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Case Report

Spontaneous cervicothoracic epidural misinterpreted as transient ischemic attack (TIA)

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ABSTRACT

Background: The acute onset of a spontaneous spinal epidural hematoma (SSEH) is an uncommon cause of spinal cord compression. Early diagnosis and treatment are critical to avoid significant residual postoperative neurological deficits.

Case Description: A 15-year-old male presented with the sudden onset of a hemiparesis which recovered (4/5 weakness). The brain MR was negative, but spinal MRI revealed a dorsolateral extradural lesion extending from C7 to D1. At surgery, this proved to be a hematoma that we readily removed.

Conclusion: Spontaneous epidural hematomas are rare. They should be diagnosed promptly with MR, and typically warrant urgent/emergent surgical excision. Further, cases of SSEH resulting in hemiparesis may occasionally be misdiagnosed as attributed to a stroke or transient ischemic attack.

Keywords: Hemiparesis, Spontaneous hematoma, Transient ischemic attack

INTRODUCTION

Spontaneous spinal epidural hematomas (SSEHs) are rare and are usually attributed to; nontraumatic causes such as hemophilia, sneezing or lifting, neoplasms, arteriovenous malformation, hypertension, straining, or anticoagulants.[4,5] The incidence of SSEH is 0.1%/100000.[1] Idiopathic cases account for 40–60% of SSEH.[2] Patient may present with clinical syndrome ranging from being neurologically intact to quadriplegic/paraplegic. Early diagnosis and treatment of spinal SSEH MR are to achieve the best outcomes. Rarely, those with SSEH who present with hemiparetic deficits may be misdiagnosed as having sustained a stroke versus transient ischemic attack.

CASE REPORT

A 15-year-old male presented with the sudden onset of a hemiparesis (i.e., left upper limb 4/5 and left lower limb 4/5). The laboratory work up was negative for any coagulation abnormalities; normal international normalized ratio, prothrombin time, activated

partial thrombin time, and bleeding/clotting times. The brain MRI was normal, thus largely ruling out a stroke. However, the cervical MR showed a dorsolateral left-sided epidural hematoma extending from C7 to D1 causing severe cord compression. The lesion was hyperintense on T1, hyperintense with a hypointense band on T2 studies, but did not enhance with contrast [Figures 1a-c and 2]. These findings were diagnostic for a SSEH. The patient underwent an emergent C7-D1 laminectomy for excision of the SSEH. Postoperatively, the patient regained normal function.

DISCUSSION

Most SSEH occurs during activities such as sneezing, coughing, coitus, bending, and straining. They may be accompanied by the rapid onset of quadriparesis, paraparesis, or rarely, hemiparesis. MRI is the imaging modality of choice to diagnose SSEH. In first 24 h, epidural hematoma is isointense to cord on T1 images and is usually hyperintense or heterogeneous on T2 images; within 48 h, SSEH becomes hyperintense both T1 and T2 sequences. Few patients warrant conservative management and acute deterioration may result in permanent neurological sequelae. More typically, SSEH is spinal surgical emergencies requiring, with decompressive laminectomy and hematoma evacuation. Further early surgery results in the best prognoses (i.e., the "earlier the better").[3]

