# Primary Vertebral Ewing's Sarcoma In An Adolescent: A Case Report

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## Introduction

Primary malignant sarcomas of the spine are extremely rare. It has been estimated that they account for only 3.5% to 14.9% of all primary bone sarcomas. In the study of primary vertebral Ewing's sarcoma (PVES), the division of the spine into non-sacral and sacral. Non-sacral spinal Ewing's sarcoma (ES) is rarer and often mimics a benign condition before spreading extensively. ES is the second most common primary bone tumor in pediatric patients accounting for approximately 4% of pediatric malignancies. They present with neurologic deficits due to spinal cord compression including acute onset paraplegia as we reported here.

## Report

A 14-year-old female presented to us with rapidly deteriorating weakness of both lower limbs over 2 weeks. No constitutional symptoms were present. Clinically there was bilateral lower limbs paraplegia. Beevor's sign was positive and sensory examination revealed hypoesthesia below the level of T12 dermatome. MRI showed aggressive lesion of T12 with large soft tissue component that has intraspinal extension comprising spinal cord (Fig. 1). We performed a radical excision of tumor (Fig. 3) and posterior decompression with laminectomy and stabilization (Fig. 2). Subsequently referred for adjuvant systemic chemotherapy and local radiotherapy. Histopathology report was suggestive of a small round blue cell tumor that was confirmed as Ewing's sarcoma by immunohistochemistry. The neurological outcome of surgery was good with mild residual deficits.

## Conclusion

According to Intergroup Ewing's Sarcoma Study (IESS) studies, lesions of non-sacral spine had a 100% local control rate and an 86% long-term survival rate. When there is epidural compression secondary to ES with rapidly progressing neurological symptoms, prompt surgical intervention is the only primary alternative if irreversible deficit is to be prevented. For tumors involving the vertebral body, a posterior approach is the preferred route to prevent neurological damage and future spinal instability. Early diagnosis and treatment in Ewing's sarcoma can result in favorable outcomes. Acute paraplegia as a presenting symptom is extremely rare in Ewing's sarcoma of the non-sacral spine and requires a high index of suspicion in children for early diagnosis.

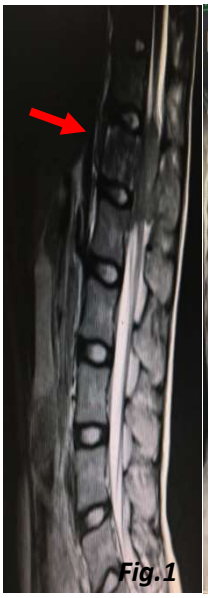

Fig.1

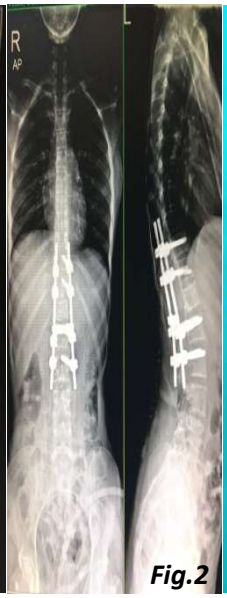


Fig.2

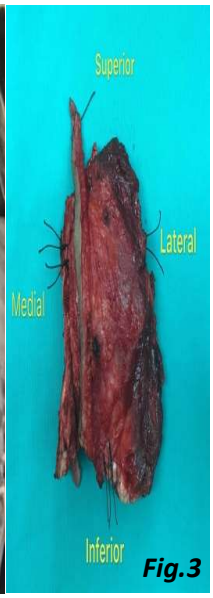


Fig.3

## References

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2. C. V. Gopalakrishnan et al. Primary Ewing's sarcoma of the spine presenting as acute paraplegia. J Pediatr Neurosci. 2012 Jan-Apr; 7(1): 64–66.