

Effect of maternal obesity on labor induction in postdate pregnancy

Abstract

Objective To test the hypothesis that there is a higher rate of unsuccessful induction of labor (IOL) in post-term obese pregnant women compared to non-obese ones. **Methods** In this prospective cohort study, 144 obese (BMI > 30) and 144 non-obese (BMI < 29.9) post-term (> 41 weeks) pregnant women were recruited. IOL was done by misoprostol or amniotomy and oxytocin infusion according to the Bishop score. Comparison of percentage of failed IOL in both groups (primary outcome) was performed by the Chi test. Logistic regression and multivariable regression were performed to assess the odds ratio (OR) of cesarean section (CS) and coefficient of delay in labor till vaginal delivery (VD) in obese versus (vs) non-obese groups. Adjustment for gestational age, parity, Bishop Score, membrane rupture and amniotic fluid index was done in both regression analyses. **Results** CS rate was significantly higher in obese group [26.4 vs 15.9%; difference in proportion (95% CI) 0.1 (0.01, 0.19); *P* value 0.02]. 106 (73.6%) obese women and 121 (84.1%) non-obese women delivered vaginally. In addition, the duration till VD was significantly higher in obese group (22 vs 19 h, *P* value 0.01). After adjustment for possible confounding factors, the CS was still higher in the obese group in comparison to non-obese group (OR 2.02; 95% CI 1.1, 3.7; *P* value 0.02). This finding suggested that obesity was an independent factor for failure of IOL. In addition, after adjustment for these confounders, obesity had the risk of increasing labor duration by 2.3 h (95% CI 0.1, 4.5) in cases that ended in VD. **Conclusion** Based on our results, we conclude that there is a higher risk of CS in obese postdate pregnant women undergoing IOL in comparison to non-obese counterparts. Therefore, obstetricians should pay more attention to advising pregnant women about optimal weight gain during pregnancy and counseling about the chances of VD in cases of IOL. ClinicalTrials.gov ID NCT02788305.