Conduction (regional) anesthesia and the CRNA: A philosophy

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Recently at a major hospital in California, a first-year obstetrical resident inserted a needle in a patient’s back and administered 8 mg of tetracaine as a spinal anesthetic. He left the patient, proceeded to scrub for the pending cesarean section, and told a certified registered nurse anesthetist (CRNA) to manage the anesthetic. The nurse anesthetist had the responsibility of monitoring and correcting the physiologic changes brought about by the spinal. She administered IV fluids and potent vasopressors. At the same time, other CRNA’s in the surgical suite were administering: intravenous barbiturates; potent narcotics such as morphine, meperidine, and fentanyl; myocardial depressants such as halothane and enflurane; and skeletal muscle relaxants.

Although nurse anesthetists may legally administer general anesthesia in California, they may not administer a regional anesthetic. An opinion by the Attorney General of California dated December 9, 1972, states:

“Nurses In Field of Anesthesia—Registered nurses may not administer spinal, epidural and regional anesthesia and analgesia; nurses may only administer general anesthetics and must be supervised in the administration only by a licensed physician, surgeon or dentist.”

Should CRNA’s use regional anesthesia techniques as part of their practice? It is the opinion of many that regional anesthesia can effectively be administered by nurse anesthetists.

In support of this argument, certain factors need to be examined. The most significant and pertinent factor is that regional techniques are often clearly the safest method of anesthesia for the patient. In many instances, to deny the CRNA practitioner this valuable technique would be to deny the patient the safest and highest quality anesthetic care. Once this is established, the controversy appears: Who should and should not administer this technique?

Although many believe that the ideal situation would be 100% physician-performed anesthesia, it is obvious that this will not happen in this country in the near future. The surveys conducted on anesthesia manpower show that about 50% of the anesthetics in the United States are administered by nurse anesthetists. The demographic maldistribution of MD anesthesiologists, as charted by Carron, shows that states with the highest population density have the highest ratios of anesthesiologists to population, for example, New York has 9.4 anesthesiologists per 100,000 population.

Does this mean that the people of
the less populated states should not have the luxury of optimal anesthesia care? I am sure the women of South Dakota, where there are 1.1 anesthesiologists per 100,000 population, are still having babies and could benefit from regional anesthesia administered by a CRNA to alleviate the pains of childbirth.

Concrete evidence of the feasibility of nurse anesthetists administering regional anesthesia is found in current military procedure, where the nurse anesthetists who are members of the military are educated in and practice regional anesthesia. In 1973, the United States Army recognized the limited availability of physician anesthesiologists in future years; consequently, in the interest of total patient care, Army Nurse Corps anesthetists are now trained in selected regional anesthesia techniques. Similarly, the Navy has always required their nurse anesthetists to be competent practitioners of regional anesthesia and place strong emphasis on these techniques in their educational programs.

The arguments against nurse anesthetists administering regional anesthesia are highly emotional and of little substance. In a letter sent to members of the California legislature by the president of the Union of American Physicians, scare tactics were used. To quote from that letter:

"We are also aware of the need for economy in medical care, but the preposterous nature of entrusting spinal anesthesia to anyone other than fully-trained physicians is analogous to authorizing Do-It Yourself Brain Surgery Kits — it is outside any consideration of reasonableness."

The author of this letter, by dismissing the question altogether, failed to provide any facts to support his thesis. Are nurse anesthetists, then, less technically capable of performing blocks? In areas where student nurse anesthetists and anesthesia residents are taught regional technique, there are no statistically significant differences in the occurrence of sequelae or morbidity as a result of regional anesthesia administered by the various categories of practitioners. The techniques of regional anesthetics are easily mastered by all but the most inept of students, physicians, dentists, and registered nurses alike.

Dr. Alon P. Winnie of Chicago, a noted and widely recognized expert on regional anesthesia, in an editorial published in the Illinois Society of Anesthesiologists Bulletin strongly supports the administration of these procedures by CRNA's as an opportunity to improve anesthesia care. Dr. Winnie questions whether anesthesiologists fear that their own technical abilities in regional anesthesia may be exceeded by those of nurses.

