EX-UTERO INTRAPARTUM TREATMENT (EXIT) PROCEDURE – A CHALLENGE TO THE ANAESTHESIOLOGIST

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EXIT procedure is a rare technique consisting of fetal partial externalization from uterine cavity during delivery that maintains uteroplacental circulation while managing life-threatening conditions.

The anaesthetic management is different from that of conventional caesarean section.

CASE REPORT

- 37-year-old female, ASA II, primipara, 37 weeks pregnancy
- Prenatal diagnosis: fetal cervical lymphangioma
- Listed to an elective caesarean section with EXIT procedure
- Before the onset of anaesthesia:
 - ✓ Arterial line
 - ✓ 2 peripheral intravenous lines
 - ✓ Preparation: rocuronium, fentanyl and atropine (intramuscular fetal administration if necessary)

Fig. 1 – Multidisciplinary team

ANAESTHETIC MANAGEMENT

- Aspiration and antibiotic prophylaxis
- Remifentanyl perfusion (2 minutes before induction)
- Endotracheal intubation (rapid sequence induction with propofol and rocuronium)
- General anaesthesia was maintained with sevoflurane (2,5%) and remifentanyl
- After uterine incision:
 - ✓ Fetal head, trunk and upper limbs delivery
 - ✓ Endotracheal intubation (3,5 mm uncuffed tracheal tube) by neonatologist at the second attempt
 - ✓ After ventilation was satisfactory the umbilical cord was clamped and the neonate was fully delivered
- Time from uterine incision to cord clamp was 4 minutes and 20 seconds. Apgar score 9-10
- Oxytocin 10 U bolus + 20 U in 250 ml NaCl 0,9% over the next hour

Fig. 2 – Endotracheal intubation

DISCUSSION

EXIT procedure allows ensuring fetal airway patency prior to delivery when there is no airway obstruction due to congenital malformations.

A multidisciplinary team (obstetrics, anaesthesiology, neonatology, pediatric pneumology, otorhinolaryngology, pediatric surgery) with a proper plan was essential to the success of this technique. There was a previous meeting to discuss and plan procedure.

A general anaesthesia using high concentrations of halogenated agents to get a deep uterine relaxation, uteroplacental circulations preservation and fetal immobility is the recommended technique.

General anaesthesia has the advantage of providing anaesthesia and immobility of the fetus.

Once the fetus airway is safe and the cord clamped, halogenated levels should be immediately lowered and oxytocin perfusion initiated to control uterine relaxation that is associated with bleeding risk.

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