

# Severe spinal hemangiomas are surgically treated

Sam Thomas

Thomas S. Severe spinal hemangiomas are surgically treated. *J surg Res.* 2022; 6(3):34-36.

### ABSTRACT

The surgical treatment for severe spine hemangiomas and the results after surgery. In this investigation, patients treated surgically for severe hemangiomas of the cervical, thoracic, lumbar, and sacral spine between 2005 and 2018 at a tertiary referral academic medical facility were included. The database of the hospital's pathology department was utilised to locate patients who had been diagnosed

with an aggressive hemangioma. The Fischer exact test with significance set was used to examine patient demographics, medical history, surgical procedure, adjunct therapy, early and late problems, and recurrence.

**Key Words:** *Benign spinal tumor; Vertebroplasty; Vertebral hemangioma; Spine.*

---

### INTRODUCTION

Patients had to meet the inclusion criteria for the study. It took 11 months on average to follow up. Adverse thoracic spine hemangiomas affected eight out of ten patients back or leg discomfort was reported by seven out of the ten individuals. Laminectomy at the site of the lesion was the procedure performed most frequently. In two of the patients who received simultaneous intra-operative vertebroplasty and spinal fusion, which occurred in 40% of patients, Post-operative radiation therapy was given to three individuals. Among the three people, five problems were found. There were three preoperative issues, including deep vein thrombosis, renal failure, one surgical site infection, and two postoperative complications, both requiring revisions. It didn't happen again. Effective treatment with comparatively low complication and recurrence rates is surgical surgery for aggressive spine hemangiomas. Hemangiomas are vascular tumors that can develop anywhere in the body, including the spine. With a prevalence of 10%–12%, they are the most prevalent benign vascular lesions affecting the spine. However, there are aggressive forms that can result in neural element compression by pathologic fracture, mass effect, extrasosseous extension, or bone expansion into the epidural region. According to the site of the lesion, these tumors, which were first characterized by Perman, Baily, and Bucy, can initially appear as acute back pain, radiculopathy, or myelopathy and may proceed to acute cauda equine syndrome. Up to 1% of all spinal hemangiomas are

these aggressive hemangiomas, which typically develop in the thoracic spine. Hemangiomas that are radiographically aggressive appear on computed tomography with enhanced trabeculae or with lysis. These have a "polka-dot" or "honeycomb" appearance and are brought on by an increase in fatty marrow, which reduces the density of the vertebral body. The lesions on Magnetic Resonance Imaging (MRI) can be either hyper- or hypo intense on T1, but they are invariably hyper intense on T2 and have a higher intensity than fat, occasionally simulating a metastatic lesion. The outcomes following surgical intervention for aggressive spinal hemangiomas at a single center. To find patients with aggressive hemangiomas, a tertiary referral academic facility was examined. Hemangiomas of the sacrum and movable spine were required for inclusion. Hemangiomas of the clivus and surgical removal of a tumor at a different institution were the exclusion criteria. Our inclusion criteria were met by ten patients. We gathered demographic information about these patients. The surgical treatment of severe hemangiomas of the mobile spine over a 13-year period is reported in a single-center series. Since our cohort's mean age was 50, the age distribution for vertebral hemangiomas in the literature peaks between the third and fifth decades of life. In contrast to the gender distribution described in other studies, which suggests a female majority, our study included four females and six males. Rare spine tumors called aggressive hemangiomas exist. This series discovered low peri- and postoperative complication rates, no tumor recurrence, and

---

Editorial Office, *Journal of Surgical Research*, United Kingdom

Correspondence: Sam Thomas, Editorial office, *Journal of Surgical Research*, United Kingdom, e-mail id: [jsugresarch@theresearchpub.com](mailto:jsugresarch@theresearchpub.com)

Received: 03-June-2022, Manuscript No. *pulpsjr- 22-5673*; Editor assigned: 06-June-2022, PreQC No. *pulpsjr- 22-5673* (PQ); Reviewed: 18-June-2022, QC No *pulpsjr- 22-5673* (Q); Revised: 24-June-2022, Manuscript No. *pulpsjr- 22-5673* (R); Published: 30-June-2022, DOI: [10.37532/pulpsjr.2022.6\(3\).34-36](https://doi.org/10.37532/pulpsjr.2022.6(3).34-36)



