AFRICAN AMERICANS ARE AT HIGHER RISK FOR LIMB LOSS BUT NOT MORTALITY AFTER LOWER EXTREMITY BYPASS SURGERY

Objectives Lower extremity revascularization is the gold standard for treatment of symptomatic peripheral arterial disease. The objective of this study was to examine the impact of race on outcomes among patients with peripheral arterial disease who have undergone open lower extremity bypass.

Methods Data was obtained from the 2013 American College of Surgeons National Surgical Quality Improvement Program (NSQIP) database using Procedure Participant User File. Patients were divided into three groups based on race: whites, African Americans or Hispanic. Bivariate analysis was done for pre-, intra-, and post-operative risk factors among races. Multivariate analysis was used to determine associations of independent variables with mortality and lower extremity amputation as primary outcomes.

Results A total of 2,381 patients (31.9% Females, 68.1% Males) were identified in the NSQIP database who underwent lower extremity bypass in the year 2013. Among these patients, 1732 (72.74%) were white, 488 (20.50%) were African American, and 161 (6.76%) were Hispanic. African American patients were more likely to have undergone urgent surgery, have hypertension, be on dialysis, and present with rest pain and tissue loss (p <0.05). They were also more likely to return to the OR and be readmitted within 30 days (p=0.003).

On multivariate analysis, the following factors were found to have significant association with amputation: African American race (vs. White race, OR 2.5, p<0.05), length of total hospital stay ≥7 days (OR 4, p<0.05), return to OR (OR 9.4, p<0.05), unplanned readmission within 30 days (OR 1.9, p<0.05), major re-intervention on the bypass (OR 2, p<0.05). Factors that have significant associations with mortality include: 60-69 years of age (vs. <60 years of age, OR 10, p<0.05), 70-79 years of age (vs. <60 years of age, OR 7.6, p<0.05), ≥80 years of age (vs. <60 years of age, OR 14, p<0.05), dialysis (OR 8.2, p<0.05), length of total hospital stay ≥7 days (OR 2.5, p<0.05), and major re-intervention on the bypass (OR 3.4, p<0.05).

Conclusions African American patients were more likely than White and Hispanic patients to undergo major amputation following open lower extremity bypass. Unlike previously published data, this study does not show any difference in mortality.

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