

Retrospective Study of Birth Outcomes at a Maine Birth Center Comparing Neonates Born Into Water to Those Born on Land

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Abstract

Water birth is a method of delivering a baby from the maternal environment into a warm tub and placed into the mother's arms. While increasing numbers of nationally accredited birth centers and hospitals are standardizing protocols for best practices, concerns of neonatal safety raised by pediatricians and obstetric providers remain.

Objective:

This study aims to compare outcomes of water born neonates to those born via standard land birth to self –selected cohorts designated as low risk for obstetric complications in a freestanding birth center in New England.

Study Design/setting:

A retrospective chart audit of women giving birth in water with a matched cohort who birthed on land and their neonatal outcomes. Population studied: Women of child bearing age between 18 and 45 meeting low-risk pregnancy criteria as designated by the standards set by A.A.B.C (American Association of Birth Centers.) All deliveries were completed at a freestanding birth center in Portland, Maine between 1999 and 2008.

Outcome measures/Results:

475 charts were reviewed by two separate reviewers. Of the 320 women included in the

study, 170 delivered in water and 150 delivered on land. Primigravids represented 49.7% (n = 159) of the sample. There were significant differences in the mean durations of both first and second stages of labor between women who delivered on land and women who delivered underwater (95% CI, P < .0001) with shorter mean first and second labor stages for women who delivered underwater. Of neonates born underwater, (n = 56) 32.9% had 1-minute Apgar scores of 7 or less and 2.9% (n = 5) had 5-minute Apgar scores of 7 or less while neonates delivered on land, (n = 55) 36.7% had 1-minute Apgar scores of 7 or less and 6.7% (n = 10) had 5-minute Apgar scores of 7 or less. Fewer abnormalities in initial vital signs were observed in neonates delivered in water than on land. No deaths occurred in either group.

Conclusion:

Neonates who were born into water did not experience higher levels of morbidity or mortality when compared to those born on land. In addition, women who delivered into water, on average, experienced shorter first and second stages of labor.