

Anterior approach to thoracic and lumbar spine

D'Aliberti et al. from the Department of Neurosurgery, Niguarda Cà Granda Hospital, [Milan, Italy](#) report on a series of 145 consecutive patients with different types of spine lesions surgically treated via an anterior approach (AA) at the thoracic and lumbar levels during the past 10 years. Indications, techniques, and surgical results are described.

This series included 92 patients with fractures, 30 with neoplasms, 13 with thoracic disc hernias, and 10 with spinal infections. Based on the lesion to be addressed, the AA was used for lesion excision, corpectomy, vertebral body reconstruction with cages, realignment, and/or plating or screwing. The approach was extracavitary in 55 patients and intracavitary in 90. In 126 patients (86.8%), neural decompression and spine stabilization were achieved via a stand-alone AA (SA-AA), whereas 19 patients (13.1%) were treated using a 2-stage anteroposterior approach. This circumferential approach was reserved for select cases of severe traumatic dislocation, particular types of tumors, or specific anatomical locations. The authors developed a simple neuronavigation-based method of identifying the severely injured patients who were eligible for the SA-AA by evaluating the angle of lateral dislocation.

There were no deaths and no instances of major surgery-related morbidity. Minor morbidity was almost always transitory and was reported in 13 patients (8.9%). Neurological improvement was reported in 20% of injured patients with a preoperative incomplete lesion. Postoperatively, all patients were able to stand or at least sit without load pain. During the follow-up (mean \pm standard deviation 3.8 \pm 2.4 years), there were no cases of failure, fracture, dislocation, or bending of the anterior instrumentation, and the rate of pseudarthrosis was 0%.

The anterior route provides direct access to most spine diseases and allows optimal neural decompression and the possibility of adequate realignment and strong reconstruction/fixation. Stability of the vertebral column is achieved, resolution of clinical pain is rapid and almost complete, and the rate of surgical complications is very low. The authors assert that the SA-AA offers so many advantages and has such good results that the 2-stage anteroposterior approach can be reserved for a minority of select cases and that the time for using the posterior approach alone is over ¹⁾.

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D'Aliberti G, Talamonti G, Villa F, Debernardi A, Sansalone CV, LaMaida A, Torre M, Collice M. Anterior approach to thoracic and lumbar spine lesions: results in 145 consecutive cases. J Neurosurg Spine. 2008 Nov;9(5):466-82. doi: 10.3171/SPI.2008.9.11.466. PubMed PMID: 18976178.

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