Medicaid Insurance is Associated with Increased Readmissions and Mortality after Antibiotic Spacer Placement for Periprosthetic Joint Infection

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INTRODUCTION:
Patients with Medicaid insurance are at increased risk for postoperative complications following total knee arthroplasty and total hip arthroplasty. However, the association between Medicaid insurance and postoperative outcomes following revision total joint arthroplasty (TJA) for periprosthetic joint infection (PJI) requires further study. Given patients with Medicaid have unique risk factors and vulnerabilities, we evaluated outcomes among this patient population following a first stage surgery with antibiotic spacer placement for PJI.
METHODS: A retrospective query of a large healthcare database between 2016 and 2021 was conducted for adult patients (≥18 years) with PJI. Using International Classification of Disease, Tenth Revision and Current Procedural Terminology codes, as well as hospital charges for antibiotic spacers, patients undergoing the first stage for PJI were identified. Patients were grouped by Medicaid or non-Medicaid insurance enrollment status at the time of procedure. Patients with Medicaid were then age matched to non-Medicaid controls via exact caliper matching. Multivariable regression models were utilized to control for potential confounding using demographic, comorbidity, and hospital characteristics. Adjusted risks of 90-day postoperative complications between patients with Medicaid and patients with non-Medicaid were assessed and reported.
RESULTS:
Of the 40,346 patients available, 2,711 Medicaid patients were matched to 10,844 non-Medicaid patients on age (56.1 vs. 56.1 years, p=1.000). Patients with Medicaid insurance had significantly longer length of stay (9.48 vs. 6.67 days, p<0.001). Medicaid patients had a higher rate of inpatient mortality (0.81% vs. 0.48%, p=0.038), however, after accounting for differences in comorbidities, the risk of mortality was similar among both groups adjusted odds ratio [aOR]=1.12, 95%-confidence interval [CI]=0.65-1.91, p=0.689). Additionally, patients with Medicaid experienced significantly higher risk of sepsis (aOR=1.20, 95%-CI=1.04-1.38, p=0.010), surgical site infection (aOR=1.70, 95%-CI=1.21-2.40, p=0.002), readmission (aOR=1.12, 95% CI=1.02-1.24, p=0.022), and of being discharged to a skilled nursing facility (aOR=1.13, 95%-CI=1.01-1.25, p=0.031) compared to patients with non-Medicaid.
DISCUSSION AND CONCLUSION:
Patients with Medicaid were at increased risk for postoperative complications following surgery for PJI, including reinfection and readmission compared to patients with non-Medicaid insurance. Patients with Medicaid had a higher rate of inpatient mortality that may be driven by differences in comorbidities. Insurers and policy-makers should consider this information to develop risk stratification-based payment strategies that take into account the healthcare burden of this high-risk patient population.