Positioning, padding, documentation, and the CRNA

Key words: Documentation, padding and positioning, res ipsa loquitur, standards of practice.

Pommier v Savoy Memorial Hospital
On July 15, 1998, an appellate court in Louisiana issued a very instructive opinion holding virtually all of the members of the operating team, the surgeon, anesthesiologist, nurse anesthetist, and circulating nurse liable for a patient's development of peroneal palsy (Pommier v Savoy Memorial Hospital, 1998 WL 391121 (La. App. 3 Cir.)). This case has not been released for publication and until released it is subject to revision or withdrawal. (It is discussed here, not for its precedential value, but for its newsworthiness.) The case reinforces some changes to the Scope and Standards for Nurse Anesthesia Practice approved by the Board of the American Association of Nurse Anesthetists on November 6, 1997 becoming effective April 6, 1998.1

In the Pommier case, the plaintiff, a 55-year-old woman, was found to have a fractured hip. She underwent surgery for a total hip replacement. The surgery lasted 2 hours and 20 minutes. After the operation, the plaintiff developed peroneal palsy. As often occurs in cases involving anesthesia, the plaintiff brought suit using the doctrine of res ipsa loquitur. The plaintiff was unaware of what actually happened during the operation and had no direct evidence of negligence. However, she argued that peroneal palsy was unlikely to result except as a result of negligence, and someone on the operating team had to have been responsible. The court's first task was to determine whether the nerve injury was a recognized complication of the surgery or whether it could only result from negligence. The medical evidence submitted at trial was consistent that this type of nerve injury was either not a known risk of hip replacement surgery or a very rare occurrence when the knee was properly padded.

Whose responsibility was it? The hospital's policy and procedures manual, introduced as proof of the standard of care, indicated that the responsibility of properly positioning and padding a patient's boney areas during surgery is the responsibility of the entire operating team: "nurse, anesthetist, and the surgeon." The hospital policy was consistent with the newly adopted addendum to Standard V of Scope and Standards for Nurse Anesthesia Practice that nurse anesthetists "monitor and assess patient positioning and protective measures at frequent intervals."

Because this was a res ipsa loquitur claim, it became imperative for the operating team to be able to prove that it was not negligent. Unfortunately, the patient's chart and documentation did not clearly show that the patient had been properly padded. Expert testimony that was offered by the plaintiff was limited to a review of the record, a record that failed to show that the patient had been properly padded. Plaintiff's expert's testimony was
not that the patient was improperly positioned or padded, it was simply that the record did not show that the patient had been properly positioned or padded. While one of the nurses testified that it was her normal practice to pad boney portions of the body, she did not satisfactorily document her use of padding, and the court entered judgment in favor of the plaintiff under res ipsa loquitur.

The Pommier case doubly relies on the doctrine of res ipsa loquitur. First, if the injury occurs, the assumption is that someone is negligent. Second, if the record does not clearly show that proper padding and positioning were used, the assumption is, it was not. The Pommier case is a warning for nurse anesthetists to understand their responsibility for padding and positioning the patient and for thoroughly documenting that the patient has been carefully positioned, padded, and monitored.

In addition to the Pommier case, there have been several cases involving claims of improper padding or positioning against anesthetists. As in many legal areas involving anesthesia, court decisions are not uniform. Factual patterns in which anesthetists are held liable under res ipsa loquitur in some cases turn out to be insufficient in others. For example, in some cases involving ulnar nerve damage, the courts have held that under res ipsa loquitur, ulnar nerve damage is evidence of negligence, while in others, evidence has shown that ulnar nerve damage can occur without negligence, and the courts have ruled that res ipsa loquitur should not apply.

**Carolan v Hill**

This column previously discussed the case of Carolan v Hill (553 N.W. 2d 882, Iowa, 1996), in which the Iowa Supreme Court held that it was an error for a trial court to exclude expert testimony of a nurse anesthetist under an Iowa statute governing expert testimony. The Iowa statute provided that a “person” was qualified to testify as an expert witness if the person’s “medical or dental” qualifications relate directly to the “medical problem or problems at issue.” The trial court said that the statute prohibited a nurse anesthetist from testifying on the standard of care to be followed by an anesthesiologist, but the Iowa Supreme Court overruled it. Substantively, what the case involved was a patient who had undergone surgery to treat severe reflex esophagitis. After the operation, he began experiencing pain and numbness in his left arm. He was diagnosed with ulnar nerve injury and he brought suit against his surgeon and anesthesiologist alleging that the injury was caused by improper positioning and padding of his arm during his surgery. A nurse anesthetist was expected to testify about the responsibility of an anesthetist (in this case an anesthesiologist) for padding and positioning.

