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**"CODE OB": A PROTOCOL FOR PERIMORTEM CESAREAN SECTION** *Selman, L.; Lebowitz, K.; Gambling, D. Anesthesia, Scripps Mercy Hospital, SD, CA* **Introduction:** Perimortem cesarean section (PMCS) is recommended within four minutes of cardiac arrest (CA) in pregnant women beyond 24 weeks gestation as a resuscitative measure for mother and neonate if all usual measures have failed.(1,2) We describe a hospital protocol called "CODE OB" which allows immediate recruitment of staff for PMCS and neonatal resuscitation. **Case:** A 38 y.o. with chronic hypertension and 1+ mitral regurgitation presented at 35 weeks gestation with chest pain and BP of 225/135. She received IV labetalol and O<sub>2</sub> by mask. She then became agitated, developed florid pulmonary edema, was given IV lasix and prepared for intubation. ABG was pH 7.19, pCO<sub>2</sub> 51, pO<sub>2</sub> 25. Shortly after intubation she developed bradycardia followed by pulseless ventricular tachycardia. "CODE OB" was called in anticipation of PMCS. ACLS was started maintaining left uterine displacement. PMCS started at the bedside after 3 mins of unsuccessful ACLS; the cardiac rhythm was pulseless electrical activity. The infant was delivered 1 min later with Apgars <a href="mailto:1@1" target="new">1@1</a>, <a href="mailto:5@5" target="new">5@5</a> and <a href="mailto:8@10mins" target="new">8@10mins</a>. Six minutes after delivery vital signs returned with BP136/60 and HR 150 bpm. The patient suffered severe hypoxic encephalopathy. A healthy infant was discharged after 12 days. **Discussion:** The "CODE OB" protocol calls the "CODE BLUE" team, obstetrician, anesthesiologist, and neonatal team and forewarns them of an imminent PMCS. Despite a growing number of cases and adoption of Katz's "Four Minute Rule" in the ACLS guidelines, many institutions do not have an organized approach to maternal CA. Universal adoption of the term "CODE OB" and the development of protocols that can be tailored to locally available resources will promote education and preparedness for maternal cardiopulmonary resuscitation. **Reference:** 1. Katz, VL, et al: Perimortem Cesarean Delivery. *Obstet Gynecol* 1986; 68:571-6 2. Cummins RO: *Advanced Cardiac Life Support*. American Heart Association, Dallas, 1997, pp1-60, 11-8-9

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**ONDANSETRON IN THE PREVENTION OF PRURITUS DURING ELECTIVE CESAREAN SECTION UNDER SPINAL ANESTHESIA** *Dubuc, M.; Crochetière, C.; Villeneuve, E. Anesthesiology, Hospital Sainte-Justine, Montréal, PQ, Canada* **INTRODUCTION:** Pruritus, nausea and vomiting(N/V) are common phenomena in patients undergoing a C/S under regional anesthesia. Antiemetics, mostly metoclopramide, are recommended to prevent N/V during and after C/S(1). Ondansetron(O)4mg was shown cost-effective and more efficacious than metoclopramide(M)10mg and placebo(P) in preventing nausea during non-emergent C/S under epidural anesthesia(O=24%, M=43%,P=57%)(2). Pruritus remains a significant irritant for recovering parturients and treatment is disappointing. Pruritus was significantly relieved by ondansetron 8mg which brought its incidence from 85% to 25%(3). We want to know whether 4 mg of ondansetron prevent pruritus during and after C/S under spinal anesthesia. We also want to find out if ondansetron is detectable in cord blood and maternal milk when the drug is given before the baby's birth. **METHOD:** This randomized, double-blind study had IRB approval. After written informed consent, 40 ASA I-II term parturients scheduled for elective C/S under spinal anesthesia were given metoclopramide 10 mg or ondansetron 4 mg. General comfort, pruritus, N/V were assessed during surgery and the following 24 hours. Blood was drawn from the mother and the umbilical vein and artery at the time of birth for pharmacokinetic studies. Sample size was calculated based on an 80% incidence of pruritus (P1),  $\alpha=0.05$ ,  $\beta=0.2$ , and P2 = 40%. Chi-squares and ANOVA were used to analyse the data. **RESULTS:** To date, 34 patients were recruited. No difference (clinical or statistical) was detected between groups for incidence of pruritus M=91%, O=82%. Our incidence of nausea was M=28%, O=13%. Blood and milk samples will be analysed at the end of the study. **CONCLUSION:** Ondansetron 4mg IV does not prevent pruritus. With the number of patients studied, we cannot draw any conclusion on the incidence of nausea. **Reference:** 1. Chestnut DH(ed) *Obstetric Anesthesia*. 1999 p.474 2. *Anesthesiology* 2000;92(A40) 3. *Anesth. Analg.* 2000;91:172-5

