Bariatric Surgery Impact on Weight Loss and Comorbidities in Polycystic Ovarian Syndrome (PCOS) Patients

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INTRODUCTION

In this study we aim to explore the role of bariatric surgery on weight loss and several commodities in polycystic ovary syndrome (PCOS) patients that include diabetes, GERD, sleep apnea, hypertension, and hyperlipidemia.

PCOS is an endocrine disorder that leads to fluid filled cyst formation in the ovaries. It affects child-bearing females and a common cause of infertility. PCOS leads to hormonal imbalance on several levels including androgens, insulin, cortisol...etc. causing many comorbidities [1]. Obesity among other factors can aggravate and lead to the development of PCOS by influencing the hypothalamic- pituitary-ovarian (HPO) axis[2].

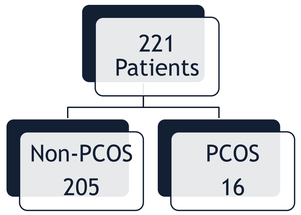
AIM

The aim of this study was to examine average weight loss and explore comorbidities exacerbations and frequency such as diabetes, GERD, sleep apnea, hypertension, and hyperlipidemia between Non-PCOS and PCOS patients:

- Prior to bariatric surgery
- 6 months post-op
- 1 year post-op

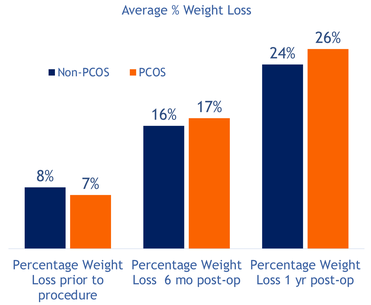
METHOD

We performed a retrospective study of 221 patients who underwent bariatric surgery. Patients were surveyed at three intervals regarding their weight loss and comorbidities: pre-operation, post-operation at 6 months, and post-operation at 1 year. Average weight loss in kilograms, average weight loss percentages were calculated for both groups. Agresti-Caffo based 95% Confidence intervals was used to measure the significance of difference in proportions between non-PCOS and PCOS patients who responded “yes” to the following comorbidities: diabetes, GERD, sleep apnea, hypertension and number of hypertensive medications, and hyperlipidemia.



RESULTS

Weight loss average over the period of the three intervals was similar between Non-PCOS and PCOS patients, and there was no significant difference in proportions of weight loss averages. The average weight loss increased post operation and was highest at 1 year follow-up with 24% for non-PCOS patients and 26% for PCOS patients.
For comorbidities and based on 95% confidence intervals, there was no true difference in the proportion of Non-PCOS and PCOS patients who reported comorbidities at pre-operation, post-operation at 6 months, and post-operation at 1 year.



CONCLUSION

Bariatric surgery had a similar positive impact on average weight loss in Non-PCOS and PCOS patients with increasing average weight loss over time. Additionally, there was no significant difference in reporting comorbidities in both groups.

Despite the endocrine nature of their disease, this study shows promising results of bariatric surgery for PCOS patients they had similar outcomes as Non-PCOS patients. The limitations of this study include a small sample size of PCOS patients in which many were lost to follow up. Further studies are needed to establish the role of bariatric surgery on comorbidity resolution as weight loss can have a role in re-establishing hormonal balance which could potentially alleviate PCOS symptoms.

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