This open-access article is distributed under the terms of the Creative Commons Attribution Non-Commercial License (CC BY-NC) (<http://creativecommons.org/licenses/by-nc/4.0/>), which permits reuse, distribution and reproduction of the article, provided that the original work is properly cited and the reuse is restricted to noncommercial purposes. For commercial reuse, contact [reprints@pulsus.com](mailto:reprints@pulsus.com)

complete symptom relief in the majority of subjects with surgery. Surgery can successfully remove the tumor in the presence of neurological abnormalities and discomfort with low risks of recurrence. Over a 20-year period, we looked at the results of individuals who received treatment for symptomatic vertebral hemangiomas at the University of California, San Francisco. Tran's arterial embolization, embolization followed by surgical decompression or arthrodesis, or percutaneous vertebroplasty alone were all options for treatment. Retrospective reviews of all medical, surgical, and radiological records were performed. Back pain assessment and a follow-up neurological examination were performed on all patients. Sixteen patients with symptomatic vertebral hemangiomas producing pain or neurological disability received treatment. The typical follow-up lasted 81 months. When undergoing surgical decompression and tumor removal, seven out of nine patients experienced pain alleviation and showed improvement in any neurological defect that was present. Two patients developed recurrent myelopathy; one had a second decompressive operation and was effectively treated; the other had a staged vertebrectomy. The growth of extraosseous tumors caused cord compression in all three individuals undergoing vertebrectomy. In four cases, preoperative embolization decreased anticipated intraoperative blood loss. Back discomfort was relieved in three out of four individuals who received Tran's arterial embolization alone. In two out of four patients who underwent vertebroplasty, the discomfort was permanently relieved. A safe and efficient therapy for treating cord compression caused by a vertebral hemangioma that causes stenosis without instability or deformity is Tran's arterial embolization followed by laminectomy. Cord compression from extraosseous tumor expansion can be treated with vertebrectomy, embolization, and reconstruction. Painful intraosseous hemangiomas can be effectively treated without decompression by transarterial embolization. Vertebroplasty is useful for reducing short-term pain symptoms, especially in individuals without neurological deficits who have experienced vertebral body compression fractures, but it is less successful in reducing chronic pain. One of the most prevalent benign tumors of the vertebral column is hemangioma. These typically asymptomatic lesions might manifest as pain, a neurologic deficiency, or both. There are numerous therapy options for managing such symptomatic conversion. Retrospective assessment and analysis of clinical and radiographic data of six patients treated at our medical center over a ten-year period for symptomatic vertebral hemangioma was performed. Six patients were identified as having symptomatic vertebral hemangiomas. The thoracic, lumbar, and numerous segments were affected by the lesions. Simple or radicular back pain was the primary complaint of our patients. Among the patients, one had weak muscles, three had a sensory impairment, and the other two had normal neurological function. Preoperative transarterial embolization was performed on four patients before laminectomy and vertebroplasty was performed on the afflicted level on two more patients. A 35-year-old woman arrived while she was pregnant. An abrupt pulmonary embolic episode during her examination worsened her clinical history and required the implantation of an inferior vena cava filter. At an average follow-up of 35 months, all patients reported varying degrees of symptomatic improvement and an uneventful overall surgical course.