**Cox v Deppisch**

A similar case from Ohio involved a nurse anesthetist. In Cox v Deppisch (1991 WL 191758, Ohio App. 9 Dist.), another unpublished decision, the plaintiff, a mechanic, suffered an injury to his back. He underwent surgery and shortly thereafter complained of numbness in his right hand and a bruise on his arm. He was eventually diagnosed as suffering from an ulnar neuropathy. At trial it was established that the nurse anesthetist had been responsible for positioning the plaintiff on the operating table and monitoring him during surgery. A neurologist testified that the plaintiff’s ulnar nerve was permanently damaged due to improper positioning during the course of the 2½ hour operation. The neurologist testified that insufficient padding had been placed around the plaintiff’s arm as he lay on his stomach. The defendants appealed the case on grounds that the award ($432,000) was too high, but they did not challenge the determination that the damage had been caused by the anesthetist’s improper positioning.

**Vogler v Dominguez**

In Vogler v Dominguez, (624 N.E. 2d 56, Ind., 1994), the patient sued his neurosurgeon and hospital for loss of motor function and pain in his left arm, diagnosed as a brachial plexus stretch. The plaintiff underwent surgery for the purpose of repairing a cerebral spinal fluid leak which had resulted from a fall. After the operation, the patient experienced a loss of motor function and pain in the left arm and sued the hospital and surgeon. The trial court dismissed the case, but the appellate court reinstated the case against the surgeon. Expert testimony suggested that if the operation had been prudently performed, the patient would not have suffered nerve damage and that, therefore, the standard of care must have been breached.

The evidence suggested that responsibility for positioning the patient was shared by the surgeon and anesthesiologist, neither of whom were hospital employees. Because there was no evidence that any hospital employee was involved in the negligence, the hospital was dismissed as a defendant. The plaintiff is entitled to proceed against the surgeon because his injury arose from faulty positioning, which is a shared responsibility of surgeon and anesthesiologist. (Because the plaintiff chose not to sue the anesthesiologist, the surgeon may end up liable for the negligence of both the surgeon and anesthesiologist, but that is a story for another column.)
Froysland v Altenburg

In Froysland v Altenburg (439 N.W. 2d 797, N. Dakota, 1989), a plaintiff experienced pain and numbness in his right arm and hand from compression of the ulnar nerve while having open heart surgery. When the pain did not end within a couple of months, he saw a second physician and, approximately 2 years later, had surgery on his right arm to correct the ulnar nerve complication. His subsequent suit against the anesthesiologist and the clinic where his heart surgery was performed was dismissed for failure to bring the suit within the 2-year statute of limitations. The patient claimed that it was not until after the second surgery that he discovered that it was the responsibility of the anesthesiologist to position and pad his arm during surgery. The appellate court dismissed his suit because he should have made a greater effort to find out who was responsible for padding and positioning him and brought suit earlier.

Hoven v Rice Memorial Hospital

In Hoven v Rice Memorial Hospital (396 N.W. 2d 569, Minn. 1986), the plaintiff had ulnar nerve damage but introduced no evidence of negligence at trial. The trial court granted a directed verdict in favor of the defendants, which was appealed. The intermediate appellate court ordered the case back for a retrial on the theory of res ipsa loquitur. The Supreme Court of Minnesota reversed the appellate court and reinstated the trial court's decision in favor of the defendants. The Supreme Court pointed out that under res ipsa loquitur three things must be proved: "(1) that ordinarily the injury would not occur in the absence of negligence; (2) that the cause of the injury was in the exclusive control of the defendant; and (3) that the injury was not due to plaintiff's conduct."

The plaintiff's expert witness was a general surgeon who testified that ulnar nerve injuries do not usually occur during surgery if proper procedures are followed in the placement of the patient's arms. He admitted, on the other hand, that on occasion an ulnar nerve compression injury is possible even if all of the proper procedures are followed. The mere possibility that something could have caused ulnar nerve damage other than negligence was sufficient, in the view of the Minnesota Supreme Court, to deny the plaintiff a chance to rely on res ipsa loquitur.

Mitchell v New Milford Hospital

In Mitchell v New Milford Hospital (1995 WL 631017 (1995, Conn. Super.), the plaintiff had suffered ulnar nerve damage and was prepared to offer expert testimony of an anesthesiologist presumably about the positioning of the patient's arm during surgery. The hospital's attorney asked a number of questions relating to the anesthesiologist's qualifications as an expert witness before the anesthesiologist was allowed to testify. During this examination, the hospital's attorney got the anesthesiologist to admit that while he may have been an expert on positioning the arm during anesthesia, he was not a neurologist and was not qualified to testify as to how the injury arose. Consequently, the case was dismissed. Even under res ipsa loquitur, the plaintiff needs testimony that establishes the elements of res ipsa loquitur, including testimony that the injury resulted from the operation.

This discussion may give the impression that courts find the area hard to understand and that decisions are largely arbitrary. However, two Louisiana cases demonstrate that anesthetists who are aware of the need for padding and positioning and properly document their patient records do better jobs of protecting both their patients and themselves.

