



## Case report

## Surgical treatment of aggressive vertebral hemangioma causing progressive paraparesis

M. Dobran<sup>a,\*</sup>, F. Mancini<sup>a</sup>, D. Nasi<sup>a</sup>, M. Gladi<sup>a</sup>, S. Sisti<sup>b</sup>, M. Scerrati<sup>a</sup><sup>a</sup> Department of Neurosurgery, Università Politecnica delle Marche, Ospedali Riuniti Umberto I, Ancona, Italy<sup>b</sup> Department of Pathological Anatomy, Umberto I General Hospital, Università Politecnica delle Marche, Ancona, Italy

## ARTICLE INFO

## Keywords:

Vertebral hemangioma  
Paraparesis  
Laminectomy  
Cavernous hemangioma

## ABSTRACT

Vertebral hemangioma is a benign vascular lesion that may onset with neurologic symptoms due to spinal cord compression by epidural extension. Surgical procedure, embolization and radiotherapy are the gold standard for the treatment of this disease. We present a case of a 84 years old woman admitted at our department with worsening paraparesis and urinary retention. Her magnetic resonance images (MRI) showed a lesion involving both anterior and posterior vertebral element of D5, with extension into epidural space and spinal cord compression. The patient was operated for laminectomy and epidural lesion removal. Histological examination confirmed the diagnosis of cavernous hemangioma.

## 1. Introduction

Vertebral hemangioma is the most common benign lesion of the spine, most often an asymptomatic incidental finding [1]. Typically, this lesion involves the vertebral body and less commonly it extends to pedicles, lamina or spinous process. Only in 0.9–1.2% of cases it is symptomatic [2] and it is defined as aggressive vertebral hemangioma. In symptomatic cases, generally there is an extension of the lesion into the epidural space with consequent spinal cord compression, but other mechanisms are described such as: spinal canal stenosis, due to the bone expansion, direct compression by vessels feeding the lesion and fracture of the vertebra. Very rarely, deficit may be caused by spinal cord ischemia or hemorrhage with epidural hematoma. Even in cases of aggressive hemangioma, the lesion maintains its benign nature and no malignant degeneration has been reported. The diagnosis is made by computer tomography scan (CT), where we can observe the typical “Polka-dot- sign” due to trabecular aspect of the involved vertebra, and by MRI where the lesion appears hyperintense on both T1WI and T2WI with contrast enhancement. In most cases, vertebral hemangioma has a benign course and surgery is not required. Hereby, we discuss a case of aggressive vertebral hemangioma in a patient suffering with worsening paraparesis that required urgent surgical treatment. The work has been reported in line with the SCARE criteria [3] (see Figs. 1–3).

## 2. Case presentation

A 84 years old Italian woman was admitted at our department with a worsening paraparesis started about 6 months before with recent appearance of urinary retention and constipation. Her past medical history was characterized by depressive syndrome, hypercholesterolemia and a surgical procedure for an ovarian benign mass at the age of 50 years. The neurological examination showed a paraparetic gait possible only with external support, proximal muscle strength deficit at lower leg with (F4-), initial spasticity with positive bilateral Babinski sign, deep tendon reflex exaggerated at the lower leg, tactile hypoesthesia with a sensory level ad D6; the patient also suffered with urinary retention (bladder catheter was positioned) and constipation. The contrast magnetic resonance images (MRI), performed the day after admission, showed homogeneous signal alteration of both vertebral body and posterior arch of D5, with hyper intensity in T2WI; the lesion extended into epidural space causing spinal cord compression and, at the same level, was traced an intramedullary area of T2WI hyperintensity, suggestive for myelomalacia. High, homogeneous contrast enhancing was observed. In addition, other two similar lesions were noted at D2 and D4 and an old fracture was detected at D7. We performed a surgical procedure of posterior decompression by laminectomy ad D6 with partial extension at D5 and D7; a soft, blu-reddish epidural mass was removed and sent for histological examination. During the removal, the lesion appeared highly bloody but we achieved a good hemostasis. No fixation was performed.

