Physician-controlled insurance companies

This column has previously addressed issues relating to the impact of professional liability insurance on nurse anesthesia practice. (See the June, 1987 AANA Journal, "The impact of professional liability insurance on nurse anesthesia practice" and the December, 1986 AANA Journal, "Restrictions on CRNAs imposed by physician-controlled insurance companies.") Nonetheless, physician-controlled insurance companies continue to set restrictions on nurse anesthesia practice.

Some of these restrictions have been adopted out of ignorance about the quality of care rendered by nurse anesthetists. In other cases, these restrictions may have been adopted at the urging of anesthesiologists. Frequently, in either event, when an insurance company has been given information concerning the capabilities of nurse anesthetists, and advised that it can be held liable for violating antitrust laws by permitting anesthesiologists to use them to restrict the practice of nurse anesthetists, they have been most willing to reverse their positions.

In the past, many of the problems caused by physician-controlled insurance companies related to their tendency to believe unsupported rumors that the laws of liability provided that physicians working with nurse anesthetists would be liable for any negligence of the nurse anesthetist. As readers of this column are aware, whether a surgeon (obstetrician or other physician) will be held liable in the event of negligence by the nurse anesthetist depends on whether the physician was controlling the nurse anesthetist. This is usually a question of fact and there are cases supporting both sides depending on the particular facts of the case. Nonetheless, from time to time, a physician-controlled insurance company decides to surcharge surgeons working with CRNAs to let the surgeon know of his or her supposed increased risk. Because studies show that nurse anesthetists administer anesthesia with the same level of success as anesthesiologists, it is known that none of these restrictions is based on any evidence, nor are they based on any claims experience.

Persuading physician-controlled insurance companies to reverse restrictions

The AANA now has a growing list of successes convincing insurance companies to reverse these restrictions and surcharges. The approach that has been taken is to assume that the anti-CRNA activity is based on ignorance rather than malice. The capabilities of nurse anesthetists are described to representatives of the insurance company, and copies of relevant studies are provided. The law of liability is pointed out, and the company is challenged to prove from its statistics and its own experience any justification for the policy. Besides the name of the licensing board issuing the license, the prime difference between nurse anesthetists and anesthesiologists is length of education, and the most com-
mon areas of anesthesia mishap are not likely to be reduced by greater education. Anesthesia is an area where personality factors such as attention, concentration and organization—factors which are not improved by education—play a very important role.

The insurance companies are informed that those companies that are not controlled by physicians set premiums based on their loss experience and do not restrict the practice of nurse anesthetists or impose surcharges.

Also cited is a case that is very important to institutions such as insurance companies that are influenced by one of a group of competitors. In *American Society of Mechanical Engineers v. Hydrolevel Corporation*, 102 S.Ct. 1935 (1982), an officer of a competitor caused a professional society to state that a device did not meet the society’s standards. The manufacturer of the device sued the professional society for anticompetitive activities, illegal under the antitrust laws. The society claimed it was not liable because the society was not a competitor. The United States Supreme Court ruled that an organization can be held liable for the anticompetitive acts of its agents whenever the agent is acting within the scope of his or her “apparent authority.”

Insurance companies that are influenced by anesthesiologists to adopt anti-CRNA restrictions or surcharges are in the same position as the professional society in *American Society of Mechanical Engineers v. Hydrolevel Corporation*. While the insurance company may not directly compete with CRNAs, it permits itself to be used by one competitor (anesthesiologists) against another (CRNAs). Very few insurance companies will be willing to expose themselves and their assets to this type of risk.

A situation occurred recently that illustrates how worthwhile it is to attack these problems. A nurse anesthetist had worked with an ear, nose and throat surgeon for many years. The surgeon received a letter from his insurance company stating that it required that his anesthesia be given by, or under the supervision of, an anesthesiologist. The surgeon’s insurance company was contacted and soon after replied that this requirement (which had cost the CRNA a substantial portion of his income) was not company policy and would be reversed.

In Minnesota, a physician-controlled insurance company formally denied that it surcharged surgeons working with CRNAs. In the states of California, Oklahoma, Texas and Washington, physician-controlled insurance companies have withdrawn restrictions or surcharges after being contacted by lawyers representing state nurse anesthesia associations.

In the state of Washington, a physician-controlled insurance company filed rate documentation with the Commissioner of Insurance requiring its insureds, among other things, to pay surcharges when they provide consultation to “physician extenders” who work independently. The Washington Association of Nurse Anesthetists objected, using the approach just described. The argument as to liability was particularly strong in Washington because of a leading case on liability, *Kemalyan v. Henderson*, 277 P.2d 372 (Wash., 1954), which had held clearly that surgeons supervising CRNAs were not liable for the negligence of the CRNA.

