

Case Report

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Traumatic Spinal Epidural Hematoma with Neurological Deficit

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ABSTRACT

Blood collection in epidural and subdural areas is known as spinal subdural and epidural hematoma. The incidence of spinal epidural hematoma (SEH) is roughly 0.1 per 100.000 per year. These hematomas that can cause mechanical pressure are usually seen in lumbar and thoracic areas in the spinal cord. Spinal epidural hematoma is an unusual and acute clinically significant event. Hemorrhagic diathesis, spinal trauma, lifting, coughing and anticoagulant treatment are known as the common causes of spinal epidural and subdural hematomas. Spinal epidural hematomas could be present paralysis of the lower extremity, cauda equina syndrome, local orradicular backpain in regard to location of spinal blood collection but sometimes asymptomatic cases could be seen. A 64-year-old woman was admitted to emergency department after falling from a motor vehicle. The aim of this case report is to present a post-traumatic lumbar epidural hematomas.

KEY WORDS: Trauma; Spinal epidural hematoma (SEH).

ABBREVIATIONS: SEH: Spinal Epidural Hematoma; MRI: Magnetic Resonance Imaging; CT: Computed Tomography.

INTRODUCTION

Blood collection in the epidural and subdural areas is known as spinal subdural and epidural hematoma.¹ These hematomas that can cause mechanical pressure are usually seen in lumbar and thoracic areas in the spinal cord.¹ Spinal epidural hematoma is an unusual and acute clinically significant event.² For the first time, spinal epidural hematoma (SEH) was identified in 1808 by Mayer and upto now over 300 cases were reported in the literature and also spontaneous spinal epidural hematoma is the most common type of these cases.² Hemorrhagic diathesis, spinal trauma, lifting, coughing and anticoagulant treatment are known as the common causes of spinal epidural and subdural hematomas.^{1,2} The aim of this case report is to present a post-traumatic lumbar epidural hematomas.

CASE REPORT

A 64-year-old-woman was admitted to emergency department after falling from a motor vehicle. There was no previous relevant medical or surgical history except for cervical and lumbar discherniation. In the first assesment, vital signs were as follow; blood pressure: 130/80 mmHg, fever: 36.7 C, pulse: 87 bpm. On examination, the patient was oriented, alert, conscious, Glasgow Coma Scale was 15, there was a minimal abrasion at thoraco lumbar areas and focal motor neurological deficit in left lower extremity (unilateral power grade 2/5). The rest of the physical examination was normal. Laboratory results were normal. The patient's radiographic evaluation included X-ray, thoracoabdominal computed tomography (CT) scan and magnetic resonance imaging (MRI) cervical-thoracic-lumbar-weighted MRI images showed hypointense, T2-weighted MRI images showed hyperintense and the level of L5 vertebral and there was a depression on spinal canal (Figure 1). After the examination and laboratory tests she was operated by neurosurgery. "Immediate surgical drainage" was performed by neurosurgeon.

Figure 1: T1 Weighed MR Images Showed Hypointense Expansile Image at the Level of L5 Vertebral.



After the operation she was discharged without neurological deficit.

DISCUSSION

The incidence of SEH is roughly 0.1 per 100,000 per year.⁴ SEH rate of incidence is 4:1 between men and women.⁴ In literature, accessing to information about post-traumatic SEH is uncommon so that pathophysiology of SEH is unclear and risk factors can change according to every patient with SEH.³ Spinal epidural hematomas could be present paralysis of the lower extremity, cauda equina syndrome, local or radicular back pain in regard to location of spinal blood collection but sometimes asymptomatic cases could be seen.¹ Prevalently, blood collection in the spinal cord originates at the posterior surface by reason of anatomical location of venous plexus.¹ Blood collection can be determined anywhere in spinal canal between dura and spine but also SEHs are more common than the cervical.⁴ Early diagnosis of spinal epidural hematoma is difficult because of its unusual occurrence whereas normal neurological examination may cause retardation of diagnosis.² The physician should think about epiduritis, neuralcyst, slipped disc and tumor in the differential diagnosis of spinal epidural hematoma.³ MRI is used for diagnosis of SEH and surgical intervention which should be treated immediately but some authors argue for any surgical intervention if the patient has minimal neurologic deficit.³ Epidural hematoma can be seen hypointense, isointense or hyperintense signal in T1-weighted images due to hemorrhage age.⁴ If the patient was treated with surgical intervention, the patient's outcome neurological motor deficit depends on pre-operative and operative timing interval.⁴ If the decompression of SEH within 12 hours, the outcome will be better.⁴ Wahjoepramono reported a case of traumatic subacute traumatic spinal epidural hematoma in a 4-year-old boy with distinct neurological deficits and completely recovered.⁵ Our patient was decompressed for about six hour in hospital and after that her outcome neurological motor deficit was absent.

CONCLUSION

Consequently, patients with neurological deficit who are admitted to the emergency department after a trauma, should be detected for any spinal epidural or subdural hematomas, back pain and paraplegia. Paraplegia could be confirmed by performing CT and MRI in the emergency department.

CONFLICTS OF INTEREST

The authors declare that they have no conflicts of interest.

CONSENT

Written informed consent was obtained from the patient.

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