OBJECTIVE:
Review the current guidelines for administration of obstetric anesthesia

INTRODUCTION
1. Obstetric anesthesia is considered by many to be a high-risk subspecialty of anesthesia practice that is laden with clinical challenges and medico-legal liability
2. Anesthesia-related complications are the sixth leading cause of pregnancy-related maternal mortality in the United States
3. Difficult or failed intubation following induction of general anesthesia for cesarean delivery remains the major contributory factor to anesthesia-related maternal complications

PERIANESTHETIC EVALUATION
1. History and physical examination
   a. Anesthesia-related obstetric history
   b. Examination of the airway
   c. Examination of the back
   d. Consultation with the obstetrician
2. Intrapartum platelet count
   a. In the healthy parturient a routine platelet count is not necessary
   b. In the high-risk parturient platelet count may reduce the risk of complications
   c. A specific platelet count predictive of regional anesthetic complications has not been determined
   d. Decision to order platelet count should be individualized
3. Blood type and screen
   a. The decision to order or require a blood type and screen or cross-match should be individualized
4. Recording of fetal heart rate
   a. The fetal heart rate should be monitored before and after administration of regional anesthesia

FASTING IN THE OBSTETRIC PATIENT
1. Clear liquids
   a. Oral intake of clear liquids during labor improves maternal satisfaction
   b. Examples of clear liquids include, but are not limited to, water, fruit juices without pulp, carbonated beverages, clear tea and black coffee
   c. Patients at risk for aspiration (e.g., morbidly obese), or patients at risk for operative delivery (e.g., non-reassuring FHR) may require restrictions of oral intake, on a case-by-case basis
2. Solids
   a. Solid food intake should be avoided in labor
   b. The patient undergoing elective cesarean delivery should have a fasting period for solids consistent with the hospital’s policy for non-obstetric patients undergoing elective surgery (8 hours or more is preferable)
ANALGESIA FOR LABOR AND VAGINAL DELIVERY

1. Indications
   a. Maternal request represents sufficient justification for pain relief, but the choice of analgesia depends on the medical condition of the patient, the progress of labor, and the resources of the facility

2. Choice of labor analgesia
   a. CLEA (continuous lumbar epidural analgesia)
   b. CSEA (combined spinal epidural analgesia)
   c. IT (intrathecal opioids with or without local anesthetics)

3. CLEA
   a. The lowest concentrations of local anesthetics with or without opioids that provide adequate analgesia with minimal motor block should be used
   b. 0.1% bupivacaine with fentanyl 2 mcg/ml
   c. 0.0625% bupivacaine with fentanyl 2 mcg/ml
   d. Ropivacaine and levobupivacaine

4. CSEA
   a. Provides a rapid onset of spinal block combined with the temporal flexibility of epidural analgesia via catheter
   b. 0.1% bupivacaine with fentanyl 2 mcg/ml
   c. 0.0625% bupivacaine with fentanyl 2 mcg/ml
   d. Ropivacaine and levobupivacaine

5. IT (intrathecal analgesia)
   a. Spinal opioids with or without local anesthetics may be used to provide effective, though time-limited, analgesia for labor

6. Labor analgesia and the progress of labor
   a. Cervical dilatation at the time of administration of labor analgesia does not impact the outcome of labor
   b. Labor analgesia does not adversely affect the incidence of VBAC (vaginal birth after cesarean section)

7. MAC (monitored anesthesia care)
   a. MAC refers to instances in which an anesthesiologist has been called upon to provide specific anesthesia care (sedation)

ANESTHESIA FOR REMOVAL OF RETAINED PLACENTA

Choice of anesthesia
   a. Regional
   b. General endotracheal
   c. MAC (sedation)

ANESTHESIA FOR CESAREAN DELIVERY

1. Choice of anesthesia
   a. Spinal (SAB)
   b. Epidural (CLEA)
   c. Combined spinal-epidural (CSEA)
   d. General endotracheal (GETA)

2. When compared to regional techniques, general anesthesia can be administered with shorter induction-to-delivery time

3. However, the literature suggests that a greater number of maternal deaths occur when general anesthesia is administered
ANESTHESIA FOR POSTPARTUM TUBAL LIGATION

1. Choice of anesthesia
   a. Spinal
   b. Epidural
   c. Combined spinal-epidural
   d. General

2. An epidural catheter placed for labor may be more likely to fail with longer post-delivery time intervals (> 4 hours)

3. Scheduling
   a. BTL can be performed safely within 8 hours of delivery
   b. BTL should not be attempted at a time when it might compromise care of other L&D patients

MANAGEMENT OF COMPLICATIONS

1. Difficult airway
   a. Labor and Delivery units should have equipment and personnel readily available to manage airway emergencies
   b. Portable equipment for difficult airway management should be readily available in the operative area of L&D units

2. Invasive monitoring
   a. It is not necessary to routinely use central invasive hemodynamic monitoring of severe preeclamptic patients

3. Cardiopulmonary resuscitation
   a. Basic and advanced life-support equipment should be immediately available in the OR area of L&D units
   b. If cardiac arrest occurs during labor and delivery, standard resuscitative measures (including LUD), should be taken
   c. The decision to perform a perimortem cesarean section should be made rapidly, with delivery effected within 4-5 minutes

CONCLUSION

1. Obstetric anesthesia has been a major subspecialty of anesthesiology for a long time and is now an integral part of practice of most anesthesiologists
2. An obstetric anesthesiologist has become an essential member of the obstetric care team, who closely works with the obstetrician, neonatologist and Labor and Delivery nurse to ensure the highest quality care for the parturient and her baby
3. The anesthesiologist’s unique skills in acute resuscitation combined with experience in critical care make members of our specialty particularly valuable in the peripartum care of the high risk patients, extending our role well beyond the routing provision of intrapartum anesthesia or analgesia

REFERENCES