Evaluating the Comparative Risks of Weight Loss Surgery in Post-Menopausal Women

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Introduction

Bariatric Surgery is the most effective tool for weight loss and resolution of the metabolic syndrome. It decreases the risk for cardiovascular and liver disease mortality and cancer incidence1-4. The rate of obesity may be higher in post-menopausal women than currently estimated due to changes in body composition observed in the post-menopausal state5. To date, no study has attempted to evaluate the risks of weight loss surgery in post-menopausal women as compared to their pre-menopausal counterparts.

Methods

Using MBSAQIP 2019-2020 data, we performed a retrospective cohort study comparing 30-day outcomes of women of pre-menopausal age (Age 18-35) vs post-menopausal aged women (Age 55-65) undergoing sleeve gastrectomy (VSG) or roux-en-y gastric bypass (RYGB). Propensity Score Matching analysis for 26 pre-operative characteristics resulted in 12178 patients per cohort.

Results

30-Day Sleeve Gastrectomy Outcomes

	Pre-Menopausal (n=12,178)	Post-Menopausal (n=12,178)	p-value
Mortality	**2 (0.0)**	**11 (0.1)**	**0.013**
Cardiac Complication	2 (0.0)	6 (0.0)	0.157
Pulmonary Complication	3 (0.0)	5 (0.0)	0.479
Renal Complication	11 (0.1)	16 (0.1)	0.336
Unplanned ICU Admission	**29 (0.2)**	**67 (0.6)**	**<0.001**
Reoperation	79 (0.6)	96 (0.8)	0.197
Emergency Visit	**1201 (9.9)**	**590 (4.8)**	**<0.001**
Operative Time (minutes)	**63.84 ± 30.71**	**70.42 ± 36.60**	**<0.001**
Anastomotic Leak	29 (0.2)	21 (0.2)	0.257
Postoperative Bleeding	12 (0.1)	18 (0.1)	0.273

30-Day Gastric Bypass Outcomes

	Pre-Menopausal (n=5426)	Post-Menopausal (n=5426)	p-value
Mortality	3 (0.1)	5 (0.1)	0.479
Cardiac Complication	1 (0.0)	5 (0.1)	0.102
Pulmonary Complication	**2 (0.0)**	**10 (0.2)**	**0.038**
Renal Complication	**1 (0.0)**	**10 (0.2)**	**0.007**
Unplanned ICU Admission	**34 (0.6)**	**65 (1.2)**	**0.002**
Reoperation	**107 (2.0)**	**141 (2.6)**	**0.029**
Emergency Visit	**857 (15.8)**	**410 (7.6)**	**<0.001**
Operative Time (minutes)	**163 ± 99**	**182 ± 197**	**<0.001**
Anastomotic Leak	**8 (0.1)**	**22 (0.4)**	**<0.001**
Postoperative Bleeding	11 (0.2)	16 (0.3)	0.668

Conclusion

- No statistically significant difference in VSG-specific complications between the pre- and post-menopausal age bariatric patients.
- Post-menopausal aged women were found to have higher rates of anastomotic leak after RYGB.
- As there was no difference in overall mortality or cardiac complications, our findings suggest that bariatric surgery can be safe in appropriately selected post-menopausal women.
- The higher leak rate observed in post-menopausal women undergoing RYGBP deserves further investigation.