

EP16.75 Intrapartum uterine rupture without versus with one prior Caesarean delivery and associated adverse outcomes

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Objectives

To ascertain if the adverse outcomes differ significantly in individuals without versus with one prior Caesarean delivery (CD).

Methods

This population-based, retrospective cohort study utilized the U.S. Vital Statistics period linked birth and infant death data files (2016-2023). We included all pregnancies with non-anomalous singletons, with at least 1 prior delivery, who labored, delivered at 24-41 weeks and had a uterine rupture. We excluded individuals with > 2 prior CD. The co-primary outcomes included composite neonatal and maternal adverse outcomes (CNAO and CMAO, respectively), and secondary outcomes included components of CNAO and CMAO, and infant death. CNAO included any of the following: Apgar scores < 5 at 5 minutes, assisted ventilation > 6 hours, neonatal seizure, or neonatal death; CMAO included admission to the intensive care unit (ICU), blood transfusion, or unplanned hysterectomy. Multivariable Poisson regression was used to estimate relative risk and adjust for confounding variables. Results are presented as adjusted relative risks (aRR) with 95% confidence intervals (CI).

Results

Among individuals that met the inclusion criteria, 4,446 uterine ruptures were identified, of whom 1,864 (41.9%) had no prior CD and 2,582 (58.1%) had one prior CD. The overall rate of CNAO (aRR 1.05; 95% CI 0.92–1.19) did not differ significantly between the two groups. Except for neonatal seizure (aRR 1.60; 95% CI 1.10-2.35), other components of CNAO did not differ significantly. The CMAO (aRR 1.85; 95% CI 1.68–2.05), along with all of its component, were significantly higher among parturients with uterine rupture and no prior CD. Infant death was similar (aRR 1.51; 95% CI 0.99-2.31).

Conclusion

Among individuals with uterine rupture, one prior Caesarean delivery was not associated with a significantly higher composite neonatal adverse outcome; rupture in an unscarred uterus, however, was significantly associated with a higher likelihood of maternal adverse outcomes.