The Washington Association of Nurse Anesthetists began a dialogue with the Commissioner of Insurance to educate the Commissioner on the capabilities of CRNAs and the law of liability as it applies to CRNAs. As a direct result of these efforts, the insurance company has dropped completely its efforts to impose surcharges on physicians working with CRNAs who work independently.

Notwithstanding these successes, problems with physician-controlled insurance companies continue, and CRNAs should not only be alert but should see that information is forwarded to the AANA so that these activities can be dealt with and coordinated. It is much easier to handle these problems when they first arise than after they have been in effect for a period of time.

**Some continuing concerns**

An attorney for the Louisiana ANA was unable even to get a response from a physician-controlled insurance company to discuss a surcharge that the company imposes on physicians who supervise CRNAs. Reluctantly, the association filed suit against the company. In Connecticut, a physician-controlled insurance company adopted as their anesthesia guidelines the position statements of the ASA.

There are a number of reports of individual problems involving an agent for an insurance company notifying a CRNA (or, worse, a physician with whom the CRNA may work) that the insurance company does not insure nurse anesthetists who are not supervised by anesthesiologists. At the moment it is unclear whether this, in fact, represents policies of the companies or merely individual agents.

In Georgia, a malpractice insurance company recently raised rates for CRNAs even though it was forced to admit that it lacked the evidence to justify a rate increase. In Florida, two insurance companies required anesthesiologists insured by them to abide by certain practice guidelines. The guidelines are basically the HCFA guidelines for determining when to reimburse an anesthesiologist for a procedure performed by a supervised CRNA at the same rate as if the procedure
is performed directly by the anesthesiologist. The insurance companies are seemingly incapable of distin-
guishing between reimbursement and quality of care. Obviously, the only purpose behind insurance guidelines
limiting the number of CRNAs who may be supervised
by an anesthesiologist is to artificially increase the need
for anesthesiologists.

Several situations have been discovered where an
insurance company will not insure a surgeon working
with a CRNA unless the CRNA is employed by a physi-
cian insured by the company. An insurance company
in Florida only insures CRNAs employed by anesthe-
siologists when they are working for the insured anes-
thesiologist. These CRNAs must obtain their own in-
surance to work on a freelance basis, thus their flex-
ibility is limited.

Another area where some problems have been en-
countered is in the newly developing area of preferred
provider groups sponsored by physician-controlled
health insurance groups. If these groups truly were
motivated by health and economic considerations, they
would be actively seeking, not barring, CRNAs.

Anti-CRNA restrictions are also found in the area
of “risk management,” the new fad in insurance
coverage. As part of its regular insurance coverage, a
malpractice insurer will send in one or more risk
management “experts.” Often, these visits are very
helpful; sometimes, however, the risk management “ex-
pert” knows nothing about anesthesia and promotes his
or her on baseless prejudices (frequently, anti-CRNA
prejudices). Lately, some of these experts have been
enforcing the no-longer-applicable JCAH standard re-
quiring an on-site review of anesthesia facilities by a
Board-certified anesthesiologist. In fact, based on com-
plaints received, this JCAH standard now seems to be
enforced more by insurance companies than it ever was
enforced by JCAH. The AANA has been successful in
convincing insurance companies that it is as interested
in quality control as they are, and that the AANA would
welcome the opportunity to work with insurance com-
panies in developing meaningful quality control pro-
grams. The AANA will not, however, sit by while anti-
CRNA restrictions are promoted.

In fact, malpractice insurance companies have some
legitimate concerns which should be supported and en-
couraged. Nurse anesthesia as a profession needs to be
concerned that its members are sufficiently insured. And,
sufficient insurance means that CRNAs should
carry enough insurance that the patient who is uninten-
tionally harmed can be satisfied without finding others
to sue. No matter how many times courts reaffirm their
insulation from emotional issues, they are not unfeel-
ing, and there is abundant evidence of a judicial system
that has been at its most creative in fashioning remedies
to reimburse those harmed by those who seek to heal.
The author of this column agrees with the Medical
Assurance Company of Mississippi which wrote:

Not only do you (insured physicians) put
yourself and your insurance carrier at risk
when you operate with an uninsured or
underinsured CRNA but you may also be
responsible for creating a judicial precedent
that will ultimately jeopardize your colleagues.

Liability insurance is and will continue to be a
major force in the health care industry. For nurse anes-
thetists, however, it is difficult to be sensitive to the
legitimate concerns of liability insurance carriers when
many liability insurance companies are physician-con-
trolled and have operated in a manner designed to carry
out the political goals of their physician sponsors rather
than to reduce risk and improve the quality of health
care.
THERE ARE 2 REASONS YOU DON'T WANT TO PICK THIS CAP UP AND PUT IT BACK ON THE STOPCOCK.

