

TRANSFORAMINAL ENDOSCOPIC DISCECTOMY AND REAMERS FORAMINOTOMY FOR THORACIC DISC HERNIATION

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Objective: To describe benefit of transforaminal endoscopic discectomy using reamers for foraminotomy for treatment of thoracic disc herniations.

Summary of Background Data: Incidence of symptomatic thoracic disc herniation (TDH) is estimated to be 1 in 1,000 to 1 in 1,000,000 in the general population, and thoracic discectomy procedures constitute of only 0.15% to 4% of all surgical disc procedures. Surgical treatment for TDH is indicated by severe or progressive myelopathy as well as persistent axial back pain and intractable radiculopathy.

Surgical approaches can be divided to anterior and non-anterior approaches with well-known benefits and complications for the patient. Presently there is no consensus about the best approach to address thoracic disc herniations. Using the reamers and transforaminal endoscopic approach, the authors describe a novel minimally disruptive approach that allows the surgeon to perform a discectomy while minimising approach-related morbidity.

Methods: A series of 11 patients with single-level TDH and one patient with two levels TDH underwent posterolateral transforaminal discectomy using reamers for foraminotomy. All patients were operated in local anesthesia with sedation. Demographic and radiographic data, intraoperative complications, and clinical outcomes were reviewed.

Results: Twelve patients were enrolled with an average age of 55 years (range, 28 to 71 years). The average follow-up was 24 months (range, 12 to 36 months). The length of hospital stay was one day. The average preoperative verbal numeric pain scale 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 transient hemiparesis and needed early revision.

Conclusions: Posterolateral transforaminal decompression using reamers for additional foraminotomy provides excellent exposure and allows consistent decompression of thoracic disc herniations. This study demonstrated that a new minimally invasive, posterolateral transforaminal 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 over conventional surgery for thoracic disc herniation.