To determine and compare the scope and rates of complications associated with anterior and posterolateral surgical approaches to access herniated thoracic discs.

Methods

- Retrospective analysis of prospectively collected data from the American College of Surgeons (ACS) National Surgical Quality Improvement Program (NSQIP) from 2005 to 2014.
- Cases with thoracic disc herniation were included (ICD9 codes 722.11, 722.51, and 722.72).
- Cases involving concurrent herniation in other spinal regions (thoracolumbar) were excluded.
- The operations associated with each patient was then categorized as anterior or posterolateral based on CPT codes.
- A propensity score match was performed between the anterior and posterolateral groups to account for the non-random assignment of surgery approach.
- A binomial logistic regression model was created to derive the propensity scores with the target variable of surgical approach with the following covariates for matching: sex, race, age, obesity, diabetes, smoking, history of COPD, and ASA class.
- 30-day surgical outcomes were evaluated using the Pearson χ² test or Fisher exact test for categorical variables and Kruskal-Wallis test for continuous variables.
- All statistical analyses were conducted using commercially available software (SPSS v22, IBM, Armonk, NY) and the level of significance was set at p<0.05.

Results

- Outcome measures of general and matched cohorts categorized by surgical approach

The literature

- Ultimately multiple factors play a role in surgical approach, but through this large database analysis, the perioperative complication profiles appear equivalent in all observed measures of morbidity and mortality except for the length of hospital stay.
- The longer length of hospital stay associated with the anterolateral approach suggests a longer recovery time.
- Based on our results, the surgical approach should continue to be based on current guidelines and surgeon’s choice.

Conclusions

- Thirty-Day Perioperative Outcomes for Anterior and Posterolateral Approaches to Thoracic Degenerative Disc Disease: An Analysis of 432 Patients from the National Surgical Quality Improvement Program Database

Aims

- To review the literature for complications of the anterior and posterolateral surgical approaches to herniated thoracic discs.
- To determine and compare the scope and rates of complications associated with anterior and posterolateral approaches in the treatment of thoracic disc herniation.

References