



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

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Introduction

As the percentage of obese people approaches 30% of the global population, the obesity epidemic is no longer just a national healthcare issue. 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.

Objective

The objective of this study is to observe specific improvements of pre-operative co-morbidities at the 6 month post-operative time between African Americans, Caucasians, Hispanics, Asians, and Other. By observing statistically significant variations between groups, it may be beneficial to pre-operatively stratify patients based on co-morbidities and potential specific medical benefit of Adjustable Gastric Band.

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

Clinical Outcome	Time in Months Post-op for Difference	African-American n=7,601	Caucasian n=50,283	Hispanic n=4,188	Asian n=140	Other n=5,302	P-value	Clinical Outcome	Time in Months Post-op for Difference	African-American n=7,601	Caucasian n=50,283	Hispanic n=4,188	Asian n=140	Other n=5,302	P-value
Weight (kg)	24	105+/-26	99+/-22	95+/-22	99+/-13	100+/-21	<0.0001	Diabetes (%)	6	22.6	23.51	22.03	26.25	18.46	<0.001
BMI (kg/m2)	24	38+/-9	36+/-7	36+/-7	37+/-4	36+/-7	<0.0001	Dyslipidemia (%)	12	24.92	37.31	27.55	40.0	23.58	<0.05
HTN (%)	24	47.2	42.41	30.67	57.14	28.74	<0.001	Back Pain (%)	6	35.25	38.42	31.81	30.0	26.78	<0.001
Obstructive Sleep Apnea(%)	6	30.74	34.47	30.32	36.25	25.6	<0.0001	Stress Incontinence (%)	2	12.43	20.01	14.15	8.76	12.79	<0.05
Asthma(%)	6	13.84	13.66	13.9	11.25	12.46	<0.0001	Gout (%)	2	3.67	2.95	1.64	2.19	2.03	<0.05
Panniculitis (%)	12	2.83	4.95	3.73	4.44	1.26	<0.001	Musculoskeletal Pain (%)	18	25.4	29.01	23.48	25.0	23.07	<0.001
Cholelithiasis(%)	18	12.58	19.45	16.89	10.0	7.94	<0.0001	Leg Edema (%)	6	17.46	18.05	11.04	23.75	11.11	<0.001
GERD(%)	12	25.54	27.09	20.93	20.0	20.84	<0.0001	Depression (%)	12	16.72	32.48	20.09	26.67	17.32	<0.001
Liver Disease(%)	6	2.8	4.05	4.56	6.25	1.55	<0.001	Psych Impairment (%)	18	7.83	12.76	10.47	5.0	8.05	<0.01

- Weight and BMI were AA > C,H,O to 24 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,O), sleep apnea, asthma, and back pain in AA,C,H, A at 2,6 months (p<0.0001), which resolved at 12 months
- Dyslipidemia was highest in C,A to 12 months (p<0.05)
- 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 trailed C,H,A,O. Hypertension persisted long-term in AA,C. Metabolic co-morbidities resolve less in A. Overall resolution of co-morbidities is worst for C and best for H,O. These racial variations should be considered in identifying patients for AGB.