

The Risk of Fetal Death in Non-Anomalous Pregnancies Affected by Polyhydramnios

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Objective: To evaluate the ongoing risk of intrauterine fetal demise (IUFD) in non-anomalous pregnancies affected by polyhydramnios.

Study Design: We analyzed a retrospective cohort of all singleton, non-anomalous births in California between 2005-2008 as recorded in a statewide birth certificate registry. We included all births between 24+0 weeks and 41+6 weeks gestational age, excluding multiple gestations, major congenital anomalies and pregnancies affected by oligohydramnios. Polyhydramnios was identified by ICD-9 codes. Chi-squared tests were used to compare dichotomous outcomes and multivariable logistic regression analyses were then performed to control for potential confounders. We analyzed data for pregnancies affected and unaffected by polyhydramnios. IUFD risk was expressed as a rate per 10,000.

Results: The risk of IUFD in pregnancies affected by polyhydramnios was greater at every gestational age compared with unaffected pregnancies. The IUFD risk in pregnancies affected by polyhydramnios was over seven times higher than unaffected pregnancies at 37 weeks at a rate of 18.0 (95% CI: 9.0-32.6) versus 2.4 (95% CI: 2.0-2.5) and was eleven fold higher by 40 weeks gestational age at a rate of 66.3 (95% CI: 10.8-68.6) versus 6.0 (95% CI: 5.1-6.3) in unaffected pregnancies. When adjusted for multiple confounding variables, the presence of polyhydramnios remained associated with an increased odds of IUFD in non-anomalous singleton pregnancies, with an adjusted odds ratio of 5.5 (95% CI: 4.1-7.6).

Conclusion: Ongoing risk of IUFD is greater in low risk pregnancies affected by polyhydramnios at all gestational ages compared to unaffected pregnancies with the greatest increase in risk at term. Though further study is needed to explore the underlying etiology of polyhydramnios in these cases, the identification of polyhydramnios alone may warrant increased antenatal surveillance.