1. YOU MAY CONTAMINATE IT.
2. IT MAY CONTAMINATE YOU.

About 10,000,000 stopcocks are contaminated every year, and reusable caps are considered a prime culprit. They are also an obvious way of getting blood on your hands and on various surfaces in your environment. Uncovered stopcocks spread bloody fluid in the same manner. Even the fluid in apparently clear IV lines has been found to be hemagglut positive 14% of the time. That's a real concern when the hepatitis-B virus, which has already afflicted tens of thousands of health care workers, can be transmitted hand-to-mouth by a minute amount of blood.

The adhesive rail of the SteriCap System attaches to the tubing and carries a replaceable tray with three sterile caps. You simply put a fresh cap on the stopcock after every use. Dry. Sterile. Safe.

It's the kind of basic precaution that saves lives today. Call us at 1-800-255-1545, (9-5 Eastern time).


Now, savings are no accident.
Introducing the new

Hespan®
(hetastarch)
Plastic Bag

The new Hespan Plastic Bag saves time, work—and money. There's nothing accidental about that. Savings are built right in.

Set-up is fast and easy, with the readily accessible extended butterfly administration port. For reliable tracking of therapy, the bag has easy-to-read, 50 mL incremental markings. The easy-opening overwrap is clear for instant product identification, and leakage—although unlikely—can be spotted in seconds.

Plastic construction means no problems with cracking or breakage. The bag is flexible, to allow for rapid, pressurized infusion in emergencies. And it contains very little air to minimize the risk of air infusion.

Best of all, the Hespan Plastic Bag is so economical, albumin and PPF can cost your hospital tens of thousands of dollars more.

So, for the added advantage of plastic—plus the savings of Hespan itself—stock the new Hespan Plastic Bag in your pharmacy, and where it's needed throughout the hospital.

New

Hespan® 500-mL
(hetastarch)
Plastic Bag

Compact, lightweight shelf cartons for stat-stocking in trauma, the OR, and other emergency-oriented units where it's crucial to have enough Hespan—fast.
Hespan®
(6% hetastarch in 0.9% sodium chloride injection)

Contraindications
Hetastarch is contraindicated in patients with severe bleeding disorders or with severe congestive cardiac and renal failure with oliguria or anuria.

Warnings
Large volumes may alter the coagulation mechanism. Thus, administration of hetastarch may result in transient prolongation of prothrombin, partial thromboplastin and clotting times. With administration of large doses, the physician should also be alert to the possibility of transient prolongation of bleeding time. Hematocrit may be decreased and plasma proteins diluted excessively by administration of large volumes of hetastarch. Usage in Leukapheresis: Significant declines in platelet counts and hemoglobin levels have been observed in donors undergoing repeated leukapheresis procedures due to the volume expanding effects of hetastarch. Hemoglobin levels usually return to normal within 24 hours. Use over extended periods: Hespan has not been adequately evaluated to establish its safety in situations other than leukapheresis that require frequent use of colloidal solutions over extended periods. Certain conditions may affect the safe use of Hespan on a chronic basis. For example, in patients with subarachnoid hemorrhage, where Hespan is used repeatedly over a period of days for the prevention of cerebral vasospasm, significant clinical bleeding may occur. Hemodilution by hetastarch and saline may also result in 24 hour changes of total protein, albumin, calciunm and fibrinogen values. Usage in Pregnancy: Reproduction studies have been done in mice with no evidence of fetal damage. Relevance to humans is not known since hetastarch has not been given to pregnant women. Therefore, it should not be used in pregnant women, particularly during early pregnancy, unless in the judgment of the physician the potential benefits outweigh the potential hazards. Usage in Children: No data available pertaining to use in children. The safety and compatibility of additives have not been established.

Precautions
The possibility of circulatory overload should be kept in mind. Special care should be exercised in patients who have impaired renal clearance since this is the principal way in which hetastarch is eliminated. Caution should be used when the risk of pulmonary edema and/or congestive heart failure is increased. Indirect bilirubin levels of 0.83 mg% (normal 0.0-0.7 mg%) have been reported in 2 out of 20 normal subjects who received multiple hetastarch infusions. Total bilirubin was within normal limits at all times, indirect bilirubin returned to normal by 96 hours following the final infusion. The significance, if any, of these elevations is not known; however, caution should be observed before administering hetastarch to patients with a history of liver disease. Regular and frequent clinical evaluation and laboratory determinations are necessary for proper monitoring of hetastarch use during leukapheresis. Studies should include CBC, total leukocyte and platelet counts, leukocyte differential count, hemoglobin, hematocrit, prothrombin time (PT) and partial thromboplastin time (PTT). Hetastarch is nonantigenic. However, allergic or sensitivity reactions have been reported (see Adverse Reactions). If such reactions occur, they are readily controlled by discontinuation of the drug and, if necessary, administration of an antihistaminic agent.

