

Conus medullaris ischemia with ventral roots enhancement of cauda equina: a case report

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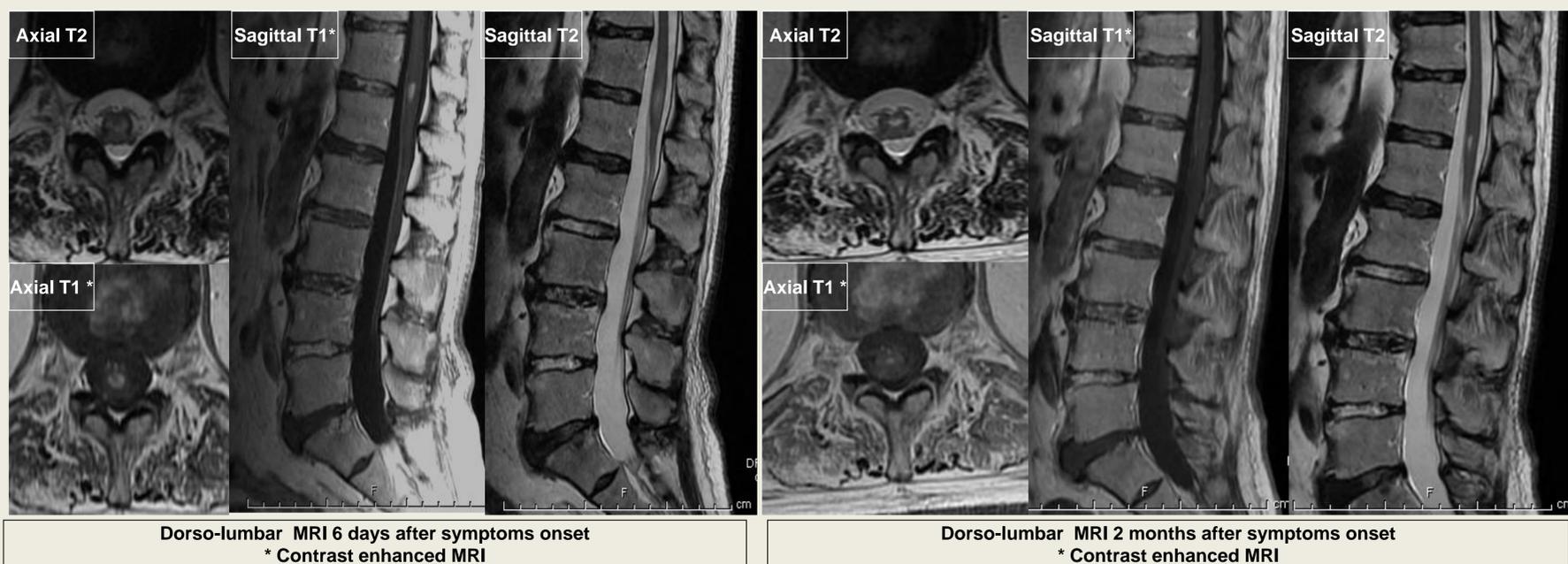
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Objectives:

Spinal cord ischemia represent 5 to 8% of acute myelopathies with a peak incidence between the sixth and seventh decades. The diagnosis is primarily clinical but radiologic imaging is an essential support; in particular, a magnetic resonance imaging (MRI) is of outmost priority: when approaching an acute myelopathy, it is the initial investigation of choice to exclude an acute compressive cause (surgical emergence) and to define the site and extension of a spinal cord lesion. Yet, as in this case, the radiologic findings cannot be always easy to interpret.

Case presentation :

A 81-year old man was admitted to our hospital because of a progressive gait disturbance that began 3 days earlier. At the emergency department it was noted an ataxic gait with difficulty walking and standing up. At the neurological examination there was a moderate weakness of all movements at the ankles and toes, and of knee flexion; symmetric and normoactive upper extremity deep tendon reflexes; brisk knee jerks bilaterally; reduced ankle reflex on the right and absent on the left; a diminished sensation in both lower legs and feet, with an apparent sensory level at L1; his gait appeared minimally ataxic. He did complain some voiding difficulties. A presumptive diagnosis of transverse myelitis was suspected so the patient underwent a dorso-lumbar MRI (6 days after symptoms onset) that revealed a central conus medullaris lesion (limited to D12-T1 level, predominantly involving the anterior horns and left-postero-lateral horns), with a subtle hyperintensity in DWI and focal enhancement after gadolinium administration (fig.1). In addition, cauda equine anterior roots showed vivid and linear enhancement (fig. 1). A lumbar puncture was then performed displaying an increased protein level with a normal glucose level, without pleocytosis. The patient had a history of hypertension and coronary artery disease. A color Doppler ultrasonography of the abdominal vessels revealed a mild atherosclerotic disease of the infrarenal aorta. It was started an antiplatelet therapy. The patient noticed a progressive improvement of weakness and urinary function within the first days after the admission. At 2 months he was ambulating without a gait aid and a MRI control scan showed a gliotic scar of conus medullaris (fig. 2).



Conclusions:

A final diagnosis of spinal cord ischemia was done, supported by the rare positive anterior cauda sign. Our report aims to raise awareness about the insidious presentation of this severe neurological disease and the significant contribute of MRI that can also exhibit specific findings.

References:

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