

SPORTS MEDICINE & ORTHOPEDICS

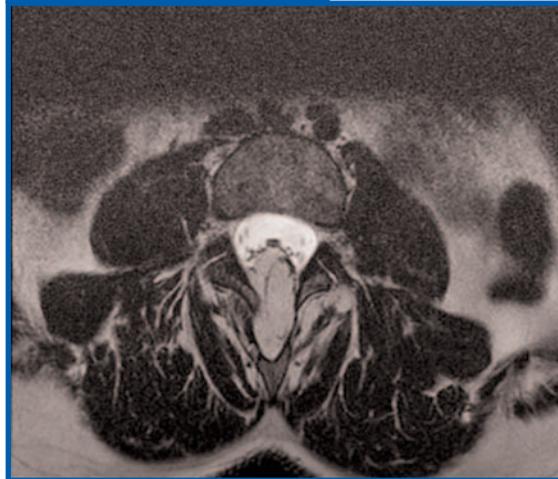
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FIGURE 1



FIGURE 2



A 29-year-old man presents with a 1-week history of increasing pain and paresthesia in his bilateral lower extremities, with his right foot and ankle affected most. He denies any recent history of trauma or injury but has a remote history of an injury to his right foot and ankle. He also reports that he had “scar tissue” removed from his lumbar spine during childhood. Examination reveals decreased range of motion of the right foot and ankle and altered sensation in both feet. Radiographs of the lumbar spine are noncontributory, and MRI of the lumbar spine is performed (Figures 1 and 2).

How would you interpret these images?

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FIGURE 1

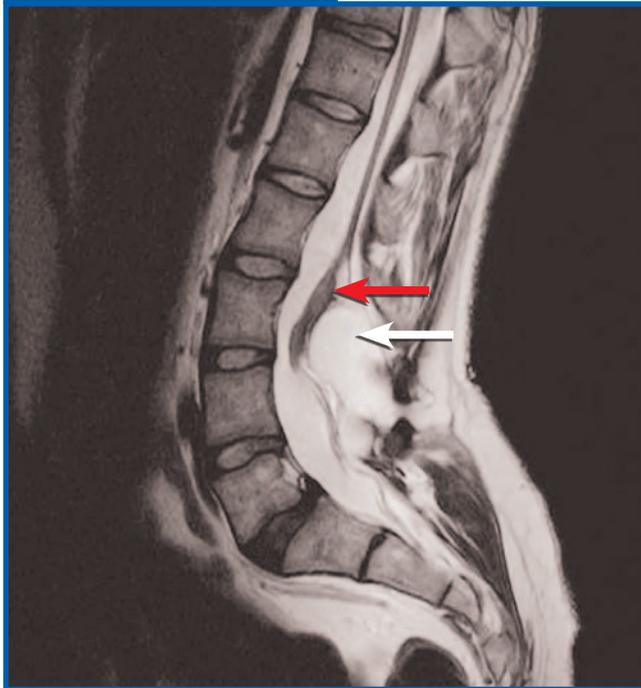


FIGURE 2



Figure 1 is a sagittal T₂-weighted image and Figure 2 is an axial T₂-weighted image; both reveal a tethered cord (red arrows) in the lumbar spine with a fluid-filled atypical arachnoid cyst (white arrows) at the level of L3. Tethered cords often develop as a result of arachnoiditis or meningeal scarring. These conditions provide an environment that enables the cord to adhere to the area of inflammation surrounding the injury. In this patient, the arachnoid cyst is most likely a sequela of his childhood spine surgery. Over time, the enlarging cyst provided opportunity for the cord to tether.

Once tethering occurs, excessive cord tension develops with normal range of motion of the lower back, resulting in pain. Patients with cord tethering frequently report weakness (78%), sensory loss (58%), and increasing pain (40%).¹ Ischemia to the cord may also result from tethering. This patient was referred immediately for neurosurgical evaluation.

REFERENCE

1. Little JW, Burns SP. Neuromusculoskeletal complications of spinal cord injury. In: Kirshblum S, Campagnolo DI, DeLisa JA. *Spinal Cord Medicine*. Philadelphia, PA: Lippincott Williams & Wilkins; 2002:chap16.