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Case Report

Spontaneous lumbo-sacral epidural hematoma presenting as Cauda Equina syndrome: a case report

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ABSTRACT

Spinal epidural hematoma (SEH) is a rare condition and it accounts for less than 1% of all spinal canal space occupying conditions. Spontaneous SEH most commonly occurs in the cervical and thoracic regions. They present with neck or back pain with radiculopathy and/ or myelopathy. Early surgical decompression is the recommended treatment in the presence of progressive neurological deficits. Spontaneous SEH (SSEH) presenting as Cauda Equina syndrome (CES) are rarely reported in the literature. We present a case of SSEH presenting late with CES. Due to delay in presentation and multiple co-morbidities, patient was treated conservatively.

Keywords: Spontaneous spinal epidural hematoma, Cauda equina syndrome, Lumbo-sacral hematoma

INTRODUCTION

Spinal epidural hematoma is a rare condition and it accounts for less than 1% of all spinal canal space occupying conditions. Spontaneous SEH (SSEH) commonly occurs in cervical and thoracic region and early surgical decompression is usually recommended. We present a rare case of SSEH presenting as cauda equina syndrome, managed conservatively because of multiple co-morbidities and high risk of bleeding.

CASE REPORT

A 54 years old male foreign citizen, presented with acute onset of severe low back pain radiating to both lower limbs with associated weakness of both legs, 4 weeks prior to his admission. His weakness resolved significantly over 3-4 hours of presentation. He also had urinary retention, constipation and hypoesthesia over perianal region. He was diabetic and hypertensive. He had chronic kidney disease with renal failure for which he had renal transplant 25 years back. He had undergone aortic valve replacement surgery 3 months back and was on anticoagulants (Warfarin).

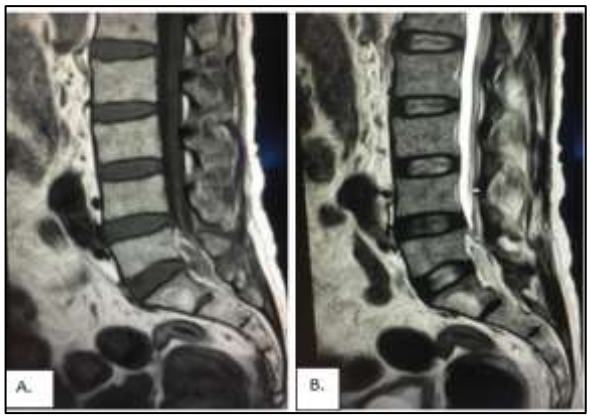

Figure 1: (A, B) T1 and T2 sagittal images showing the extradural hematoma at L5/S1 level.

He also had multiple other surgical procedures like cholecystectomy, hydrocele surgery, vocal cord surgery, cataract surgery in the past. He was on tablet Warfarin 3.5 mg once daily and tablet Ecospirin 75 mg once daily and immunosuppressant. His INR was 2.28. Neurological examination confirmed partial cauda equine syndrome with good motor power (Grade-4), intact sensory system and urinary retention requiring indwelling catheter. MRI of lumbosacral region showed extradural hematoma at L5-S1 level (Figure 1a, b; 2 a, b). After detailed discussion with patient and his physicians we planned for surgical decompression and evacuation of hematoma. He had episode of hematuria after starting bridge therapy with heparin and his INR was still high. Hence patient was counseled in favor of conservative treatment as there was considerable risk of anesthesia and bleeding from surgery.

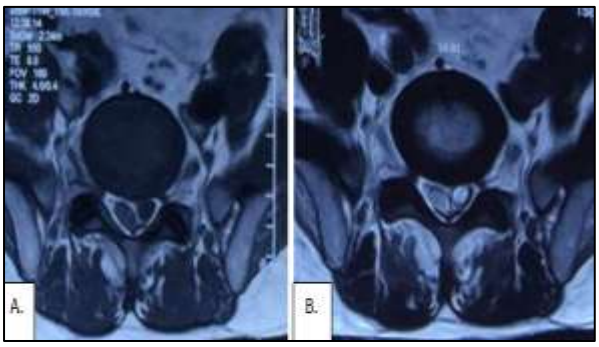

Figure 2: (A, B) Axial T1 and T2 images showing the chronic encapsulated hematoma on the left side.

