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A Case of Ewing's Sarcoma Involving Cervical Spine

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Abstract: Ewing's sarcoma is a highly malignant tumour involving the long bones of extremities together with soft tissues. Our case reports a very unusual case of Ewing's sarcoma of spine. In this report, a 11 years old boy who presented with features of cold compression. After reaching a diagnosis of a space occupying lesion in cervical region, we excised the maps surgically and biopsy was sent which confirmed our diagnosis of swings sarcoma. Surgery was followed by dramatic improvement in motor signs of patient and he was referred to NIMRA for further treatment with radiotherapy and chemotherapy.

Key words: Ewing's sarcoma · spine · cord compression

INTRODUCTION

Ewing's sarcoma or Red Marrow tumour, a highly malignant bone tumour, was first described by James Twing in 1921. Mostly, it is observed in children and aldolescents aged 4-15 years and rarely develops in adults older than 30 years. It accounts for approximately 5% of biopsy – analyzed bone tumours and approximately one third of primary bone tumours. It is second most common malignant bone tumour in young patients. It is more common in males than females with ratio of 1.5:1.

Most frequently the tumour is diagnosed as monostatic lesion in metaphysic or diaphysis of long bones of extremities. But tumour also may occur less frequently in pelvic areas, spine, ribs and scapula.

Annual incidence rate averages less than 2 cases per 1,0000,000 children considering this tumour as the rarest.

The earliest symptom is pain that may radiate to the limb particularly with tumour in vertebral or pelvic region.

Neurological signs such as nerve root signs and cord compression are present in half of patients with involvement of arial skeleton, rarely patient may have pathological fractures. The tumour is classified as localized disease or metastatic disease on which the prognosis depend.

An 11 years old boy, resident of Larkana, came as an out patient in Neurosurgical OPD with presenting complaint of all four limbs weakness for last 2 ½ months. The weakness was gradual in onset, not proceeded by febrile or diarrheal illness. It was associated with neck pain which was moderate to severe in intensity together with radiculopathic features in both arms. There was preservation of sphincters.

Power was grade 3 in both lower limbs and grade O in both upper limbs Bulk was normal, tone was increased in all four limbs together with exaggeration of reflexes and up going planters bilaterally. There was sensory loss involving lateral, anterior and posterior column but there was no definite sensory level.

On investigations x-ray cervical spine both AP and lateral view showed vertebral erosion together with subperiosteal elevation, MRI cervical spine showed extradural cervical cord compression. With these findings we planned an operative intervention, after removal of cervical mass we sent the specimen for biopsy and it was confirmed to be Ewing's Sarcoma of Cervical Spine.

After surgical removal there was dramatic improvement of motor weakness of patient and power improved to grade 3 in both upper limbs which initially was grade O and grade 4 in lower limbs which initially was grade 3.

DISCUSSION

Ewing's sarcoma is very rare tumour. It can occur at any time during childhood when bones are growing rapidly. Our case was a 11 years old boy who went to many local doctors at Larkana during which period

