



Does Mom Know Best? — Cesarean Delivery on Maternal Request (CDMR) vs. Trial of Labor (TOL)

Investigators: Cassandra Deocera, PA-S; James Napolitano, PA-S; Oriel Rafaelov, PA-S; Benjamin Rispoli, PA-S; Jessica Wilm, PA-S; Alexander Zelez, PA-S
 Research Advisor: Nisha Lakhi, MD Group Advisor: Robert Marchese, MS, PA-C

Introduction: Delivery has traditionally been either through trial of labor (TOL) or cesarean section (c-section), but mothers can now opt for elective c-sections without medical indications, otherwise known as cesarean delivery on maternal request (CDMR). This poses an ethical dilemma of whether or not a patient may choose her delivery modality. With this in mind, we present the following question: Among full-term pregnant women and their newborns, is there a correlation between choice of modality of delivery and neonatal and maternal outcomes?

Hypothesis: Pregnant women who deliver by CDMR will have a higher incidence of poor newborn and maternal outcomes than those who deliver by TOL.

Background

Supporting Literature

- “Higher incidence of respiratory distress in CDMR versus emergency c-section” (Karlström, Lindgren, & Hildingsson, 2013)
- “Planned cesarean delivery has an increased transfer rate to ICU and increased risk of pulmonary disorders” (Kolas, Saugstad, Daltveit, Nilsen, & Oian, 2006)

Opposing Literature

- “No significant differences between Apgar score and delivery modes with sex and birth weight” (K. Rahmanian, Jahromi, V. Rahmanian, Ghasvari, & Abari, 2013)
- “CDMR when compared to spontaneous labor has a lower risk of adverse maternal and neonatal outcomes” (Fonseca-Pérez, 2017)

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- “The available information does not provide basis for a recommendation for either mode of delivery.”

Study Design

Retrospective case control study between the dates of January 2012 and January 2019 conducted at Richmond University Medical Center in Staten Island, NY. 102 charts matching the criteria for CDMR were matched these to 168 control cases to include TOL.

Independent Variables:

- Demographics (age, race, BMI, insurance, gestational age)
- Mode of delivery (TOL vs. CDMR)

Dependent Variables:

- Maternal outcomes (hospital length of stay, postpartum hemorrhage)
- Neonatal outcomes (hospital length of stay, need for supplemental oxygen use, NICU admission and APGAR scores at 1 and 5 minutes)

Inclusion Criteria:

- Primary CDMR or medically-induced TOL, ≥ 18 years old, ≥ 37 weeks gestation, ≤ 41 weeks gestation

Exclusion Criteria:

- Non-primary delivery, < 18 years old, < 37 weeks gestation, > 41 weeks gestation, multigestations, non-elective c-sections, emergency deliveries

Results

	TOL (n = 168)	CDMR (n = 102)	p-value
EBL (ml)	682.33 (200-1500)	802.73 (236-1500)	<0.001
Length of Stay (Days)	4.58 (3-7)	3.80 (2-6)	<0.001
Artificial Rupture of Membranes	89 (52.9%)	87 (85.3%)	<0.001
Episiotomy	46 (27.4%)	0 (0.0%)	<0.001
Laceration	29 (17.3%)	0 (0.0%)	<0.001
Maternal Fever	26 (15.5%)	1 (0.9%)	<0.001
APGAR at 1 Minute	9 (3-9)	9 (8-9)	0.009
APGAR at 5 Minutes	9 (4-9)	9 (8-9)	0.223
Birthweight (kg)	3.22 (2-4.8)	3.37 (2.1-5.2)	0.012
Newborn Length of Stay (Days)	3.80 (2-13)	4.20 (3-24)	0.068
Length of Stay in NICU (Days)	1.18 (0-13)	2.52 (0-24)	0.006

Data are presented as mean (range), N (%), or median (range). All p values are Chi square except those marked with a (*) which use a 2-sided Fisher exact tests.

Discussion

- Mothers who delivered via CDMR **did not** have a higher incidence of poor outcomes when compared to TOL.
- Newborns delivered via CDMR **had an equal amount of** poor outcomes when compared to TOL.