Fetal MRI assessment of head & neck vascular malformation in predicting outcome of EXIT-to-airway procedure

ABSTRACT

Objectives: The objective of this clinical case report is to highlight the MRI features and staging system which may guide clinicians in determining further management. Case presentation: Three different cases with fetal head and neck vascular malformation diagnosed during prenatal screening were presented. MRI demonstrates large cystic neck masses which may compromise fetal airway during delivery. Thus, this required multidisciplinary team management among obstetricians, otolaryngologists, pediatricians, anesthesiologists, and radiologists. A decision for complex birth delivery through the cesarean section aided with EXIT-to-airway procedure was made. Each of these procedures demonstrates the different challenges and outcomes of the neonates which correlated with the characterization and staging based on prenatal MRI. Conclusions: EXIT-to-airway procedure in head and neck malformation may be beneficial in transiting complicated and potentially catastrophic delivery situations to a more controlled environment. However, it also needs to align with prenatal MRI evaluation, which provides a more objective assessment guide for the clinicians.

Keyword: EXIT procedure; Fetal airway obstruction; Fetal MRI; Vascular malformation