of symptoms led us away from serious consideration of an arteriovenous malformation in the differential diagnosis. The patient's refusal of the contrast-enhanced CT scan was unfortunate, since it would appear to be a valuable and safe screening test for spinal vascular malformations.

One would have expected an arterial component to this vascular anomaly since a low-pressure venous system is an unlikely cause of bone erosion. In the absence of spinal angiography, the postoperative venogram and the lack of arterialization of the varicosity with low pressure in the vascular sac suggests the diagnosis of venous angioma. The clinical findings supported by the presence of the enlarged foramen and changes in the pedicles led to the preoperative diagnosis of neurinoma.

**References**


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