

Thoracic Fracture Dislocation in a Toddler

¹Chen BJ, ¹Fazir Mohamad

Department of Orthopaedics, Hospital Kuala Lumpur

INTRODUCTION:

Spinal fractures in very young children are extremely rare and are rarely reported in the literature. ¹We report a case of thoracic fracture dislocation in a 15-month-old child treated with open reduction and posterior spinal instrumentation and fusion (PSIF) with cervical lateral mass screws

REPORT:

A 15-month-old boy presented with a vague history of being unwell for 2 weeks and bilateral lower limb weakness. Spinal examination revealed prominence at midthoracic region with no sign of other physical injury. Roentgenographic examination revealed T8/T9 body dislocation. CT images showed separation of T9 posterior element from its vertebral body, bilateral T9/T10 facets dislocation and T7 to T9 spinous process fracture. MRI showed intact spinal cord with massive right pleural effusion. Patient was put on respiratory support and chest tube was inserted to drain the pleural effusion. He underwent PSIF using lateral mass screws. Meticulous subperiosteal soft tissue dissection was performed from T7 to T11. T9/T10 level supraspinatus and interspinous ligaments were removed to facilitate reduction. T9 pedicles and T10 superior articular facets were disengaged, resulting in partial reduction of the fracture dislocation. Pedicle entry points were confirmed with image intensifier, and located using micro curette or a small bone tap. Ball tip probe was used to ensure the pedicle walls were not breached. 3.5mm rods were locked to the proximal screws bilaterally. T9 and T10 lamina were distracted gently to facilitate further reduction to enable the application of nuts to distal screws. The distraction was then released and allowed to settle into the final resting position naturally. Bone graft was applied over the decorticated posterior laminar surface. Body cast was applied and maintained for 3 months.

Despite reduction, no neurological recovery was noted at 3 month post surgery.

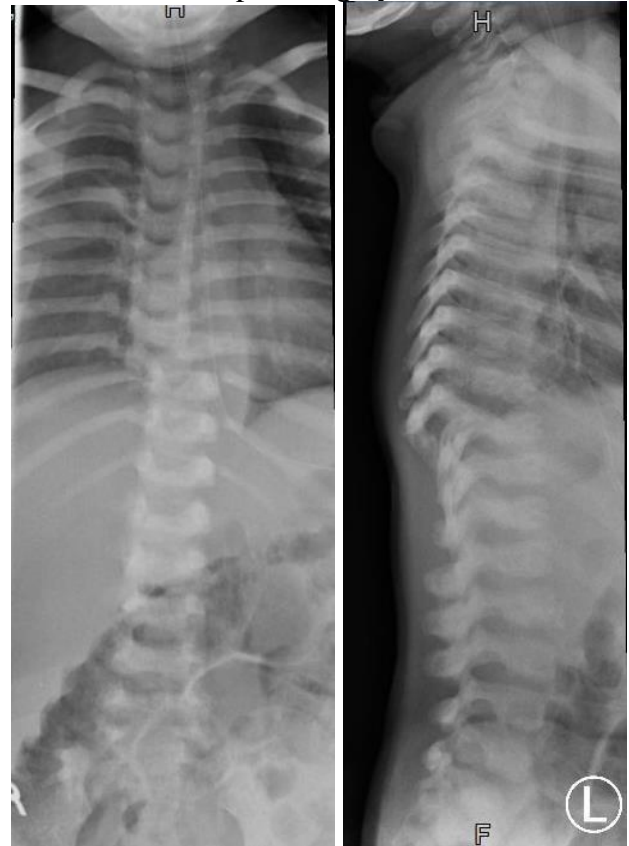


FIGURE 1&2: Plain radiographs of the spine (AP and lateral view)

CONCLUSION:

Fracture dislocation injury is caused by extremely high-energy mechanism which is often associated with neurologic injury. Treatment requires reduction and stabilization.

REFERENCES:

1. Sieradzki, J. P., & Sarwark, J. F. (2008). Thoracolumbar Fracture-Dislocation in Child Abuse: Case Report, Closed Reduction Technique and Review of the Literature. *Pediatric Neurosurgery*, 44(3), 253–257