By far, the most convincing arguments in favor of CRNA's mastering regional blocks are made by anesthesiologists specializing in obstetrics (OB). OB anesthesiologists recognize that their specialty has long been considered the stepchild of anesthesia. Anesthesia is one of the four leading causes of maternal mortality, and 95% of these deaths are preventable. In the past decade, the total anesthesia death rate decreased because fewer deaths were associated with spinal anesthesia, but the death rate associated with the inhalation of vomitus remained the same.

Professional groups have expressed the concerns of the OB anesthesiologists. The Joint Commission on Accreditation of Hospitals (JCAH) requires that "the same competence of anesthesia personnel shall be available for obstetrical procedures as is available for elective procedures".

Furthermore, in 1974 the American College of Obstetrics and Gynecology (ACOG) standards stated that "whenever possible, obstetric anesthesia should be supervised by a qualified anesthesiologist and administered by an anesthesiologist or CRNA". The OB anesthesiologists' support of CRNA's administering spinal and epidural anesthetics is well-founded: They want to increase the availability of regional anesthetics to
their patients, improve overall patient care, and decrease maternal mortality.

Frederick Hehre, MD, a strong supporter of nurse anesthetists contributing to the quality of OB anesthesia care, provides an unequivocal summation of the OB anesthesiologists’ point-of-view. He states rather dogmatically:

"Why should any physician regardless of his training, place a local anesthetic in the subarachnoid space and immediately turn the patient over to a nurse anesthetist for management? Complications caused by physiologic effects of spinal anesthesia are far more life threatening than the actual art of induction of the anesthetic itself... It is more sensible to allow qualified individuals to make the decision to administer conduction anesthesia to an obstetrical patient with a known full stomach than to risk the aspiration of vomitus with inhalation anesthesia, which is the leading anesthetic cause of maternal death." 1, 2

Conclusions

The position of the OB anesthesiologists underscores the importance and necessity of allowing nurse anesthetists to administer regional anesthesia. There is a shortage and maldistribution of anesthesiologists in the United States which will continue. In fulfilling the current need for anesthetics, nurse anesthetists now administer about 50% of them. The presence of nurse anesthetists trained in regional anesthesia in the military disproves any arguments which challenge the capability of nurse anesthetists to master these techniques. The answer to the original question proposed, should CRNA’s use regional anesthesia techniques as part of their practice, is yes.

This answer raises a second question: How can this be accomplished? In reply and conclusion, I would like to offer several suggestions:

1. Legislation—The American Association of Nurse Anesthetists (AANA) and particularly the state associations of nurse anesthetists must monitor all legislation regarding the practice of anesthesia. This includes changes in the nurse practice acts and medical practice acts. Lobbying is expensive, but laws are difficult to change after they are passed.

2. Curriculum additions — The AANA Council on Accreditation should study the advisability of requiring regional anesthesia techniques as part of the curriculum of schools.

3. Certification process—An intense program involving education of CRNA’s in the techniques of regional blocks should be instituted. Emphasis should be placed on anatomy, physiology and pharmacology, as well as techniques. CRNA’s completing these courses should receive recognition.

4. Physician participation—A final word on this topic would be the advisability of incorporating our physician colleagues in the establishment and implementation of these courses in regional anesthesia. Since historically these blocks have been in the domain of the doctors, they have a considerable amount to contribute.

In the preparation of this paper, I have talked with a large number of people on this subject. No one was able to give me a valid reason why CRNA’s should not do regional anesthesia based on solid facts and statistics. But, I would be remiss if I did not state that I believe a large part of the fear on this topic from our physician colleagues has economic undertones. It is a sad commentary on the practice of health care when economic factors are placed in higher esteem than what is best for the patient.

Every CRNA practicing in this country today should be able to offer his/her patient all the options available in the selection of anesthetic agents and techniques. To deny the public these options is to deny them the highest quality anesthesia care available.

REFERENCES
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