Higher Rates of Emergency Department Utilization by Female Gastric Bypass Patient of Childbearing Age and Post-Menopausal Age: Propensity Score Matched MBSAQIP Analysis

Ripley-Hager C.[1], Cornejo J.[2], Zevallos A.[2], Sebastian R.[2,3], Coker A.[3], Zosa B.[3], Adrales G.[3]

[1] Temple University Hospital; [2]Northwest Hospital; [3]Johns Hopkins University School of Medicine

Introduction

Bariatric patients are predominantly female despite a nearly equal incidence of obesity among the sexes. Prior research indicates that perioperative and bariatric-specific outcomes are worse for male patients. However, it is not known if this sex disparity persists with aging amidst an expected rise in cardiovascular disease and decrease in estrogen production among female patients. We sought to evaluate the comparative safety and efficacy of bariatric surgery in female patients in ages of expected high (18 to 35 years old) and low (55 to 65 years old) estrogen levels compared with males.

Methods

Male and female patients between 18 to 35 years old and 55 to 65 years old who underwent RYGB were identified in the MBSAQIP 2019-2020 dataset. Using Propensity Score Matching analysis, the cohorts were matched for 26 preoperative characteristics. We compared 30-day outcomes and bariatric-specific complications between males and females from 18 to 35 years old and from 55 to 65 years old.

Results

30-Day Gastric Bypass Outcomes Age 18-35

	Male (n=2156)	Female (n=2156)	p-value
Mortality	1 (0.0)	1 (0.0)	1.000
Cardiac Complication	1 (0.0)	2 (0.1)	0.564
Pulmonary Complication	2 (0.1)	1 (0.0)	0.564
Renal Complication	4 (0.2)	3 (0.1)	0.705
Unplanned ICU Admission	22 (1.0)	15 (0.7)	0.248
Reoperation	44 (2.0)	31 (1.4)	0.130
Emergency Visit	**193 (9.0)**	**309 (14.3)**	**<0.001**
Operative Time (minutes)	**118.57 ± 54.87**	**114.85 ± 51.96**	**0.023**
Anastomotic Leak	8 (0.4)	6 (0.3)	0.592
Postoperative Bleeding	**11 (0.5)**	**5 (0.2)**	**0.003**

30-Day Gastric Bypass Outcomes Age 55-65

	Male (n=2814)	Female (n=2814)	p-value
Mortality	13 (0.5)	7 (0.2)	0.179
Cardiac Complication	7 (0.2)	4 (0.1)	0.365
Pulmonary Complication	4 (0.1)	5 (0.2)	0.739
Renal Complication	16 (0.6)	10 (0.4)	0.238
Unplanned ICU Admission	52 (1.8)	51 (1.8)	0.921
Reoperation	69 (2.5)	64 (2.3)	0.661
Emergency Visit	**191 (6.8)**	**226 (8.0)**	**0.049**
Operative Time (minutes)	**132.51 ± 65.97**	**127.51 ± 56.92**	**0.002**
Anastomotic Leak	8 (0.3)	7 (0.2)	0.852
Postoperative Bleeding	14 (0.5)	8 (0.3)	0.364

Conclusion

- No difference between male and female patients in mortality, cardiopulmonary complications, or bariatric-specific outcomes in either age cohort.
- Female bariatric patients at ages of expected high and low estrogen levels are at higher risk for postoperative emergency visits compared with males.
- This sex disparity is consistent with outcomes of other surgical procedures such as hernia repair.
- Additional research is needed to determine the driving factors for this difference in emergency care.