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Abstract Title: Declining Insulin Requirements in Late Pregnancy: A Cause for Concern?

Category: Obstetrics

Abstract Body (250 words)

Introduction: There is conflicting data on whether diminishing insulin requirement at the end of pregnancy is a sign of placental insufficiency. This study gathered descriptive data on women with diminishing insulin requirement and their obstetric and neonatal outcomes.

Methods: This was a retrospective cohort study of women who received antenatal care between November 2017 and May 2019 in a clinic of endocrinologists and obstetricians. We hypothesized that women with a declining insulin requirement would have increased rates of placental dysfunction-related complications (oligohydramnios, IUGR, abnormal dopplers, non-reassuring antepartum testing, or a cesarean delivery for non-reassuring fetal heart tracing).

Results: Our cohort consisted of 157 women: 30 Type 1, 43 Type 2 and 84 gestational diabetics. Twenty-one (13%) experienced a drop in insulin with an average decline of 28% starting at 34 weeks. There was no significant difference in complications related to placental dysfunction (33% vs 24%; $p=0.37$). There was a significantly increased rate of polyhydramnios (43% vs. 9%; $p<0.01$). Women who experienced a decline in insulin delivered one week earlier (median 36w4d vs. 37w4d; $p<0.01$). NICU admissions rates were higher (62% vs. 33%; $p<0.01$) independent of gestational age, and were secondary to respiratory distress (52% vs. 24%; $P<0.01$) as there were no differences in rates of treated hypoglycemia.

Conclusions: We found no relationship between a decline in insulin requirement and placental function-related complications. Interestingly, we found higher rates of polyhydramnios and NICU admissions for respiratory distress regardless of gestational age, suggesting a decline in insulin requirement has a greater impact on the neonate after delivery.