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Spontaneous regression of traumatic lumbar epidural hematomas

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Summary

Background:

The aim of this report is to present a case of spontaneous regression of traumatic lumbar epidural hematomas.

Case Report:

A 45-year-old man presented at our clinic after falling from a height. After admission, anterior compression was detected by X-ray, so lumbar spinal CT was performed. For ligament damage, emergency MR was performed. There was acute hematoma at 1 cm diameter, which began at the L3 vertebra superior surface and spread to L4 vertebra corpus; therefore the patient was informed and surgery recommended. The patient rejected the surgery, and medical management was designed. At day 45, lumbar MRI was performed. There was no evidence of traumatic epidural hematoma.

Conclusions:

The purpose of this study is to report a case with post-traumatic spinal epidural hematomas with normal neurologic findings and spontaneous regression.

key words:

trauma • spinal epidural hematoma • spontaneous resorption

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BACKGROUND

Spinal subdural and epidural hematomas are blood collection in subdural and epidural spaces, causing mechanical compression of the spinal cord. Bleeding is usually seen at thoracic and lumbar regions and can occur spontaneously or with spinal trauma, anticoagulant thrombolytic treatment, bleeding diathesis or after lumbar puncture [1,2].

Initial symptoms can be local or radicular back pain. Cauda equina syndrome and paralysis of the lower extremity may occur according to width and localization of the hematomas. Deficits can occur in a short period, but in some cases there may be no symptoms or findings.

In this case the traumatic spinal hematomas resolved spontaneously.

CASE REPORT

A 45-year-old man was brought to the emergency department after falling from a height. In the first assessment, vital signs were stable (blood pressure: 120/80, fever: 36.7, pulse: 74); the patient was conscious and had no neurological deficit. Upon inspection there was minimal abrasion at lumbar areas and precision with palpation. Urgent blood tests and spinal X-ray were performed. No pathological findings were determined in urgent blood tests. In X-ray, anterior compression was detected, so lumbar spinal CT was performed. Comminuted fracture was detected at L3 vertebral corpus. For ligament damage, emergency MR was performed. There was acute hematoma at 1 cm diameter beginning at the L3 vertebra superior surface and spread to L4 vertebra corpus (Figures 1, 2); therefore the patient was informed and surgery recommended. The patient rejected the surgery, and medical management was designed. Ten days later, there were no deficits detected at physical



Figure 1. Initial sagittal T2 weighted MRI imaging of spinal epidural hematoma at L3.

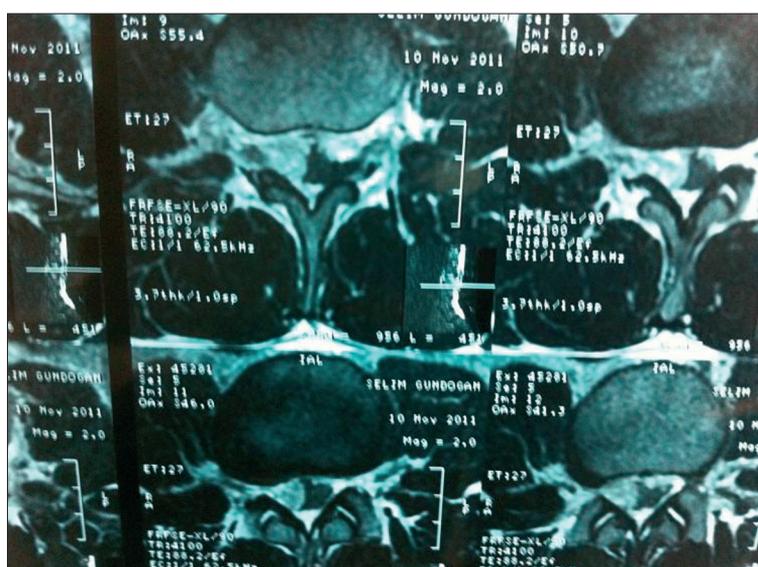


Figure 2. Initial axial T2 weighted MRI imaging of spinal epidural hematoma at L3.

