OPTIMAL GOALS FOR ANESTHESIA CARE IN OBSTETRICS

Committee of Origin: Obstetrical Anesthesia

(Approved by the ASA House of Delegates on October 17, 2007 and last amended on October 20, 2010)

This joint statement from the American Society of Anesthesiologists (ASA) and the American College of Obstetricians and Gynecologists (ACOG) has been designed to address issues of concern to both specialties. Good obstetric care requires the availability of qualified personnel and equipment to administer general or neuraxial anesthesia both electively and emergently. The extent and degree to which anesthesia services are available varies widely among hospitals. However, for any hospital providing obstetric care, certain optimal anesthesia goals should be sought. These include:

1. Availability of a licensed practitioner who is credentialed to administer an appropriate anesthetic whenever necessary. For many women, neuraxial anesthesia (epidural, spinal, or combined spinal epidural) will be the most appropriate anesthetic.

2. Availability of a licensed practitioner who is credentialed to maintain support of vital functions in any obstetric emergency.

3. Availability of anesthesia and surgical personnel to permit the start of a cesarean delivery within 30 minutes of the decision to perform the procedure.

4. Because the risks associated with trial of labor after cesarean delivery (TOLAC) and uterine rupture may be unpredictable, the immediate availability of appropriate facilities and personnel~~,~~ (including obstetric anesthesia, nursing personnel, and a physician capable of monitoring labor and performing cesarean delivery, including an emergency cesarean delivery) is optimal. When resources for immediate cesarean delivery are not available, patients considering TOLAC should discuss the hospital's resources and availability of obstetric, anesthetic, pediatric and nursing staff with their obstetric provider (1); patients should be clearly informed of the potential increase in risk and the management alternatives. The definition of immediately available personnel and facilities remains a local decision based on each institution's available resources and geographic location.

5. Appointment of a qualified anesthesiologist to be responsible for all anesthetics administered. There are many obstetric units where obstetricians or obstetrician-supervised nurse anesthetists administer labor anesthetics. The administration of general or neuraxial anesthesia requires both medical judgment and technical skills. Thus, a physician with privileges in anesthesiology should be readily available.

Persons administering or supervising obstetric anesthesia should be qualified to manage the infrequent but occasionally life-threatening complications of neuraxial anesthesia such as respiratory and cardiovascular failure, toxic local anesthetic convulsions, or vomiting and aspiration. Mastering and retaining the skills and knowledge necessary to manage these complications require adequate training and frequent application.

To ensure the safest and most effective anesthesia for obstetric patients, the Director of Anesthesia Services, with the approval of the medical staff, should develop and enforce written policies regarding provision of obstetric anesthesia. These include:

OPTIMAL GOALS FOR ANESTHESIA CARE IN OBSTETRICS

1. A qualified physician with obstetric privileges to perform operative vaginal or cesarean delivery should be readily available during administration of anesthesia. Readily available should be defined by each institution within the context of its resources and geographic location. Neuraxial and/or general anesthesia should not be administered until the patient has been examined and the fetal status and progress of labor evaluated by a qualified individual. A physician with obstetric privileges who concurs with the patient's management and has knowledge of the maternal and fetal status and the progress of labor should be readily available to deal with any obstetric complications that may arise. A physician with obstetric privileges should be responsible for midwifery back up in hospital settings that utilize certified nurse midwives/ certified midwives as obstetric providers.

2. Availability of equipment, facilities, and support personnel equal to that provided in the surgical suite. This should include the availability of a properly equipped and staffed recovery room capable of receiving and caring for all patients recovering from neuraxial or general anesthesia. Birthing facilities, when used for labor anesthesia services or surgical anesthesia, must be appropriately equipped to provide safe anesthetic care during labor and delivery or postanesthesia recovery care.

3. Personnel, other than the surgical team, should be immediately available to assume responsibility for resuscitation of the depressed newborn. The surgeon and anesthesiologist are responsible for the mother and may not be able to leave her to care for the newborn, even when a neuraxial anesthetic is functioning adequately. Individuals qualified to perform neonatal resuscitation should demonstrate:

    3.1 Proficiency in rapid and accurate evaluation of the newborn condition, including Apgar scoring.
    3.2 Knowledge of the pathogenesis of a depressed newborn (acidosis, drugs, hypovolemia, trauma, anomalies, and infection), as well as specific indications for resuscitation
    3.3 Proficiency in newborn airway management, laryngoscopy, endotracheal intubations, suctioning of airways, artificial ventilation, cardiac massage, and maintenance of thermal stability.

In larger maternity units and those functioning as high-risk centers, 24-hour in-house anesthesia, obstetric and neonatal specialists are usually necessary. Preferably, the obstetric anesthesia services should be directed by an anesthesiologist with special training or experience in obstetric anesthesia. These units will also frequently require the availability of more sophisticated monitoring equipment and specially trained nursing personnel.

A survey jointly sponsored by ASA and ACOG found that many hospitals in the United States have not yet achieved the goals mentioned previously. Deficiencies were most evident in smaller delivery units. Some small delivery units are necessary because of geographic considerations. Currently, approximately 34% of hospitals providing obstetric care have fewer than 500 deliveries per year (2). Providing comprehensive care for obstetric patients in these small units is extremely inefficient, not cost-effective and frequently impossible. Thus, the following recommendations are made:

1. Whenever possible, small units should consolidate.

2. When geographic factors require the existence of smaller units, these units should be part of a well-established regional perinatal system.

OPTIMAL GOALS FOR ANESTHESIA CARE IN OBSTETRICS

The availability of the appropriate personnel to assist in the management of a variety of obstetric problems is a necessary feature of good obstetric care. The presence of a pediatrician or other trained physician at a high-risk cesarean delivery to care for the newborn or the availability of an anesthesiologist during active labor and delivery when TOLAC is attempted and at a breech or multifetal delivery are examples. Frequently, these physicians spend a considerable amount of time standing by for the possibility that their services may be needed emergently, but may ultimately not be required to perform the tasks for which they are present. Reasonable compensation for these standby services is justifiable and necessary.

A variety of other mechanisms have been suggested to increase the availability and quality of anesthesia services in obstetrics. Improved hospital design, to place labor and delivery suites closer to the operating rooms, would allow for safer and more efficient anesthesia care, including supervision of nurse anesthetists. Anesthesia equipment in the labor and delivery area must be comparable to that in the operating room.

Finally, good interpersonal relations between obstetricians and anesthesiologists are important. Joint meetings between the two departments should be encouraged. Anesthesiologists should recognize the special needs and concerns of the obstetrician and obstetricians should recognize the anesthesiologist as a consultant in the management of pain and life-support measures. Both should recognize the need to provide high quality care for all patients.

REFERENCES

(1) Vaginal birth after previous cesarean delivery. ACOG Practice Bulletin No. 115. American College of Obstetricians and Gynecologists. Obstet Gynecol 2010; 116: 450-463.

(2) Bucklin BA, Hawkins JL, Anderson JR, et. al. Obstetric anesthesia workforce survey: twenty-year update. *Anesthesiology* 2005;103:645-53.