

ABSTRACT

Introduction

The epidemic of overweight/obesity has life long and intergenerational effects. Obese pregnant women are in a higher risk for delivery complications including emergency caesarian section. This study aimed to determine the association between emergency caesarean section and pre-pregnancy overweight/obesity in Anuradhapura district Sri Lanka.

Methods

A hospital document-based case-control study among women who delivered in teaching hospital Anuradhapura, nested in a large population-based cohort study was carried out. Cases and controls were those have undergone emergency cesarean section and normal vaginal delivery respectively. Exposure status was overweight/obesity in the first trimester collected from the cohort database.

Results

A total of 886 records were extracted linked to the original cohort. The sample mean age at conception was 27.9 years (SD=5.5) with 7.6% of teenage pregnancies and 89.6% having had education beyond grade 10. The mean BMI of the sample was 23.7 Kg/m². The baseline prevalence of obesity and overweight was 34.7% and 16.6% respectively. The study sample included women with 118(13.3%) emergency caesarean section, 194 (21.9%) elective caesarean section and 558(63.1%) normal vaginal deliveries. There were 36.6% of women who underwent induction of labor and 11.5% had to use more than one method for induction. There was a 12.8% prevalence of at least one delivery complication and the commonest was vaginal tears. Overweight and obese pregnant women showed less likelihood of undergoing emergency caesarean section than normal-weight women. (Odds Ratio; 0.63; 95% CI 0.39-0.99, p=0.05). The mean weight gain was within the recommended range for each BMI category with a significant negative correlation of 0.66 with pre-pregnancy BMI.

Conclusion

Even though overweight and obesity is not a risk factor for emergency caesarean section in this population, the risk of other lifelong maternal and neonatal morbidities due to high BMI will be high as more than half of the pregnant women in this comparatively young sample were overweight/obese.

Recommendations

Early life interventions may be required for high prevalence of overweight in this rural population and the long-term effects of high BMI in pregnancy should be further evaluated.

Key words- Antenatal overweight, obesity, pre-pregnancy, BMI, emergency cesarean section, cesarean section, delivery complications.