

Vertebral Eosinophilic Granuloma

Long-Term Evolution of a Case

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INTRODUCTION

The term “vertebra plana” corresponds to the condition described by Calvé⁴ in 1925 as vertebral osteochondritis. In 1940 Otani and Ehrlich¹⁷ named it solitary granuloma of the bone. Later, other authors^{5,8,12} demonstrated that the so-called vertebra plana did not correspond to a vertebral osteochondritis but to eosinophilic granuloma affecting the spine. Other authors upheld such hypotheses.^{3,14,25}

Schajowicz²² reported that the incidence of vertebral eosinophilic granuloma represents 7.8% of the total solitary eosinophilic granuloma and the Netherlands Committee on Bone Tumors¹⁶ reported an incidence of 15%. In spite of the varying statistical reports, the vertebral localization of this tumor cannot be considered infrequent.

Although neurologic involvement has been reported,⁹ clinical symptoms generally include pain and spasm of the paravertebral muscles, especially in children.⁴

Curettage of the lesion with or without bone grafting has been recommended as the management of choice.^{7,16,20,23} Nevertheless, a conservative approach is considered sufficient in treating vertebral eosinophilic granuloma^{11,13,19,24} except for those cases with neurologic involvement. There is no general agreement with respect to the efficacy of radiotherapy.^{19,22}

The purpose of this study is to present a case of eosinophilic granuloma that was managed conservatively and that was followed closely for 15 years.

CASE REPORT

A white boy, born January 1965, came to our clinic in May 1969. The parents had noticed that he had difficulty moving about. During the last 45 days the patient complained of pain in the left hip.

There was no relevant personal family history. No significant findings were appreciated upon inspection. Physical examination showed right genua hyperreflexia, lumbar hyperlordosis, difficulty in sitting up, and evidence of Gower's sign.

Radiographs of the spine showed collapse of L1 with loss of 75% of the vertebral body height (Figure 1). A needle biopsy confirmed the suspicion of vertebral eosinophilic granuloma.

The patient was treated initially with a plaster cast. Later, a Milwaukee brace was used for 3 months. Against advice, the patient discontinued the treatment. Evolution was followed for 4 years; the patient did not consult us again until 1984, when he presented with a slight retraction of the hamstrings. The patient did not complain of pain or weakness.

Radiographs of the spine showed reconstitution of the L1 vertebral body height with slight platyspondylia (vertebral body height, 92.59%). Figure 2 shows the first, fourth and fifteenth year of the disease's evolution.

DISCUSSION

Although eosinophilic granuloma is the commonest cause of vertebra plana,^{5,6,12-14,16,22-24} other pathologic conditions must be kept in mind because of their appearance in radiologic studies.^{10,18,21} In our opinion, biopsy is mandatory for an accurate diagnosis. Clinical evolution, the radiographic picture, and histopathologic signs coincided in our patient.

As referred to by Ippolito¹¹ et al only a few patients with vertebra plana have been followed to skeletal maturity. Globally, there are no significant differences among the published cases^{1,11,15,38} and the one we present here.

At the T12-L1 level, the vertebral body flattening due to eosinophilic granuloma can theoretically induce angular kyphosis; nevertheless, our case and those reported by Ippolito¹¹ et al have followed a satisfactory evolution, even when we consider that two patients discontinued using the Milwaukee brace.

Although the remodeling process of vertebra plana is not well known, our case and the reported experiences seem to support that the results are good whatever the treatment.⁷ Thus, we think surgery is indicated only in those cases with neurologic involvement.⁹

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Figure 1. Collapse of L1 with loss of 75% of vertebral body height in 4-year old boy.



Figure 2. Vertebral eosinophilic granuloma progress at year 1, 4, and 15, respectively.