The Southern Ontario Obstetric Network – Past Present and Future

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Research: Timing of delivery in GDM.

Gestational age, wk	RR of stillbirth (95% CI)
36	1.57 (1.2–2.0)
37	1.84 (1.5–2.3)
38	1.45 (1.1–1.9)
39	1.56 (1.2–2.0)
40	1.29 (0.92–1.8)
41	1.35 (0.85–2.13)
42	0.83 (0.37–1.9)
Overall	1.34 (1.2–1.5)

CI, confidence interval; *RR*, relative risk.

Rosenstein. Risk of stillbirth, infant death, and expectant management in women with gestational diabetes. Am J Obstet Gynecol 2012.

Obstetrics & Gynaecology
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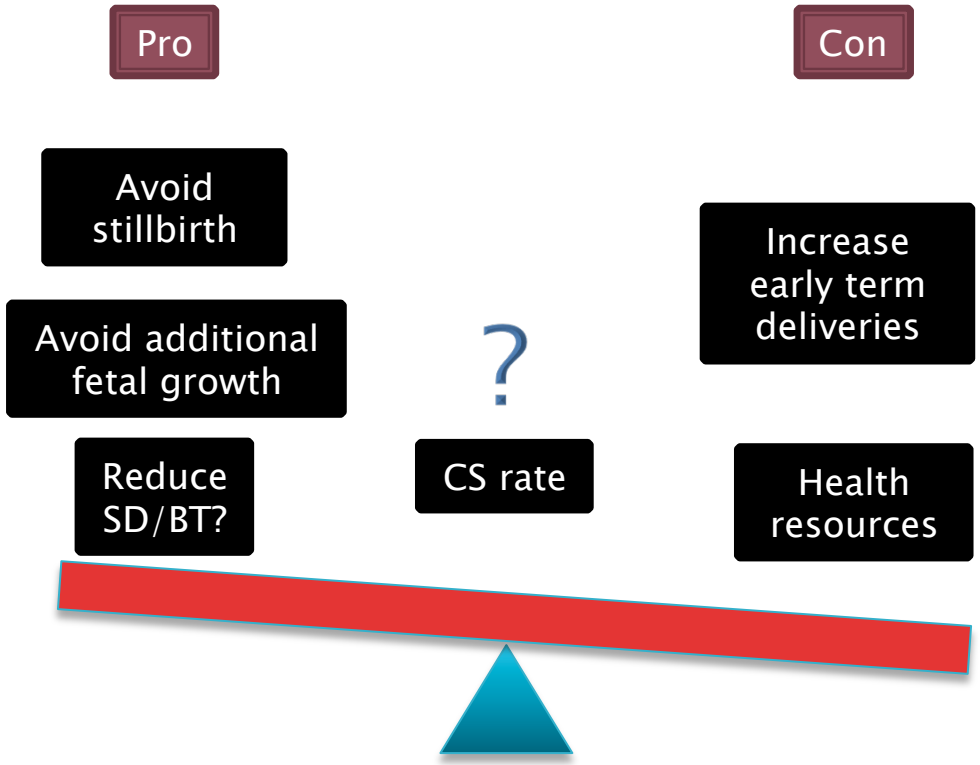
SOUTHERN ONTARIO OBSTETRICAL NETWORK
SOON

Routine delivery at 38/39 weeks?



Evidence?

- Until 2016 -> One small RCT Kjos et al

Am J Obstet Gynecol. 1993 Sep;169(3):611-5

- Recently a European RCT was published – underpowered for all outcomes.

BJOG. 2017 Mar;124(4):669-677

- IOL for macrosomia? (10% were GDM on diet)

Lancet. 2015 Jun 27;385(9987):2600-5

No increase in CS rates

OBSTETRICS

Induction of labor before 40 weeks is associated with lower rate of cesarean delivery in women with gestational diabetes mellitus

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SMFM

All women with GDM Ontario, 2012-2014 (N=14,600)

Excluded (N=6,208)
- Twins
- Non-vertex presentation
- Placenta previa
- Previous CS
- Major congenital anomalies
- Maternal medical conditions

Low-risk women with GDM delivered at **38+0 to 42+0 weeks** (N=8,392)

Induction at 38+0 to 38+6 weeks for GDM-related reasons (N=1,188)

VS.

