

Unusual Case: Progressive Lower Limb Weakness Due to Thoracolumbar Arteriovenous Fistula

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INTRODUCTION:

Spinal dural arteriovenous fistulas (SDAVFs) are rare vascular anomalies involving an abnormal connection between the arterial and venous systems within the spinal dura mater. These lesions commonly exhibit a range of neurological symptoms, from mild sensory issues to severe motor deficits.

REPORT:

We report a 37-year-old man presenting with persistent back pain for two months. He experienced progressive weakness and numbness in both legs without bowel or urinary incontinence, and no significant trauma history. He denied fever, infection symptoms, or signs of malignancy. Clinical examination showed lumbar and paravertebral muscle tenderness, with normal blood investigations.

Neurological exam showed decreased power below L2 level with reduced sensation at L4, L5, and S1 bilaterally. Sphincter function remained intact. MRI revealed a rare arteriovenous fistula from T3 to L2, underscoring the need to consider vascular anomalies in patients with back pain and neurological symptoms, regardless of trauma history. The patient was subsequently managed with a multidisciplinary approach, involving neurosurgery and interventional radiology, to address the arteriovenous fistula.

The gold standard for diagnosis is spinal angiography, usually conducted after an initial MRI.^[1] Due to the rarity of the disease, there is limited epidemiological data; however, one study noted that patients are typically males in their sixth decade of life when diagnosed with spinal dural arteriovenous fistulas.^[2] Finally, the management of these patients involves either endovascular embolization of the AVM or the clipping and ligation of the AVM.

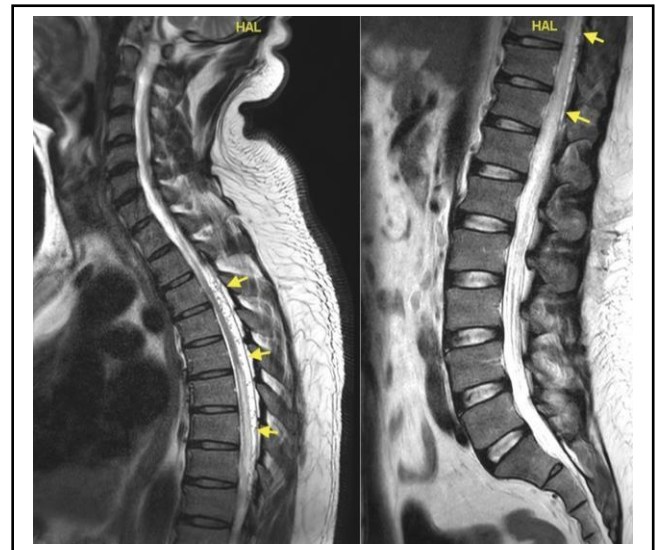


Figure 1: MRI T2 showing intradural extramedullary serpiginous flow voids at the dorsal aspect from T3 to T11 vertebral levels (Yellow Arrow) with mild enhancement seen.

CONCLUSION:

SDAVFs are frequently missed or misdiagnosed, emphasizing the importance of raising awareness among healthcare providers for prompt identification and intervention in cases of spinal dural arteriovenous fistulas with cord edema.

REFERENCES:

1. Jellema K, et al. Spinal dural arteriovenous fistulas: clinical features in 80 patients. *J Neurol Neurosurg Psychiatry*. 2003;74(10):1438–40.
2. Krings T, et al. Endovascular management of spinal vascular malformations. *Neurosurg Rev*. 2010;33(1):1–9.