A Peculiar Case of Paravertebral Small Round Cell Tumour in Children

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INTRODUCTION:

Small round cell tumours are highly aggressive malignant tumours characterised by small, monotonous undifferentiated cells with high nuclear to cytoplasmic ratios. [1,2] Their vast clinical presentation makes definitive diagnosis difficult. We report a case of undifferentiated small round cell tumour with atypical presentation.

REPORT:

A previously healthy 13-year-old boy, developed a right upper back swelling after he slipped and fell from a flight of stairs. The swelling increased from the size of a ping-pong-ball to a mango, within 3 weeks. Pain was mild throughout with no limitation in daily activities. There were no constitutional symptoms, neurological deficit or family history of malignancy. He was initially treated as soft tissue injury by the local clinic but was referred to general surgical team in a district hospital 3 weeks later for unresolved swelling. Examination showed a 15x10cm non-tender swelling over the right upper thoracic paravertebral region, firm in consistency with ill-defined borders and no overlying skin changes. Initial ultrasound revealed intramuscular hypoechoiec heterogenous lesion which may represent hematoma. Hence, evacuation of hematoma was performed. Intraoperatively, noted white gelatinous material from the paraspinal swelling, extending into neural foramina. He sustained hypovolemic shock due to 2litres blood loss. Patient was recovering well until post-operation day3 where he developed sudden onset of bilateral lower limb total paralysis and lost of sensation with bowel and urinary incontinence. Orthopaedic team was involved. Blood investigations and plain radiographs were relatively unremarkable. Computed tomography scan showed large enhancing right paraspinal collection with intrathoracic and extradural involvement. Magnetic resonance imaging revealed significant thoracic spinal cord compression with resultant cord edema. Tissue sent for histopathology earlier resulted as undifferentiated small round cell carcinoma, with differentials of Ewing sarcoma. He underwent decompression and laminectomy over T4-T6 and was referred to tertiary centre for chemotherapy.

Figure 1: Clinical presentation of right upper back swelling
Figure 2: MRI in sagittal view

CONCLUSION:

The diagnosis of small round cell tumours remains a challenge given its diversity in clinical and histological presentation. Although rare, unusual presentation of a soft tissue swelling in children should be ruled out for such malignancy to aid early diagnosis and treatment.

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