CASE PRESENTATION

ANTERIOR SPINAL ARTERY INFARCT

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ABSTRACT

The infarcts of the spinal cord are a relatively rare disease, being described in small series of cases or case reports. We describe a case of a 51 year old female with a partial form of anterior spinal artery infarct presenting only brachial diplegia, with MRI scan showing a medullar infarct in the anterior spinal cord, from C3 to T1.
Key words: anterior spinal artery, infarct

BACKGROUND

The anterior spinal artery syndrome due to spinal cord infarction is a relatively rare disease. The anterior two thirds of the cord are more frequently affected by ischemia than the posterior one third due to the existence of more efficient functional anastomoses at the posterior spinal arteries region (1). The partial forms are most common; the infarction can be limited to the gray matter of the anterior horn because of its grater susceptibility to ischemia, patients presenting acute flaccid motor paralysis and normal sensory and sphincter functions (2).

The magnetic resonance imaging (MRI) of the spinal cord provides important data for the diagnostic workup. In 93% of the cases, T2-weighted images can detect the ischemic lesion at the time of the onset of the symptoms, but the T1-weighted images are less reliable because in 70% of the cases the infarcts appear isointense at the onset and 18% are hypointense (3).

CLINICAL HISTORY

We present the case of a 51-year-old woman who came to the emergency unit for an intense lancinating precordial and thoracic pain, with a sudden onset in the morning, soon after she woke up. The pain irradiated in both upper limbs. In a few minutes, the symptoms aggravated with brachial diplegia and paresthesias in forearms and palms. In the emergency room, there was excluded a cardiac disease, performing EKG and Doppler echocardiography (including transesophagian ultrasonography).

NEUROLOGICAL ASSESSMENT

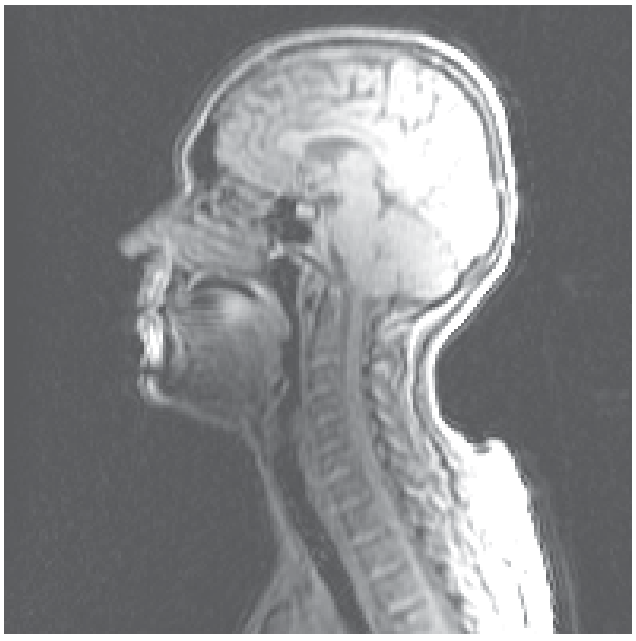
The neurological examination revealed the following pathological signs: flaccid brachial diplegia with tendency to flexion of the upper limbs, tendon reflexes were absent in the upper limbs, the Babinski sign was present bilaterally. There was no sensory impairment.

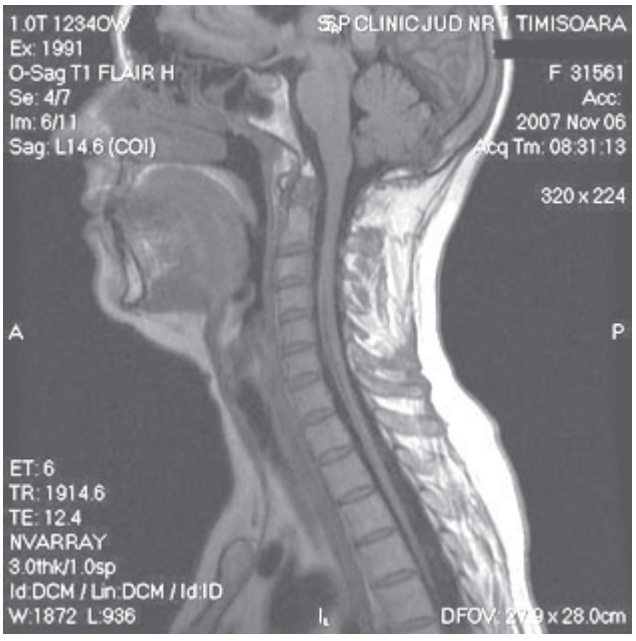
After 6 weeks, the motor deficit improved, with more difficult extension of the forearm than flexion, but impossibility of finger movements. The jerk reflexes appeared, but were diminished in the upper limbs. During this time the patient presented two syncope attacks due to severe orthostatic hypotension.

