

## Vertebroplasty For Vertebral Haemangioma - A Case Report -

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### Introduction

Haemangioma is the most common benign vascular tumour of bone and it mostly affects the vertebral body, skull and hand bones. Vertebral involvement is usually an incidental finding and requires treatment only when neurological function is compromised (1). Radiotherapy was the mainstay of treatment, before anterior spinal surgery became common. But radical anterior resection with cord decompression and grafting entails massive haemorrhage and a lot of surgical expertise. Vertebroplasty is the structural reconstruction of a vertebral body using Polymethyl Methacrylate (P.M.M.A.) bone cement and is commonly used in osteoporotic compression fractures in elderly as a minimally invasive procedure (2). But it was first described in 1987 by Galibert et al for vertebral haemangioma (3) and can also be used in osteolytic secondaries as well as multiple myeloma (4) for the immediate relief of pain. Here we have tried this procedure in a young girl with dorsal body haemangioma with paraplegia and the case is being reported.

### Case Report

A 17 year girl, Miss N, presented with history of dorsal backache of gradual onset and dull-aching in nature for six months duration, for which she was taking some analgesics from local practitioners. Since one and half months, there was gradually increasing weakness in both lower limbs and at the time of admission, there was complete paraplegia without bladder and bowel involvement.

She was admitted under neurosurgical department and her radiographs and MRI revealed

**Haemangioma of D7 vertebra**, with extension into neural canal posteriorly and cord compression.

The original plan of the treating neurosurgeon was to do total corpectomy with decompression of the cord and large iliac crest bone grafts through anterior approach (Thoracotomy), for which they had kept 8 to 10 pints of blood ready expecting catastrophic bleeding. We were asked to provide posterior instrumentation for stabilization.

As vertebral haemangioma has been described as one of the extended indications of vertebroplasty, we suggested that modality. Through a posterior midline incision in prone position over bolsters, central and lateral laminectomy of D7 was performed, decompressing the cord completely. The friable tumour tissue was extending from both sides of the cord and started profusely bleeding even on simple touch. After controlling bleeding by packing, bone cement in liquid state was injected in anterior part of D7 body through both the pedicles of D7 using 8 no. needle under C-arm control, taking care to protect the cord. Surprisingly, the profuse bleeding stopped totally with a complete dry field and the protruding pathological tissue could now be easily removed for HPR, as well as to decompress the cord.

No posterior instrumentation was necessary and anterior surgery through thoracotomy was cancelled. Thus a major surgery was avoided, with only total 3 pints blood transfusion given intra and post operatively

Postoperative period was uneventful and postoperative xrays showed total filling up of D7 body with bone cement. The girl had complete relief from backache and no brace was given postoperatively.

At 11/2 months postop, the patient started getting gradual recovery from paraplegia, with flicker of movements. Now at 3 months postop, pt. has regained Grade 4 power in both lower limbs and is walking with support.

### **Discussion**

Even in the hands of an experienced spine surgeon, anterior radical surgery with cord decompression and strut grafting with instrumentation for haemangioma of a vertebral body poses challenges – mainly due to its tendency for profuse bleeding. To reduce the operative morbidity and blood loss, Galibert (3) in 1987, reported the use of PMMA cement injection in the vertebral body percutaneously. In 1994, Cortet et al (5) reported the value of vertebroplasty combined with surgical cord decompression in 3 cases of vertebral angiomas; while Ide et al (6) (1996) tried preoperative percutaneous vertebroplasty followed by posterior cord decompression in cases of vertebral haemangioma with neurodeficit in lower limbs.

However vertebroplasty and kyphoplasty are relatively newer modalities in India and their use is maximally reported for the cases of osteoporotic vertebral compression fractures. The relative infrequent occurrence of vertebral body haemangioma and the inadequate exposure to vertebroplasty as a very useful treatment modality for such cases prompted us to report our excellent experience with

it in this young girl with paraplegia. This structural reconstruction of the involved vertebral body alleviates any need for corpectomy, strut bone grafting and anterior or posterior instrumentation – thus reducing the extent of surgical procedure to a large extent. Ofcourse the long term result is crucial: but looking at the neurological recovery and the overall long term success of vertebroplasty for other indications, the prognosis appears to be good.

### **References :**

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