

Impact of ESRD or Kidney Transplant on Postoperative Outcomes in Patients Undergoing Primary Shoulder Arthroplasty

Introduction: End stage renal disease (ESRD) is a condition where an individual's kidneys permanently cease functioning leading to the need for long-term dialysis or kidney transplantation. This study focuses on clinical outcomes between ESRD patients and status post kidney transplant cohorts who underwent Primary Shoulder Arthroplasty (PSA).

Methods: Using The National Inpatient Sample, patients who underwent PSA from the years 2005-2012 were identified (ICD9: 8180, 8181, 8188). Demographics and incidence rates of patients diagnosed with ESRD and those that received kidney transplants were also reported.

Univariate analysis compared differences in postoperative complications, revision of shoulder arthroplasty (ICD9: 8197) and in-hospital mortality in the transplanted and ESRD cohort. Multivariate logistic regression analysis controlling for age, sex, race, and obesity status determined transplant status as an independent risk factor for postoperative outcomes between the two cohorts.

Results: The ESRD cohort experienced higher rates of surgical complications, fracture non-unions, blood transfusions, urinary tract infection and sepsis (all, $p < 0.05$) (Table 1) than the transplant cohort.

Conclusions: ESRD patients who undergo PSA experienced higher rates of surgical complications, fracture non-unions, and blood transfusions than those status post kidney transplant. These findings should be taken into consideration to optimize ESRD patients prior to PSA surgery. In addition, prior to PSA, the requirement for a kidney transplant should be considered to minimize postsurgical complications.