

## A Rare Case Of Eosinophilic Granuloma In Thoracic Spine, A Case Report

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### INTRODUCTION:

Eosinophilic granuloma (EG) is the most common (70%) subtype of Langerhan's cell histiocytosis. It is one of the rare bone tumours that constitutes less than 1%<sup>1</sup> and vertebral body involvement is seen in about 7% to 15% of the cases. EG is a benign lesion characterized by proliferation or accumulation of a clonal population of cells bearing the Langerhans cell phenotype that is functionally deficient and has been arrested at an early stage of activation. The etiology of the disease is still unknown but it is speculated to be either immunological or infection.

### CASE REPORT:

A 13 year old boy presented with back pain for 2 days post trauma. He fell into a drain leg first. Post fall, he had upper back pain, weakness over his right leg and reduced sensation chest down. Back pain was of dull aching and non-radiating type which worsened at night. His mother noted that he was dragging his feet during ambulation. His back pain progressively worsened and he subsequently required support to ambulate. Further history showed that he also had another fall 3 weeks prior to admission. He landed on a supine position while playing football. Post fall, he had minimal back pain but no neurological deficit and he was able to ambulate as usual.

MRI spine was done and showed T3 vertebral planar with associated surround enhancing soft tissue causing thoracic kyphosis and compression onto spinal cord at T3 -T4 level. The differential diagnosis was eosinophilic granuloma, osteomyelitis, lymphoma, leukemia

Subsequently a Ct guided biopsy was done shows that findings are supportive of Eosinophilic granuloma (Langerhans Cell Histiocytosis).



There was a gradual improvement in his neurology during his admission in which it had returned to normal after 2 weeks. He had an intra-vertebral steroid injection done via transpedicular route to the T3 vertebra.

Since the patient no neurology, and pain is well controlled, he is treated conservatively with a long term follow up.

### DISCUSSIONS & CONCLUSION:

Eosinophilic granuloma (EG) can be asymptomatic or can present with swelling, tenderness and localised pain. In children usually presents with pain but neurological deficit is uncommon even in cases of which progress to vertebra planar. The differential diagnoses for an osteolytic mass is broad and should include metastatic tumor, myeloma, osteomyelitis, Ewing's sarcoma, osteoblastoma, Gaucher's disease, acute leukemia, and cystic lesions such as aneurysmal bone cysts.

The role of trauma in the development of EG is unclear. However, trauma may be an aggravating factor for the progression of EG in this case as it may have developed through a local inflammatory response following a minor trauma.

The management of eosinophilic granuloma involving the thoracic vertebra should include detailed imaging, skeletal survey, and tissue diagnosis with the help of biopsy. Conservative management such as immobilization of the spine will palliate symptoms.

Surgical intervention is recommended in cases with evidence for instability or impending neurologic compromise. Long-term follow-up is recommended as the local recurrence rate is 6%, and new lesions appear in about 22% of patients<sup>2</sup>.

### REFERENCES:

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2. Hasturk AE, Basmaci M. Multifocal extradural and intradural eosinophilic granuloma. *Journal of Craniofacial Surgery*. 2013 May 1;24(3):e214-6.