\* Corresponding author. Clinica di Neurochirurgia, Università Politecnica delle Marche, Ospedali Riuniti di Ancona, Via Conca #71, I – 60020, Torrette di Ancona, Italy.

E-mail addresses: [dobran@libero.it](mailto:dobran@libero.it) (M. Dobran), [Fabrizio.geremia.mancini@gmail.com](mailto:Fabrizio.geremia.mancini@gmail.com) (F. Mancini), [davidenasi83@libero.it](mailto:davidenasi83@libero.it) (D. Nasi), [mauriziogladi@gmail.com](mailto:mauriziogladi@gmail.com) (M. Gladi), [Stefano.Sisti@ospedaliriuniti.marche.it](mailto:Stefano.Sisti@ospedaliriuniti.marche.it) (S. Sisti), [mscerrati@virgilio.it](mailto:mscerrati@virgilio.it) (M. Scerrati).<https://doi.org/10.1016/j.amsu.2017.12.001>

Received 14 August 2017; Received in revised form 22 November 2017; Accepted 4 December 2017

2049-0801/ © 2017 The Author(s). Published by Elsevier Ltd on behalf of IJS Publishing Group Ltd. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).



Fig. 1. Contrast MRI images show signal alteration of the vertebral body with extension to the posterior elements and into epidural space with spinal cord compression.

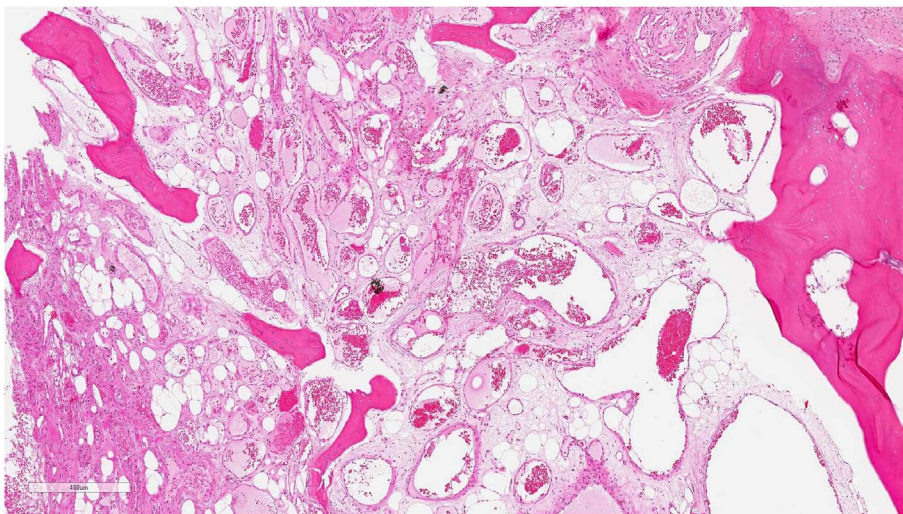


Fig. 2. H&E stain show proliferation of normal vessels with normal endothelial cells, without atypia consistent with cavernous hemangioma.

A drainage was positioned and removed at 48h after surgery. No systemic complication, such as deep vein thrombosis, occurred. We started to mobilize the patient on the fourth post-operative day, but it took three days more to achieve the ability to walk with external support for 10–20 m, because of post-operative pain and psychological status. In the following days, her objective neurological status improved gradually, particularly in regard to lower leg muscles strength. However, urinary retention did not improve in the immediate post-operative period. Constipation got progressively better with medial

therapy (anthraquinone glycosides). On the third post-surgical day, she performed a control CT scan of the dorsal spine. On the 15th post-operative day, she was transferred to the rehabilitation center. The histological examination showed a vessel proliferation with thin wall and dilated lumen, covered by flat endothelial cells without atypia or mitosis, consistent with cavernous hemangioma. On the basis of histologic examination, clinical status and radiologic imaging, radiotherapy was recommended but the patient did not perform it.

Download English Version:

<https://daneshyari.com/en/article/8817294>

Download Persian Version:

<https://daneshyari.com/article/8817294>

[Daneshyari.com](https://daneshyari.com)