



Surgical Treatment of Aggressive Vertebral Hemangiomas with Epidural Extension

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Introduction

Vertebral hemangiomas are benign vascular lesions and are generally asymptomatic. However, in ~1% of cases, they may result in pain and neurological deficit due to extraosseous extension. These lesions are termed aggressive vertebral hemangiomas and it is generally agreed that surgical decompression is indicated when epidural extension results in neurological symptoms. The optimal surgical management of these lesions is unclear. Some authors recommend en bloc spondylectomy while others advocate less aggressive resection. Here we will discuss our experience with five cases of aggressive vertebral hemangiomas.

Methods

A departmental database was searched for patients with a pathological diagnosis of “hemangioma” from 2008-2015. Medical records were reviewed to identify patients with aggressive vertebral hemangiomas and these cases were reviewed in detail.

Results

Five patients were identified who underwent surgery for treatment of aggressive vertebral hemangiomas by three spine surgeons. The average age at time of surgery was 52 (range=31-71). All lesions were located between T4 and L4 and the most common presentation was back pain. One patient underwent a total en bloc spondylectomy, two had intralesional resections, and the remaining two underwent partial resection of only the epidural portion of the tumor. Vertebroplasty was used for anterior column reconstruction in three of the four patients who had intralesional or partial resection. The en bloc resection was complicated by spinal fluid leak, wound infection, and hardware failure – ultimately requiring four surgeries. The remaining patients did not experience any complications. No patient has experienced recurrence of disease at average follow up of 2.5 years and all are clinically improved aside from the patient who underwent en bloc resection who continues to have back pain 3.5 years after surgery.

Conclusions

Intralesional or partial resection seems to be sufficient in the treatment of aggressive vertebral hemangiomas while avoiding the

Learning Objectives

By the conclusion of this session, participants should be able to: 1) describe the range of surgical approaches used in the treatment of aggressive vertebral hemangiomas, 2) discuss in small groups the advantages and disadvantages of each approach, 3) identify cases in which intralesional or partial resection should be used to avoid the morbidity associated with en bloc surgery and also identify cases in which vertebroplasty may be useful for anterior column reconstruction.

References