

Thoracic Compression Fracture

Joseph Junewick, MD FACR

10/04/2009

History

2 year old complaining of neck pain after fall from the top bunk. MRI was obtained for persistent pain and negative CT and clinical examinations of the cervical spine.

Diagnosis

T6 and T7 Compression Fractures

Discussion

Pain can be difficult to localize for children; it should not be surprising that a mid-thoracic injury was initially thought to be related to the cervical region.

Compression fractures are common in the thoracic region owing to the normal kyphotic curvature and prevalence of flexion forces. Compression injuries often result in <20% loss of vertebral body height and can involve multiple levels. The superior aspect of the vertebral body is twice as often affected. These fractures are mechanically stable if loss of vertebral body height is <50% and kyphosis is stable between supine and upright imaging.

Anterior vertebral body loss tends to heal without deformity if the ring apophysis is uninvolved; lateral vertebral body height loss does not heal as well. While the patients are often tender posteriorly, the posterior column and posterior ligament complex are intact on imaging.

Findings

CT-Sagittal reconstructed image of the cervical spine is normal through the cervicothoracic junction. MR-Sagittal T1, FS T1, FS T2 and IR images confirm normal cervical spine. However note the T2 and IR hyperintensity in the superior portions of the T6 and T7 vertebral bodies.

Reference

Dogan S, et al. Thoracolumbar and sacral spinal injuries in children and adolescents: A review of 89 patients. J Neurosurgery 2007; 106(6):426-433.











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