Aneurysmal bone cyst of thoracic spine in polyostotic fibrous dysplasia causing acute myelopathy

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ABSTRACT

Background: Fibrous dysplasia affecting the spine is considered an uncommon entity in polyostotic fibrous dysplasia and aneurysmal bone cysts occurring in this setting is rare. Although, these are benign conditions, they may present with acute cord compression and fractures which necessitate emergency treatment.

Clinical course: Our patient is a 38-year-old Egyptian male who presented to the Emergency Department with a 2-week history of increasing pain over the thoracolumbar spine with acute bilateral lower limb weakness and difficulty walking. There was no history of trauma or fever. Physical examination revealed significant sensory loss below the level of the umbilicus with paraparesis of bilateral lower limbs. X-rays revealed large expansile lesion over the mid thoracic vertebrae and multiple expansile lesions involving the ribs. Subsequent CT and MRI showed features of multiple areas of polyostotic fibrous dysplasia with secondary cystic degeneration and aneurysmal bone cyst formation, worst at T6-7 complicated with severe central spinal canal stenosis, cord compression. The patient underwent urgent spinal cord decompression with laminectomy at T6 and T7 and hemilaminectomy at T4 and T5 with aneurysmal cyst curettage and fat graft placement and subsequent physiotherapy and rehabilitation with complete resolution of motor and sensory deficits.

Discussion: This case highlights the presentation of benign, non-malignant, non-infectious, and non-traumatic acute spinal cord compression in the Emergency Department. This case also showcases classical radiological images of a rare combination of polyostotic fibrous dysplasia of the spine with subsequent cystic degeneration and aneurysmal bone cyst formation causing acute spinal cord compression.