



Anterior Versus Posterior Approaches for Thoracic Disc Herniation: Association with Postoperative Complications

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Introduction

Thoracic disc herniation (TDH) represent 1.5 to 4% of all intervertebral disc herniations. Surgical treatment can be divided into anterior, lateral and posterior approaches and is an area of contention in the literature. Available evidence consists mostly of single-arm, single-institutional studies with limited sample sizes. We sought to to retrospectively investigate 30-day surgical outcomes following excision of TDH utilizing a national surgical registry.

Methods

The American College of Surgeons - National Surgical Quality Improvement Program (ACS-NSQIP) was queried for cases that underwent anterior (thoracotomy or thoracoscopy), lateral (extracavitary or costotransversectomy) or posterior (transpedicular or laminectomy) surgery for a primary diagnosis of TDH between 2012 and 2015.

Results

A total of 388 patients (48% females) were included in the analysis. An anterior approach was used in 65 patients, lateral approach in 34, transpedicular approach in 90 and laminectomy in 199. Overall, baseline demographics and clinical characteristics were similarly distributed between the four procedure groups. Patients undergoing an anterior approach spent, on average, 2-3 more days in the hospital compared to all other groups ($p < .001$). Furthermore, the anterior approach group was more likely to have developed a major complication (27%) compared to the lateral (8%), transpedicular (18%) or laminectomy groups (14%) ($p = 0.13$). Unplanned 30-day readmission and return to the operating room occurred in 5-8% of all patients ($p = 0.69$ and 0.63 , respectively). Lastly, the majority of the patients were discharged to home or a home facility (anterior-74%; lateral-81%; transpedicular-68% and laminectomy-74%, $p = 0.58$).

Conclusions

Anterior approaches had longer length of stay and higher, although not statistically significant, complication rates. No difference was found with regard to discharge disposition. In light of these findings, surgeons should weigh the risks and

Learning Objectives

By the conclusion of this session, participants will be able to:

- 1) Discuss the various surgical techniques for surgical management of thoracic disc herniation.
- 2) Compare and contrast the outcomes of different approaches for surgical management of thoracic disc herniation.

References