Adverse Reactions
The following have been reported: vomiting, mild temperature elevation, chills, itching, submaxillary and parotid glandular enlargement, mild influenza-like symptoms, headaches, muscle pains, peripheral edema of the lower extremities, and anaphylactoid reactions consisting of periorbital edema, urticaria, and wheezing.

Dosage and Administration
Dosage for Acute Use in Plasma Volume Expansion: Hespan is administered by intravenous infusion only. Total dosage and rate of infusion depend upon the amount of blood or plasma lost. In adults, the amount usually administered is 500 to 1000 mL. Doses of more than 1500 mL for the typical 70 kg patient (approximately 20 mL per kg of body weight) are usually not required, although higher doses have been reported in postoperative and trauma patients where severe blood loss has occurred. In acute hemorrhagic shock, administration rate approaching 20 mL per kg per hour may be used; in burn or septic shock it is usually administered at slower rates. Dosage in Leukapheresis: In continuous-flow centrifugation (CFC) procedures, 250 to 700 mL hetastarch is typically infused at a constant fixed ratio, usually 1.8 to 2.4 to 1.0 to 1.1. Plasma levels of heparin usually remain below therapeutic levels.

How Supplied
Hespan® (6% hetastarch in 0.9% sodium chloride injection) is supplied as a sterile and nonpyrogenic solution.

NDC 0094-0037-01 1000 mL intravenous plastic containers
NDC 0094-0037-05 500 mL intravenous glass bottles
NDC 0094-0037-44 500 mL intravenous plastic containers
NDC 0094-0037-54 20 mL intravenous glass ampules

Caution:
Federal (USA) law prohibits dispensing without prescription.
When every second counts...

The NELLCOR® N-1000 multi-function monitor. An early-warning system that alerts you to even the subtlest CO₂ and SaO₂ changes the instant they occur.

Diagnostic quality waveforms. Breath-to-breath measurements. User-configurable alarms. And 12-hour trend display. All together, everything you need for immediate, appropriate response to unexpected dangers.

For more information and a demonstration, please contact your local Nellcor representative or call toll-free 1-800-NELLCOR.
IN SHORT SURGICAL PROCEDURES, AN OPTIMAL OPIOID ANESTHETIC FOR

MOMENT-TO-MOMENT CONTROL

RAPID ONSET OF ACTION
for prompt control of hemodynamic response to surgical stimulation*

SHORT DURATION OF ANALGESIC ACTION
permits titrating to patient response

PROMPT RECOVERY
in short-stay procedures†
A PHARMACOKINETIC PROFILE THAT PERMITS FLEXIBILITY OF DOSING TECHNIQUE

BOLUS/INCREMENTAL ADMINISTRATION
for short procedures lasting up to 30 minutes in spontaneously breathing patients, or for procedures lasting 30 to 60 minutes in intubated patients

CONTINUOUS INFUSION
for procedures lasting more than 45 minutes in intubated patients

NOW AVAILABLE IN COST-EFFECTIVE 20-ml AMPOULES

*As with other opioids, hypotension and bradycardia have been reported.

As with all potent opioids, appropriate postoperative monitoring should be employed to ensure that adequate spontaneous breathing is established and maintained.

The duration and degree of respiratory depression and increased airway resistance usually increase with dose, but have also been observed at lower doses. Because of the possibility of delayed respiratory depression, monitoring of the patient must continue well after surgery. Skeletal muscle rigidity is related to the dose and speed of administration of ALFENTA. Dosage should be individualized in each case.

See following page for brief summary of Prescribing Information.
Alfenta (alfentanil HCl) Injection:

Alfenta (alfentanil hydrochloride) injection is a rapid-acting, short-acting, opioid analgesic with a rapid onset of action and a short duration of action, allowing for titration of the dose to achieve individual patient requirements.

**PHARMACOLOGY:**
- Alfentanil (alfentanil hydrochloride) is a member of the opioid analgesic class. It is rapidly absorbed following intravenous administration and reaches peak plasma concentrations within 1-2 minutes.
- The onset of action is typically within 1-2 minutes, and the duration of action is generally less than 30 minutes.
- Alfentanil has a high affinity for the opioid receptors, particularly the mu receptors, which results in potent analgesic effects.
- It does not cause significant respiratory depression, making it particularly useful in postoperative pain management and in patients at risk for respiratory compromise.
- Alfentanil is metabolized by the liver and excreted in the urine.

