

ABSTRACT SUBMISSION FORM

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SEX + GENDER

Exploring the role of sex and gender on health research



CHR D 2020: Abstract Submission Form

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Title

Can fetal abdominal wall thickness predict intrapartum complications amongst mothers with pre-gestational type 2 diabetes? A cohort study.

Background

Type 2 diabetes (T2D) increases the risk of perinatal complications, particularly at delivery. Shoulder dystocia complicates 1% of deliveries and can result in significant injury to newborns and mothers, and is risk factor of perinatal mortality. Unfortunately, there are almost no ways to predict intrapartum shoulder dystocia or need for emergency Cesarean section (CS).

Objective

To evaluate the utility of fetal abdominal wall thickness (AWT) for predicting intrapartum complications amongst mothers with T2D.

Methods

This was a historical cohort study of pregnant mothers with pre-gestational T2DM at a tertiary-centre (2015-2019). Hospital charts were reviewed to collect information about pregnancy complications, intrapartum events and early neonatal outcomes. Stored fetal ultrasound images were reviewed to collect biometry, and post-processing measurement of the fetal AWT at 36 weeks GA was also performed in a standardized fashion by 2 blinded and independent observers. The relationship between fetal AWT and risk of intrapartum complications including emergency CS and shoulder dystocia was evaluated.

Results

216 women with T2D were eligible for inclusion. The incidence of shoulder dystocia and emergency CS were 7.3% and 17.8% respectively. There was no difference in mean fetal AWT between those that had a spontaneous vaginal delivery (8.2 mm) and those that were complicated by emergency intrapartum CS (8.1 mm; $p=0.71$) or shoulder dystocia (8.7mm; $p=0.23$). The strongest relationship between presence of intrapartum complications was birth weight ($p=0.003$): with birth weights >4000 grams, the relative risk of

shoulder dystocia or CS is 2.75 (95% CI 1.74-4.36; p<0.001).

Conclusion

There was no obvious benefit of AWT measurement at 36 weeks' in predicting shoulder dystocia and intrapartum CS amongst women at high-risk for intrapartum complications. The strongest predictor of intrapartum complication remained birth weight, and so studies evaluating other markers for predicting risk of intrapartum complications are still needed.

Theme:

Clinical

Do you have a table/figure to upload?

No

Are you willing to participate in Goodbear's Den?

Yes

Presenter Status:

Residents

What was your role in the project?

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