INTERACTION OF RACE WITH WEIGHT LOSS AND RESOLUTION OF OBESITY CO-MORBIDITIES IN PATIENTS UNDERGOING LAPAROSCOPIC ROUX-EN-Y GASTRIC BYPASS (LRYGB): AN ANALYSIS OF 83,059 BOLD DATABASE PATIENTS

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Background

Previous studies have identified significant differences by race in the distribution of medical problems associated with morbid obesity. Whether or not these racial variations persist after LRYGB and the ensuing weight loss is unknown.

Objective

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

Methods

Data from 83,059 Surgical Review Corporation BOLD database patients who underwent laparoscopic Roux-en-Y gastric bypass was analyzed retrospectively in five groups: African-American (n=9,055), Caucasian (n=63,352), Hispanic (n=6,893), Asian (n=198), and Other (Pacific Islander, Native American, or >1 race listed in BOLD; n=3,561). Outcomes analysis used General linear models (GLM) that included baseline and post-operative data, and were modified for binomial distribution of dichotomous variables.

Results

Resolution/persistence of angina, CHF, pulmonary hypertension, and polycystic ovarian disease did not vary by race. Racial differences in diabetes, liver disease, obstructive sleep apnea, obesity hypoventilation syndrome, gout, back and musculoskeletal pain, leg edema, alcohol use, and non-depression psychological issues did not remain after 6 months.. Weight and BMI were higher in African-Americans versus Caucasians, Hispanics and Other (12 months, $p<0.0001$). Hypertension persisted African-American versus Caucasian, Hispanic, Other through 24 months ($p<0.01$). Caucasian cholelithiasis (18 months, $p<0.05$), abdominal panniculitis (12 months, $p<0.01$,) and depression (24 months, $p<0.05$) continued higher versus other races. GERD was highest in African-Americans and Caucasians at 12 months ($p<0.05$), as was dyslipidemia in Caucasians, African-Americans, and Other ($p<0.05$). Hispanic depression was lowest (24 months ($p<0.05$). Other had highest stress urinary incontinence (12 months, $p<0.05$).

Conclusions

LRYGB improves obesity, weight, and co-morbidity outcomes, but results vary by race. African-American weight and hypertension, and African-American/Caucasian GERD, and dyslipidemia resolve least. Caucasian abdominal issues and depression dominate. Racial variation in many obesity co-morbidities disappeared after 6-12 months.

Table 1. BOLD DATABASE LAPAROSCOPIC ROUX-EN-Y GASTRIC BYPASS OUTCOMES BY RACE

Outcome	African-American n=9,055	Caucasian n=63,352	Hispanic n=6,893	Asian n=198	Other n=3,561	P-value	Time Period
Weight (kg)	94+/-22	86+/-20	85+/-19	87+/-21	86+/-20	<0.0001	12mos
BMI (kg/m2)	34+/-7	31+/-6	32+/-6	32+/-6	31+/-6	<0.0001	12mos
HTN (%)	43.07	29.36	24.41	63.64	29	<0.001	18mos
Cholelithiasis (%)	15.51	23.99	18.02	13.04	17.44	<0.0001	12mos
Panniculitis (%)	5.84	9.11	4.22	2.17	6.05	<0.01	12mos
Depression (%)	19.72	33.98	17.78	17.39	23.08	<0.01	12mos
GERD (%)	24.61	24.79	18.63	13.04	22.15	<0.0001	12mos
Dyslipidemia (%)	20.39	28.15	15.73	19.57	27.18	<0.0001	12mos
Depression (%)	19.72	33.98	17.78	17.39	23.08	<0.01	12mos
Stress urinary incontinence (%)	10.53	14.98	10.73	4.35	17.33	<0.05	12mos