Minimal invasive anterolateral transthoracic transpleural approach: a novel technique for thoracic disc herniation. A review of the literature, description of a new surgical technique and experience with first 12 consecutive patients

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STUDY DESIGN
A retrospective review of a case series.

OBJECTIVE
To describe a novel surgical technique for a minimally disruptive lateral transthoracic transpleural approach to treat thoracic disc herniations.

SUMMARY OF BACKGROUND DATA
Thoracic disc herniation is a relatively uncommon spinal condition, and surgical treatment is indicated for patients with myelopathy or radiculopathy that failed to respond to conservative therapy. Presently there is no consensus about the best approach to address thoracic disc herniations. Using the novel retractor system (MaXcess), the authors describe a novel minimally disruptive approach that allows the surgeons to perform a standard anterior discectomy and fusion with instrumentation while minimizing approach-related morbidity.

METHODS
A series of 12 patients with single-level thoracic disc herniations who underwent anterior spinal cord decompression followed by instrumented fusion through a novel retractor system is being reported. Demographic and radiographic data, perioperative complications, and clinical outcomes were reviewed.

RESULTS
Twelve patients were enrolled with an average age of 51 years (range, 23 to 67 y). The average follow-up was 28 months (range, 12 to 33 mo). The average length of hospital stay was 5 days (range, 2 to 12 d). The average preoperative visual analog scale pain score was 9 (range, 7 to 10), which later decreased to 3 (range, 0 to 5) at final follow-up. All patients with myelopathy and/or sphincter dysfunction had significant improvement of their symptoms. One patient had pleural effusion and 1 patient had intercostal neuralgia.
CONCLUSIONS
Anterior decompression using a transthoracic transpleural approach provides excellent exposure and allows consistent decompression of thoracic disc herniations. This study demonstrated that a new minimally invasive, transthoracic transpleural decompression technique can be safely performed for single-level thoracic disc herniations. The early results showed that this technique allows less dissection, along with the advantages of conventional thoracotomy.

type: journal paper/review (English)
date of publishing: 7-2011
journal title: J Spinal Disord Tech (24/5)
ISSN electronic: 1539-2465
pages: E40-8