

Giant-Cell Tumor Of Third Lumbar Vertebrae: A Case Report

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Citation

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Abstract

The spinal canal, as it is often situated on either side of the neural tissue, complete resection becomes surgically challenging. Most often, marginal or intralesional excision with backup therapy has to be resorted to. As with other sites various treatment options have been described. We report our experience with one surgical intervention for a patient with a L3 involvement giant cell tumor of the spine. This uncommon but most aggressive benign tumor of the spine with a high predilection for recurrence has an unpredictable outcome. Spinal giant cell tumors (GCT) however, often present with the unique problems of spinal cord compression due.

INTRODUCTION

Giant cell tumors (GCT) are benign lesions, but their cellular origin is unknown. They are aggressive, carry some malignant potential, and are associated with a high incidence of local recurrence. They are responsible for 21% of all primary benign bone tumors and affect the spinal axis in 8% 11% of all cases. Unlike most primary bone tumors, GCT tends to be found in individuals in the third and fourth decades of life. Their frequency decreases in later years. Women are affected slightly more than men. Here we report a case of GCT in a young woman [1,2].

CASE REPORT

A 34 years old woman presented with a two month history of severe chronic low back pain that was associated with numbness and pain in her right leg. Her pain aggravated with standing. Physical examination showed that she was systematically well in appearance. She was found to have isolated motor weakness in her right quadriceps muscle, and her gait was unsteady, deep tendon reflexes diminished in her right knee. Systemic workup did not reveal evidence of disease elsewhere. Plain x-ray film of the lumbar spine, obtained by her family physician, revealed a lytic lesion involving L3 vertebra (Fig.1). CT scan of the L3 vertebra showed a neoplastic lesion involve vertebral body and extending to the right pedicle (Fig.2). MRI showed a neoplastic lesion extensively involving the L3 vertebra.

TREATMENT

The surgical procedure was conducted in one stage by anterior approach and exposing the L2, L3 and L4 vertebrae. Partial L3 corpectomy was done, then L2-L3, L3-L4 discectomies were done. Reconstruction was performed using a lumbar cylindrical cage and harvested graft from iliac crest and then was fixed with lateral interbody screws and rods (Fig.4). The patient didn't suffer any other new neurological deficits and was able to ambulate with out any orthosis post operatively. After one week she was ambulatory with out any weakness and her pain was satisfactory controlled with analgesic medication.

Figure 1

Figure 1: Plain x-ray film shows a lytic lesion involving L3 vertebra.



Figure 2

Figure 2: axial CT scan of the L3 vertebrae shows a neoplastic lesion involve vertebral body and extending in to the right pedicle.



Figure 3

Figure 3: axial T2 weighted MRI shows a neoplastic lesion extensively involving the L3 vertebra.

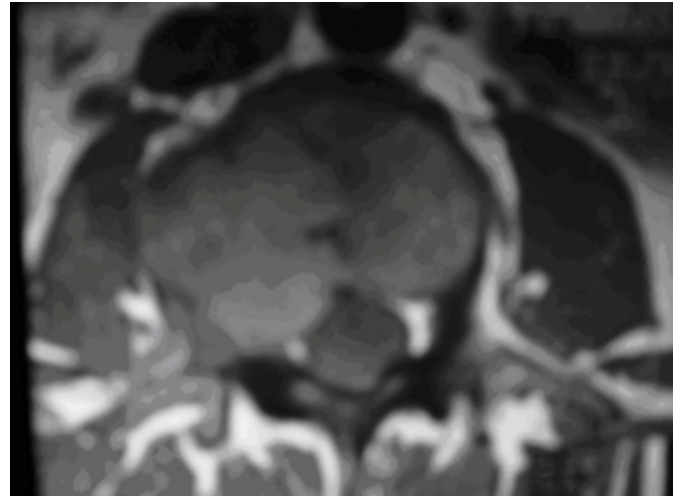
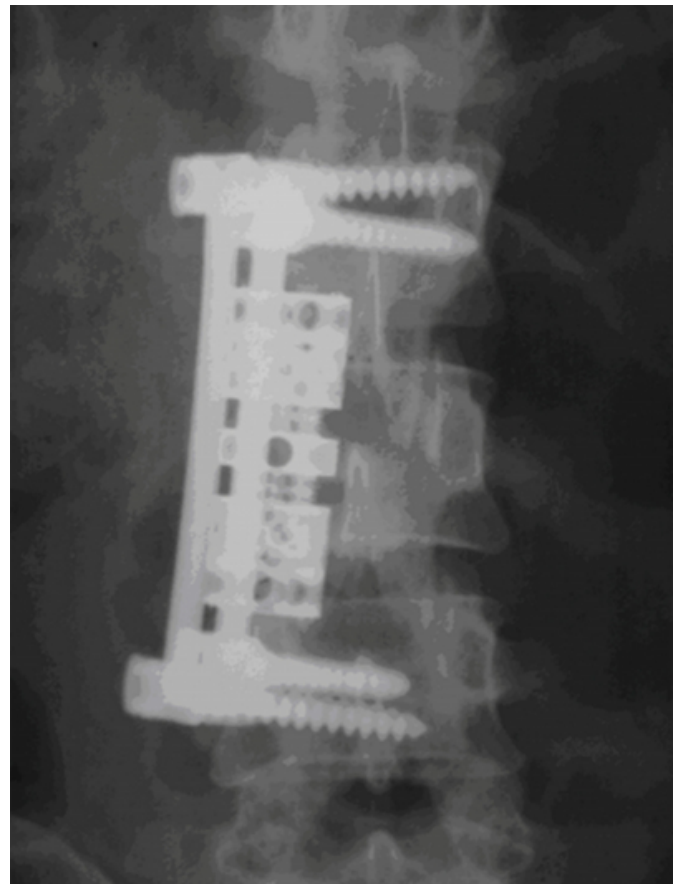


Figure 4

Figure 4: post operative plain x-ray film shows partial L3 corpectomy and L2-L4 fixation with interbody screws and rods.



DISCUSSION

GCT is an infrequent tumor of the spinal column, especially

above the level of sacrum. They usually arise in the epiphyseal- metaphyseal junction of long bones (75%) and only two to three percent of GCTs are originated in the spine [3]. A female predominance was reported in the literature, particularly women between the ages 20-40. In the spine [4,5], GCT located mostly in the thoracic region following lumbar and cervical respectively. Patient with spinal GCT generally present with local pain over the spin and progressive paraparesis or quadriparesis are seen in accordance with the localization of the tumor. Total excision of the GCT is the treatment of choice to achieve a complete clinical cure. Although, the local recurrence rate is relatively higher with simple curettage (24-40%), this rate decreases with adjuvant treatment delivered to the tumor site such as cement implantation, liquid nitrogen or phenolization.

Metastases from GCTs generally are restricted to the lung and can occur in two to nine percent of the cases.

CONCLUSION

GCT of vertebra is a rare tumor of the spinal column and total surgical excision is the treatment of choice. Patients

should be followed up carefully for lung metastasis.

Cytological examination from pleural effusion should be added to radiological and histopathological examinations to exclude possible intra thoracic seeding of tumor.

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