

EDITORIALS

The Hazards of Anesthesia for Diagnostic Procedures

AS THERAPEUTIC scope broadens, the need for diagnostic accuracy increases. The diagnostician no longer is content to obtain such accuracy by merely inspecting, palpating or auscultating the body shell. Now he must literally probe the very core by cutting, injecting, sampling and "scoping" through body orifices, natural and otherwise. Diagnostic procedures usually are uncomfortable, often prolonged and sometimes painful. The patient, as eager as the physician to arrive at the proper diagnosis, will tolerate these problings if he can undergo them without too much discomfort. The diagnostician turns naturally to his colleague in anesthesia for provision of analgesia, amnesia, quiescence or whatever condition may be necessary to make the procedure in question tolerable to the patient. But for some of these procedures, such as, cardiac catheterization in children, pneumoencephalography, carotid and vertebral angiography, suspension and examination of the larynx, bronchoscopy, esophagoscopy and aortography, anesthesia may be hazardous.

What features of diagnostic procedures cause them to be hazardous, and what can be done to make them less hazardous? This depends upon whom the procedures are performed, who performs them, who anesthetizes the patient and where the procedures are done.

Obviously, patients who undergo diagnostic procedures have or presumably have some physical disability. This fact in itself may or may not be responsible for some hazard. Little can be done to minimize this possibility other than to encourage awareness on the part of all concerned with the patient of the potentialities of the deranged physical state of the patient, to prepare him as he would be prepared for any operative procedure or for anesthesia, and to be ready to deal with any disastrous complication.

Diagnostic procedures are performed by cardiologists, pediatricians, radiologists, physiologists and in fact by physicians of all specialties. There is nothing inherently wrong in this. Nevertheless, in some cases physicians have assumed the responsibility for these procedures for somewhat obscure reasons and under less than ideal conditions. A physician may have evinced casual interest in a new diagnostic procedure and as a consequence drifted into the position of becoming the "expert" at his institution. He may have had the responsibility for such a position thrust upon him, as in the case of an intern or a resident. More fortunately, he may have had a real desire to learn to perform a diagnostic procedure skillfully and intelligently. In the latter circumstance, the physician will have studied the disease or condition for which the procedure is performed and the techniques and drugs, if any, which are used. He will have observed the procedure as performed by one skilled in its use and he will have practiced it under supervision. He will have trained himself in the disciplines of the operating room, fully realizing that diagnostic procedures performed upon anesthetized patients are accompanied by the risks of minor and major emergencies associated with surgical procedures. He will have become thoroughly familiar with the influence of body position on the patient's respiration and circulation, and with the necessity for avoiding any infringement on the airway, particularly during peroral endoscopy.

There is a tendency on the part of anesthetists to minimize the importance of details in a minor procedure. Hence, the patient's ability to tolerate anesthesia and the diagnostic procedure may not be as carefully assessed or the patient as carefully prepared as would be the case prior to a more formidable therapeutic procedure. Many diagnostic procedures are long and tedious, and the sense of achievement

which definitive surgery often engenders may not be derived from a diagnostic investigation. Accordingly, under such circumstances the responsibility for anesthesia may be relegated to the least experienced person available or, even if it is assigned to an experienced person, it may be carried out in an indolent manner.

Let us assume a minor diagnostic procedure; *ergo*, it requires only minor anesthesia. The least experienced anesthetist being least useful in the operating room has been sent three floors away to the semidarkened x-ray room to anesthetize a patient for a prolonged diagnostic procedure. The patient has eaten and has not had premedication. No one has explained the procedure to him or, for that matter, to the anesthetist. Aspirating equipment is not available, the anesthesia machine is antiquated, and the oxygen cylinder is empty. The batteries in the laryngoscope are dead, and no one seems to know where drugs for resuscitation might be kept. Sometimes this nightmarish picture is painfully real. Only preparedness and rigid adherence to the axiom that there is no such thing as minor anesthesia will dispel it.

Regional Anesthesia in Private Practice

DURING the past two decades there has been a decrease in the use of regional anesthesia for surgical operations. There are probably several reasons for this trend, including improvement in general anesthetic techniques and agents, augmentation of knowledge in the action of these drugs and body function, and the advent of muscle relaxants and other adjuvants, all of which have made general anesthesia safer. The disadvantages and advantages of regional anesthesia have become better delineated, and this method is no longer considered the choice in all poor risk patients. However, in certain circumstances regional anesthesia is better than general anesthesia for the patient, provided that the anesthesiologist is capable of administering both methods equally well. Why then is this method not being used as frequently as it should be in private practice? The reasons usually given are: (1) patients do not like regional anesthesia; (2) its performance con-

How can this unfortunate situation be resolved? First, of course, we too must learn something of the pathophysiologic aspects of the disease under investigation. We must learn the requirements of the procedure itself before we can provide the conditions necessary for its successful completion. We must see to it that the areas in which the diagnostic procedures are to be done, the equipment to be employed, and the anesthetist assigned are comparable to those considered necessary and proper in the operating room. It is the responsibility of the diagnostician and the anesthetist to prepare the patient, the area and the equipment, but above all to prepare themselves to carry out the designated investigation in a safe and orderly manner. We as anesthetists should be mindful of the fact that diagnostic procedures will not diminish in number or become less complicated as time goes on; the trend is, in fact, in the opposite direction. Our responsibilities in the field are going to increase.

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sumes too much time; (3) there are too many failures; (4) serious complications can occur; (5) there is a greater medico-legal risk, and (6) most surgeons dislike the method. Are these reasons well founded or are they poor excuses to justify deficiencies of anesthesiologists? Let us consider these reasons separately.

Patients Do Not Like Regional Anesthesia. This is undoubtedly true of many prospective patients, but in most instances, the dislike is based upon hearsay, not previous experience. Although most people dislike needles, those who have previous experience with this method frequently request it again. Consider the popularity of caudal and saddle block analgesia among obstetric patients. Most of the fears that exist about regional anesthesia can be eliminated with proper psychologic preparation. As a result of an educational program among surgeons, obstetricians, hospital person-