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Spinal dural arteriovenous fistula: a misdiagnosed and treatable cause of non-compressive myelopathy

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Image in medicine

A 50-year-old woman, previously healthy, presented with a 9-month history of progressive paraparesis with sphincter disturbances and hypoesthesia in lower legs. Several weeks before admission, her paraplegia and urinary dysfunction rapidly deteriorated. She was unsuccessfully treated 4 months prior with analgesics and corticosteroids drugs. Spinal magnetic resonance imaging (MRI) (A) showed central myelopathy of the conus medullaris with posterior dilated perimedullary veins (arrows), suggestive of a spinal vascular malformation. Selective spinal angiogram of the right T11 segmental artery (B) demonstrated a right sided fistulous connection

between the segmental artery and the perimedullary venous plexus (dotted oval circle). A thoracic T10-T12 laminectomy and durotomy was performed, which showed engorged venous vessels on the posterior surface of the spinal cord (C). An arterialized draining vein was identified arising from the inner aspect of the dura of the right T11 nerve root. This vessel was completely clipped (arrow). Postoperatively, neurologic examination remained unchanged at the time of discharge. However, at 4-month follow-up, she was able to ambulate with a walker. Postoperative angiography performed 2 months later showed total disappearance of the vascular fistula (D). Spinal dural arteriovenous fistula (SDAVF) is a rare cause of progressive myelopathy. This vascular malformation is usually misdiagnosed because its clinical features can mimic more common causes of myelopathy (Neoplams, infections, musculoskeletal, inflammatory, and nutritional). Also, MRI may be interpreted as normal for a relatively long period of time. High clinical suspicion for SDAVF when MRI is uncertain should prompt spinal angiography to avoid delay in this treatable disease.

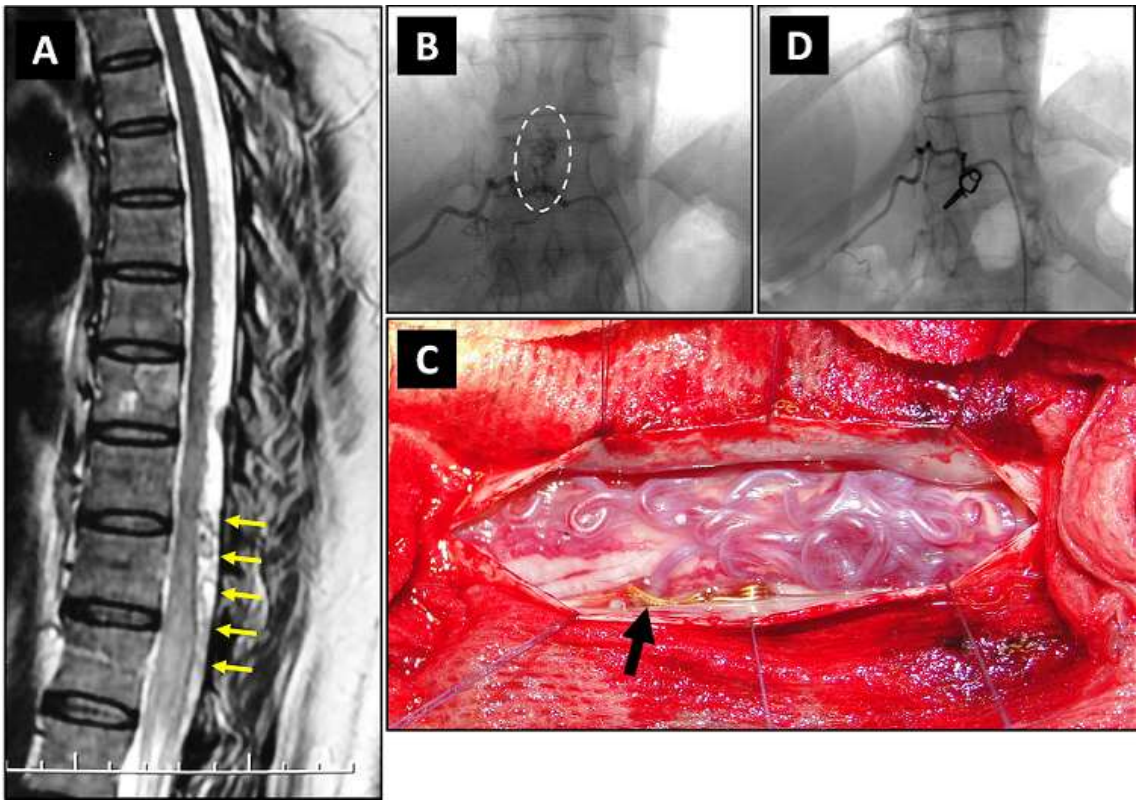

Figure 1: spinal dural arteriovenous fistula: a misdiagnosed and treatable cause of non-compressive myelopathy