

Integrated Ex-Utero Intrapartum Treatment and Postnatal Resection of Giant Cervical Teratoma: Anesthetic Management Across the Perinatal Continuum

Clinical Context

Rare Congenital Challenge: Giant cervical teratomas are rare tumors that pose a critical risk of life-threatening airway obstruction at birth.

The EXIT Strategy: Ex-Utero Intrapartum Treatment (EXIT) enables controlled airway management while maintaining vital uteroplacental circulation.

Marina S. Noia, MD

Santa Joana Hospital & Maternity

Fernanda Marques Ferraz Savoia

University of Iowa Hospitals and Clinics

Risks & Objectives

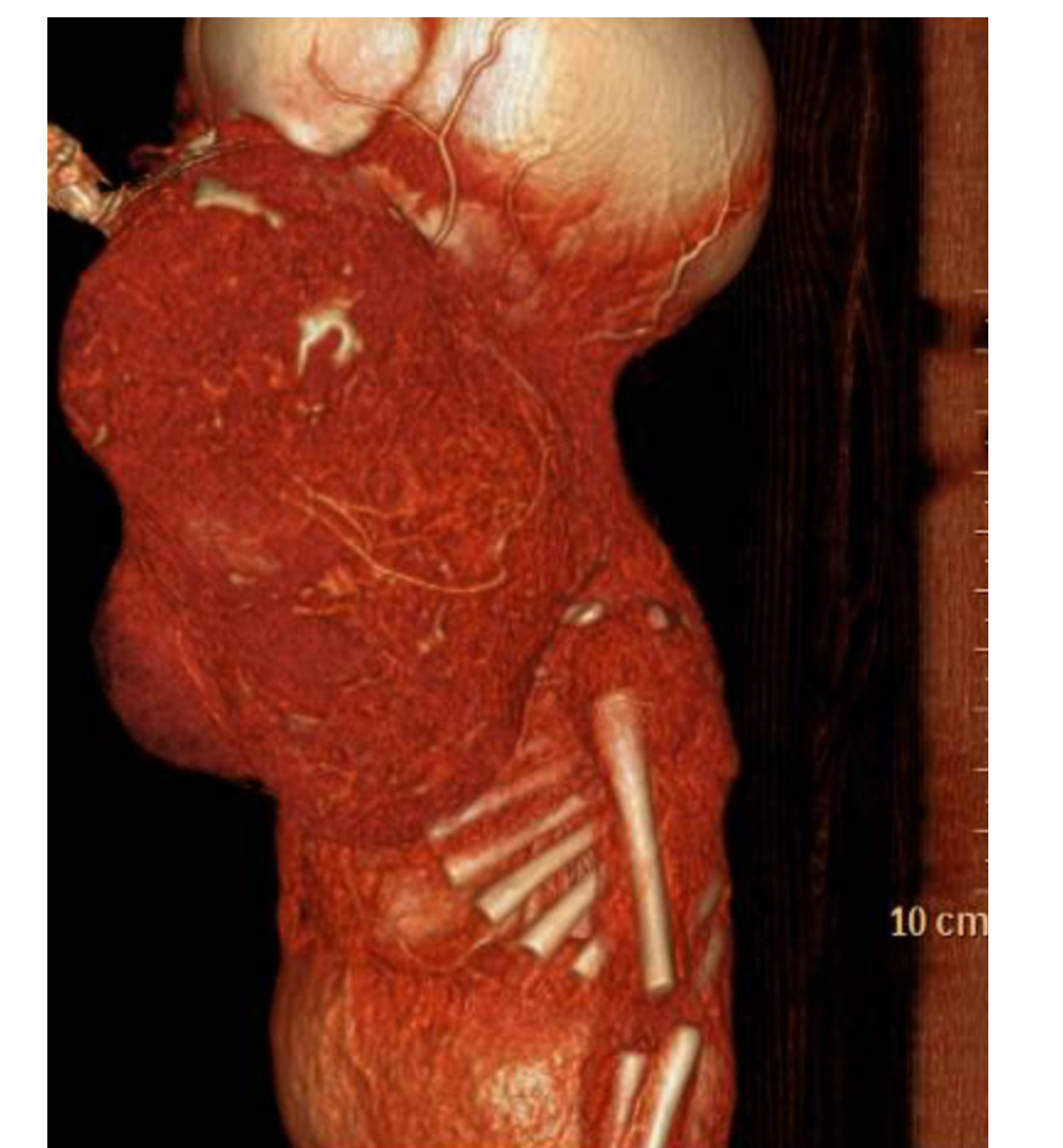
Maternal-Fetal Risk Balance: While EXIT ensures a safer neonatal transition, it carries significant maternal risks, including uterine atony and massive hemorrhage.

Postnatal Complexity: Subsequent tumor resection involves difficult airway management, hemodynamic instability, and potential for major blood loss.

