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CASE REPORT

Spontaneous spinal epidural hematoma: Early surgical intervention provides ideal neurological outcome

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surgical outcome

Summary Spontaneous spinal epidural hematoma (SSEH) is an unusual cause of spinal cord compression, requiring emergency diagnosis and treatment. We report a case of SSEH, and discuss its early diagnosis and rapid surgical intervention. A 46-year-old man was brought to our emergency department because of sudden-onset, rapidly-progressive paraplegia and acute urinary retention. Magnetic resonance imaging revealed an epidural mass lesion in the posterior epidural space from T9 to T11 in the spinal canal. The patient underwent emergency decompression laminectomy within 4 hours of symptom onset and recovered fully within 1 week. In patients with SSEH, early surgery is crucial to ensure a favorable outcome.

1. Introduction

Spontaneous spinal epidural hematoma (SSEH) is traditionally considered a relatively rare cause of spinal cord compression, with a reported incidence of approximately 1 patient per 1,000,000 people in 1996.[1] However, SSEH is becoming increasingly common, with two cases reported in 1986 and seven in 1997.[2] This increasing trend might be

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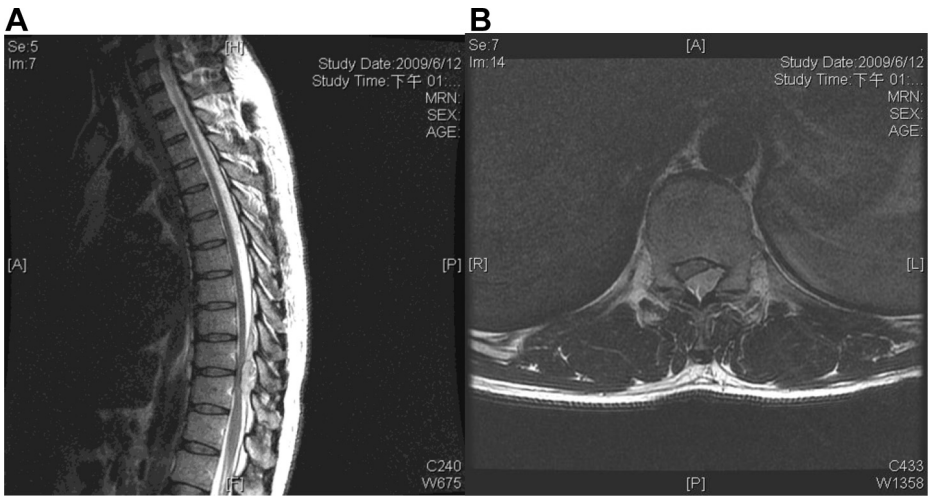

Figure 1 T2-weighted sagittal magnetic resonance imaging of the cervicothoracic spine, showing the spinal cord from T9 to T11 being compressed with a posterior epidural mass lesion: (A) sagittal view; (B) transverse view.

attributable to the increased use of spinal magnetic resonance imaging (MRI) as a diagnostic tool.

SSEH is more common in men than in women (1.5:1), and most commonly affects patients aged between 50 years and 80 years.[2] The etiology of SSEH remains unknown; however, predisposing factors are considered to include vascular anomaly, coagulopathy, and arterial hypertension.[3] Rapid decompressive surgery is strictly indicated in all cases in which the neurological deficit is serious or symptoms demonstrate rapid worsening. Time to diagnosis and surgery can play a major role in reducing morbidity. Rapid diagnosis often leads to a full recovery with no residual neurological deficits.

2. Case Report

A 46-year-old man presenting with severe lower back pain was brought to the emergency department of the study hospital. The onset of his pain was a few hours previously, with no trauma or fall reported. Rapid exacerbation of symptoms ensued, resulting in complete paralysis of the lower leg muscles (0/5 Frankel bilaterally). The patient also experienced acute urine retention.

Physical examination revealed normal response in the patient's upper limbs and normal vital signs. Blood test results indicated no abnormalities; however, spinal MRI revealed an epidural mass lesion (10 mm × 12 mm × 63 mm) in the posterior epidural space from T9 to T11 in the spinal canal. Heterogeneous high signals on T2 weighted imaging and T1 weighted imaging indicated a hematoma (Fig. 1). Although no obvious enhancement was noted, a significant mass effect on the T11 cord was observed. Disc spaces and bone marrow signal intensities displayed minimal change. Preoperative somatosensory evoked potentials tests indicated reduced waveform velocity and size. Postoperatively, the waveforms recovered.

The patient underwent surgery approximately 3 hours after admission and diagnosis. An emergency decompression laminectomy was performed between T9 and T11, revealing a dark reddish hematoma attached to the dura.

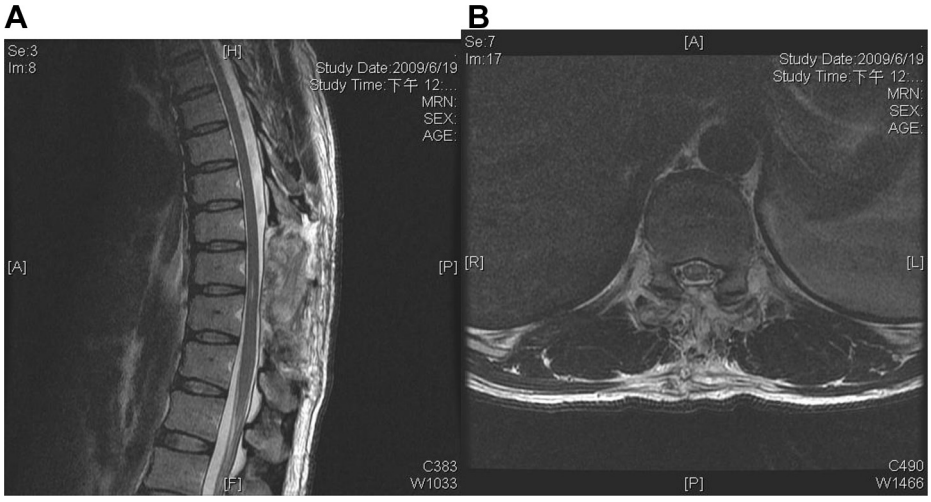

Figure 2 T2-weighted sagittal magnetic resonance imaging after laminectomy and removal of the hematoma: (A) sagittal view; (B) transverse view.