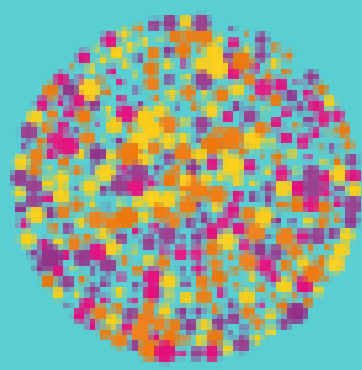


Perinatal Outcomes after Sleeve Gastrectomy vs Matched Controls

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INTRODUCTION

With sleeve gastrectomy the most popular bariatric surgery worldwide, post-sleeve pregnancies are increasingly common. However, outcomes' data remain limited and are often conflated with other bariatric surgeries.

AIMS

To compare perinatal outcomes in pregnancies following sleeve gastrectomy with those having no bariatric history, within an Australian metropolitan health district.

METHODS

The local maternity database was used to perform a retrospective matched-control cohort study over 6 years from July 2016 through June 2022.

Prior to matching, there were 520 singleton pregnancies beyond 20 weeks having a history of sleeve gastrectomy and 58,777 pregnancies with no bariatric history. For each post-sleeve gastrectomy pregnancy, up to two control pregnancies were matched for pre-pregnancy body mass index, maternal age, parity, smoking, country of birth and delivery year.

Outcomes for sleeve gastrectomy cases versus matched controls were assessed using univariable and multivariable conditional logistic regression models, conditioned by matching strata. Multivariable models were adjusted for variables unable to be matched.

RESULTS

After matching, the study groups comprised **469 post sleeve gastrectomy pregnancies** and **915 matched controls**. The adjusted relative risks (aRR) for key outcomes were:

- Gest Diabetes: **5.4%** vs **16.6%** **aRR 0.26** (95% CI 0.14-0.45)
- Gest HTN/PET: **1.1%** vs **6.1%** **aRR 0.24** (0.08-0.69)
- LGA infants: **6.0%** vs **14.1%** **aRR 0.34** (0.20-0.58)
- Nursery adm. **13.9%** vs **19%** **aRR 0.67** (0.47-0.98)
- SGA infants: **14.5%** vs **8.3%** **aRR 1.92** (1.22-3.04)
- Congenital anom. **2.6%** vs **2.4%** **aRR 0.88** (0.32-2.42)
- Caesarean birth **31.1%** vs **35.1%** **aRR 0.75** (0.56-1.01)
- Perinatal Mortality **1.5%** vs **0.9%** **aRR 3.43** (0.41 – 28.47)
- Preterm Birth **9.2%** vs **8.7%** **aRR 0.73** (0.44 – 1.22)
- Preg. iron infusion **10.9%** vs **3.1%** **aRR 3.01** (1.46 – 6.19)

CONCLUSION

In addition to several beneficial effects, pregnancy after sleeve gastrectomy is associated with increased risk of SGA. The study was under-powered for perinatal mortality, but the SGA risk means that pregnancies following sleeve gastrectomy should receive close fetal surveillance and expert nutrient oversight.