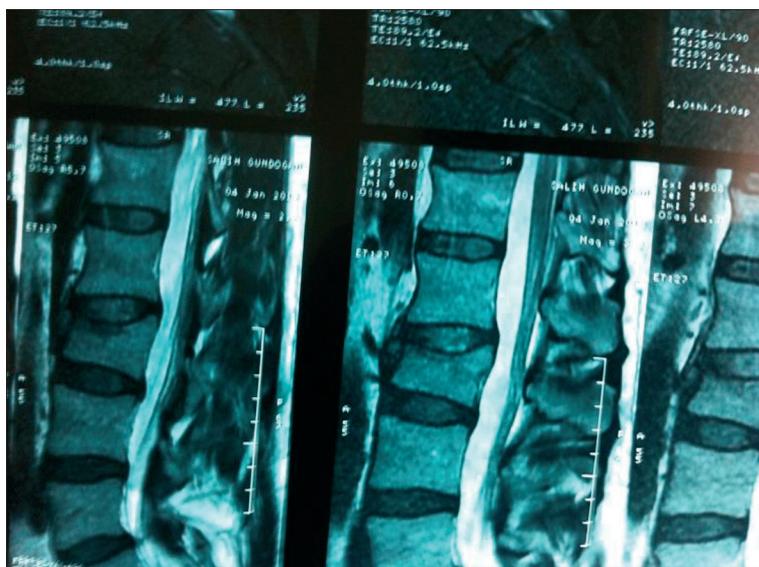


Figure 3. 10 days control mri: completely resorbed epidural hematoma was seen on sagittal T2 weighted MRI imaging at L3.

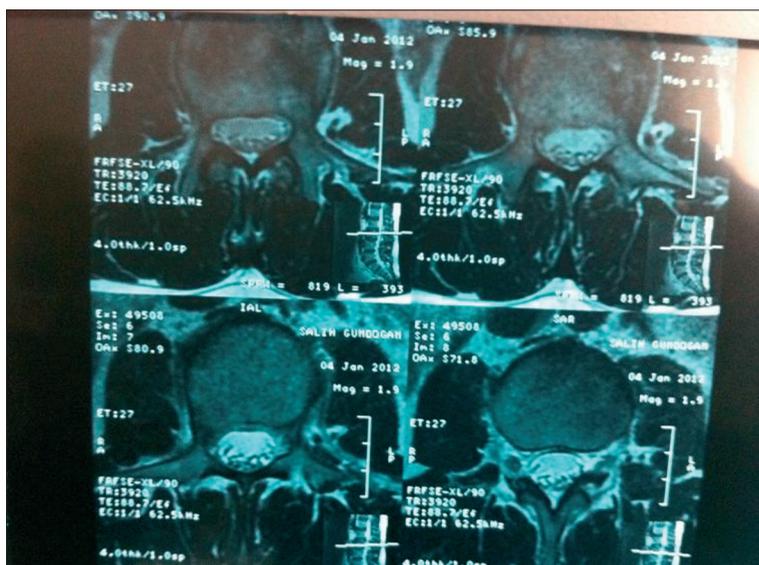


Figure 4. 10 days control mri: completely resorbed epidural hematoma was seen on axial T2 weighted MRI imaging at L3.

examination and no increase at compression in the X-ray. At day 45, lumbar MRI was performed; there was no evidence of traumatic epidural hematoma (Figures 3, 4).

DISCUSSION

Spinal epidural hematomas are seen with anticoagulant drugs, hemophilia A or B, spinal hemangiomas, trauma, surgery, or after percutaneous interventions to thoraco-lumbar areas [1–3]. Spinal epidural hematomas occur at the posterior surface of the spinal cord because of the anatomical course of the venous plexus [4]. Groen and Ponsen indicated that epidural hematomas were localized at posterior epidural regions in their series [3]. Spontaneous epidural hematomas at lumbar regions are rare, and usually occur at thoracic regions [5]. In Mahkam's 49-case series there were 5 cases with lumbar hematomas [5].

Clinical findings of spinal epidural hematomas are broad. Neurological examination can be normal, or back pain, paresis or paraplegia may present [1,6].

Some investigators suggest that the fragility of epidural venous plexus should increase bleeding tendency. Epidural hematomas can be distinguished from subdural hematomas with MRI findings. Epidural hematomas have biconvex intensity at MRI [6]. Epidural hematomas should be distinguished from epiduritis, neural cysts, metastatic tumors and discs [2]. The treatment is performed due to neurological examination and radiological findings [7]. Some authors suggest emergency surgery, planning the surgery time according to the lesion's dimension and neurologic status. Age, sex, the position of the hematoma, and lesion dimension are unimportant for the postoperative treatment and prognosis.

Groen et al. evaluated 330 cases in their series, and suggested that the patients' postoperative course correlates with preoperative neurological findings [3].

As a result, CT and MRI should be urgently performed for patients who come to the emergency department with back pain, paraparesis or paraplegia [7].

CONCLUSIONS

When our patient presented at the emergency department after trauma, we detected a traumatic epidural hematoma. We suggested surgery to this patient, who was neurologically stable. The patient rejected the surgery, so we planned medical management. MRI was performed after 6 weeks and there was no evidence of hematoma. This case is interesting because traumatic epidural hematoma was treated with non-surgical management and had a good prognosis.

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