DISCUSSION

Spinal epidural hematoma (SEH) is a rare condition (<1% of spinal canal space occupying lesions).[1] Common causes of SEH are trauma, coagulopathy, post-surgical hematoma, and vascular malformations like arteriovenous malformations, vertebral hemangiomas, obstetrical birth injury, lumbar punctures, spinal manipulation (chiropraxy), epidural injections, missile injuries, hypertension and physical exertion.[2,3] After spinal surgery, SEH is more frequent when operated for metastasis.[4] SSEH is defined as blood within the spinal epidural space without a history of trauma.

Cauda equina syndrome is defined as a constellation of symptoms and signs including back pain, radicular pain that can be uni-or bilateral, motor loss, sensory loss, and urinary dysfunction associated with decrease in perianal sensation.[5] The sources of bleeding in SSEH are hypothesized as from rupture of epidural veins, arteries, or from vascular abnormalities.[1]

The classical presentation of SSEH is acute onset of severe, often radiating, back pain followed by features of nerve root and/or spinal cord compression, which develop minutes to hours later. There are scattered reports of presentation of massive SSEH in high level swimmer and as abdominal pain in child.[6,7]

Magnetic resonance imaging (MRI) is the investigation of choice. Surgical intervention in the form of laminectomy and clot evacuation is the recommended treatment. Preoperative neurological status and the timing of surgery are very important in the final outcome and results are satisfactory if operated within 12-24 hours of onset of symptoms.[8] There are scattered reports of successful conservative management of four cases of SSEH and a case of recurrent cervical epidural hematoma spontaneously resolving in a 37 week primigravida.[9,10] Hematoma may resolve spontaneously within four months and outcomes are reported to be poor without surgical intervention9. Non-operative management is thus reserved only for those who are symptomatic but not good surgical candidates.[11]

Our patient had multiple co-morbidities. After stopping oral anticoagulant and starting bridge therapy with heparin, patient had frank hematuria. Hence, we offered him conservative treatment.

CONCLUSION

SSEH is a rare cause of back pain and permanent neurological deficit. Several causes have been described as possible risk factors for development of SSEH. There are scattered reports of conservative treatment in selective cases. The mainstay of the treatment is surgical.

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REFERENCES

1. Al-Mutair A, Bednar DA. Spinal epidural hematoma. J Am Acad Orthop Surg. 2010;18:494-502.
2. Lawton MT, Porter RW, Heiserman JE, Jacobowitz R, Sonntag VK, Dickman CA. Surgical management of spinal epidural hematoma: relationship between surgical timing and neurological outcome. J Neurosurg. 1995;83(1):1-7.
3. Ruelle A, Datti R, Pisani R. Thoracic epidural hematoma after spinal manipulation therapy. J Spinal Disord. 1999;12(6):534-6.
4. Cabana F, Pointillart V, Vital J, Sénégas J. Hématorrachisouhématome extradural rachidien (HER) postopératoirecompressif. Etude de 15 cas et revue de la littérature [Postoperative compressive spinal epidural hematomas. 15 cases and a review of the literature]. Rev Chir Orthop Reparatrice Appar Mot. 2000;86(4):335-45.
5. Kostuik J. Cauda equina syndrome. Neurosurg Focus. 2004;16.
6. Fleager K, Lee A, Cheng I, Hou L, Ryu S, Boakye M. Massive spontaneous epidural hematoma in a high-level swimmer: a case report. J Bone Joint Surg Am. 2010;92(17):2843-6.
7. Cheng X, Qu Y, Dong R, Yang L, Kang M, Zhao J. Spontaneous spinal epidural hematoma

masquerading as atypical abdominal pain in a child: A case report. Medicine (Baltimore). 2020;99(33):e21762.
8. Shin JJ, Kuh SU, Cho YE. Surgical management of spontaneous spinal epidural hematoma. Eur Spine J. 2006;15(6):998-1004.
9. Duffill J, Sparrow OC, Millar J, et.al. Can spontaneous spinal epidural haematoma be managed safely without operation? a report of four cases. J NeurolNeurosurg Psychiatry. 2000;69:816-9.
10. Iwatsuki K, Deguchi M, Hirata H, Kanamono T. Spontaneously Resolved Recurrent Cervical Epidural Hematoma in a 37-Week Primigravida. Global Spine J. 2015;5(5):44-7.
11. Rajz G, Cohen JE, Harnof S, Knoller N, Goren O, Shoshan Y et al. Spontaneous spinal epidural hematoma: the importance of preoperative neurological status and rapid intervention. J Clin Neurosci. 2015;22(1):123-8.

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