

Transpedicular corpectomy

Case series

In a single-center [Humanitas Research Hospital](#), retrospective study. Demographics, clinical, and radiologic data of 19 patients who underwent surgery for [thoracolumbar burst fractures](#) between 2016 and 2019 were collected. All patients enrolled in the present study underwent surgery by means of posterior fixation and [transpedicular corpectomy](#) with the aid of an intraoperative image-guided [neuronavigation](#) system.

Postoperative correction of the vertebral height ratio was achieved in all cases, with an average increase of 23.6% ($p = 0.0005$). No statistical differences ($p = 0.9$) were found comparing 1- and 3-month postoperative CT scans, in relation to vertebral height ratio. A statistically significant difference was found between the pre- and postoperative kyphotic angles for the thoracolumbar and lumbar segments ($p = 0.0018$ and 0.005 , respectively), but no difference was found between kyphotic angles at the 3-month follow-up. A unilateral approach was performed on 15 patients (79%), while 4 cases (21%) required a bilateral laminectomy. We did not observe any significant intraoperative complications.

Single-stage posterior corpectomy and fixation is a safe and effective approach for thoracic and lumbar burst fractures. It provides excellent 360-degree reconstruction in a single surgical stage with satisfactory results in terms of kyphosis reduction, biomechanical stability, and reduced invasiveness. Spinal navigation represents a fundamental tool to overcome some anatomical limits of the presented technique ¹⁾.

¹⁾

Anania CD, Bono BC, Tropeano M, Fornari M, Servadei F, Costa F. Single-Stage Posterior Transpedicular Corpectomy and 360-Degree Reconstruction for Thoracic and Lumbar Burst Fractures: Technical Nuances and Outcomes. J Neurol Surg A Cent Eur Neurosurg. 2022 Apr 6. doi: 10.1055/s-0042-1743515. Epub ahead of print. PMID: 35388449.

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