



Influence of Gender on Outcomes after Anterior Cervical Discectomy and Fusion

Parth Kothari BS; Jeremy Steinberger MD; Nathan John Lee BS; Branko Skovrlj MD; Dante Leven DO; Javier Z Guzman BS;
John I Shin BS; John M. Caridi MD; Samuel K Cho
Icahn School of Medicine at Mount Sinai



Introduction

Gender may have an effect on outcomes. Large scale studies examining the effect on gender on outcomes after anterior cervical discectomy and fusions (ACDF) have not been performed to date.

Methods

Adults (> 18 years) undergoing ACDF from 2005-2012 were identified using the Current Procedural Terminology (CPT) codes in the ACS NSQIP database. Patients were divided by gender. Baseline, operative, and outcomes data were compared in bivariate fashion. Univariate and multivariate analyses were performed to assess the impact of gender on 30-day postoperative complications and mortality.

Results

3,845 patients were identified, of which 49.7% were women. Females were more likely to have preoperative dyspnea (8.06% vs 5.48%, p=0.0015). Males were more likely to have American Society of Anesthesiologists (ASA) physical status classification scores greater than or equal to 3 (39.25% vs 35.22%, p=0.0098), increased likelihood to consume greater than two drinks per day in the two weeks prior to admission (5.07% vs 1.26%, p<0.0001), and higher overall cardiac comorbidities (47.05% to 42.07%, p=0.0019). Intraoperatively, males had increased operative time more than four hours (7.5% vs 5.6%, p=0.0174), but rate of intraoperative complications, return to the operating room, overall postoperative morbidities, and mortality were not statistically different between males and females on univariate and multivariate analyses.

Conclusions

In evaluating gender differences in patients undergoing ACDF, intraoperative complications, thirty-day morbidity, and mortality were not statistically different between genders.

Learning Objectives

By the end of this presentation, participants should be able to assess the effect of gender on 30-day outcomes after ACDF.

Morbidity Univariate Analysis between Cohorts			
Outcome	Male, N=1934	Female, N =1911	P
Complications			
Any Complication	3.46	3.04	0.453
Major Complication	2.69	1.83	0.0739
Death	0.36	0.16	0.2122
Pulmonary Complication	1.45	1.36	0.8182
Renal Complication	0.1	0	0.1597
CNS Complication	0.16	0.16	0.9883
Peripheral Nerve Injury	0.21	0.05	0.1838
Cardiac Complication	0.26	0.21	0.7522
PE/DVT	0.72	0.21	0.0194
Sepsis/Septic Shock	0.16	0.1	0.6642
Intra/post-op Blood Transfusion	0.52	0.42	0.6548
UTI	0.31	0.84	0.0303
Wound Complication	0.78	0.78	0.9738
Graft/Flap Failure	0	0.05	0.3144
Other Outcomes			
HAC (SSI, UTI, VTE)	1.76	1.67	0.842
Return to OR	2.28	1.47	0.064
Unplanned Reoperation	1.61	0.96	0.2316
Unplanned Readmission	3.46	2.88	0.4933