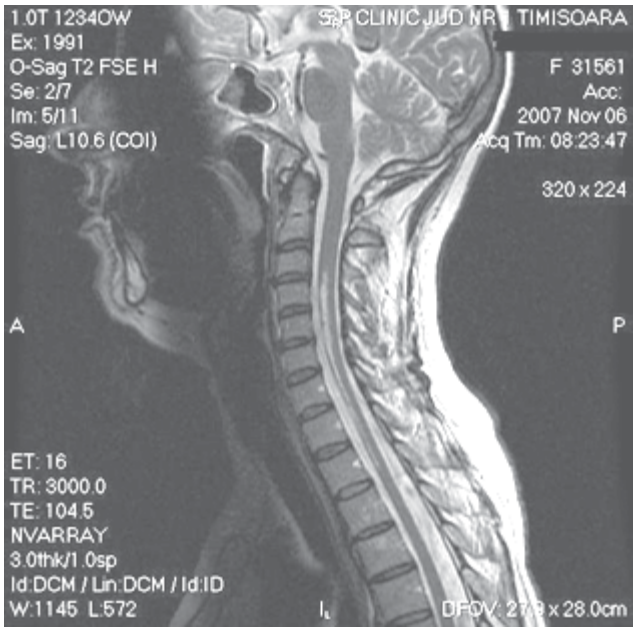
NEUROIMAGING

The magnetic resonance imaging (MRI) performed soon after the onset of the symptoms revealed an increased spinal caliber from C3 to T1 with T1 hypointensity and T2 hyperintensity of anterior horns. There were no changes at the ependymar level or at the vertebras or discs. The image is suggestive for an anterior spinal infarct.

The MRI performed 6 weeks later revealed a T1 hypointense and T2 hyperintense lesion in the segment C4-T1 involving exclusively the anterior horns, with discrete increase of the volume of the affected segment, the image corresponding to the territory of the anterior spinal artery.







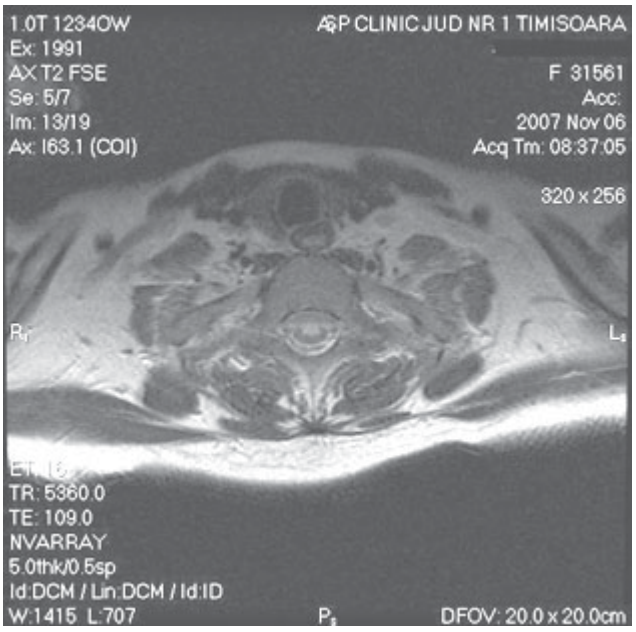


Figure 1
Comparing the two examinations, there is a decrease in the volume of the lesion, suggesting the natural course of an ischemic lesion

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