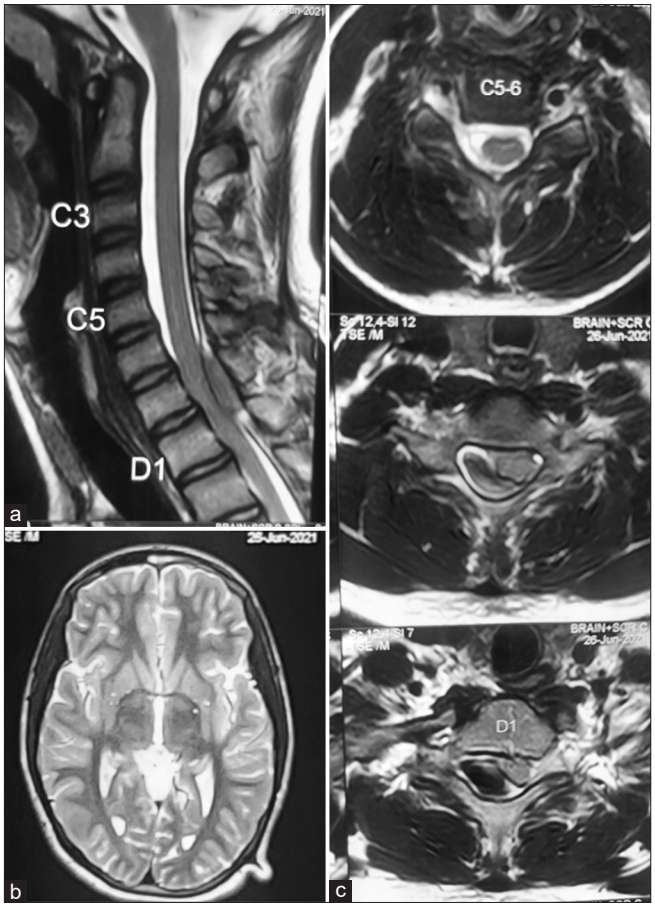

Figure 1: (a and c) There was a extradural lesion at C7-D1 level which was iso/hyperintense to cord on T1-weighed images and hyperintense with hypointense band on T2 images (b) MRI (magnetic resonance imaging) brain was suggestive of normal study, with no features of stroke or intracranial bleed.

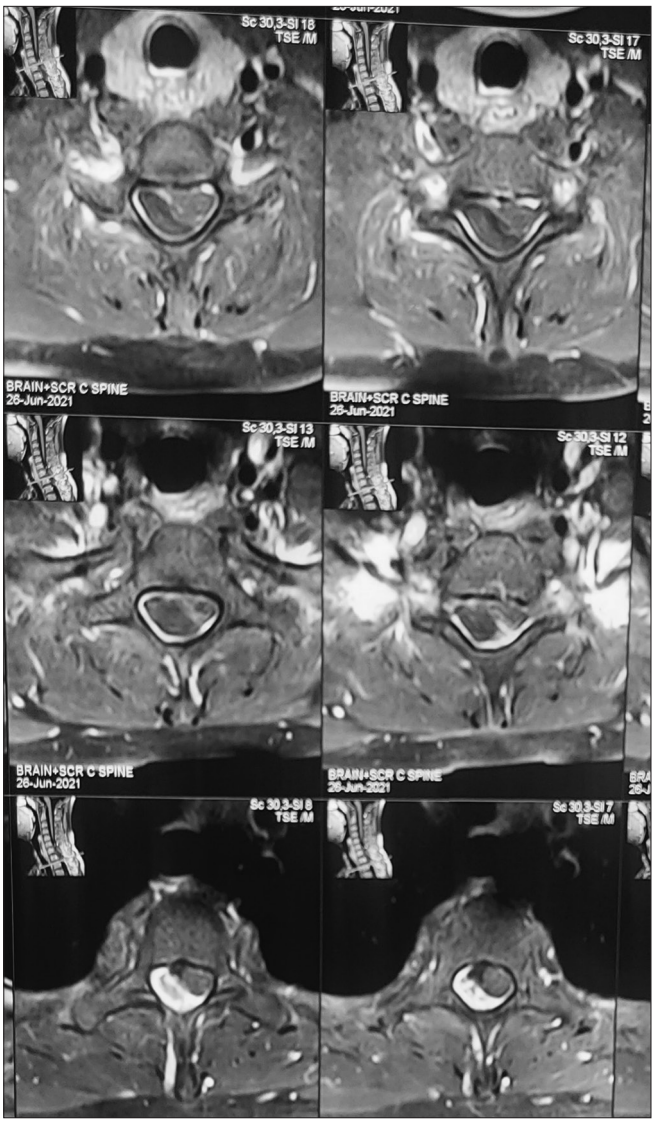

Figure 2: An extradural lesion at C7-D1 level with no enhancement on contrast injection with final diagnosis of spontaneous spinal epidural hematomas with significant mass effect and compression of cord.

CONCLUSION

SSEH is rare and required urgent/emergent diagnosis with MR and typically surgical management/decompression. Rarely, for patients who present with a hemiparesis, MR studies are required to rule out stroke.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent.

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Nil.

Conflicts of interest

There are no conflicts of interest.

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