

A Boy Got Flattened By A Flattened Vertebrae

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INTRODUCTION:

Eosinophilic granuloma (EG) is a rare benign tumour that is characterized by clonal proliferation of dendritic-like cells, langerhans cells. Langerhans cell histiocytosis of the spine frequently presents as a solitary lesion and rarely results in neurological deficit. In addition, its treatment approach varies from observation to surgical intervention due to limited studies.

CASE REPORT:

We present a 13-year-old boy with sudden onset of back pain complicated with lower limb weakness. Physical examination reveals kyphotic gibbus deformity over upper thoracic region. Sensation was noted to reduce at level of T7 with patchy motor weakness at level of L2, L3, and L4 bilaterally. Plain radiographs showed a T3 vertebral plana with thoracic kyphosis. MRI revealed a T3 perivertebral mass encircling and extended posteriorly into the spinal cord through neural foramina. Histopathological diagnosis of EG was established via a CT-guided biopsy. He was treated non-operatively with closed observation and supported with a functional thoracolumbar brace to prevent further kyphosis. Upon one-month follow-up, he was able to ambulate with walking frame as his initial neurological deficit improves.



Figure 1: (a) T3 vertebral plana; (b) perivertebral mass anteriorly at level T2-T4, causing compression onto the spinal cord.

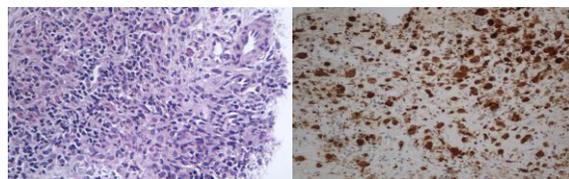


Figure 2: Micrograph showing (a) shows numerous eosinophils with histiocytes infiltrate at 40x. (b) Immunohistochemistry shows that these histiocytes are S100 staining positive.

DISCUSSION:

EG remains diagnostically and therapeutically challenging. Its non-specific initial presentation complicates the diagnosis. The most common cause of a single vertebra plana in children is EG, however aneurysmal bone cysts, osteomyelitis, tuberculosis and Ewing's sarcomas do present similarly, therefore tissue diagnosis is imperative. Neurological involvement in EG of the thoracic spine is rare, however interestingly, vertebra plana in EG have been found to be self-limiting, which is why we opted for a non-invasive approach in treating our patient.

CONCLUSION:

Eosinophilic granuloma is well known to be 'the great mimicker', as it presents similar to many lesions. Therefore histopathological diagnosis is essential. As the disease is self-limiting, surgical intervention is not always recommended, however treatment should be individualized case-to-case basis.

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