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IMAGES OF SPINE CARE

Extradural spinal cavernous malformation presenting with radiculopathy

A 10-year-old boy presented with pain radiating down the left lower extremity and gait changes, which were noted by the parents. Neurologic examination was remarkable for left foot plantar flexion weakness and decreased muscle bulk in the left calf. Magnetic resonance imaging (MRI) of the lumbar spine revealed a complex cystic lesion in the epidural space with mass effect on the left S1 nerve root. MRI signal features included intrinsic T1 and T2 hyperintensity suggesting blood products or proteinaceous cyst contents (Figure). Intraoperatively, a cystic lesion with a greenish-brown wall was found, puncture of which resulted in leakage of contents of what appeared to be liquefied chronic hematoma. Pathologic evaluation demonstrated fibrovascular tissue with ectatic blood vessels and patchy hemosiderin deposition indicative of a cavernous malformation. Near-total resection of the lesion was achieved in this case without complication.

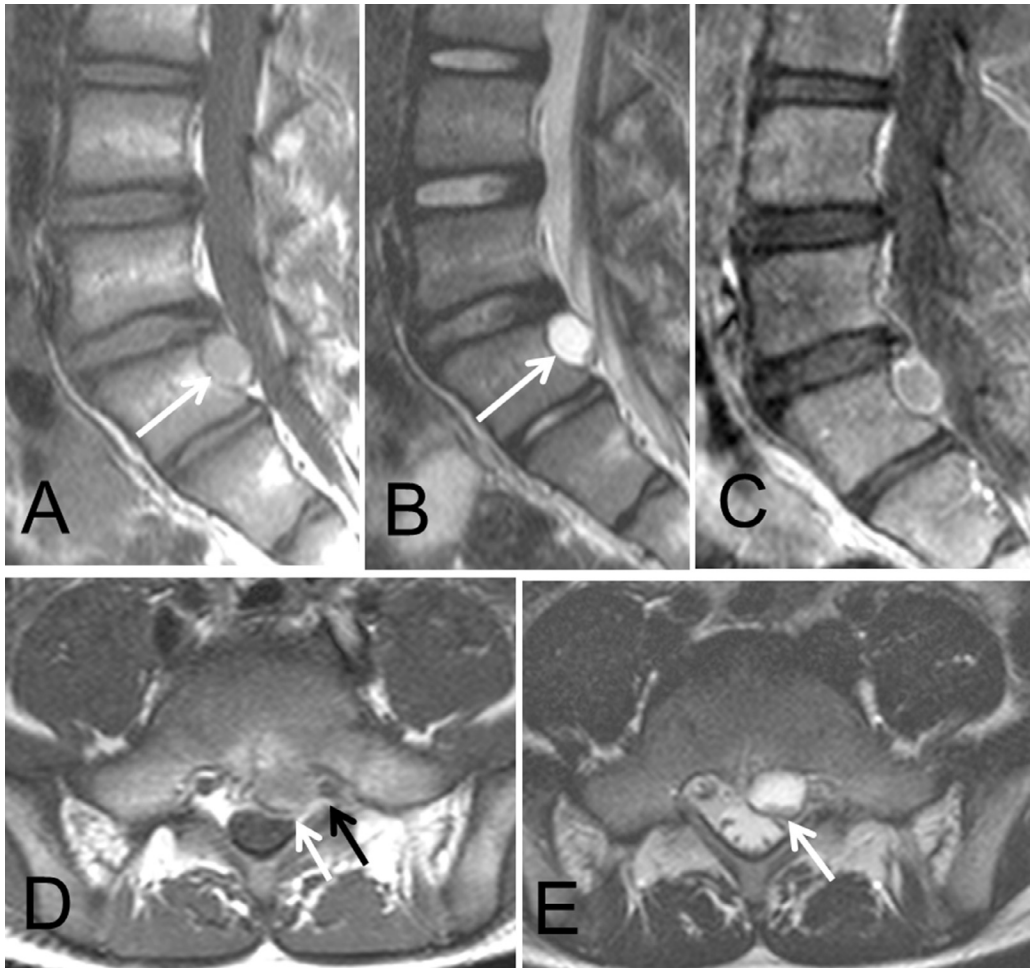

Figure. MRI with sagittal T1, T2, postgadolinium T1 as well as axial T1- and T2-weighted images (A–E). Cystic mass is seen ventrolateral to the thecal sac at the S1 level with peripheral enhancement. Signal features of T1 and T2 hyperintensity are related to subacute blood products (white arrows, A and B), with more focal blood clots/debris also noted to layer dependently (white arrows, D and E). There is mass effect on the left S1 nerve root (black arrow, E). Note the osseous remodeling of the dorsal margin of the S1 vertebral body indicating chronicity.

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Cavernous malformations ("cavernomas") are low-flow vascular malformations consisting of a cluster of dilated blood vessels. These lesions are almost always *intra*-axial in location in the brain or spinal cord and have a tendency to hemorrhage repeatedly and produce variable neurologic deficits. Extra-axial cavernous malformations are rare but have been reported [1,2]. Given their atypical location, preoperative recognition may be difficult. However, if a cystic lesion containing complex fluid or blood products is seen on MRI, this entity should be considered in the differential. Nerve sheath tumor with cystic necrosis and ganglion cyst of the posterior longitudinal ligament are other cystic lesions that can occur at this location.

References

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Saad Ali, MD[a]
David M. Frim, MD, PhD[b]
[a]*Section of Neuroradiology*
Department of Radiology
University of Chicago Medical Center
5841 S. Maryland Avenue Chicago, IL 60637, USA
[b]*Section of Neurosurgery*
Department of Surgery
University of Chicago Medical Center
5841 S. Maryland Avenue Chicago, IL 60637, USA

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