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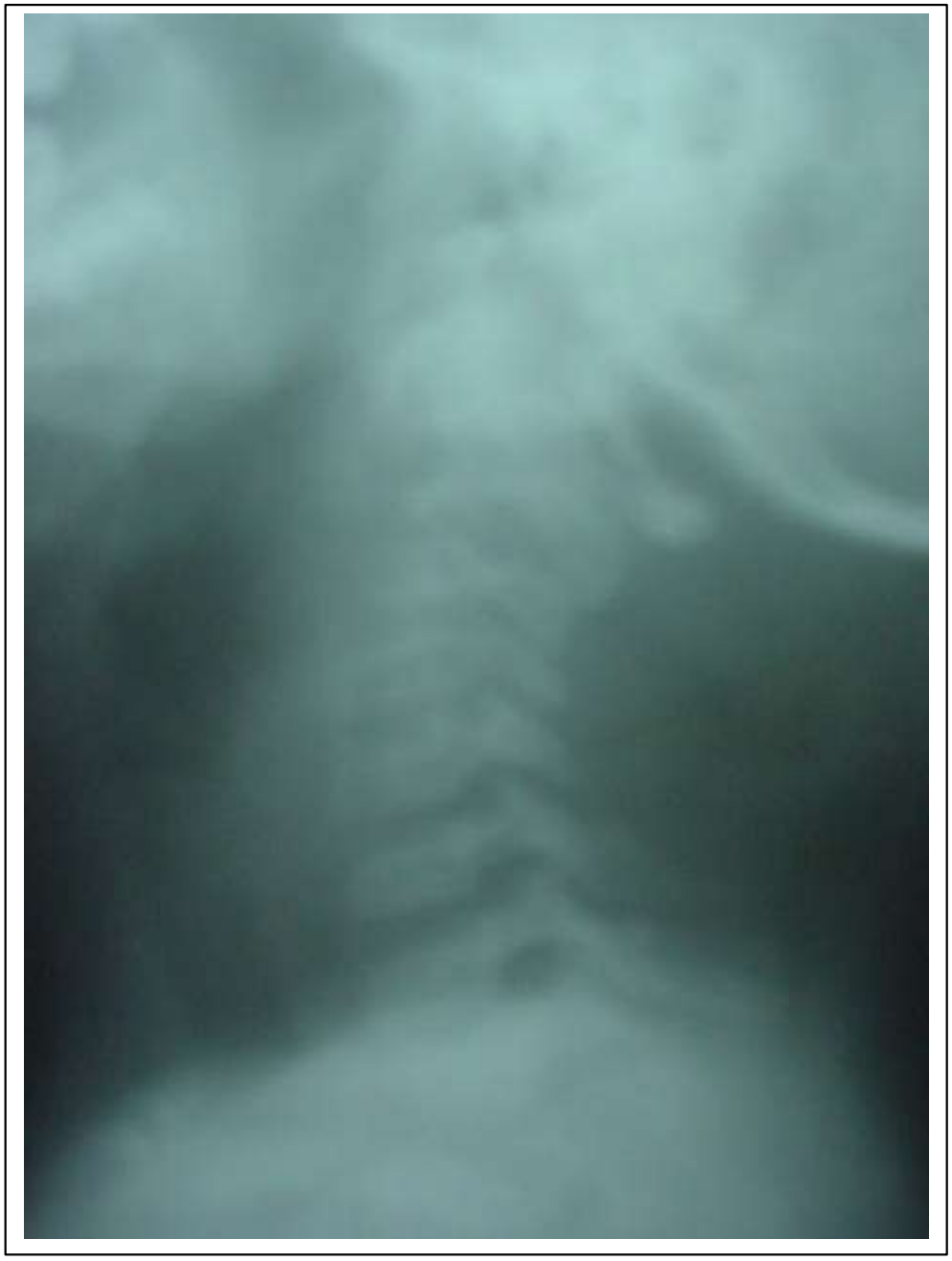

Fig. 1: X-Ray Cervical Spine Lateral view showing damage of Cervical 2nd 3rd, 4th vertebral bodies

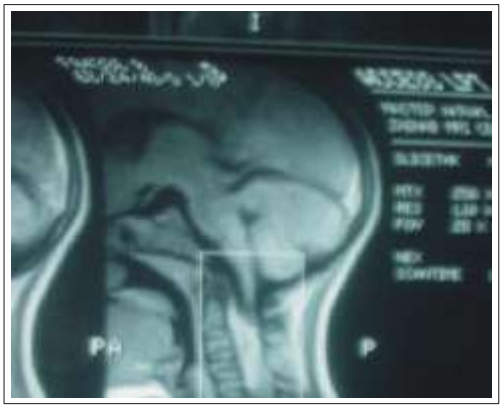

Fig. 2: This Magnetic Resonance Imaging (MRI) of patient showing damage of C3-4 vertebral body damage and retrovertebral mass pushing cord backward

Fig. 3: This is post operator picture of patients showing the improvement in motor deficit and mobility of patients who came with +3 power and with tetra paresis

his condition was gradually getting worse despite of improving. After that he came to Neurosurgical OPD and was admitted in Neurosurgical Ward. After complete workup diagnosis of cervical spine space occupying lesion was made, which followed by surgical excision and biopsy and was confirmed as Ewing's sarcoma.

After 8th POD, patient was referred to NIMRA, Jamshoro for Bone Scan to rule out other skeletal metastasis and advised for further Rx with radiotherapy and chemotherapy.

CONCLUSIONS

As tumour is very uncommon there requires vigilance and it presents with a vide variety of Non-specific features. Despite recent advance in surgery, availability of specific chemotherapeutic agents the morbidity and mortality with Ewing's Sarcoma very high. The key in early diagnosis and management.

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