

Anesthetic Management for an EXIT Procedure in a Parturient With Fetal Cervical Teratoma

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Background

Ex Utero Intrapartum Treatment (EXIT)

- Perinatal procedure that maintains uteroplacental circulation during partial delivery
Allows time to secure fetal airway or perform life-saving interventions before cord clamping

Indications

- Large cervical/oropharyngeal masses (e.g., teratoma)
- Congenital high airway obstruction syndrome (CHAOS)
- Anticipated difficult neonatal airway

Anesthetic Challenges

- Need for profound uterine relaxation to preserve placental function
- Risk of:
 - Maternal hypotension
 - Uterine atony → hemorrhage

Case

19-year-old G3P2002 at 38+1 weeks' gestation was diagnosed with a large fetal cervical teratoma measuring $7 \times 6.6 \times 6$ cm, causing tracheal displacement and anticipated airway obstruction.

Intraoperative Management

Access: 2 large-bore IVs + arterial line

Induction:

--Fentanyl, propofol, succinylcholine

--Intubation via video laryngoscopy

Maintenance:

- Sevoflurane (2 MAC)
- Phenylephrine infusion (100 mcg/min)
- Remifentanyl infusion (0.3 → 0.5 mcg/kg/min)
- Nitroglycerin infusion (15 → 37 mcg/min) for uterine relaxation

Outcomes

1. Successful intubation within 5 minutes
2. Delivery 25 minutes after head exposure
3. EBL ~1500–1896 mL
4. Stable maternal hemodynamics

Key Points

1. Plan for Hemorrhage

- Large-bore IV access/ Rapid infuser
- Blood products readily available

2. Maintain Uteroplacental Perfusion

- Avoid hypotension with vasopressors (phenylephrine)
- Use invasive monitoring for tight hemodynamic control

3. Achieve Controlled Uterine Relaxation

- High-dose volatile anesthetic (≈ 2 MAC)
- Adjunct: nitroglycerin infusion
- Be prepared to rapidly reverse after delivery

4. Optimize Fetal Conditions

- Remifentanyl infusion for transplacental anesthesia
- Direct fetal medications:
 - Atropine (prevent bradycardia)
 - Fentanyl (analgesia)
 - Neuromuscular blockade if needed