Prenatal Cephalocentesis: Revisit the Outcome

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Introduction

Cephalocentesis is a procedure used to decompress the fetal head to allow vaginal birth in cases of severe cerebral ventriculomegaly. Historically the procedure is considered destructive and would almost always result in fetal death, hence it's recommended to be reserved for cases with concurrent other major malformations or in cases with expected severe neurological damage.

Case presentation

We report two cases of prenatal transabdominal cephalocentesis. Both patients were primigravid who wished to have vaginal birth. The first patient had a fetus with thoracolumbar rachischisis and bilateral severe cerebral ventriculomegaly while the second patient had a fetus with severe alobar holoprosencephaly. For both patients fetal MRI results were concordant with the ultrasound findings and amniocentesis results came normal for chromosomes and microarray analysis. After being counselled by a multidisciplinary team both patients opted for transabdominal cephalocentesis; the procedure was performed at \( \sim 36 \) weeks gestation, under ultrasound guidance through a single lateral cranial entry using 18 gauge needle. Total 420 ml and 620 ml of clear cerebrospinal fluid aspirated for the first and second fetus respectively. Both mothers had induced labor and underwent uneventful vaginal birth. Both infants survived beyond their neonatal period.

Conclusion

When vaginal birth is desirable, transabdominal cephalocentesis could be safely performed to prenatally facilitate vaginal birth. However, in addition to other fetal factors, the gestational age at which the procedure is performed and the method of performing cephalocentesis could play an important role in predicting fetal survival. Further studies are recommended.