## Aggressive Vertebral Hemangioma Causing Acute **Spinal Cord Compression**

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A 46-year-old woman presented to our emergency department with sudden onset of lower extremity weakness after physical activity. She referred only dorsal back pain before these symptoms. Neurologic examination revealed weakness (3/5) of lower limbs, hyperreflexia of deep tendon reflex of lower limbs, hypoesthesia under D7 level, and no sphincteric dysfunction. A computed tomography scan showed an

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accentuation of trabecular markings within the vertebral body and areas of lysis ( > Figs. 1A and F). Contrast-enhanced magnetic resonance images show diffuse abnormal marrow signal throughout the T6 vertebral body with epidural components with spinal cord compression (**Fig. 1B-H**).

She underwent surgery on the same day through a mini-open decompression and percutaneous short posterior

Fig. 1 Sagittal (A) and axial (F) computed tomography images demonstrating accentuation of trabecular markings within the vertebral body and areas of lysis involving the entire T6 vertebral body. Sagittal T1-weighted (B); sagittal (C) and axial (C) T2-weighted; sagittal (D), coronal (E), and axial (H) contrast-enhanced magnetic resonance images showing a T6 aggressive hemangioma with epidural extension and severe anterior cord compression.

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Fig. 2 Sagittal (A) and axial (B–D) postoperative computed tomography images demonstrating the posterior decompression and short pedicle screw fixation.

fixation (**Fig. 2**). No complications occurred after surgery with full recovery of neurological symptoms. Radiotherapy was perfomed after 4 weeks with resolution of dorsal back pain.

Vertebral hemangiomas (VH) are benign and generally asymptomatic primary vascular tumors of bone.<sup>1,2</sup> Rarely, these lesions can cause symptoms due to cord compression as a result of bone expansion, erosion through cortex, fracture, or hematoma.<sup>3</sup> Despite our long-standing recognition of aggressive VH, there is still a controversy regarding the optimal treatment strategy, and numerous therapeutic options have been described: embolization, surgery, radiotherapy, vertebroplasty, or a combination of them.<sup>4-9</sup>

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## **Conflict of Interest** None declared.

## References

- 1 Enneking WF. A system of staging musculoskeletal neoplasms. Clin Orthop Relat Res 1986; (204):9–24
- 2 Friedman DP. Symptomatic vertebral hemangiomas: MR findings. AJR Am J Roentgenol 1996;167(2):359–364
- 3 Goldstein CL, Varga PP, Gokaslan ZL, et al. Spinal hemangiomas: results of surgical management for local recurrence and mortality in a multicenter study. Spine 2015;40(9):656–664

- 4 Guarnieri G, Ambrosanio G, Vassallo P, et al. Vertebroplasty as treatment of aggressive and symptomatic vertebral hemangiomas: up to 4 years of follow-up. Neuroradiology 2009;51(7):471–476
- 5 Jiang L, Liu XG, Yuan HS, et al. Diagnosis and treatment of vertebral hemangiomas with neurologic deficit: a report of 29 cases and literature review. Spine J 2014;14(6):944–954
- 6 Urrutia J, Postigo R, Larrondo R, Martin AS. Clinical and imaging findings in patients with aggressive spinal hemangioma requiring surgical treatment. J Clin Neurosci 2011;18(2):209–212
- 7 Raco A, Ciappetta P, Artico M, Salvati M, Guidetti G, Guglielmi G. Vertebral hemangiomas with cord compression: the role of embolization in five cases. Surg Neurol 1990;34(3):164–168
- 8 Smith TP, Koci T, Mehringer CM, et al. Transarterial embolization of vertebral hemangioma. J Vasc Interv Radiol 1993;4(5):681–685
- 9 Heyd R, Seegenschmiedt MH, Rades D, et al; German Cooperative Group on Radiotherapy for Benign Diseases. Radiotherapy for symptomatic vertebral hemangiomas: results of a multicenter study and literature review. Int J Radiat Oncol Biol Phys 2010;77(1):217–225