Clinical Objective

To describe comprehensive anesthetic management across fetal, maternal, and neonatal phases in complex giant cervical teratoma cases

Case Visualization



Santa Joana
Hospital e Maternidade



SOCIETY FOR OBSTETRIC
ANESTHESIA AND PERINATOLOGY¹
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Case 1: EXIT Procedure (Maternal)

36-year-old G1 (IVF) woman at 32w with a prenatal diagnosis of a fetal cervical mass. Developed severe polyhydramnios requiring 2 amniotomies (30 and 32w), complicated by chorioamniotic separation: earlier delivery planning.

Setup & Induction

Standard monitorization, BIS, 2 IV
CS + GA → Fetal status: USG by MFM team

Uterine Relaxation

Sevoflurane at 3 MAC with Norepinephrine infusion: placental perfusion

Transition Phase

Fetal airway in 7 minutes; switch to TIVA and aggressive uterotonics post clamping

Outcome: Hemorrhage Protocol; blood loss of 2.1L; hemodynamic stability maintained without blood products

RL 2,5L Balanced crystalloid 1L
Hemorrhage protocol: ATB, TXA, Calcium, active temperature management
Antenatal MgSO₄

Case 2: Neonatal Resection

Delivered via EXIT under GA; Apgar 5/7; BW 2250 g. Intubated, stabilized at delivery → NICU
Initial labs were within normal limits.

Preoperative Findings

Fetal MRI: 9 × 6.0 cm; CT angiography: 11.7 × 12.3 × 7.5 cm
vascular involvement + airway deviation

Indication for Surgery

Tumor progression + anemia → resection at Day 5 of life

Monitoring & Access

Standard + NIRS
Umbilical venous access + PICC + Central venous access

Anesthesia

GA: sevoflurane, fentanyl, ketamine, rocuronium
Active warming

Intraoperative Course

Complex resection + thyroidectomy + tracheostomy

Outcome: EBL 73% of the neonatal blood volume. (130g), tumor weight 220g;

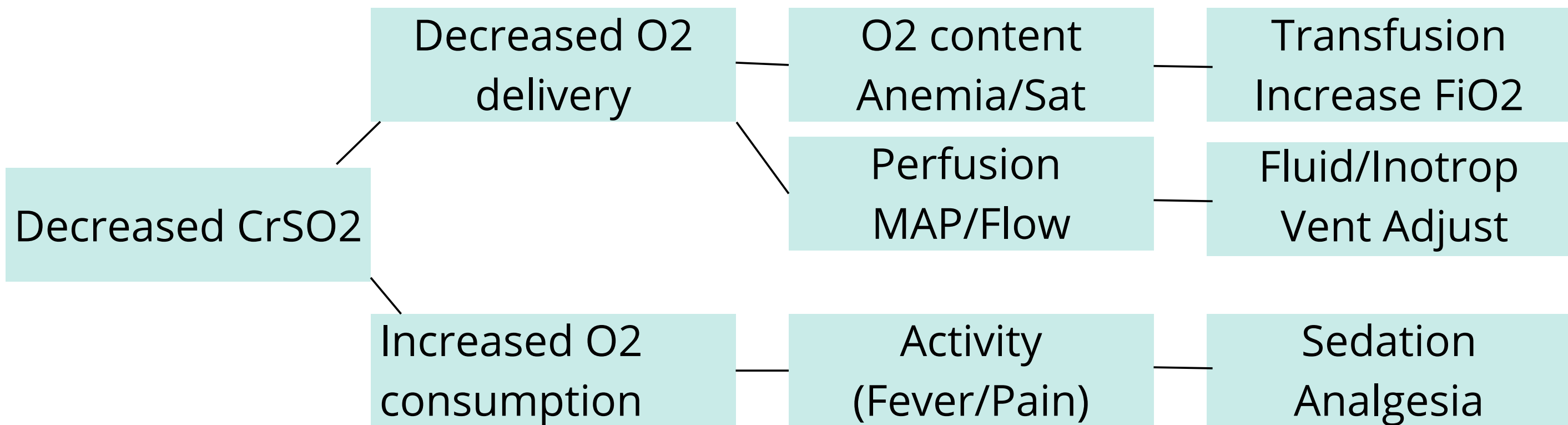
Balanced crystalloid 168, albumin 2g. CH 120g
Hb 9,2, lactate 2.7/ pH 7,46 / pCO₂ 45

 Uteroplacental Perfusion

Deep uterine relaxation with volatile agents combined with vasopressor support (norepinephrine) maintains critical perfusion during EXIT procedure

 Advanced Monitoring

Near-infrared spectroscopy provides real-time tissue oxygenation assessment, supporting early detection of perfusion compromise during major blood loss and airway manipulation



 Multidisciplinary Synergy

Multidisciplinary planning between maternal fetal medicine, obstetric anesthesiology, pediatric anesthesiology, pediatric surgery, advanced airway team and neonatology is imperative for safe delivery across perinatal

 Hemorrhage Preparedness

High risk in both maternal (EXIT) and neonatal phases requires early activation of transfusion protocols and massive hemorrhage management

Perinatal Continuity: The successful outcome of this case highlights the anesthesiologist as a pivotal link in perinatal continuity. By synchronizing specialized teams—including MFM, obstetrics, pediatric surgeons and neonatology—the anesthesiologist facilitated a cohesive transition of care that was vital to managing this complex clinical scenario.

