

Anterolateral Decompression and Instrumentation for Thoracolumbar Burst Fractures: Indications and Outcomes.

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Introduction

Treatment of these fractures takes into account neurological deficit, and extent of spinal injury. Options for the management of these fractures include non-operative treatment, posterior reduction and instrumentation, and anterolateral decompression and instrumentation. We reviewed our data of patients who underwent anterolateral approach for this fracture type.

Methods

Methods: Sixty-four patients underwent anterolateral decompression and instrumentation of burst thoracolumbar fracture. Data was collected prospectively, and reviewed retrospectively.

Results

Sixty-four patients underwent surgery for traumatic thoracolumbar burst fracture. Surgery was undertaken in 46 patients with neurological deficit, and in 18 for persistent pain. The mean age was 41+/-16 years with 45 males and 19 females. The majority of injuries were due to falls and motor vehicular accidents. L1 was the most common affected level in 29, followed by T12 in 15. MRI scans were available for review on the last 31 patients, 11 in patients who were intact, and 20 who had a deficit. The PLC was deemed disrupted in 4 of the 11 intact patients, and 6 of the 20 patients with a deficit. Disruption of the PLC did not correlate with deficit. The residual spinal canal was the same in the 21 patients with intact PLC as it was in the 11 with disrupted PLC. The kyphotic angulation in patients with intact and disrupted PLC was 3.5+/-8.2° and 8.5+/-9.7 respectively.

Conclusions

Anterolateral decompression and instrumentation is recommended procedure for thoracic and lumbar burst fractures. Supplemental posterior instrumentation was necessary in 11% of cases, with age a risk factor for supplemental posterior instrumentation. PLC disruption was correlated with kyphotic deformity but not neurological deficit, or residual canal.

Learning Objectives

By the conclusion of this session participants should be able to discuss risk factors for failure of anterior only instrumentation

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