Morgan v WillisKnighton Medical Center

In Morgan v WillisKnighton Medical Center (456 So. 2d 650, Court of Appeal of Louisiana, 2nd Circuit, 1984), the court upheld a judgment awarding damages to a patient who suffered ulnar nerve damage after an operation for the removal of a tumor on the bladder. The plaintiff's left arm was placed on an extended platform to facilitate the placement of an intravenous catheter. His right arm was allowed to rest unpadded on the operating table. While the surface of the operating table was equipped with approximately 1 1/2 inches of padding, there was no padding on the vertical metal edge or side of the operating table. The court held that an injury to the plaintiff's ulnar nerve does not ordinarily occur in the absence of negligence. It was reasonable to conclude that plaintiff's injury would not have occurred without pressure on or a direct blow to the ulnar nerve. Res ipsa loquitur was applicable, and the trial court's judgment in favor of the patient was upheld.

Shahine v Louisiana State University

Twelve years later, a similar case came before the same appeals court in Shahine v Louisiana State University (680 So. 2d 1392 (Louisiana App. 2nd Circuit, 1996)). The plaintiff suffered ulnar nerve damage after hip surgery. The trial court ruled that the plaintiff failed to meet the burden of proof and dismissed the plaintiff's malpractice claim against the anesthesiologist and the hospital.
plaintiff appealed on the grounds that he had met the requirements for asserting a claim under res ipsa loquitur. The plaintiff relied on Morgan v Willis Knighton Medical Center.

The court pointed out that to prove a case under res ipsa loquitur the plaintiff must prove that "(1) the defendant has actual control of the agency, instrumentality or conditions which caused plaintiff's injuries; (2) the evidence as to the true cause of plaintiff's loss is more readily accessible to defendant than plaintiff; and (3) the accident is of a kind that does not occur in the absence of negligence and/or the circumstances attending the accident create an inference of negligence on the part of defendant." (Note the difference between the description of the doctrine of res ipsa loquitur in Shahine with the description of the Minnesota court in Hoven v Rice Memorial Hospital.) It was the third element that played the crucial role in the Shahine case. Unlike the earlier Morgan case, the defendant in Shahine introduced results of studies that indicate that ulnar neuropathy may be caused by factors other than anesthesia and intraoperative positioning. However, the most important difference between Shahine and the Morgan and Pommier cases was that the defendants in Shahine presented evidence in the form of contemporaneously documented nurses' notes of the procedures followed regarding the placement and padding of the arm to protect against ulnar nerve injury. The documentation showing the efforts that were made to protect the patient played an important role in the court's determination that the defendants had evidence that they were not negligent and that this was not a proper case for the application of res ipsa loquitur.

Conclusion

Unfortunately, this is a human and imperfect world. This is as true of the legal system as it is of anesthesia. However, when it comes to positioning and padding, the same steps maximize the desired outcomes in both areas. Nurse anesthetists should recognize their role in padding and positioning as has the AANA Board in revised Standard V.1 Nurse anesthetists should make sure that their patients are properly padded and positioned. Most importantly, the patient's record should demonstrate that the patient was properly padded, positioned, and monitored.

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Concentrations of desflurane exceeding 1 MAC may increase heart rate. Thus an increased heart rate may not be a sign of inadequate anesthetic effect.

In patients with intracranial space occupying lesions, Suprane® (desflurane, USP) should be administered at 0.5 MAC or less. A concentration with a barbiturate induction and hyperventilation (hypocapnia). Appropriate measures should be taken to maintain cerebral perfusion pressure (see CLINICAL STUDIES, Neurosurgery).

In patients with coronary artery disease, maintenance of normal hemodynamics is important to the avoidance of myocardial ischemia. Desflurane should not be used as the sole agent for anesthetic induction in patients with coronary artery disease or patients when increases in heart rate or blood pressure are undesirable. It should be used with caution in patients with recent myocardial infarction (see CLINICAL STUDIES, Cardiovascular Surgery).

Intravenous concentrations of Suprane® (desflurane, USP), greater than 12% have been safely administered to patients, particularly during induction of anesthesia. Such concentrations will proportionately dilute the concentration of oxygen. Therefore, maintenance of adequate concentration of oxygen may require a reduction of nitrous oxide or assistance with oxygen. The recovery from general anesthesia should be assessed carefully before patients are discharged from the post anesthesia care unit (PACU).

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Drug Interactions:

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SAFETY AND HANDLING:

Occupational Caution:

There is no specific work exposure limit established for Suprane® (desflurane, USP). However, the National Institute for Occupational Safety and Health Administration has recommended an 8-hour time-weighted average limit of 2 ppm for halogenated anesthetic agents in general (0.5 ppm when coupled with exposure to CO2). The predicted effects of acute overexposure by inhalation of Suprane® (desflurane, USP) include headache, dizziness, and/or extreme cardiac depression.

There are no documented adverse effects of chronic exposure to halogenated anesthetic vapors (Vapor Anesthetic Gases or WAGs) in the workplace. Although some studies of epidemiological studies suggest a link between exposure to halogenated anesthetics and certain health problems (particularly spontaneous abortion), the relationship is not conclusive. Since exposure to WAGs is one possible factor in these findings for these studies, operating room personnel, pregnant women, or anyone who may be exposed may require medical supervision at the workplace. Precautions include adequate general ventilation in the operating room, the use of the well-designed and well-maintained scavenging system, work practices to minimize leaks and spills while the anesthetic agent is in use, and routine equipment maintenance to minimize leaks.

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