INDIANA UNIVERSITY
SCHOOL OF MEDICINE

The Effect of Pregnancy on Weight Regain After Bariatric Surgery

Edward Hernandez[1] , Dimitrios Athanasiadis[1], Leah D. Frischmann[1], Zachary Gunderson[1], Ambar Banerjee[1] , Dimitrios Stefanidis[1]
[1]Department of Surgery, Indiana University School of Medicine, Indianapolis, Indiana.

INTRODUCTION

Weight regain (WR) after bariatric surgery is a common concern. Factors that contribute to WR must be explored and discussed preoperatively as they affect the patient's expectations of weight loss. The hormonal changes that occur during pregnancy may counter those after bariatric surgery and increase WR risk. The aim of our study was to assess the impact of pregnancy on WR after bariatric surgery.

MATERIALS and METHODS

Patients who underwent bariatric surgery at our institution between 2010-2016, successfully carried a pregnancy to term, and had at least 4 years postop and 1 year post pregnancy follow up were identified. Patient characteristics such as age, type of surgery, preoperative weight, nadir weight, time from surgery to pregnancy and delivery, and subsequent weights after pregnancy were recorded. Female patients who underwent bariatric surgery during the same time period and had at least four years of continuous follow up were used as controls. For both groups' percent WR was calculated as 100 x (4^{th} year post-operative weight – nadir weight)/nadir weight. In accordance with the literature, clinically significant WR was defined as >10%. A p-value of <0.05 was considered significant.

RESULTS

Eighteen post-bariatric patients (13 gastric bypass and 5 bands) had successfully carried a pregnancy to birth. The average time from surgery to conception was 18.5 months with 50% of the participants becoming pregnant within 18 months of their operation. The control group consisted of 174 patients (165 gastric bypass, and 9 bands). Clinically significant WR (>10%) four years after surgery was identified in 83.3% (15/18) patients who had become pregnant compared to 59.2% (103/174) in the control group (p=0.045). The pregnant group was younger than the control group (31.8 SD:6.0 vs 45.6 SD:12.1, respectively). Analysis was also performed with a max age cut off 45 in the control group (34.7 SD:6.2). Although the percent of WR (>10%) was similar for the control group (64.6%, 53/82), when chi-square analysis was performed there was no longer a statistical difference (p=0.124) due to the decrease in sample size.

CONCLUSION

Patients who became pregnant and gave birth after bariatric surgery had a higher rate of weight regain compared with nonpregnant controls. Although the miracle of birth is something to be celebrated, factors that affect weight regain must be discussed with patients preoperatively to set realistic expectations.