Anesthetic management of a parturient with chronic renal failure, pulmonary embolism, coagulopathy from heparin infusion, and a difficult airway for urgent cesarean section

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Introduction: Patients with chronic renal failure (CRF) requiring dialysis were historically considered infertile due to amenorrhea. We describe the successful management of a dialysis dependant parturient with chronic hypertension (HTN), morbid obesity, and a Mallampatti IV airway for urgent cesarean section. She was also anticoagulated with iv heparin for a subacute pulmonary embolus (PE).

Case Report: A 32 yo G9P2 5’ 110 kg parturient with 6 days/wk dialysis-dependent CRF and HTN developed a right lower lobe PE at 20 wks gestation requiring iv heparin. Medications included hydralazine, labetalol and nifedipine. At 27 wks, an urgent C/S was called for PPROM, vaginal bleeding, and FHR decelerations. Due to a PTT of 68 and a Mallampati IV airway, regional anesthesia (RA) was contraindicated, and an awake fiberoptic intubation was planned. Nebulized lidocaine 4% was administered. In the OR, she received O2, mild iv sedation, 60mg labetalol and iv nitroglycerine infusion titrated to a BP of 150/90 and LLUD. FHR was 110-120 bpm. 4% viscous lidocaine was applied to the tonsillar pillars. Atomized lidocaine was used on deeper pharyngeal mucosa and the vocal cords. A fiberoptic scope was advanced through an ovassapian airway into the glottic opening. After ETT placement was confirmed, iv induction proceeded. A live male was delivered 3 minutes later with Apgars of 1, 0, and 3 at 1, 5, and 10 minutes, respectively. The infant was intubated, and transferred to the NICU. A complete abruption was identified and the remainder of the C/S was uneventful. Total iv fluids infused were 900cc NS and 50 cc 25% albumin. Urine output was 200cc. She was transferred to the ICU and was dialyzed and extubated on POD #1. The infant at 11 wks of age (39 wks post conception) was extubated on room air and without neurological sequelae.

Discussion: Despite improvements in outcomes for CRF patients, half of pregnancies in women on dialysis are not successful. A majority of deliveries are premature due to polyhydramnios, maternal HTN, and PPROM. C/S is the most common method of delivery.1-2 Parturients and patients on chronic dialysis are both at increased risk for PE.3 LMWH is the treatment of choice for PE in pregnant patients. However, iv heparin is preferred in patients with CRF to better regulate appropriate anticoagulation.4 RA is preferred for C/S, but was contraindicated in this case due to the patient’s full anticoagulation and delivery urgency. An awake fiberoptic intubation was chosen due to the high risk for failed intubation. Acute management of HTN with labetalol and nitroglycerin and closely monitoring fluid input were critical. Postoperative dialysis was arranged after ICU stabilization. Communication with the obstetrical and medical teams contributed to a favorable outcome.

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