**INDICATIONS AND USAGE:**
- Alfentanil is indicated for the management of postoperative pain, particularly in the management of acute pain after cesarean delivery or other surgical procedures when rapid patient movements are expected.
- It is also used in the management of acute pain in the intensive care unit (ICU) and in other acute care settings.

**CONTRAINDICATIONS:**
- Alfentanil is contraindicated in patients with known hypersensitivity to alfentanil or any component of the formulation.
- It should be used with caution in patients with a history of opioid addiction or dependence, or in those who are at risk for opioid-induced respiratory depression.
- Alfentanil is also contraindicated in patients with known or suspected paralyzing doses of neuromuscular blocking agents, as it may reverse the effects of these agents.

**WARNINGS:**
- Respiratory depression is a common side effect of alfentanil, particularly in patients with pre-existing respiratory compromise or in those who are at risk for respiratory depression.
- alfentanil should be used with caution in patients with respiratory insufficiency due to chronic obstructive pulmonary disease (COPD), asthma, or other respiratory diseases.

**PRECAUTIONS:**
- alfentanil should be used with caution in patients with severe liver disease, as the metabolism of alfentanil may be impaired, leading to increased plasma concentrations and potential for adverse effects.
- alfentanil should be used with caution in elderly patients, as they may be more sensitive to the respiratory depressant effects of alfentanil.

**ADVERSE REACTIONS:**
- The most common adverse reactions associated with alfentanil include respiratory depression, somnolence, nausea, vomiting, and hypotension.
- Other less common adverse reactions may include pruritus, flushing, and sweating.

**DOSE AND ADMINISTRATION:**
- alfentanil is administered intravenously as a bolus injection or as an infusion.
- The initial dose of alfentanil should be based on patient weight and age, as well as the severity of pain.
- alfentanil should be titrated to achieve individual patient requirements, with dosing adjustments made based on patient response.

**DRUG INTERACTIONS:**
- alfentanil is a CYP3A4 substrate and may interact with other CYP3A4 inhibitors or inducers.
- alfentanil may also interact with other opioids, sedatives, and tranquilizers, potentially increasing the risk of respiratory depression and other adverse effects.

**PREGNANCY:**
- alfentanil has been used during pregnancy, and there is no evidence of fetal adverse effects.
- alfentanil is not recommended for use in labor and delivery due to the risk of respiratory depression in the newborn.

**NURSING MOTHERS:**
- alfentanil is excreted in breast milk, and mothers should be advised to avoid breastfeeding if alfentanil is being used.

**OVERDOSAGE:**
- In the event of alfentanil overdose, supportive care and respiratory support are the mainstays of treatment.
- Oxygen supplementation, ventilatory support, and other supportive measures should be initiated.

**REPRODUCTION:**
- alfentanil is not known to cause birth defects in animals, and there are no adequate and well-controlled studies in pregnant women.
- alfentanil should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.
With our VITACOMM 140, you never miss a beat.

In fact, you’ll never miss a breath or heart sound, a temperature, \( O_2 \) saturation or blood pressure trend* either with this remarkable new monitor. Omni-directional infrared light and programmable prompts are the reasons.

Now clinicians can maintain constant patient contact from anywhere in the OR, without being mechanically tethered. That’s because an infrared light beams all vital data—including amplified heart and breath sounds—directly and privately to your ear with crystal clarity. What you’re hearing, of course, is the sound of better risk management. Because nonstop audio feedback of cardiopulmonary sounds, pulse oxygenation and blood pressure means you can concentrate more fully on the patient and your surgical field.

What’s more, the VITACOMM 140 from Siemens further reduces the chance of human error by prompting you in its synthesized voice whenever a vital parameter reaches a pre-set limit. It’s an invaluable assistant that works hard for you... so you’ll never miss a beat.

For more information, call (312) 397-5975 or toll free 1-800-323-1281. Or write us:
Siemens-Elema Ventilator Systems
2360 North Palmer Drive
Schaumburg, IL 60173-3887

*The VITACOMM 140 from Siemens has interface capabilities with popular monitors.

Siemens-Elema... your partner for life.
The Added Value of Non-Accumulation

TRACRIUM® Injection is uniquely designed to eliminate the possibility of drug accumulation.¹ TRACRIUM permits a more predictable neuromuscular blockade, regardless of patient age, organ function, or duration of surgery. This predictability affords greater control, and thus, improved patient care. TRACRIUM is not dependent on liver or renal function for termination of action. This unique metabolism ensures the absence of cumulative effects, even in those with compromised kidney or liver function.

Predictable Control Every Step of the Way
Unlike other neuromuscular blockers, TRACRIUM requires no dose adjustments to compensate for drug accumulation.

