May 16th, 1:45 PM

Racial Differences in the Effectiveness of Total Knee Arthroplasty (TKA) on Postoperative Pain and Function

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Et al.

RACIAL DIFFERENCES IN THE EFFECTIVENESS OF TOTAL KNEE ARTHROPLASTY (TKA) ON POSTOPERATIVE PAIN AND FUNCTION

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Objective: African Americans are less likely than Caucasians to perceive TKA as an effective treatment option. We examined post-TKA pain and function by race, with and without adjusting for demographic and clinical factors on determining racial differences.

Methods: We analyzed data from FORCE-TJR, a national cohort of TJR patients. Patients had primary and unilateral TKA surgeries 07/01/2011-12/31/2014, and completed surveys on demographic and clinical information, including a pre- and 6-month postoperative Knee Injury and Osteoarthritis Outcome Score (KOOS). The KOOS pain and function scores ranged from 0-100 (higher=better). We examined baseline, 6-month, and 6-month change in pain and function by race, and estimated the association between race and outcomes, adjusting for demographic and clinical factors.

Results: Analyses included 5028 white (63% female, 65% income>45k; mean age of 67. BMI of 31) and 270 black patients (80% female, 39% income>45k; mean age of 63, BMI of 34). At baseline, black compared with white patients reported worse knee pain (mean: 39vs.48), and poorer function (mean: 46vs.54). While all patients reported significant gains at 6-month post-surgery, black patients had lower postoperative pain (mean: 71vs.82) and function scores (mean: 73vs.84) than white patients. Although not statistically significant, black patients on average had lower 6-month change than white patients in pain -1.9 (95%CI: -4.4, 0.6) and function -1.6 (95%CI: -3.9, 0.7). Adjusting for covariates, racial differences were significantly more pronounced in change in pain -5.5 (95%CI: -8.3, -2.7) and function -5.6 (95%CI: -8.2, -3.0).

Conclusions: TKAs were as effective in reducing pain and improving functions in blacks as in whites. Adjusting for certain demographic and clinical factors can impact assessment of racial differences and the effectiveness of TKA on postoperative outcomes, as black patients were very different from white patients on these important factors.

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