SHORT-TERM VARIATION BY RACE IN WEIGHT, WEIGHT LOSS, BMI AND OBESITY CO-MORBIDITIES FOLLOWING SLEEVE GASTRECTOMY (SLEEVE)

Justin Kucinski D.O., Muhammad M. Hussain D.O and J. Slotman, M.D.
Departments of Medicine and Surgery, Inspira Health Network, Vineland, NJ

Background

Among morbidly obese patients, previous investigations have identified statistically significant differences between major racial populations in weight and BMI, and in the distribution of weight-related medical problems. Whether or not these racial variations persist post-operatively in response to SLEEVE is unknown.

Objective

To identify racial variations in weight loss and resolution of obesity co-morbidities after SLEEVE

Methods

Data from 8,936 Surgical Review Corporation BOLD database patients who underwent SLEEVE was analyzed retrospectively in five groups: African-American (AA; n=936), Caucasian (C; n=6,708), Hispanic (H; n=816), and Other (O; Pacific Islander, Native American, or >1 race listed in BOLD; n=476). Outcomes analysis used General Linear Models that included baseline and post-operative data, and were modified for binomial distribution of dichotomous variables.

Results

AA 12 month weight and BMI were increased, and weight loss decreased vs C, O, H ($p<0.01$). 2 month gout and 6 month AA hypertension were highest ($p<0.05$). C 2 month psychological impairment and alcohol use, 6 month sleep apnea, GERD, liver disease, and depression, and 12 month cholelithiasis were most prevalent ($p<0.05$). Diabetes was highest in C and H at 6 months ($p<0.05$). AA and O asthma was highest at 6 months. O stress urinary incontinence, back and musculoskeletal pain and leg edema were greatest up to 12 months ($p<0.05$). These variations all resolved by 18 months. Racial variations in angina, heart failure, pulmonary hypertension, peripheral vascular disease, obesity hypoventilation syndrome, abdominal hernia and panniculitis, dyslipidemia, polycystic ovarian disease, pseudotumor cerebri, impaired functional status, substance and tobacco abuse, and support group attendance were not significant.

Conclusions

Racial variation during early post-operative follow-up after SLEEVE is significant for weight, weight loss and BMI, and for many obesity co-morbidities. AA weight loss lags behind other groups. Co-morbidities persist most often among C patients, as does diabetes in both C and H. Applying this advance knowledge clinically may optimize patient management early after SLEEVE.

Table 1. BOLD DATABASE LAPAROSCOPIC SLEEVE GASTRECTOMY OUTCOMES BY RACE

Outcome	African-American n=936	Caucasian n=6,708	Hispanic n=816	Other n=476	P-value	Time Period
Weight (kg)	108+/-30	96.5+/-27	98.9 +/ 37	95.8 +/ 27	<0.001	12mos
Weight Loss (kg)	40.8 +/- 15.3	43.3 +/ 17.8	43.5 +/ 18.4	44 +/ 18.6	<.001	12mos
BMI (kg/m2)	38.5 +/- 9.5	34 +/- 8.3	35 +/ 10.4	34 +/ 9.8	<0.001	12mos
HTN (%)	50.17	40.87	34.38	39.89	<0.05	6mos
Diabetes (%)	19.6	18.08	19.64	17.55	<.05	6mos
Asthma (%)	18.94	13.04	10.71	19.68	<.05	6mos
Stress Urinary Incontinence (%)	5.38	14.21	10.53	20.29	<.05	12mos
Back Pain (%)	31.18	30.75	29.82	46.38	<.05	12mos
Musculoskeletal Pain (%)	25.25	30.73	28.07	42.03	<.05	12mos
Gout (%)	3.88	3.43	2.1	2.99	<0.05	2mos
Psychological Impairment (%)	9.69	18.19	10.88	7.89	<.01	2mos
Alcohol Use (%)	27.99	29.31	24.47	17.27	<.05	2mos
OSA (%)	30.23	33.23	25.89	26.6	<.05	6mos
GERD (%)	33.55	36.3	26.34	30.32	<.05	6mos
Depression (%)	23.26	34.19	16.96	13.83	<.05	6mos
Liver Disease (%)	1.99	4.54	3.57	1.06	<.05	6mos
Lower Extremity Edema (%)	13.98	19.04	10.53	24.64	<.05	12mos
Cholelithiasis (%)	22.58	21.96	17.54	8.7	<0.05	12mos