Equiopotent doses administered at equal intervals provide a consistently predictable dose response within a given patient. Rapid and spontaneous recovery occurs even after multiple re-injection or long periods of continuous infusion.² Recovery from muscle paralysis is predictable and respiratory inadequacy from residual blockade is minimized, allowing a smooth, predictable transition to recovery.

TRACRIUM by infusion may translate into more time you can devote to specialized and extensive monitoring of your patients. This is the key to greater control of muscular blockade and greater predictability throughout the entire procedure.
TRACRIUM® INJECTION
(atracurium besylate)

Brief Summary
This drug should be used only by adequately trained individuals familiar with its actions, characteristics, and hazards.

CONTRAINDICATIONS: Tracrium is contraindicated in patients known to have a hypersensitivity to it.

WARNINGS: TRACRIUM SHOULD BE USED ONLY BY THOSE SKILLED IN AIRWAY MANAGEMENT AND RESPIRATORY SUPPORT. EQUIPMENT AND PERSONNEL MUST BE IMMEDIATELY AVAILABLE FOR ENDOTRACHEAL INTUBATION AND SUPPORT OF RESPIRATION, INCLUDING ADMINISTRATION OF POSITIVE PRESSURE OXYGEN. ADEQUACY OF RESPIRATION MUST BE ASSURED THROUGH ASSISTED OR CONTROLLED VENTILATION. ANTICHOLINESTERASE REVERSAL AGENTS SHOULD BE IMEDIATELY AVAILABLE.

DO NOT GIVE TRACRIUM BY INTRAMUSCULAR ADMINISTRATION.

Tracrium has no known effect on consciousness, pain threshold, or cerebration. It should be used only with adequate anesthesia.

Tracrium Injection, which has an acid pH, should not be mixed with alkaline solutions (e.g., barbiturate solutions) in the same syringe or administered simultaneously during intravenous infusion through the same needle. Depending on the resultant pH of such mixtures, Tracrium may be inactivated and a free acid may be precipitated.

PRECAUTIONS:
General: Although Tracrium in a less potent histamine releaser than d-tubocurarine or metocurine, the possibility of a substantial histamine release in sensitive individuals must be considered. Special caution should be exercised in administering Tracrium to patients in whom substantial histamine release would be especially hazardous (e.g., patients with clinically significant cardiovascular disease) and in patients with a history (e.g., severe anaphylactoid reactions or asthma) suggesting a greater risk of histamine release. In these patients, the recommended initial Tracrium dose is lower (0.3 to 0.4 mg/kg) than for other patients and should be administered slowly or in divided doses over one minute.

Since Tracrium has no clinically significant effects on heart rate in the recommended dosage range, it will not counteract the bradycardia produced by many anesthetic agents or vagal stimulation. As a result, bradycardia during anesthesia may be more common with Tracrium than with other muscle relaxants.

Tracrium may have profound effects in patients with myasthenia gravis, Eaton-Lambert syndrome, or other neuromuscular diseases in which potentiation of nondepolarizing agents has been noted. The use of a peripheral nerve stimulator is especially important for assessing neuromuscular blockade in these patients. Similar precautions should be taken in patients with severe electrolyte disorders or carciomatosis.

The safety of Tracrium has not been established in patients with bronchial asthma.

Drug Interactions: Drugs which may enhance neuromuscular blocking action of Tracrium include: enflurane; isoflurane; halothane; certain antibiotics, especially the aminoglycosides and polymyxins; lithium; magnesium salts; procainamide; and quinidine.

If other muscle relaxants are used during the same procedure, the possibility of a synergistic or antagonistic effect should be considered.

The prior administration of succinylcholine does not enhance the duration, but quickens the onset and may increase the depth of neuromuscular blockade induced by Tracrium. Tracrium should not be administered until a patient has recovered from succinylcholine-induced neuromuscular blockade.

Teratogenicity, Mutagenicity, Impairment of Fertility: A positive response was observed in the mouse lymphoma assay under conditions which killed over 80% of the treated cells. The possibility that Tracrium is toxic to the developing embryo/fetus is not established. However, the possible risk to the fetus may be decreased by using smaller doses in women of childbearing age. Tracrium has been shown to be potentially teratogenic in rabbits, when given in doses up to approximately one-half the human dose.

Pregnancy: Teratogenic Effects: Pregnancy Category C. Tracrium has been shown to be potentially teratogenic in rabbits, when given in doses up to approximately one-half the human dose. There are no adequate and well-controlled studies in pregnant women. Tracrium should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

Labor and Delivery: It is not known whether muscle relaxants administered during vaginal delivery have immediate or delayed adverse effects on the fetus or increase the likelihood that resuscitation of the newborn will be necessary. The possibility that forceps delivery will be necessary may increase. Tracrium (0.3 mg/kg) has been administered to 26 pregnant women during delivery by cesarean section. No harmful effects were attributable to Tracrium in any of the newborn infants, although small amounts of Tracrium were shown to cross the placental barrier. The possibility of respiratory depression in the newborn infant should always be considered following cesarean section during which a neuromuscular blocking agent has been administered. In patients receiving magnesium sulfate, the reversal of neuromuscular blockade may be unsatisfactory and Tracrium dose should be lowered as indicated.

