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ANESTHETIC MANAGEMENT OF THE EXIT (EX UTERO INTRAPARTUM TREATMENT) PROCEDURE UTILIZING SEVOFLURANE *Jalko, S.A. Hoyt, M. University Hospitals of Cleveland, Cleveland, OH* The Ex Utero Intrapartum Treatment (EXIT) procedure was developed to assist in the direct evaluation and management of a potential fetal airway obstruction before placental circulation is terminated. One of the anesthetic goals is to provide for fetal oxygenation and anesthesia allowing for direct visualization, evaluation, and securing of the fetal airway. Case Report: A 22 year old presented at 38 weeks gestation for an EXIT procedure and cesarean delivery. The fetus was diagnosed at 18 weeks with a large left sided neck mass. Because neonatal airway compromise was likely the patient agreed to the unique delivery plan. A rapid sequence induction was performed with pentothal and succinylcholine. Prior to uterine incision, sevoflurane was increased to 3.5% to ensure fetal anesthesia. The fetus was delivered to the level of the torso and a neonatal pulse oximeter was applied. Fetal heart rates were between 140 and 160 with oxygen saturations between 36-48 percent. Under direct laryngoscopy, the pediatric ENT service visualized the airway and noted some tracheal compression, but placed a 3.0 ETT. After securing the airway the fetus was fully delivered, and the neonate was handed over to the pediatric team. The umbilical artery blood gas were a pH of 7.37, pCO₂ of 44 mmHg, and a pO₂ of 47 mm Hg. After delivery the maternal anesthetic was adjusted by stopping the sevoflurane and administering fentanyl and nitrous oxide. The uterus contracted well following ptocin. Discussion: The anesthetic goals during the EXIT procedure are to provide maternal anesthesia and uterine relaxation, maintain uteroplacental circulation, provide fetal oxygenation and anesthesia, and to minimize maternal blood loss. Use of a volatile agent is necessary to provide fetal anesthesia and uterine relaxation but can significantly increase blood loss. Once delivery is completed, anesthetic management focuses on minimizing maternal blood loss from a relaxed uterus. All of the reported EXIT cases except one, used isoflurane to achieve the anesthetic goals. We chose to use sevoflurane because its blood solubility is lower than isoflurane allowing for faster titration and limiting blood loss secondary to uterine relaxation. We did not use nitrous oxide until after delivery because fetal oxygenation is a priority. *Liechty KW, et al: Intrapartum airway management for giant fetal neck masses: The EXIT (ex utero intrapartum treatment) Procedure. The American Journal of Obstetrics and Gynecology 1997;177 Gaiser RR, et al: Anesthetic management of Cesarean delivery Complicated by Ex Utero Intrapartum Treatment of the Fetus. Anesthesia and Analgesia 1997; 84 Shib GH, et al: The EXIT Procedure Facilitates delivery of an infant with a Pretracheal Teratoma. Anesthesiology 1998; 89*

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PREGNANCY COMPLICATED BY HEPATOCELLULAR CARCINOMA *Sbibi, G. Forster, J.; Myers, S. Kansas University Medical Center, Kansas City, KS* Pregnancy complicated by hepatocellular carcinoma is rare but has a high fetal and maternal mortality rate. Historically, termination of pregnancy was recommended.¹ Successful resection has been described.² We present the anesthetic management of a successful left hepatectomy during pregnancy. The patient was a 27-year-old white primigravida at 28 weeks gestation with right upper quadrant pain. An ultrasound of the upper abdomen demonstrated a 20-cm left lobe liver mass. MRI of the lesion demonstrated a 16 x 9-cm vascular left liver lobe mass. Liver enzymes were elevated (SGOT of 102 U/L and SGPT of 182 U/L). Hemoglobin was 9.9 g/dl. The patient had stable vital signs with an unremarkable physical exam. RUQ pain was not elicited upon examination. Preoperatively, aspiration prophylaxis was given. Rapid sequence induction with cricoid pressure was performed, with the patient in the left uterine displacement position. After confirmation of ETT placement, a right radial arterial line and right internal jugular vein introducer were placed. A triple lumen catheter was threaded through the introducer. The patient was maintained on oxygen and isoflurane during surgery. A perinatologist performed continuous fetal heart rate monitoring during surgery. Approximately one hour into the case, uterine activity was noted, and a magnesium sulfate drip was initiated. 15 minutes later 3 doses of terbutaline were given subcutaneously due to persistent uterine activity. One contraction was noted over the next hour. Two more doses were given prior to the end of surgery. Fetal heart rate in the preoperative period was 120-125 bpm. Intraoperatively, the rate was 140-145 bpm with no decelerations. The patient remained hemodynamically stable throughout and did not require vasopressor support. Estimated blood loss was 2600 ml. The patient received 7700 ml of crystalloid, 500 ml of hetastarch, 3 units of packed red blood cells and 500 ml of cell saver. Her hemoglobin was 11.4 g/dl after surgery. Pain was controlled with IV PCA during the postoperative period. The patient did well and was discharged on postop day 8. The size of the mass, vascularity, risk of rupture and possible relationship to hormonal stimulation may necessitate surgery. Successful resection of hepatocellular carcinoma in pregnancy can be done to allow the mother and fetus to reach term. The patient returned in labor at 37 5/7 weeks and delivered a healthy 3056 gm female infant by midforceps delivery. *1. Anthanassiou A, Craigo S: Liver Masses in Pregnancy. Semin Perinatol 1998, 22, 166-77. 2. Gisi P, Floyd R: Hepatocellular Carcinoma in Pregnancy, A Case Report. J Reprod Med 1999; 44, 65-7.*