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**ELABORATE HAIRPIECE AS A CAUSE OF UNEXPECTED DIFFICULT INTUBATION.** *Kuczukowski, K.M.; Benumof, J.L. Anes, Univ CA, San Diego, CA* **Introduction:** We present a case of a patient who presented for an emergency C-section with an elaborate occipital hairpiece that was covered by a hospital hat and resulted in unexpected difficult intubation; we think the incidence of this problem is increasing. **Report of case:** A 23 y/o G2P1 African American (AA) female was admitted for an emergent C-section. Her airway was perfectly normal. The patient refused regional anesthesia. Rapid sequence induction of anesthesia was performed in a standard manner. The head was thought to be in a reasonable 'sniff' position. Laryngoscopy revealed a Grade IV view. In re-evaluating the position it was discovered that an elaborate occipital hairpiece would not permit full extension of the head on the neck. Positive pressure ventilation was easily instituted. A shoulder roll 3" in diameter was placed under the patient's shoulders. Laryngoscopy then revealed a Grade I view and endotracheal intubation was easily accomplished. **Discussion:** The literature concerning unexpected hairpiece interference with airway management is limited (1). Elaborate hairpieces used to be worn only on formal occasions. However, a recent trend is that many AA women are wearing hairpieces even in the absence of a formal indication. These hairpieces are firmly tied to the native hair and their removal in an emergency is difficult. Additionally, hospital head covers may mask the problem. Our airway evaluation now includes examination of the hair formation. A shoulder roll seems an effective and simple method to manage a bulky mass of occipital hair by providing extra space for head extension and proper alignment of oral, pharyngeal and laryngeal axes. Subsequent to this case, we have encountered two more patients with similar hairpieces; shoulder rolls were used and no airway problems were experienced. In summary, these cases should serve as a warning that the increasing popularity of elaborate hair fashions will require increasing vigilance. **Reference:** 1. *Anaesthesia*, 2000;55:305.

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**IS EPIDURAL ADMINISTRATION OF MORPHINE SAFE FOLLOWING DURAL PUNCTURE DURING COMBINED SPINAL EPIDURAL ANESTHESIA FOR C-SECTION?** *Patton, C.M.; Lai, M.; Ranasinghe, S.; Toyama, T.; Steadman, J. Anesthesiology, Univ of Miami, Miami, FL* **Introduction:** Combined Spinal-Epidural (CSE) is a common anesthetic technique for C-Section in our institution. Almost all of these patients receive epidural morphine near the conclusion of surgery. There are theoretical concerns about transdural spread of morphine into the cerebrospinal fluid via the dural hole created by a spinal needle, with the possibility of delayed sedation and respiratory depression. This report reviews our experience. **Method:** CSE is initiated with intrathecal Bupivacaine 0.75% in Dextrose at a dose appropriate for the patient (7.5-11.25 mg) and Fentanyl 10-20 mcg. A #27 gauge Whitaker spinal needle is used via a #17 Touhy. An Epidural catheter is then advanced and secured. It is injected with local anesthetic only if needed because of prolonged surgery or inadequate spinal anesthesia. When surgical closure begins, Morphine 4mg in a volume of 4ccs is administered via the epidural catheter, which is then removed at the conclusion of surgery. From the recovery room patients are transferred to a routine post-partum floor where nurses document respiration and level of sedation hourly for 20 hours on a special data sheet. No respiratory monitoring equipment or pulse oximetry is utilized. The anesthesia team is to be called stat if respirations are below 10 or the patient is not easily aroused. **Results:** During an 18 month period 1680 patients were so treated. The nurses' records show no instance of decreased arousability or respiratory rate below 10 in any of the patients. The in-house anesthesia team was never called by the nurses to evaluate excess sedation or depressed respiration. **Discussion:** We believe it is safe to utilize normal doses of epidural morphine following CSE with a #27 pencil point spinal needle in C-Section patients. However, we do not recommend it with larger bore needles or if inadvertent dural puncture has occurred with the Touhy.