



2020 Annual Conference Abstract Submission

PRESENTATION TITLE:

Standardized Care Pathway for Total Knee Arthroplasty Improves Outcomes in Minority Patients

AUTHOR

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DEGREE:

MD

IF NOT ACCEPTED FOR PODIUM PRESENTATION, IS POSTER PRESENTATION ACCEPTABLE?

Yes

STRUCTURED ABSTRACT (PURPOSE, METHODS, RESULTS, AND CONCLUSIONS) IN LESS THAN 400 WORDS:

Introduction: Disparities in TKA outcomes have been reported between minority and non-minority populations. Standardized TKA pathways improve outcomes but have not been studied extensively in minority groups. This study evaluates the efficacy of TKA pathway standardization at an urban teaching hospital that primarily serves minority patients.

Methods: This retrospective cohort study compares unilateral, primary TKAs before and after implementation of a standardized multi-disciplinary pathway that emphasized preoperative education and discharge planning, pre-emptive multimodal pain control, and early rehabilitation. Minimum 90-day follow-up was required. Patients were deemed "non-pathway" (n=144) or "pathway" (n=182) if they underwent TKA in the 16 months before or after pathway implementation. Outcomes were length of stay (LOS), PCA use, intraoperative blood transfusion, postoperative hemoglobin, complications, and discharge disposition (home vs. skilled nursing vs. rehab facility). Analysis utilized negative binomial and multiple logistic regression models adjusting for covariates (age, sex, BMI, incidence of complications, and need for blood transfusion), t-tests, and Fisher's exact tests.

Results: 326 patients were included. Mean age was 61.6 +/- 8.7 years, with 36.5% males. Hispanics comprised 44.5%, African Americans 27.9%, Asians 14.1%, and Caucasians 12.9%. Pathway and non-pathway patients were not statistically different in age (p=0.06), gender (p=0.56), BMI (p=0.12), or ethnicity (Hispanic [p=0.78], African American [p=0.37], Asian [p=0.83], Caucasian [p=0.50]). LOS was shorter for pathway patients (Geometric mean [GM]=2.65 days, 95%CI=2.47-2.83, p=0.04) than non-pathway patients (GM=3.10 days, 95%CI=2.76-3.49). Pathway patients required less PCA use (GM=0.04 days, 95%CI=0.01-0.14, p<0.001) than non-pathway patients (GM=1.87 days, 95%CI=1.74-2.00). Pathway patients were more frequently discharged to home (95.1% vs. 86.8%, p=0.03). Despite having no difference in mean preoperative hemoglobin (13.1 vs. 13.4 g/dL, p=0.10), pathway patients required fewer transfusions (1.6% vs. 9.7%, p=0.002) and exhibited higher mean postoperative hemoglobin (11.7 vs. 10.5 g/dL, p<0.001). Although total incidence of complications was not different between the groups (11.5% vs. 13.9% p=0.61), non-pathway patients developed more cardiopulmonary complications (5.6% vs. 0%, p=0.02) while pathway patients had more frequent wound dehiscence (4.4% vs. 0%, p=0.01).

Conclusion: Compared to the non-pathway patients, standardized TKA pathway patients had shorter LOS, decreased PCA use, increased discharge to home, fewer blood transfusions, and higher postoperative hemoglobin with no difference in total incidence of complication. This data suggests that standardized TKA pathways can improve outcomes in minority patient populations.