FEMALE AND MALE MORBIDLY OBESE SURGICAL PATIENTS VARY SIGNIFICANTLY IN PRE-OPERATIVE CLINICAL CHARACTERISTCS: ANALYSIS OF 67,514 BARIATRIC SURGERY PATIENTS

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Background

While more women than men undergo bariatric surgery, differences between the sexes in obesity-related pre-operative clinical conditions have not been investigated. Since the obesity epidemic now brings obesity to every surgical practice, every clinical insight helps.The objective of this study was to identify variations in age, BMI, and the incidence of obesity co-morbidities between morbidly

Methods

Pre-operative clinical data on 53,292 women and 14, 222 men in the Surgical Review Corporation's BOLD database who underwent adjustable gastric band (AGB) was examined retrospectively. Female versus male age and BMI, race, insurance, and the frequency of major obesity co-morbidities were compared by ANOVA and the Chi-squared equation.

Results

Female/male age (45.2+-12/48.2+-12; p<0.001), BMI (44.6+-7/46.2+-7; p<0.0001), race (African-American 12.4%/6.8%, Caucasian 73.5%/78.3%, p<0.001), and health insurance (Medicaid 3.1%/1.6%, Medicare 7.1%/9.9%; p<0.0001) varied significantly. Obesity co-morbidities (%) are detailed in the Table (all p<0.0001). Overall, females carried 12 weight-related illnesses more frequently than did males (abdominal panniculitis, cholelithiasis, GERD, stress urinary incontinence, asthma, back pain, fibromyalgia, pseudotumor cerebri, mental health diagnosis, depression, and psychological impairment – p<0.0001 – and lower extremity edema – p<0.01). Males had higher incidences of 18 obesity co-morbidities, compared with females (abdominal hernia, liver disease, obesity hypoventilation syndrome, obstructive sleep apnea, angina, hypertension, CHF, ischemic heart disease, peripheral vascular disease, dyslipidemia, diabetes, gout, impaired functional status, alcohol use, tobacco use, substance abuse, and unemployment – p<0.0001 – and DVT-PE – p<0.01). Pulmonary hypertension and musculoskeletal pain did not vary female/male.

Conclusion

Women were more frequently African-American and on Medicaid while men were more frequently Caucasian and insured with Medicare. Before AGB, compared with women, men were older, heavier, used alcohol, drugs, and tobacco more frequently, and had higher rates of cardiovascular pathology, obesity hypoventilation syndrome and obstructive sleep apnea, diabetes, gout, abdominal hernia, liver disease, and impaired functional status. Higher male alcohol use and liver disease incidence may be related.. Among women AGB patients, asthma, cholelithiasis, stress urinary incontinence, abdominal panniculitis, and mental health issues/dysfunction were more frequent. This advance knowledge may facilitate optimized surgical management of morbidly obese patients..

Female vs. Male Variation in Morbid Obesity Medical Co-Morbidities and Psychological/Behavioral Parameters

CARDIO-PULMONARY CO-MORBIDITIES

	Angina	CHF	Hypertension	Ischemic Heart Disease	Peripheral Vascular Disease	DVT/PE	Lower Extremity Edema	Obesity Hypoventilation Syndrome	Obstructive Sleep Apnea	Asthma
Females	1.83%	1.15%	52.15%	2.83%	0.79%	2.51%	23.32%	1.37%	34.33%	16.42%
Males	3.35%	3.07%	67.09%	8.71%	1.51%	2.94%	22.17%	2.17%	56.65%	10.65%
p-value	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.01	<0.01	<0.0001	<0.0001	<0.0001

ENDOCRINE/METABOLIC CO-MORBIDITIES

	Diabetes	Pseudotumor Cerebri	Gout	Dyslipidemia
Females	26.30%	1.37%	2.09%	37.25%
Males	37.82%	0.64%	6.75%	48.24%
p-value	<0.0001	<0.0001	<0.0001	<0.0001

MUSCULOSKELETAL CO-MORBIDITIES

	Back Pain	Functional Status	Fibromyalgia
Females	45.05%	1.92%	3.30%
Males	42.74%	2.89%	0.55%
p-value	<0.0001	<0.0001	<0.0001

ABDOMINAL & HEPATOBILIARY CO-MORBIDITIES

	GERD	Abdominal Hernia	Abdominal Panniculitis	Cholelithiasis	Liver Disease	Stress Urinary Incontinence
Females	43.97%	3.95%	4.84%	19.44%	3.91%	25.14%
Males	36.66%	6.63%	3.36%	7.03%	5.32%	3.45%
p-value	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001

PSYCHOLOGICAL & SOCIAL CO-MORBIDITIES

	Depression	Psychologically Impaired	Alcohol Use	Substance Abuse	Tobacco Use	Mental Health Diagnosis	Unemployment
Females	34.29%	14.83%	29.74%	0.31%	5.99%	9.69%	16.55%
Males	20.63%	10.01%	34.58%	0.57%	8.09%	5.82%	21.64%
p-value	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001