

Learning Objectives

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

- 1) Characterize common complications after single-level discectomies and their frequency of occurrence.
- 2) Compare and contrast different outcomes for single-level discectomies performed by neurosurgeons versus those performed by orthopedic surgeons.
- 3) Appreciate the low, comparable, complication risk for both surgical specialties, slightly higher transfusion rate among orthopedic surgeons, and slightly longer operative time among neurosurgeons.

Introduction

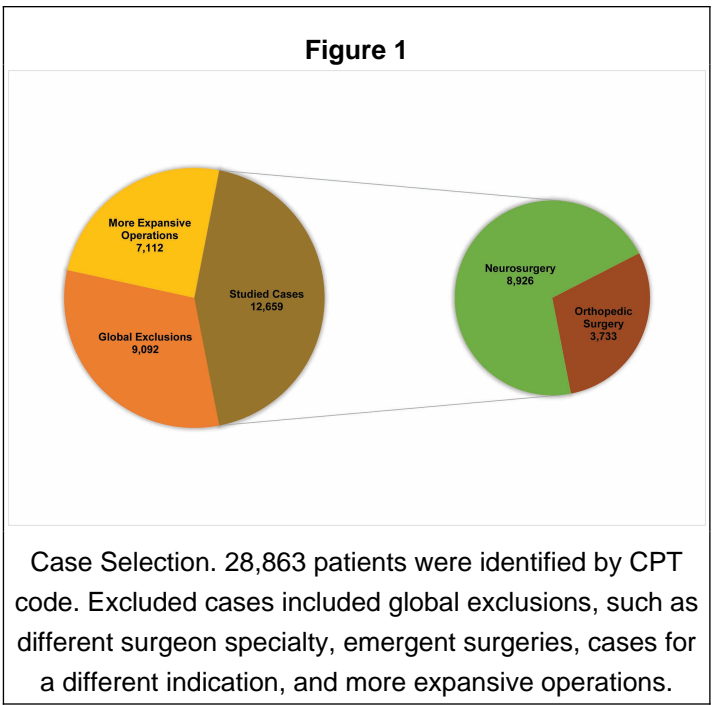
- Lumbar discectomy is a common procedure performed by orthopedic and neurological surgeons.
- While previous studies have examined preoperative risk factors and the impact of outpatient surgery versus inpatient admission on postoperative complications, the impact of surgeon specialty has not been examined.
- In this study, we investigate the impact of surgeon specialty on 30-day postoperative complication rates for single-level lumbar discectomies.

Methods

- All patients who underwent single-level lumbar discectomy between 2005 and 2014 were reviewed from the American College of Surgeons National Surgical Quality Improvement Program (ACS-NSQIP) database.
- Propensity-score matching and univariate binary regression was utilized to determine if surgeon subspecialty had an impact on 30-day post-operative complications.

Results

- 28,863 patients underwent single-level lumbar discectomies from 2005-2014. 12,659 cases met inclusion criteria.
- 3,733 (29.4%) operations were performed by orthopedic surgeons, while 8,926 (70.6%) were performed by neurosurgeons.
- A propensity-score matched sample of 7,464 total cases (3,732 orthopedic surgeon, 3,732 neurosurgeon) was analyzed for impact of surgeon specialty on 30-day outcomes.
- After matching, orthopedic surgeons and neurosurgeons were similar in all post-operative outcomes, except for a slightly higher frequency of blood transfusions (0.3%, n = 11) in orthopedic versus neurosurgery patients (0.1%, n = 3; p = 0.032), although this did not remain significant after Bonferroni adjustment.
- Mean operative time was slightly longer for neurosurgeons (83.7min) versus orthopedic surgeons (72.5min; p < 0.001). No significant differences existed between mortality, readmission, or reoperation rates.



Conclusions

- Single-level lumbar discectomies hold a low complication profile and show equivalent outcomes for both orthopedic and neurological surgeons, although neurosurgeons may exhibit a slightly longer mean operative time.
- In propensity-score matched cohorts, orthopedic surgeons had slightly higher rates of blood transfusions, although the number was small and did not remain significant after Bonferroni adjustment.

