

Uterine Rupture Risk After Perivable Cesarean Delivery

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OBJECTIVE: To investigate the risk of uterine rupture in women with prior perivable cesarean delivery and prior term cesarean delivery independent of initial incision type.

METHODS: We conducted a retrospective longitudinal cohort study using Washington state birth certificate data and hospital discharge records, identifying primary cesarean deliveries performed at 20–26 weeks and 37–41 weeks of gestation with subsequent delivery between 1989 and 2008. We compared subsequent uterine rupture risk in the two groups considering both primary incision type and subsequent labor induction and augmentation.

RESULTS: We identified 456 women with index perivable cesarean delivery and 10,505 women with index term cesarean delivery. Women with index perivable cesarean delivery were younger, more frequently of nonwhite race, more likely to smoke, and more likely to have hypertension. Women in the perivable group had more index classical incisions (42% compared with 1%, $P < .001$) and fewer subsequent inductions and augmentations (8% compared with 16%, $P < .001$). Uterine rupture in the subsequent pregnancy occurred more frequently among women in the index perivable group than those in the index term group (8/456 [1.8%] compared with 38/10,505 [0.4%], odds ratio [OR] 4.9, 95% confidence interval [CI] 2.3–10.6). This relationship persisted among women with a low transverse incision (4/228 [1.8%] compared with 36/9,558 [0.4%], OR 4.7, 95% CI 1.7–13.4).

CONCLUSION: Cesarean delivery at perivability compared with term is associated with an increased risk for uterine rupture in a subsequent pregnancy, even after low transverse incision. These data support judicious use of cesarean delivery at perivable gestational ages and inform subsequent counseling.

LEVEL OF EVIDENCE: II