

Vaginal delivery as safe as cesarean for most early preterm births

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Vaginal delivery for early preterm fetuses presenting head first, or vertex presentation, had a high rate of success with no difference in neonatal mortality compared to cesarean delivery, a new study published in the *American Journal of Obstetrics and Gynecology* reports. For breech births, however, the failure rate of vaginal delivery was high and planned cesarean delivery was associated with significantly lower neonatal mortality.

"Selecting a route of delivery at less than 32 weeks' gestation is a difficult clinical decision given the high rate of infant mortality and morbidity as well as the maternal risks associated with cesarean delivery," says lead investigator Uma M. Reddy, MD, MPH, of the Eunice Kennedy Shriver National Institute of Child Health and Human Development, National Institutes of Health, Bethesda, MD. "For vertex-presenting fetuses less than 32 weeks' gestation, we saw no improvement in [neonatal mortality](#) with a planned cesarean delivery."

Trials that attempt to randomize the route of delivery for women in preterm labor at high risk for delivery have not been feasible. Dr. Reddy and her colleagues used data from the Consortium on Safe Labor (CSL), a study conducted by the Eunice Kennedy Shriver National Institute of Child Health and Development, National Institutes of Health. The CSL is a retrospective study collecting extensive data on over 200,000 deliveries between 2002 and 2008 from 12 clinical centers and 19 hospitals across the country.

The investigators first categorized the indications for preterm delivery: preterm labor, preterm premature rupture of membranes (PPROM), or fetal/maternal issues such as preeclampsia, placental abruption, or severe maternal medical disease. Maternal or fetal indications were responsible for 45.7% of early preterm deliveries, PPRM for 37.7%, and preterm labor for 16.6%. Preeclampsia and major congenital anomalies were the leading contributors to indicated early preterm births. The study then evaluated 2,906 singleton pregnancies between 24 0/7 weeks and 31 6/7 weeks eligible for either route of delivery. Attempted [vaginal delivery](#) was compared to planned cesarean delivery. Data were analyzed based on gestational age blocks: 24 0/7 to 27 6/7 weeks and 28 0/8 to 31 6/7 weeks, based on the fact that the highest rates of neonatal mortality and morbidity occur 24 0/7 to 27 6/7 weeks.

Attempting vaginal delivery with vertex presentation at 24 0/7 to 27 6/7 weeks of gestation did not significantly affect neonatal mortality. More than 80% of the attempted vaginal births were successful. However, if the fetal presentation was breech, the majority of the deliveries were by planned cesarean delivery, and only 27.6% of attempted vaginal deliveries were successful.

Findings in the 28 0/7 to 31 6/7 weeks' gestation also differed by presentation. If the fetal presentation was vertex, the majority of attempted vaginal deliveries succeeded and there was no difference in the neonatal mortality rate compared with planned cesarean delivery. For breech-presenting fetuses, neonatal mortality was 6% for vaginal deliveries compared to 1.5% of the cesarean deliveries.

Dr. Reddy notes that previous studies examining the effect of route of delivery on neonatal mortality for early preterm births looked at the actual, not attempted, route of delivery. "The detailed information in our study, not available in birth certificate data, enabled us to account for the effect of attempted route of delivery and indications for delivery on

neonatal mortality. This information has direct clinical applications and is crucial for counseling families about the benefit and risks of attempting vaginal [delivery](#) in this situation," she concludes.

More information: “Neonatal Mortality by Attempted Route of Delivery in Early Preterm Birth” by U.M Reddy, J. Zhang, L. Sun, Z. Chen, T.N.K. Raju, and S.K. Laughon ([doi 10.1016/j.ajog.2012.06.023](https://doi.org/10.1016/j.ajog.2012.06.023)), *American Journal of Obstetrics & Gynecology*, Volume 207, Issue 2 (August)

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