



Resolving the problem of polyhydramnios

Browne B, Damodaram M, Langford P, Salvesen D, Leonce J, Modi M
East and North Hertfordshire NHS Trust, Stevenage, United Kingdom

Objective

Polyhydramnios is a common obstetric complication, which requires investigation and increased levels of monitoring, due to increased rates of structural abnormality, neonatal morbidity and neonatal mortality. There is a paucity of evidence on whether risk of adverse outcomes persists despite resolution of polyhydramnios. We compared outcomes in two groups of patients in a district general fetal medicine unit - those in whom polyhydramnios resolved, and those in whom it persisted until delivery.

Methods

We reviewed a cohort of patients from 2015-2017 who developed moderate to severe polyhydramnios in a district general fetal medicine unit (n=32). Moderate and severe polyhydramnios were defined as amniotic fluid index (AFI) of greater than 30cm and 35cm respectively. Case where polyhydramnios resolved were defined as AFI returning to below 25cm. We reviewed the literature and identified reported complications associated with polyhydramnios, and used those as markers to compare between groups. These include risk factors as well as maternal, intrapartum and neonatal complications.

Results

28 women out of the cohort of 32 continued their care and delivered in our unit. Within this cohort, there were 16 cases (57%) of unresolved polyhydramnios, and 12 cases (43%) of resolved polyhydramnios. Upon diagnosis, ToRCH, GDM and viral screening bloods showed no difference between groups. 3 women in each group were subsequently diagnosed with GDM, and one woman from the unresolved polyhydramnios cohort exhibited mild positivity to CMV IgM, which is thought to have predated the pregnancy. Median gestation at delivery was 38+4 in the resolved group, and 38+5 in the unresolved group. There was one case of term intrauterine death at 37+4 in the resolved group. There were no incidences of placental abruption, intrapartum death and shoulder dystocia which are recognised as serious adverse outcomes in polyhydramnios. The unresolved group had higher rates of instrumental delivery (25% vs 0%, $p = 0.06$), but rates of caesarean section (both emergency and elective) were similar (41% vs 38%). There was a statistically significant difference in EBL (estimated blood loss), with the median estimated blood loss being 600mL in the unresolved group, vs 275mL in the resolved group ($p=0.045$). There was one incidence of massive obstetric haemorrhage in the unresolved group, and none in the resolved group. Median birth weight was 3725g in the resolved group, and 3659g in the unresolved group. Apgars at 1 and 5 minutes were 9 and 10 in both groups (median values). In both groups, 2 babies required admission to SCBU, with 1 baby from each group requiring intubation. There were no cases of RDS identified. There was one case of unilateral renal agenesis, which was diagnosed prior to diagnosis of polyhydramnios in the unresolved group.

Conclusion

Our retrospective cohort analysis showed that only 25% (n=7) of our cases of polyhydramnios had a cause identified. 43% of the total cases resolved spontaneously. There were increased rates of instrumental delivery and increased blood loss at delivery in cases of unresolved polyhydramnios. Further research is needed to ascertain risk associated with polyhydramnios, and in particular if the risk is maintained even when polyhydramnios resolves.