

BATTLE OF THE SUPER OBESE SEXES: FEMALE VERSUS MALE VARIATION IN PRE-OPERATIVE CLINICAL CHARACTERISTICS AMONG 1,673 SURGICAL PATIENTS UNDERGOING BILIO-PANCREATIC BYPASS/DUODENAL SWITCH (BPD/DS)

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INTRODUCTION

OBJECTIVE: To identify variations in weight and demographics in the distribution of preoperative clinical characteristics between super obese females compared with males who were about to undergo BPD/DS surgery.

As the American obesity epidemic increases, morbidly obese patients have become integral to every surgical practice; they are no longer limited to bariatric surgeons. Every clinical insight helps the surgeon to optimize outcomes when operating on and managing these medically fragile individuals with

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METHODS

Preoperative data from 1,673 Surgical Review Corporation BOLD patients who were planning to undergo BPD/DS were analyzed retrospectively in two groups: Female (n=1217) and Male (n=456). Statistical analyses performed included ANOVA which compared age, weight, and Body Mass Index (BMI) and Chi-squared which assessed dichotomous variable distribution.

RESULTS

Female versus Male Preoperative Clinical Comorbidities

Demographics	Unemployment	Medicaid	Medicare	Private	Self-Pay
Female	82.17	9.69	9.61	76.62	4.08
Male	83.33	5.41	11.49	80.63	2.48
Chi-Square Probability	0.1409	0.0116	0.0116	0.0116	0.0116

Demographics	Age (years)	Weight (kg)	BMI	African American	Caucasian	Asian	Hispanic	Other
Female	45	140	51	8.71	82.17	0.41	2.79	5.92
Male	46	174	53	5.48	83.33	0.22	3.07	7.89
Chi-Square Probability	0.035	<0.0001	0.0002	0.1409	0.1409	0.1409	0.1409	0.1409

Cardiopulmonary Comorbidities	Asthma	Hypertension	Obstructive Sleep Apnea	Lower Extremity Edema	Angina
Female	25.47	58.92	54.31	47.66	3.29
Male	16.67	73.25	78.07	48.46	4.39
Chi-Square Probability	0.0001	<0.0001	<0.0001	0.7687	0.2817

	Pulmonary Hypertension	CHF	DVT/PE	Obesity Hypoventilation Syndrome	Ischemic Heart Disease	Peripheral Vascular Disease
Female	12.98	3.29	3.78	1.89	2.55	2.14
Male	11.84	6.58	3.73	2.63	6.58	2.85
Chi Squared Probability	0.5323	0.0027	0.9605	0.3452	<0.0001	0.3885

Abdominal and Hepatobiliary Comorbidities	Abdominal Hernia	Cholelithiasis	GERD	Panniculitis	Liver Disease	Stress Incontinence
Female	10.27	25.97	54.56	22.43	5.42	45.69
Male	10.96	10.53	40.57	15.13	8.11	7.24
Chi Squared Probability	0.6797	<0.0001	<0.0001	0.001	0.0415	<0.0001

Endocrine and Metabolic Comorbidities	Fibromyalgia	Glucose Metabolism	Pseudotumor Cerebri	Dyslipidemia	Gout	Menstrual Irregularities	PCOS
Female	6.57	38.78	1.48	42.65	2.79	36.48	10.52
Male	0.88	50.88	1.10	50	9.21	0	0
Chi Squared Probability	<0.0001	<0.0001	0.5496	0.0071	<0.0001	<0.0001	<0.0001

Behavioral and Psychological Comorbidities	Alcohol Use	Depression	Psychomotor Impairment	Mental Health Diagnosis	Substance Abuse	Tobacco Use
Female	31.96	44.78	17.01	12.82	0.90	5.51
Male	41.89	28.95	13.60	9.21	0.88	7.89
Chi-Square Probability	0.0001	<0.0001	0.0907	0.0419	0.9589	0.0702

Somatic Comorbidities	Back Pain	Impaired Functional	Musculoskeletal
Female	17.01	17.01	17.01
Male	13.60	13.60	13.60
Chi-Square Probability	0.0907	0.0907	0.0907

DISCUSSION

The incidence of morbid obesity has been steadily rising over the last three decades with an increase in BMI estimated to be 0.4kg/m² per decade worldwide [1]. Among developed countries, the United States has been found to have the highest average BMI [1]. Surgeons will be operating on more morbidly obese individuals who frequently suffer from a multitude of medical comorbidities. The data collected in this study may be used to identify and optimize each patient's preoperative clinical comorbidities in an effort to decrease surgical complications.

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CONCLUSION

Among super-obese patients who were pre-operative for BPD/DS, demographics and clinical characteristics varied significantly by sex. Females suffered from higher rates of asthma, abdominal skin inflammation, hepatobiliary illnesses, and psychological issues including depression and fibromyalgia. Males were older, heavier, more often unemployed, drank more alcohol, suffered increased cardiac dysfunction, liver disease, obstructive sleep apnea, diabetes and other endocrine/metabolic co-morbidities. The advanced clinical knowledge reported here may help to optimize pre-

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