The treatment of symptomatic vertebral column hemangiomas can be difficult and frequently calls for the active participation of various specialties. However, an examination of the pertinent literature reveals that there aren't many therapeutic strategies for these lesions. Depending on the patient's presenting symptoms, the combination of preoperative transarterial embolization followed by vertebroplasty, with or without surgical decompression, is a generally safe treatment that may provide these patients with long-term symptomatic relief. Further discussion is given to additional therapy facets. We looked at the results of individuals who received treatment for symptomatic vertebral hemangiomas at the University of California, San Francisco. Transarterial embolization, embolization followed by surgical decompression or arthrodesis, or percutaneous vertebroplasty alone were all options for treatment. Sixteen patients with symptomatic vertebral hemangiomas producing pain or neurological disability received treatment. The typical follow-up lasted 81 months. When undergoing surgical decompression and tumor removal, seven out of nine patients experienced pain alleviation and showed improvement in any neurological defect that was present. Two patients developed recurrent myelopathy; one had a second decompressive operation and was effectively treated; the other had a staged vertebrectomy. The growth of extraosseous tumors caused cord compression in all three individuals undergoing vertebrectomy. In four cases, preoperative embolization decreased anticipated intraoperative blood loss. Back discomfort was relieved in three out of four individuals who received transarterial embolization alone. In two out of four patients who underwent vertebroplasty, the discomfort was permanently relieved. A safe and efficient therapy for treating cord compression caused by vertebral hemangioma that causes stenosis without instability or deformity is transarterial embolization followed by laminectomy. Cord compression from extraosseous tumor expansion can be treated with vertebrectomy, embolization, and reconstruction. Painful intraosseous hemangiomas can be effectively treated without decompression by transarterial embolization. Vertebroplasty is useful for reducing short-term pain symptoms, especially in individuals without neurological deficits who have experienced vertebral body compression fractures, but it is less successful in reducing chronic pain. Vertebral hemangiomas are frequently found by mistake during spine imaging because they are typically asymptomatic. In these circumstances, no treatment is advised. However, some hemangiomas may clinically present with axial pain and neurological impairment and necessitate surgery or additional treatment. This study's objective was to evaluate the results of surgically treating symptomatic vertebral hemangiomas at two neurosurgical centers. Prospective analysis of patients with symptomatic vertebral hemangiomas treated surgically at the Ostrava-Fifejdy Hospital Neurosurgical Department. Patients with proven thoracic and lumbar vertebral hemangiomas who presented with axial, later radicular pain and/or neurological deficit, such as myelopathy or radicular lesion, were advised to have surgery. When axial lumbar discomfort was the only reason for surgery, the only technique performed was vertebroplasty of the vertebral body. Vertebroplasty and posterior decompression employing hemilaminectomy with the removal of hemangioma tissue projecting into the spinal canal were recommended in cases of neurological impairment. Vertebroplasty had a positive effect on the severity of axial and radicular pain in all subjects (seven patients), and when co-

Combined with decompression, it improved all subjects' myelopathy symptoms (three patients). Neither a spinal canal cement leak nor an embolization during VP, nor any postoperative wound-healing problems such as an infection or hematoma, were noted. No additional surgeries were required. Nervous tissue decompression, spinal stability, and the prevention of spontaneous or traumatic epidural bleeding are all goals of symptomatic vertebral hemangioma therapy. Only in patients with severe Para paresis can nerve tissue decompression using laminectomy or hemilaminectomy is justified and may have a positive outcome. Decompression should be done in conjunction with arterial embolization, vertebroplasty, balloon kyphoplasty, or intralaminar alcohol injection. All patients with symptomatic vertebral hemangiomas saw an improvement in their pain scores after vertebroplasty. All of the patients who underwent combined vertebroplasty and decompression experienced an improvement in their myelopathy symptoms. The benign tumors known as vertebral hemangiomas have a robust blood supply. Simple spinal discomfort, which can occasionally be resistant to conventional medical care, can be one of the symptoms, as might developing a neurological deficiency. The preferred treatments for many years have been surgery or radiotherapy, but these methods were made worse by intraoperative and postoperative hemorrhagic complications linked to the rich vascularization that distinguishes these types of lesions, which were frequently preceded by a preoperative embolization in the acute setting. An alternative to traditional surgical and radiotherapy treatment for symptomatic vertebral hemangiomas with or without

characteristics of aggressiveness at imaging investigations is the percutaneous, minimally invasive procedure of vertebroplasty. The purpose of this study was to demonstrate the efficacy of percutaneous vertebroplasty in the treatment of individuals with symptomatic vertebral hemangiomas. The distribution of cement was consistently uniform and widespread. In 3 cases, we discovered paravertebral cement leaking without the emergence of any radicular symptoms associated with epidural diffusion. No cement leakage was found in the spinal canal or the intervertebral foramen. No clinical or symptomatic problems, including pulmonary embolism, were ever noticed. Pathology testing verified the presence of hemangiomas. Basic information was gathered, including pathology, the type of surgery performed, how long it took, and how much blood was predicted to be lost during the procedure. For the evaluation of neurologic function, the modified Frankel grade was applied. Radiological results served as the foundation for Enneking staging. Retrospectively, we looked at aggressive VHs with neurological problems. In cases when radiotherapy failed to treat the neurologic deficit, it was necessary to do surgery. The procedure for decompression was done. Since 2009, posterior decompression has included intraoperative vertebroplasty. In order to prevent a recurrence, adjuvant radiation with 40–50 Gy was advised if contrast-enhanced computed CT showed a residual lesion. Basic and surgical information about the patients was gathered. The spine frequently develops benign lesions called vertebral hemangiomas. Because there are so many different therapies, VH management hasn't always been reliable. The indications and choices for treating VH are described in this retrospective assessment of a single-center experience.