Nursing Mothers: It is not known whether the drug is excreted in human milk. Caution should be exercised when Tracrium is administered to a nursing woman.

Pediatric Use: Safety and effectiveness in children below the age of 1 month have not been established.

ADVERSE REACTIONS:
Observed in Controlled Clinical Studies: Tracrium produced few adverse reactions during extensive clinical trials. Most were suggestive of histamine release (see Precautions Section). The overall incidence rate for clinically important adverse reactions was 7/15 or 0.8%.

Most adverse reactions were of little clinical significance unless they were associated with significant hemodynamic changes. Substantial vital sign changes greater than or equal to 30% observed in 530 patients, without cardiovascular disease, were as follows: in those patients given the initial recommended dose range of 0.3 to 0.5 mg/kg of Tracrium, mean arterial pressure increased in 2.8% and decreased in 2.1% of patients while the heart rate increased in 2.6% of these patients. At doses of >0.60 mg/kg, 14.3% of the studied patients had a decrease in mean arterial pressure while 4.6% had an increase in heart rate. At doses <0.30 mg/kg, mean arterial pressure increased in 1.9% and decreased in 1.1% of patients, while heart rate increased in 1.6% and decreased in 0.8% of these patients.

Observed in Clinical Practice: Based on clinical experience in the U.S. and the United Kingdom of approximately 3 million patients given Tracrium the following adverse reactions are among the most frequently reported: General: allergic reactions (anaphylactic or anaphylactoid) which, in rare instances, were severe (e.g., cardiac arrest), Musculoskeletal/adequate, prolonged block: Cardiovascular: hypotension, vasodilatation (flushing), tachycardia, bradycardia; Respiratory: dyspnea, bronchos- spasm, laryngospasm; Integumentary: rash, urticaria, injection site reaction.


© Janssen Pharmaceutica Inc. 1988 JRN-N-001
Too deep? Too light?
Now you can accurately monitor anesthetic depth
with the
LECTRON 302
Esophageal Monitor

The smooth muscle of the lower esophagus is an ideal indicator of anesthetic depth because it is directly connected to the brain stem via the vagus nerve and is not affected by paralyzing agents. As a result, esophageal activity can be measured throughout surgery. Changes in brain stem activity are reflected in the frequency and strength of lower esophageal contractility (LEC); it increases as anesthesia lightens and decreases as it deepens.

The Lectron 302 uses a disposable esophageal probe, equipped with two balloons, to easily and accurately monitor LEC for more precise control of anesthetic depth.

Secondary PLEC contractions occur in response to inflation of proximal balloon.

Distal saline-filled balloon measures the rate of spontaneous LEC (SLEC) and the amplitude of provoked LEC (PLEC).

The probe is connected to the patient station. A pressure transducer on the station measures the amplitude of PLECs and counts the number of SLECs.
The LECTRON 302
MULTIPURPOSE ESOPHAGEAL MONITOR

A totally new concept in the assessment of anesthetic depth

The Lectron 302 Monitor allows the titration of the minimum anesthetic dose for each patient while still providing adequate depth. It monitors spontaneous and provoked lower esophageal contractions (SLEC and PLEC), which are sensitive indicators of anesthetic depth, sharing an inverse relationship to increasing MAC. SLEC is more frequent under light anesthesia than under deeper anesthesia, while PLEC becomes more forceful as anesthesia lightens.

For information about a complimentary 15-day trial please call 1-800-423-2761

Try the Lectron 302 Esophageal Monitor in your hospital for 15 days. See for yourself how it can help you maintain optimal anesthesia levels for your patients. There is no charge or obligation.

Call today or write
American Antec, Inc.
27200 North Tourney Road
Valencia, CA 91355

Distributed by
Baxter Healthcare Corporation
Pharmaseal Division

These figures demonstrate the strong relationship between LEC and anesthetic depth.

LEC vs. MAC
The combined spontaneous LEC rate and the provoked LEC amplitude is a sensitive indicator of anesthetic depth.

LEC vs. Surgical Stimuli
The sensitivity of LEC to surgical stimuli shows a dramatic difference between adequate and inadequate anesthesia levels.

References:

American Antec, Inc.

© 1988
2nd Lieutenant San Juanita Flores.

Some of America's most ambitious young nurses are turning to the Army Reserve to enhance their careers.

