Racial Variation in Clinical Outcomes Following Adjustable Gastric Band (AGB): Analysis of 67,514 Surgical Review Corporation BOLD Database Patients

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Background: Overall AGB results for weight loss and resolution of obesity co-morbidities are known. However, differences in treatment responses to AGB by race have not been investigated. This study identified variations by race in weight and BMI and in the distribution of obesity co-morbidities following AGB.

Methods: Data from 67,514 AGB patients in the Surgical Review Corporation's BOLD database was analyzed retrospectively in four groups: African-American (AA, n=7,601), Caucasian (C, n=50,283), Hispanic (H, n=4,188), Asian (A, n=140), and Other (Pacific Islands, Native American, or >1 race recorded; O, n=5,302). Weight, BMI, and prevalence of obesity co-morbidities in each group were tabulated at 2, 6, 12, 18, 24 and 36 months post-operatively. Outcomes analysis used General Linear Models that included baseline and post-operative data, and were modified for binomial distribution of dichotomous variables. Pair-wise comparisons of results for AA,C,H,A,O versus each other were made at each interval.

Results: Weight and BMI were AA > C,H,O to 36 mos. ($p<0.0001$). To 24 months hypertension was highest AA>C and lowest H>O ($p<0.001$). Increased diabetes A,AA,C,H, and sleep apnea, asthma, and back pain in AA,C,H at 2,6 months ($p<0.001$) resolved at 12 months. Dyslipidemia was highest C,A to 12 months ($p<0.05$). Abdomen panniculitis, GERD, liver disease, stress incontinence, gout, musculoskeletal pain, leg edema, depression, psych impairment, cholelithiasis were highest in C up to 18 months ($p<0.05$).

Conclusions: AGB outcomes vary by race. AA weight loss was less than C,H,A,O. Hypertension persisted long-term in AA,C. Metabolic co-morbidities resolved least in A. Overall resolution of co-morbidities is lowest for C and best for H,O. Racial variations should be considered in identifying patients for AGB.