OUTCOMES FOLLOWING LAPAROSCOPIC ROUX-EN-Y GASTRIC BYPASS (LRYGB) VARY BY SEX: ANALYSIS OF 83,059 MORBIDLY OBESE WOMEN AND MEN

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Disclosure Statement of Financial Interest

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Nothing To Disclose
Introduction

• Significant variation in the pre-operative clinical characteristics between women and men seeking LRYGB

• Age, weight, BMI and the distribution of weight-related medical conditions

• Whether or not the post-operative response to LRYGB for weight, BMI and the resolution or persistence of obesity co-morbidities also varies by sex is unknown
Objective

• To identify statistically and clinically significant variations in long-term outcomes between women and men who underwent LRYGB
Methods

• Pre-operative and follow-up data at 2, 6, 12, 18 and 24 months after surgery on 83,059 patients from the Surgical Review Corporation’s BOLD database who underwent LRYGB

• Retrospective analysis of two groups: Women (n=65,325) and Men (n=17,734)

• Data included age, weight, BMI, and 29 weight-related medical conditions
Methods

• Statistics:
  • Continuous variables by ANOVA with baseline and treatment in the model
  • Distribution of obesity co-morbidities by a general linear model
    • Modified for binomial distribution to account for dichotomous variables
Results

• Pre-operatively, morbidly obese patients were divided into two groups based on sex
  • 83,059: 65,325 women and 17,734 men

• Post-op analysis:
  • 2 months: 63,625 women and 17,333 men
  • 6 months: 36,708 women and 9,816 men
  • 12 months: 20,755 women and 5,390 men
  • 18 months: 5,472 women and 1,356 men
  • 24 months: 4,316 women and 1,049 men
Weight Loss

• Male weight higher at baseline and remained higher through 24 months
• Male weight loss > female at all data points
• In spite of greater weight loss, male BMI remained higher through 24 months
Cardiovascular

- PHT increased men > women through 12 months
- CHF, PVD, HTN, and angina increased men > women through 24 months
- Women were not affected more frequently than men in any cardiovascular co-morbidity
Pulmonary

• OHS increased in men through 12 months
• OSA increased in men through 24 months
• Asthma increased in women through 24 months
Endocrine and Metabolic

• Diabetes, gout and dyslipidemia increased in men through 24 months
• Only pseudotumor cerebri was increased in women
Abdominal and Hepatobiliary

• Cholelithiasis, panniculitis, GERD and stress urinary incontinence higher in women
• Increased female GERD may contribute to increased female asthma
• Liver disease and abdominal hernia higher in men
Somatic

• Variations by sex in back pain, musculoskeletal pain, and impaired functional status resolved after 12 months

• Lower extremity edema did not vary by sex
Psychological and Behavioral

- Female mental health diagnosis, depression, psychological impairment were increased
- Conversely, women attended post-LRYGB support groups more often
- Tobacco, alcohol, and substance abuse higher in men
- Increased alcohol intake may contribute to increased male liver disease
Results

• Men had 17 obesity co-morbidities greater than women
• Women were higher in 9 co-morbidities
Conclusion

• Women:
  • Persisted higher in cholelithiasis, abdominal panniculitis, GERD, stress incontinence, and in serious mental health conditions

• Men:
  • Failed to resolve cardiopulmonary/vascular issues and metabolic derangements (diabetes, gout, dyslipidemia)
  • Developed abdominal hernia and were functionally impaired more than women
Conclusion

• In spite of greater weight loss, at 24 months BMI was higher for men
• Increased alcohol consumption may contribute to increased male liver disease
Conclusion

• Outcomes following LRYGB vary significantly between men and women
• Women may benefit more from LRYG than do men
• This advance knowledge may facilitate optimized LRYGB management