

Ambulatory Versus Inpatient Anterior Cervical Discectomy and Fusion Outcomes in Three US States Arjun Vivek Pendharkar MD; David Purger; Eric S Sussman MD; Allen Ho MD; Atman Desai MD

Introduction

Anterior cervical discectomy and fusion (ACDF) is a commonly performed procedure. Data on safety and costs in the ambulatory setting remain limited.

Methods

Patients undergoing elective ACDF in CA, FL, and NY from 2009-2011 were identified in State Inpatient and State Ambulatory Surgery and Services Databases. Demographics, comorbidities, postoperative emergency department (ED) visits, readmissions, reoperation rates, and cumulative 90-day charges were analyzed.

Results

3,135 ambulatory and 46,996 inpatient ACDFs were performed. Mean Charlson comorbidity index (CCI), length of stay, and mortality rate were 0.2, 0.4 days, and 0% respectively in the ambulatory cohort and 0.4, 1.8 days, and 0.04% for inpatients (P<0.0001). Ambulatory patients were younger (48.0 versus 53.1) and more likely to be Caucasian and to pay with private insurance (all P<0.0001). 168 ambulatory patients (5.4%) presented to the ED within 30 days (mean 11.3 days), 51 (1.6%) were readmitted, and five (0.2%) underwent reoperation. Among inpatient surgeries, 2,607 patients (5.5%) presented to the ED within 30 days (mean 9.7 days), 1,778 (3.8%) were readmitted (mean 6.3 days), and 200 (0.4%) underwent reoperation. Higher CCI increased the likelihood of ED visits (ambulatory OR 1.285, P<0.05; inpatient OR 1.289, P<0.0001) and readmission (ambulatory OR 1.746, P<0.0001; inpatient OR 1.685, P<0.0001). Overall charges were significantly lower for ambulatory ACDFs (\$33,362.51 versus \$74,667.04; P<0.0001).

Conclusions

ACDF can be performed in an ambulatory setting with comparable morbidity and readmission rates, and lower costs, to those performed in an inpatient setting. Further studies are warranted to optimize patient selection for outpatient surgery.

Learning Objectives

By the conclusion of this session participants should be able to

1) describe importance of tracking outcomes in spine surgery

2) compare outpatient and inpatient ACDF outcomes

 discuss the safety and noninferiority of performing ACDF in an ambulatory setting

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