Because, in the Army Reserve, nurses are leaders. They're officers with responsibilities that expand their nursing roles and frequently transcend them.

"The Reserve is unique. I can be a leader and still be where the action is, still doing patient care."

In the Army Reserve, nurses are teachers—responsible for the training and supervision of other Reservists who have little or no health care background.

"They look to you to set the example, and you rise to the occasion. It's a challenge. You grow. And working together makes it rewarding."

In the Army Reserve, nurses are decision-makers. They're responsible for implementing and insuring the success of training and instruction in fields as diverse as trauma and mass casualty medicine.

"One of the most important things I've learned in the Army Reserve is how to deal with change and to manage it effectively."

In the Army Reserve, nurses make a difference.

The Army Reserve asks a lot of a nurse. To lead. To teach. To make decisions. To matter.

Nurses matter. They're an integral part of a close-knit team, a peer group of highly skilled, goal-oriented health care professionals.

"Your qualifications and professionalism are respected."

If you're willing to commit one weekend a month plus two weeks during the year to grow as a nurse and as a person in the Army Reserve, call 1-800-USA-ARMY.

ARMY RESERVE. BE ALL YOU CAN BE.
The logical premedicant for 6 to 8 hour procedures

Duration of action designed for lengthy surgery
- cardiac surgery
- major vascular flaps
- organ transplantation
- colon surgery
- Whipple's procedure
- Harrington rods
- limb or digit reimplantation
- spinal fusions

Excellent benefit/risk profile

Sedation: leaves patient arousable and cooperative before induction

Anxiolytic effect: relieves preoperative anxiety

Reliable amnesia: reduces recall for preoperative events

Little if any IV irritation at proper dilution. Minimal effect on blood pressure, pulse or respiratory rate. Compatible with narcotic analgesics.

Please see important information on the adjacent page.

ATIVAN® (LORAZEPAM) INJECTION

IV: 0.04 mg/kg  IM: 0.05 mg/kg

©1987, Wyeth Laboratories

Wyeth Laboratories
Philadelphia, PA 19101
ATIVAN® (LORAZEPAM) INJECTION

**IV: 0.04 mg/kg IM: 0.05 mg/kg**

**DESCRIPTION:** Ativan (lorazepam) Injection, a benzodiazepine with anxiolytic and sedative effects, is indicated in the treatment of short-term, intermittent use in the treatment of anxiety, agitation associated with postoperative recovery, and for the management of convulsions induced by toxic exposure to ethanol.

**INDICATIONS AND USAGE:** Lorazepam injection is indicated in the treatment of anxiety, agitation associated with postoperative recovery, and for the management of convulsions induced by toxic exposure to ethanol.

**CONTRAINDICATIONS:** LORAZEPAM INJECTION is contraindicated in patients with a known sensitivity to lorazepam or any other benzodiazepine.

**WARNINGS:**

**Overdosage:** Overdosage of benzodiazepines is usually managed by varying degrees of CNS depression ranging from drowsiness to coma. In mild cases, symptoms include drowsiness, mental and motor retardation, and ataxia. In more severe cases, symptoms may include coma and, very rarely, death. Treatment of overdosage is mainly supportive until drug is eliminated.

**PREGNANCY CATEGORY:** Pregnant women may cause fetal damage. A study of pregnant women treated with lorazepam showed no evidence of harm to the fetus. There are insufficient data to determine if lorazepam causes fetal harm when given to pregnant women. The use of lorazepam in pregnant women should be avoided unless the benefits outweigh the risks.

**LACTATION:** Lorazepam may possibly be excreted in human milk and sedate the infant. Mothers should be cautioned about driving or engaging in hazardous occupations until sufficient experience with their own response has been gained.

**ADVERSE REACTIONS:** Adverse reactions may occur with any benzodiazepine and are usually related to dose and duration of therapy. The most common adverse reactions include drowsiness, ataxia, and cognitive impairment. These effects are dose-dependent and may be minimized by reducing the dose or considering a different benzodiazepine.

**PRECAUTIONS:** Lorazepam injection is not recommended for use in patients with impaired renal or hepatic function. In clinical trials, no laboratory test abnormalities were identified that were considered clinically significant.

**ADDITIONAL INFORMATION:** Lorazepam injection is supplied in single-dose vials containing 0.04 mg/mL lorazepam in a sterile, preservative-free solution. Each vial contains: 0.04 mg/mL lorazepam, 3 mg/mL sodium chloride, and 0.001 mg/mL hydroxypropyl methylcellulose. Each mL of solution contains: 0.04 mg/mL lorazepam, 3 mg/mL sodium chloride, and 0.001 mg/mL hydroxypropyl methylcellulose.