

The impact of transient isolated polyhydramnios at 34-41 week of gestations

Aviram A, Shmueli A, Hadar E, Gabbay-Benziv R, Hirsch L, Ashwal E, Yogev Y
Lis Maternity Hospital, The Tel-Aviv Sourasky Medical Center, Tel-Aviv, Israel

Objective

Polyhydramnios (AFI>250mm) is suggested to be associated with adverse perinatal outcome. However, pregnancy outcome of women diagnosed in mid-pregnancy with polyhydramnios which later resolved is unclear. Thus, we aimed to evaluate labor and perinatal outcomes of resolved polyhydramnios.

Methods

A retrospective cohort study (2008-2013). Eligibility was limited to singleton gestations, with no maternal diabetes or known structural/chromosomal anomalies, and no rupture of the membranes prior to delivery. All women included in the study had routine sonographic estimation of fetal weight (EFW) between 28-34 weeks of gestation. We compared women diagnosed with polyhydramnios at the time of the EFW but presented with normal AFI (AFI≤250mm) at admission to the delivery ward, with women who had normal AFI throughout pregnancy.

Results

Overall, 44,263 women delivered in this time period, of which 292 women had resolved polyhydramnios (study group) and 29,682 women with normal amniotic fluid level (control group) were eligible for analysis. Our main findings were: 1. Women in the study group were less likely to be nulliparous (24.3% vs. 30.4%, $p=0.024$), delivered at a more advanced gestational age (39.4 ± 1.4 weeks vs. 39.1 ± 1.4 weeks, $p<0.001$), and were more likely to use epidural analgesia (66.4% vs. 58.5%, $p=0.006$). 2. Women in the study group had higher risk operative vaginal delivery (OVD) (11.3% vs. 7.7%, $p=0.024$), mainly due to non-reassuring fetal heart rate (NRFHR) (3.4% vs. 1.9%, $p=0.05$) and higher risk for cesarean section (CS), mostly because of prolonged first (2.7% vs. 1.2%, $p=0.01$) or second stage (2.7% vs. 0.7%, $p<0.001$) of labor, suspected macrosomia (4.8% vs. 0.9%, $p<0.001$) or malpresentation (1.0% vs. 0.2%, $p<0.001$). 3. Mean birth weight (3501 ± 470 g vs. 3251 ± 446 g, $p<0.001$) and birth weight percentile ($71\pm 24\%$ vs. $57\pm 26\%$, $p<0.001$) were higher for women in the study group and the rate of necrotizing enterocolitis (NEC) was 6-fold higher (0.3 vs. 0.05%, $p=0.03$). 4. After accounting for confounders in a multivariate logistics regression model, resolved polyhydramnios remained an independent risk factor for OVD, CS, NRFHR requiring OVD, labor dystocia, suspected macrosomia or malpresentation requiring CS and NEC.

Conclusion

Transient polyhydramnios during pregnancy is independent risk factor for obstetrical intervention during labor and for neonatal NEC.