

## EDITORIAL

# American Society of Anesthesiologists' Practice Guidelines for Obstetric Anesthesia: Update 2006

The American Society of Anesthesiologists (ASA) first developed and approved *Practice Guidelines for Obstetrical Anesthesia* in October 1998, with publication in 1999.<sup>1</sup> The process of preparing a practice guideline is initiated when the ASA Committee on Standards and Practice Parameters recognizes a need for assessment of clinical practice in a particular area of anesthesia care. Once a task force is selected, evidence is collected and evaluated after identifying the clinical conditions, types of patients, users and practice settings for which the guideline is intended.

In recent years, many medical specialties have used evidence-based processes to develop clinical practice guidelines. These guidelines are primarily used as clinical tools to guide practitioners in decision-making and to assist in producing risk-management protocols. In addition, they provide direction in areas of complex practice as well as identifying areas of practice that warrant additional research and scientific study. The National Guidelines Clearinghouse requires documents to be published within five years so they remain current. Guidelines are removed from their site if not updated in that time frame. Although the ASA Committee on Standards and Practice Parameters does not use a specific time frame for updating their documents, they choose to revise their documents for the following reasons: (1) to improve the recommendations in the original document, (2) to incorporate recent literature changes, or (3) when new issues related to the topic arise. The updated *Practice Guidelines for Obstetric Anesthesia* were approved by the ASA in October 2006 with the stated purposes “to enhance the quality of anesthetic care for obstetric patients, improve patient safety by reducing the incidence and severity of anesthesia-related complications, and increase patient satisfaction.”<sup>2</sup> While these guidelines were developed largely for American anesthesiologists, many other practitioners of obstetric anesthesia around the world will find them of interest.

To give an idea of the scope of the literature used, over 4000 citations were obtained, 2986 articles were reviewed and 437 articles are in the database for the guidelines! To be evidence-based, the literature is said to be *supportive* if there are at least five well-designed studies that address the question so that a meta-analysis can be performed. If there is enough information from

studies and case reports to provide a directional assessment of the relationship but not a statistical assessment, the literature is said to be *suggestive*. When there is no clear direction from the literature or studies have found no significant differences, the relationship between the intervention and the outcome is *equivocal*. As we all know, the literature in obstetric anesthesia does not answer all our questions or support all our beliefs about clinical practice. Thus, the next level of evidence comes from consultants who are surveyed on the outcomes that the guidelines hope to address. Our panel of expert consultants included anesthesiologists, obstetricians and others involved in obstetric care, who were chosen by the Task Force members because of their expertise in the area. They provided *consultant opinion*. And finally, *ASA members* were surveyed to include the opinions of active members, not necessarily obstetric anesthesia specialists, who provide obstetric anesthesia care. From literature and surveys, a draft document was prepared and presented at two open forums held at the meetings of the International Anesthesia Research Society and the Society for Obstetric Anesthesia and Perinatology (SOAP). Once the comments from these open forums were included, the almost final document was placed on the ASA website for several months and members were encouraged to comment through the ASA Newsletter. The ASA House of Delegates voted to approve the document on October 18, 2006.

So, what's new in these guidelines versus the original guidelines from 1999? The section on “History and Physical Examination” now recommends examination of the airway, heart and lungs, consistent with the ASA “Practice Advisory on Preanesthesia Evaluation”. Interestingly, spelling out that obstetric patients undergoing anesthesia should be treated the same as non-pregnant patients generated more controversy among ASA members than any other item. At both the ASA Board of Directors meeting and the reference committee meetings at the ASA annual meeting, there was considerable discussion with some members stating that their labor and delivery practices were too busy to listen to the parturient's heart and lungs, and that the examination would yield little. In contrast, others (including our Task Force) took the stance that obstetric patients should receive the same standard of care as those in the main

operating room, and that if we want to be recognized as physicians rather than technicians we should treat our patients as such. One participant, who frequently serves as an expert witness in medical liability cases, stated that family members who had been present often commented in depositions that the anesthesiologist never examined their loved one before block placement, and she felt that this observation was frequently detrimental to the defendant's case.

Another addition to the guidelines is a stronger statement reinforcing communication between anesthesia and obstetric services. Specifically, the document states "Recognition of significant anesthetic or obstetric risk factors should encourage consultation between the obstetrician and the anesthesiologist. A communication system should be in place to encourage early and ongoing contact between obstetric providers, anesthesiologists, and other members of the multidisciplinary team." This supports the team training approach presented in a panel discussion at the 2006 SOAP meeting in Miami.

A recommendation that did not change in the updated guidelines, but still generated discussion at the ASA board and annual meetings, was that a routine platelet count is not necessary in the healthy parturient before neuraxial anesthesia. Although the literature is *equivocal*, 80% of the consultants agreed that "a routine intrapartum platelet count does not reduce maternal anesthetic complications." Interestingly, many ASA members reported still obtaining a routine platelet count before providing epidural analgesia for a healthy parturient.

