

Session/Poster#

Presenter

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Patients with End-Stage Renal Disease Experience Higher Surgical Charges, Lengths of Stay, and Deyo Scores Following 2+ Level Spinal Fusion

Introduction: There is limited literature evaluating the impact of end stage renal disease (ESRD) on long-term outcomes after spinal fusion (≥2-level) surgery in adult spinal deformity (ASD) patients. Therefore, this study compared outcomes and complication rates between adult spinal deformity patients with and without ESRD undergoing spinal fusion (≥2-level) surgery.

Methods: Adult spinal deformity patients admitted from 2009 to 2011 with diagnoses of ESRD who underwent spinal fusion (≥2-level) surgery with a minimum 2-year follow-up surveillance were retrospectively reviewed. A 1:1 propensity score-match (PSM) by age, sex, and obesity status was performed before analyzing data. Univariate analyses evaluated demographics, complications, and subsequent revision within the ESRD groups.

Results: 84 propensity score-matched patients with adult spinal deformity were identified (ESRD: n = 42; non-ESRD: n = 42). Both cohorts were nearly identical in age (ESRD: 63.21 years, non-ESRD: 62.93 years, p = 0.921), sex (ESRD: 45.2% female, non-ESRD: 45.2% female, p = 1.000), and obesity status (ESRD: 7.1%, non-ESRD: 4.8%, p = 0.645). Compared to the non-ESRD cohort, the ESRD cohort had higher surgical charges (\$179,040.98 vs. \$56,826.17, p = 0.001), Deyo score (ESRD: 3.40, non-ESRD: 0.95, p < 0.001) and length of stay (ESRD: 18.38 days, non-ESRD: 3.76 days, p < 0.001). With a 1:1 PSM, patients with ESRD, had comparatively higher rates of medical complications (p=0.003).

Discussion and Conclusion: ASD patients with ESRD had higher surgical charges, length of stay, and Deyo score compared to a propensity score matched patient cohort without ESRD from the general population undergoing spinal fusion (≥2-level) surgery. These results can support management of postoperative expectations and concerns in this patient cohort.