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Spinal Cord Infarction With Good Recovery in a Middle-aged Male : Case Report

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Introduction

Spinal cord infarction patients typically present with acute paraparesis or quadriparesis. The severity can vary depending on the level of the spinal cord involved, but permanent and disabling neurologic deficits remain in most. Herein, we report a spinal cord injury patient, who recovered to the level of independent gait and without any other complications through early intensive rehabilitation.

Case Report

A 54-year old male was presented with sudden onset both leg weakness. He complained mainly sensory change of both lower limbs and progressive lower leg weakness. He denied any changes above the waist level. On initial examination, vital sign was stable and all blood laboratory findings were within normal limits. Motor examination was normal for upper limbs. However, motor strength of lower extremities was found to be between grade zero to fair and distal muscles were weaker than proximal muscles. There were also absent deep tendon reflexes and all sensory modality was impaired below the L3 level. A digital rectal examination revealed impaired perianal sensation with absent anal tone. He also had a urinary dysfunction. In short, his initial condition was in a bed-ridden status. Cerebrospinal fluid study for differentiating inflammatory etiologies was done and found a slightly increased protein level at 59.8mg/dL. MRI of the spine was performed that showed central signal change in T12-L1 cord levels with surrounding edema and there was no severe degenerative change or space occupying lesion and cord compression lesion (Figure 1). The patient was started on aspirin and corticosteroids with a possibility of a demyelinating spinal cord lesion. To differentiate an ischemic lesion, he underwent additional MR angiography (MRA) and diffusion-weighted imaging. Although no vascular anomalies were discovered in MRA, there was a diffusion-hyperintense infarct of the spinal cord at distal thoracic level (Figure 2). After that, intensive rehabilitation including aquatic therapy was initiated to help build muscle strength and improve balance. On day 11 of admission, some improvement was observed in the power of lower limbs and he was able to sit up with a minimal assist. By one month, motor recovery was made up to normal grade except for ankle dorsiflexion and big toe extension. In addition, there was no neuropathic pain without addition of analgesic medications. He was able to sit up independently and ambulate independently with application of a customized ankle-foot orthosis, while voiding and defecation difficulties were resolved with proper management and care. Also until 3 months after the initial diagnosis, he had not experienced any recurrence or aggravation.

Conclusion

Spinal cord infarction tends to have a severe prognosis with permanent and disabling sequelae. This report is a rare case of spinal cord infarction at distal thoracic level who has a good recovery without any complications.

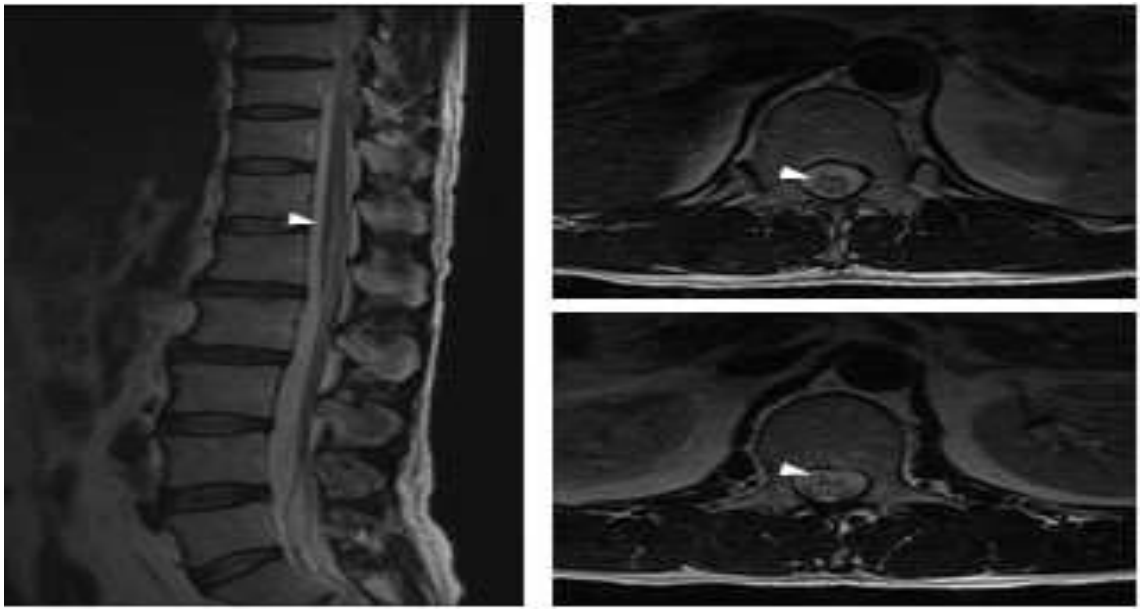

Fig 1. T-L spine MR T2 weighted image : Segmental swelling and abnormal T2 signal in central zone of conus medullaris at T12 - L1 levels

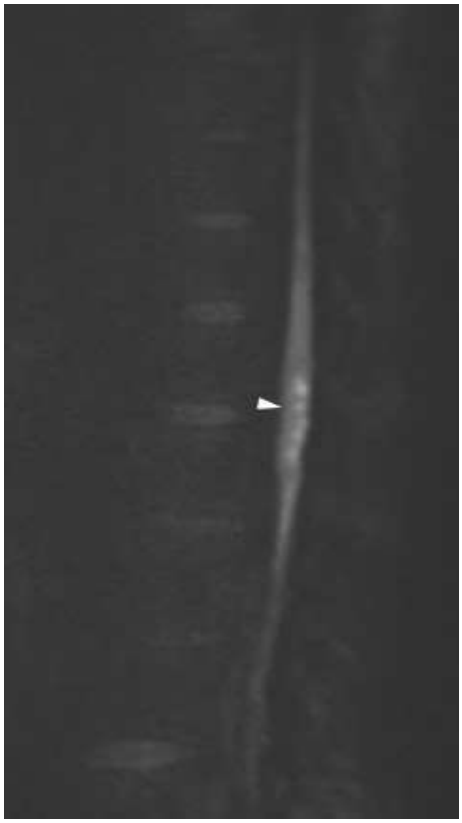

Fig 2. Diffusion-weighted image : A high signal intensity lesion in the distal spinal cord from mid-T12 level to conus medullaris and some cauda equine