

Bariatric Surgery and Pregnancy

Sushil Chawla

Keywords: Bariatric surgery, Obesity, Pregnancy in obese.

Journal of Obstetric and Gynaecological Practices POGS (2024): 10.5005/jogyp-11012-0042

Globally, there is a concerning rise in obesity among women of childbearing age (defined as a BMI of 30 or higher). This can lead to serious health problems for both mothers and babies in terms of issues, such as infertility, gestational diabetes, preeclampsia; they also have more operative morbidity in terms of the requirement of cesarean sections more frequently. Maternal obesity raises the chances of birth defects, abnormal growth patterns, miscarriage, and stillbirth for the baby. This has also been implicated in subsequent childhood obesity.^{1,2}

Most weight management focuses on nonsurgical methods, such as lifestyle changes (diet and exercise), behavior modification, and medications. While bariatric surgery (BS), introduced in the 1960s, remains the most effective treatment for severe obesity. Attempts are made for obesity to be managed with nonsurgical approaches to weight loss—behavioral changes, diet, exercise, and pharmacotherapy. Bariatric surgery is currently the most effective treatment for obesity since its launch in 1960. Bariatric surgery is either restrictive, malabsorptive, or combined with laparoscopic adjustable gastric banding, sleeve gastrectomy, silastic ring gastroplasty; vertical-banded gastroplasty is used commonly across the world. They often lead to improved insulin sensitivity and glucose control and these metabolic changes contribute to overall improved health and well-being but also impact nutrient absorption and can cause nutrient deficiencies. Bariatric procedures alter the digestive system leading to changes in bowel habits and alterations in gut hormones that control hunger.¹⁻⁴

More and more women in the reproductive age-group in our country are also resorting to the BS. In this editorial, I am putting my focus on the effects of BS on fertility and obstetric outcomes.

FERTILITY

Subfertility is a potential complication of the excess weight, because of anovulatory cycles. Improvement in menstrual cycle and hormonal profiles are seen immediately after BS and these changes can lead to spontaneous pregnancy in infertile women. A sudden increase in the level of sex hormone-binding globulin, reduction in androgens level, and inflammation is seen after surgery. The weight loss after BS also tends to improve the number and the quality of the oocytes retrieved in an ART procedure.^{2,5,6}

Until more is known about whether or not BS improves fertility, it should not be recommended as a treatment modality for infertility.

PRENATAL ADVICE

It is recommended to wait 12–24 months after BS before conceiving so that the fetus is not exposed to a rapid maternal weight loss

Department of Obstetrics and Gynecology, INHS Asvini, Colaba, Mumbai, Maharashtra, India

Corresponding Author: Sushil Chawla, Department of Obstetrics and Gynecology, INHS Asvini, Colaba, Mumbai, Maharashtra, India, Phone: +91 7030499665, e-mail: Chawla.sushil@rediffmail.com

How to cite this article: Chawla S. Bariatric Surgery and Pregnancy. *J Obstet Gynaecol Pract POGS* 2024;2(2):31–32.

Source of support: Nil

Conflict of interest: None

environment and so that the patient can achieve full weight loss goals. Should pregnancy occur before this recommended time frame, closer surveillance of maternal weight and nutritional status may be beneficial.^{1,5,7}

The preconceptional counseling should also involve checking for the deficiencies of various micro- and macronutrients, resulting in the poor health of the women. These factors predispose the fetus to growth restriction and necessitate necessary antepartum management for fetal growth monitoring. A separate consultation with the dietitian is helpful to these mothers.

WEIGHT GAIN

As mentioned earlier, the pregnancy is to be planned after the phase of weight loss. However, the recommended weight gain during the pregnancy should depend on the pre-pregnancy BMI of the women.^{2,6}

ANTEPARTUM COMPLICATIONS

Gestational diabetes mellitus (GDM) is common complication of obesity. The BS is known to reduce the incidence of the GDM. There is no consensus on the results of the various screening tests in women who are pregnant post-BS, thus these women may require continuous blood glucose monitoring for their monitoring and treatment. The obstetrician should be aware of the early or late onset dumping syndrome in these women which may require significant alteration in the dietary advice.^{1,3-5}

Preeclampsia has been found to be lower in women who underwent surgery for the obesity, thus reducing the complications associated with this dangerous obstetric condition.

Intrapartum

There appears to be no significant difference in the rates of complications, such as placental abruption, labor dystocia, or meconium-stained amniotic fluid compared with the general population. Additionally, other labor complications, such as

postpartum hemorrhage, operative vaginal delivery, and vaginal tears seem to occur at similar rates. While the cesarean delivery rate may be slightly higher in women who have undergone BS, vaginal delivery remains a viable option.^{1,3,4,6}

Bariatric surgery is not a contraindication for trial of vaginal delivery. However, various studies have found the incidence of cesarean deliveries higher among women undergone BS.

Lactation

While there is limited research on specific nutrient deficiencies in breast milk following BS, breastfeeding remains highly recommended for these mothers. The immunological and developmental benefits of human breast milk likely outweigh any potential downsides related to BS-induced deficiencies.^{1,4,6}

Contraception

Bariatric surgery can decrease the absorption of oral contraceptive pills (OCPs), raising the risk of unintended pregnancy. Women undergoing surgery should be counseled on this and explore alternative methods. Studies suggest that levonorgestrel-releasing intrauterine devices (IUDs) are a safe and effective form of contraception for women after BS. Since individual needs vary, the most suitable contraceptive method should be chosen on a case-by-case basis, considering factors like the specific bariatric procedure, the woman's age, and her medical history.

CONCLUSION

While pregnancy after BS can be considered high risk, close collaboration between different healthcare specialists can

significantly improve outcomes for both mother and baby. It is crucial to have open discussions with patients beforehand about the type of BS, its long-term effects, necessary monitoring, and potential complications.

REFERENCES

1. Huruță I, Apostol LM, Botezatu R, et al. Beyond weight loss: A comprehensive review of pregnancy management following bariatric procedures. *Medicina (Kaunas)* 2024;60(4):635. DOI: 10.3390/medicina60040635.
2. Xu H, Holowko N, Näslund I, et al. Pregnancy weight gain after gastric bypass or sleeve gastrectomy. *JAMA Netw Open* 2023;6(12):e2346228. DOI: 10.1001/jamanetworkopen.2023.46228.
3. Pg Baharuddin DM, Payus AO, Abdel Malek Fahmy EH, et al. Bariatric surgery and its impact on fertility, pregnancy and its outcome: A narrative review. *Ann Med Surg (Lond)* 2021;72:103038. DOI: 10.1016/j.amsu.2021.103038.
4. Falcone V, Stopp T, Feichtinger M, et al. Pregnancy after bariatric surgery: A narrative literature review and discussion of impact on pregnancy management and outcome. *BMC Pregnancy Childbirth* 2018;18:507. DOI: 10.1186/s12884-018-2124-3.
5. Busetto L, Dicker D, Azran C, et al. Practical recommendations of the obesity management task force of the European association for the study of obesity for the post-bariatric surgery medical management. *Obes Facts* 2017;10(6):597–632. DOI: 10.1159/000481825.
6. Karmon A, Sheiner E. Pregnancy after bariatric surgery: A comprehensive review. *Arch Gynecol Obstet* 2008;277(5):381–388. DOI: 10.1007/s00404-008-0608-5.
7. Alhumaidan L, Alrefaei GM, Alfantoukh AM, et al. The effect of bariatric surgery on menstrual abnormalities in Saudi women: A cross-sectional study. *Cureus* 2024;16(2):e54964. DOI: 10.7759/cureus.54964.