Myelopathy due to epidural varicose veins of the cervicothoracic junction

Case report

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A 30-year-old man presented with a subacute course of myelopathic signs and symptoms. Magnetic resonance imaging demonstrated an epidural mass lesion of the spinal canal at the cervicothoracic junction causing compression of the spinal cord. Laminectomy with resection of this lesion revealed a large varix with acute and chronic thrombus. Postoperatively, an improvement in neurological function occurred. Spinal epidural varicosities have been reported as an etiological factor in lumbar and sacral radiculopathies. This is the first reported case of spinal cord compression in association with spinal epidural varices. The diagnosis, pathophysiology, and management of this disorder are presented.

KEY WORDS • myelopathy • varicose veins • epidural anomaly

Spinal epidural varices have been described infrequently in the neurosurgical literature. There have been reports of lumbar and sacral varicose veins causing urinary retention1 and sciatica.2,3-4 The case reported here provides the first account of spinal cord compression from varices.

Case Report

This 30-year-old Caucasian man presented with a 13-year history of chronic interscapular and back pain and occasional numbness in the trunk and lower extremities. Three days prior to admission he had increasing and persistent numbness below the nipples, heaviness and incoordination of the lower extremities, and difficulty in initiating urination and emptying his bladder.

Examination. Physical examination revealed normal strength in the arms with mild leg weakness (5/5). There was diminished sensation to proprioception, touch, and pinprick below the nipples, with some sacral sparing. Reflexes were 3+ in the upper and lower extremities bilaterally. Bilateral Babinski signs and 3- to 4-beat ankle clonus were present. Gait was spastic and uncoordinated. Lower-extremity tone was increased. Cranial nerves and upper extremity function were normal. No cutaneous lesions were present.

Magnetic resonance (MR) imaging demonstrated a mass lesion (Fig. 1) in the epidural space, located posteriorly within the spinal canal and extending from the C-6 to the T-3 level. Diagnostic study for a neoplastic, infectious, or inflammatory process was negative.

Operation. Cervicothoracic laminectomy provided
Myelopathy due to epidural varicose veins

complete exposure of the epidural lesion, which appeared as a discrete, firm, reddish-black mass causing dorsal compression of the dural sac. Gross total resection of the lesion was achieved. The dura was normal. Pathological examination of the specimen revealed a complex of dilated veins containing organized thrombus (Fig. 2). Postoperatively, there was improvement in neurological function, with full recovery of strength and improvement in sensory and bladder function.

Discussion

Spinal epidural varices are rare causes of neurological dysfunction. Gümbel, et al., found a 0.5% incidence of varices causing isolated nerve-root compression among 1091 cases of sciatica. Similarly, Zarski and Styczynski reported a 1.3% incidence among 300 cases. Both authors describe additional instances where venous ectasia and dilatation were combined with a herniated nucleus pulposus to create nerve-root compression.

Spinal epidural varices have been ascribed to both congenital and acquired etiologies. Dysraphia and spinal anomalies are reported in up to 75% of patients with epidural varicosities. Mechanical obstructive factors, such as trauma, intervertebral disc herniation, obesity, or pregnancy, may play a role in causing thrombosis or dilatation of these vascular malformations, resulting in the production of symptoms.

Diagnosis of this entity is difficult. Magnetic resonance imaging provided a nonspecific picture, and we were unable to exclude a neoplastic or inflammatory etiology preoperatively. There were no intradural or extradural vascular dilatations on the MR image to suggest the presence of a spinal arteriovenous malformation (AVM). With lumbosacral varices, myelography may demonstrate isolated enlargement of the root sheath, but is nondiagnostic. One may consider selective spinal angiography or venography to assess for the presence of a spinal AVM, neoplasm, or venous abnormality; however, these studies are unlikely to provide a diagnosis. We recommend surgical exploration with decompression and resection of the lesion for definitive diagnostic and therapeutic purposes.

In summary, spinal epidural varicose veins are uncommon and may present with sciatica, urinary dysfunction, or, in rare cases, myelopathy. There may be an association with spinal dysraphism in some patients. Symptoms may result from thrombosis and progressive venous distention. Spinal AVM's, neoplasms, infections, and inflammatory processes should be considered in the differential diagnosis and workup of these patients. Radiographic studies are nonspecific. Surgery may offer the only means of achieving a definitive diagnosis and treatment of this disorder.

References


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