Expectant management – remained undelivered at 39+0 weeks (N=5,229)

Induction vs. expectant at 38 weeks

Induction at 39+0 to 39+6 weeks for GDM-related reasons (N=1,036)

VS.

Expectant management – remained undelivered at 40+0 weeks (N=2,162)

Induction vs. expectant at 39 weeks

Am J Obstet Gynecol 2016;214:364.e1-8.

Results

	38 weeks			39 weeks		
Outcome	**Induction (N=1,188)**	**Expectant management (N=5,229)**	**p-value**	**Induction (N=1,036)**	**Expectant management (N=2,162)**	**p-value**
Hypertensive complications	-	**293 (5.6)**	**N/A**	-	**103 (4.8)**	N/A
Induction	1,188 (100.0)	**2,484 (47.5)**	**<0.001**	1,036 (100.0)	**1,044 (48.3)**	**<0.001**
CS	198 (16.7)	**1,114 (21.3)**	**<0.001**	203 (19.6)	**494 (22.9)**	**0.04**
Shoulder dystocia	36 (3.0)	149 (2.8)	0.7	41 (4.0)	61 (2.8)	0.09
Anal sphincter injury	27 (2.3)	**197 (3.8)**	**0.01**	40 (3.9)	94 (4.4)	**0.5**
NICU admission	**165 (13.9)**	567 (10.8)	**0.002**	103 (9.9)	247 (11.4)	0.2
Respiratory morbidity ‡	36 (3.0)	188 (3.6)	0.3	**27 (2.6)**	89 (4.1)	**0.03**
Jaundice requiring phototherapy	**59 (5.0)**	178 (3.4)	**0.01**	39 (3.8)	70 (3.2)	0.4
Hypoglycemia	**74 (6.2)**	211 (4.0)	**<0.001**	49 (4.7)	77 (3.6)	0.1

	Induction vs. expectant management Adjusted OR (95% CI) *	
Outcome	**At 38 weeks**	**At 39 weeks**
Cesarean section	**0.73 (0.52-0.90)**	**0.73 (0.58-0.93)**
Instrumental delivery	1.10 (0.89-1.46)	1.19 (0.89-1.57)
Anal sphincter injury	0.97 (0.61-1.55)	1.16 (0.72-1.87)
Composite neonatal morbidity	1.10 (0.93-1.30)	0.84 (0.69-1.03)
NICU admission	**1.36 (1.09-1.69)**	0.83 (0.61-1.11)

* Adjusted for : maternal age, nulliparity, insulin treatment, BMI, BW>4000g

A cluster RCT is needed – better SOONer than later!

Non-communicable diseases in obstetrics: Improving quality of care and maternal-infant outcomes through an obstetrical research network.

SOUTHERN ONTARIO OBSTETRICAL NETWORK
SOON

1. DOH* components and perinatal outcomes

BORN/ICES data

A

Crude and adjusted risks for individual short term maternal fetal outcomes. Adjusted and quantified for each DOH component and combinations.

Mixed methods

B

Assessment of potential modifiers: baseline analysis of GWG, Diabetic control, Diet and Physical activity, ASA in DOH group

2. Individual studies of DOH components

1. Hypertension-
    1. Timing of delivery
    2. ASA use
2. GDM:
    1. CPR in GDM
    2. Timing of delivery
3. Obesity:
    1. GWG in DOH
    2. ASA in obese women
4. Stillbirth in DOH
5. Cluster RCT TBD

Intervention studies: based on A & B

*Diabetes Obesity Hypertension

CIHR 5 year grant: Berger, Melamed and Murray-Davis