Abstract

- Obesity in America has become a common occurrence with 37% of women classified obese as of 2012. In the last three decades, bariatric surgery has become an increasingly common method of weight reduction among women.
- The objective of this study is to evaluate maternal and fetal outcomes following pregnancies after bariatric surgery as compared to the general population obese mothers.

Methods

- A systematic review was conducted through PubMed to identify relevant studies from 2000-2016 with comparative data on the maternal and fetal delivery outcomes following bariatric surgery as compared to the obese population.
- The primary outcome analyzed was the rate of Cesarean deliveries.
- Other outcomes included SGA (small for gestational age or <10% of birth weight as compared to infants of same gestational age), LGA (large for gestational age or >90% of birth weight as compared to infants of same gestational age), macrosomia (>4000g at birth), assisted vaginal delivery, and preterm delivery (<37 week gestational age at delivery).
- Statistical analysis was done using random-effects meta-analysis to compare the mean value of the two groups (Comprehensive Meta-Analysis Version 3.3.070 software; Biostat Inc., Englewood, NJ).

Results

- Five out of 47 studies were quantitatively assessed and included for meta-analysis. Among the studies, 4329 Cesarean sections were recorded in 10,611 post-bariatric women and 133,533 Cesarean sections in 223,573 obese women.
- The need for caesarean sections in post-bariatric women was found to be significantly lower when compared to obese women (-0.380±0.011, p<0.001).
- There were also significant reduction in the incidence of LGA (0.527±0.114, p<0.001), macrosomia (0.418±0.245, p<0.001), SGA (0.452±0.116, p<0.0001) and assisted vaginal delivery (-0.095±0.039, p<0.014) in the post bariatric group of women.
- The incidence of preterm delivery (-0.040±0.021, p>0.05) were similar in both groups.

Conclusion

- Bariatric surgery places the expectant mother at a lower risk of delivery by Cesarean section as well as assisted vaginal delivery which may be related to the increased risk of both LGA and macrosomia in the obese mothers.
- Obese patients considering conceiving in the near future should consider bariatric surgery prior to conception to lower their risk of potentially adverse delivery outcomes.

References


Figure 1: Cesarean Delivery Rates

Figure 2: Small for Gestational Age

Figure 3: Large for Gestational Age

Figure 4: Macrosomia

Figure 5: Assisted Vaginal Delivery

Figure 6: Preterm Delivery