IMPACT OF MODE ON DELIVERY ON PRETERM NEONATAL OUTCOMES

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Introduction

Conflicting evidence exists about caesarean section (CS) in preterm births (PTB) and impact on neonatal outcomes. CS has the benefits of rapid delivery time and greater planning ability, however, is associated with risks to the fetus inc. lacerations and concern regarding potential increase in respiratory problems.

Aims

To investigate if mode of delivery significantly impacts neonatal outcomes.

Method

A retrospective single centre cohort study was conducted of all PTB (23-36+6 weeks gestation) from May 2017 to April 2019.

Mode of delivery was divided into vaginal birth (VB) which included all instrumental births, elective caesarean section (elCS) (planned ≥ 24 hours prior), emergency CS (emCS) (unplanned due to labour, or, deterioration in maternal/fetal condition) and neonatal outcomes relating to prematurity were compared.

Additionally, analysis was undertaken comparing iatrogenic birth including induction (IOL) or prelabour CS compared with Spontaneous Onset of Labour (SOL) spontaneous birth or birth after premature prelabour rupture of membranes (PPROM). Chi square analysis and one-way ANOVA were used where appropriate.

Results

Overall there were 586 PTBs with an average gestation of 34 weeks. The overall CS rate was 49.5%

MOD

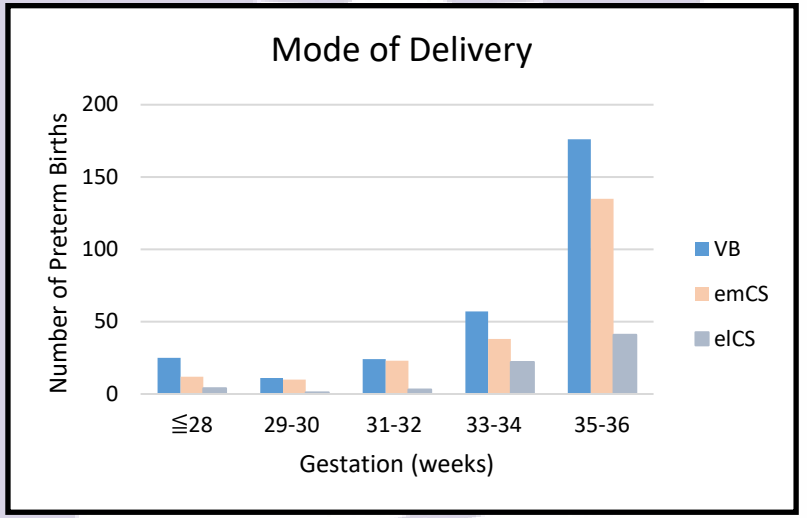
- No significant difference in neonatal outcomes relating to prematurity including hyaline membrane disease (HMD), transient tachypnoea of the newborn (TTN) or necrotising enterocolitis (NEC) (p=0.38).
- No significant difference in neonatal deaths but numbers were small overall with 4 in the emCS and 1 in the VB group
- 5-minute APGAR scores were also similar with an average of VB 8.4, emCS 8.4 and elCS 8.2 (p=0.46)

Iatrogenic vs Spontaneous BIRTH

- No significant difference in HMD, TTN or NEC (p=0.38)
- Higher 5-minute APGAR in PPROM (8.6) vs spontaneous (8.2) vs iatrogenic (8.3) (p=0.01)

Conclusion/Discussion

- Neonatal outcomes were not significantly different by mode of birth or indication for birth with low rates overall of complications.



	VB (n=295)	emCS (n=217)	elCS (n=73)
Av. Gestation	34.5 weeks	34.0 weeks	34.0 weeks
Av. Birthweight	2358g	2403g	2430g
Neonatal Outcomes			
TTN	81 (27.5%)	74 (34.1%)	25 (34.2%)
HMD	40 (13.6%)	27 (12.4%)	12 (16.4%)
NEC	1 (0.3%)	4 (1.8%)	2 (2.7%)
NND	1 (0.3%)	4 (1.8%)	0
Av.5-min APGAR	8.4	8.4	8.2
Indication for delivery			
Maternal	20 (7.0%)	63 (29.0%)	52 (71%)
Fetal	54 (19.0%)	94 (43.3%)	11 (15.3%)
Both	37 (13.0%)	60 (27.6%)	10 (13.7%)
SOL	173 (60.9%)	43 (19.8%)	16 (21.9%)