

**IN THE SUPER-OBESE, BILIOPANCREATIC DIVERSION/DUODENAL SWITCH (BPD/DS) ELIMINATES VARIATION BY SEX OF OBESITY CO-MORBIDITY RESOLUTION BUT NOT WEIGHT AND BMI: ANALYSIS OF 1,673 PATIENTS**

**Malinda Lyon, DO, Danielle Tamburrini, DO, and Gus J Slotman, MD, Department of Surgery, Inspira Health Network, Vineland NJ 08360**

**Introduction:** Previous investigations identified differences in weight and clinical characteristics between obese women and men. However, in the medically fragile super-obese, whether or not post-operative responses to BPD/DS also vary by sex is unknown.

**Objective:** To identify variations in outcomes between women and men who underwent BPD/DS.

**Methods:** Pre-operative and follow-up data at 2, 6, 12, 18 and 24 months after surgery on 1,673 BPD/DS patients from the Surgical Review Corporation's BOLD database was analyzed retrospectively in two groups: Women (n=1,217) and Men (n=456). Data included weight, BMI, and 29 weight-related medical conditions. Continuous variables were analyzed using ANOVA with baseline and treatment in the model. Dichotomous variables were examined by a general linear model with baseline and treatment in the model and modified for binomial distribution.

**Results:** At baseline and 12 months ( $p < 0.0001$ ), and 24 months ( $p < 0.01$ ), male weight and BMI were higher than female. Baseline female abdominal panniculitis, asthma, cholelithiasis, GERD, stress urinary incontinence, depression, fibromyalgia ( $p < 0.01$ ) and mental health diagnosis ( $p < 0.05$ ) (n=8) were higher than were those characteristics among men. Male alcohol use, congestive heart failure, hypertension, ischemic heart disease, dyslipidemia, obstructive sleep apnea, diabetes, gout ( $p < 0.01$ ), liver disease and unemployment ( $p < 0.05$ ) (n=10) were higher than female. At 12 months, male sleep apnea, alcohol use, and gout remained significantly higher, as did female panniculitis, asthma, mental health diagnosis, depression, psychologic impairment, and stress incontinence. At 24 months, only stress urinary incontinence varied by sex.

**Conclusions:** Pre-operative female versus male variations in weight and BMI remain significant after BPD/DS. However, the eighteen obesity co-morbidities that varied by sex pre-operatively

were reduced to nine at twelve months following BPD/DS and were eliminated, except for stress urinary incontinence, by 24 months. Among the super-obese, in long-term outcomes men and women benefit equally from BPD/DS.

- 1.) Overall weigh and BMI remained higher for which population throughout the pre-op and post-op periods? **A.Males**, b.females, c.not recorded, d.no differene noted
- 2.) Were differences noted in co-morbidies based on sex in the pre-op phase? **Yes**, no, not studied, inconclusive
- 3.) A patient comes to your office and wants to know how else bariatric surgery can help them other than weight loss. What significant co-morbidity differences between the sexes were found at the 24 month post op period? **None**, hypertension, diabetes, asthma