Race and Outcomes after Elective Spine Surgery

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Introduction

Studies that have looked at the effect of race on spine surgery outcomes have failed to take into account baseline risk factors for adverse outcomes. We wished to determine the effect of race on outcomes in patients undergoing elective laminectomy or fusion.

Methods

We identified 48,493 adult patients who underwent elective laminectomy and/or fusion from 2006-2012 at hospitals participating in the American College of Surgeons National Surgical Quality Improvement Program (ACS NSQIP), a prospectively-collected, national clinical database with established reproducibility and validity. Pre- and intraoperative characteristics and 30-day outcomes were stratified by race. We used propensity scores to match Caucasian and non-Caucasian patients on all pre- and intraoperative factors. We used regular and conditional logistic regression to predict the effect of race on adverse postoperative outcomes in the full sample and matched sample.

Results

Caucasians comprised 82% of our sample. We did not find any difference in in pre- and intraoperative factors when comparing Caucasian patients to all minority patients, and only minimal increase in odds for prolonged length of length of hospitalization (LOS) and discharge with continue care. However, African-American (AA) patients, who comprised 39% of our minority sample, had more preoperative comorbidities compared to Caucasian patients. Even after eliminating all differences between pre- and intraoperative factors between Caucasian and AA patients, AA continued to have LOS that was, on average, one day longer then Caucasian patients. AA also had higher odds for complications (odd ratio [OR] = 1.3; 95% CI 1.1-1.6), and discharged with continued care (2.3, 1.8-2.8).

Conclusions

African-American race is an independent predictor of prolonged LOS, complications, and discharge with continued care in patients undergoing elective spine surgery.

Learning Objectives

1. African-American race is an independent predictor of prolonged length of hospital stay, postoperative complications, and discharge with continued care in patients undergoing elective spine surgery.