There was much discussion by the Task Force about the cost-effectiveness, utilization and immediate availability of blood-bank resources in an unexpected emergency. We found that even among those of us who practice obstetric anesthesia most of the time in tertiary care centers, there was no consensus about whether to obtain a routine "clot to hold" or any kind of sample on normal parturients. Our consultants and ASA members were equally divided, although they tended to agree that "all parturients should have an intrapartum blood sample sent to the blood bank to reduce maternal complications." Overall, the recommendation remains essentially unchanged, stating that type and screen or cross-match should be ordered on an individual basis, depending on risk factors and "local institutional policies."

The section on "Aspiration Prevention" is largely unchanged for clear liquids and solids. However, the "ASA Practice Guidelines for Preoperative Fasting" is referenced repeatedly because of the range of timing for solids from 6 to 8 hours. The longer time interval applies to fatty foods because they do not empty as quickly. Instead of specifying 6 or 8 hours, Task Force members and consultants kept a range to allow for flexibility. A section on pharmacologic agents for aspiration

prophylaxis was added to encourage practitioners to consider their use, although the literature only supports decreasing acidity, and not a reduction in maternal complications.

Several statements were added to the section on labor analgesia. Now there is adequate literature to perform meta-analytic comparisons on the timing of neuraxial analgesia. Consequently, the recommendation states that "Patients in early labor should be given the option of neuraxial analgesia when this service is available. Neuraxial analgesia should not be withheld on the basis of achieving an arbitrary cervical dilation, and should be offered on an individualized basis. Patients should be reassured that the use of neuraxial analgesia does not increase the incidence of cesarean delivery." How far we have come on this question in the last ten years! A statement was added to encourage early placement of neuraxial catheters for high-risk patients (e.g. twin gestation, difficult airway or obesity), even before a request for labor analgesia. The section on specific techniques emphasizes analgesia *without* motor block as well as availability of treatments for complications. Patient-controlled epidural analgesia (PCEA) is new to this document and states that PCEA is effective, flexible and may be preferable to infusion techniques in order to reduce anesthetic interventions and dosages of local anesthetics, with or without a basal infusion rate.

The Task Force added an important statement about the significance of obstetric care for cesarean delivery. The new document states "Equipment, facilities, and support personnel available in the labor and delivery operating suite should be comparable to those available in the main operating suite." How many of us have faced such a debate in our own hospitals? In addition to a comparison of anesthetic techniques, the new document also contains recommendations on fluid preloading (beneficial but not mandatory), use of phenylephrine as an alternative for treating hypotension, and a preference for neuraxial opioid administration for postoperative analgesia when possible. New recommendations for postpartum tubal ligation emphasize compliance with oral intake guidelines and consideration of aspiration prophylaxis. In addition, there is a preference for neuraxial techniques as well as consideration of higher failure rates of epidural catheters used for labor, and timing of the procedure so it does not compromise other aspects of patient care.

Finally, there are new guidelines for *Management of Obstetric and Anesthetic Emergencies* that include consideration of cell salvage in cases of intractable hemorrhage. The ASA Practice Guidelines for Management of the Difficult Airway are also referenced by having a qualitative carbon dioxide detector readily available (i.e. outside the operating rooms), using a laryngeal or supraglottic airway device when intubation and ventila-

tion are difficult, and progression to a surgical airway when patients cannot be ventilated or wakened. The 2005 American Heart Association Guidelines for Cardiac Arrest in Pregnancy are cited, with a reminder that the obstetrics team should perform a hysterotomy within four minutes of cardiac arrest.

While developing the guidelines, Task Force members were asked by the ASA Committee on Performance and Outcomes Measurement to consider whether a pay-for-performance measure (P4P) could be recommended from their literature review and the consultant and member surveys. The Centers for Medicare and Medicaid Services have mandated the transition toward reimbursement based on predetermined performance standards. Whatever we might think of that process, it is best if we determine our performance standards rather than those mandated by a governmental agency. The ASA has been actively searching for evidence-based measures that improve patient outcome that are under the anesthesiologist's control (unlike preoperative administration of antibiotics, for example). On the basis of this document, the ASA has adopted its first P4P item, the use of pencil-point spinal needles instead of cutting-bevel spinal needles to reduce the frequency of post-dural puncture headache in obstetric patients. This item is evidence-

based and supported by both consultants and ASA members.

One of the goals of developing practice guidelines is to identify areas where further research is needed; areas where evidence is lacking and practices are based on consensus opinion. When you read through the update guidelines,<sup>2</sup> every time you see that the literature is silent, insufficient or inadequate, there is work to be done! These are the areas in obstetric anesthesia where our patients will benefit from the implementation and publication of well-designed studies so that one day we will practice from a predominantly evidence-based standard of care.

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#### REFERENCES

1. Task Force on Obstetrical Anesthesia. Practice Guidelines for Obstetrical Anesthesia. *Anesthesiology* 1999; 90: 600–11.
2. <http://www.asahq.org/publicationsAndServices/OBguide.pdf>.