Ex-Utero intrapartum procedure for congenital high airway obstruction syndrome in a neonate: First case in Alexandria

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ABSTRACT

Introduction: Large fetal neck masses can present a major challenge for securing an airway at birth with associated risks of hypoxia, brain injury and death. Teratomas of the oropharynx are rare, presenting 3% of teratomas in childhood, and are treated by surgical excision. If respiratory distress accompanies the lesion, priority must be given to the securing of the airway. Case History: We present a case of an infant who was diagnosed antenatally as having a huge oropharyngeal teratoma. The anaesthetic, surgical and neonatology teams were ready to perform surgical excision depending on the placental circulation immediately after securing the airway. The tumour weighed 1591 g and was $20 \times 22 \times 12 \text{ cm}$. The patient was a male and weighed 715 g. Histopathology showed Grade II teratoma. Conclusion: Large fetal neck masses can present a major challenge for securing an airway at birth with associated risks of hypoxia, brain injury and death. A multidisciplinary team approach combined with an accurate prenatal diagnosis obtained through fetal ultrasound is the key to a successful outcome. Ex utero intrapartum treatment (EXIT) that is based on the placental blood during intubation, tracheostomy or surgical excision is the standard procedure.

KEY WORDS: CHAO syndrome, Ex utero intrapartum treatment, oropharyngeal teratoma
The tumour weighed 1,591 g and was 20 × 22 × 12 cm [Figure 2]. Histopathology showed Grade II teratoma.

The postoperative course was smooth and the baby was discharged after 7 days and followed up to the age of 3 months with no recurrence.

DISCUSSION

The combination of intensive maternal-fetal monitoring, cesarean section with maximal uterine relaxation and maintenance of intact fetoplacental circulation provides a controlled environment for securing the airway in infants with prenatally diagnosed airway obstruction.[3]

The EXIT procedure was developed originally for management of airway obstruction after fetal surgery and indications have continued to expand for a variety of fetal anomalies.[6] Even in twin gestations, the EXIT procedure is the delivery method of choice for fetuses with giant neck masses.[7] The EXIT technique, performed for the first time in 1989 and now in many centers abroad, can be considered as a safe procedure as long as a multidisciplinary approach is carried out.[8]

The EXIT procedure was successfully used to ensure the uteroplacental gas exchange and fetal hemodynamic stability during a variety of surgical procedures performed to secure the fetal airway or to ensure the successful transition to postnatal environment.[9]

CONCLUSION

A multidisciplinary team approach combined with an accurate prenatal diagnosis obtained through fetal ultrasound is the key to a successful outcome. EXIT depending on placental blood during intubation, tracheostomy or surgical excision is the standard procedure.

REFERENCES