

EDITORIAL

"THE METHOD WAS GOOD BUT THE PATIENT DIED"

SPINAL anesthesia continues to suffer growing pains. The familiarity that breeds contempt has resulted in clinical disasters which have brought the method condemnation in some quarters. In others, where success has been relatively unclouded by adverse results, the method is praised without stint as one by which all good and no ill can be accomplished. Middle-of-the-roaders who plead for respectful caution in dosage, for impeccable technic, for constant vigilance over the patient are in a minority and relatively unheard in the controversial hubbub.

Let the still small voice speak again: Spinal anesthesia is dangerous. The literature is replete with reports of serious complications which follow what had seemed to be perfect technic of administration. Too often death steals in and takes the patient from under the anesthesiologist's hands. He is startled by the "suddenness" of the lethal outcome. Unfortunately, only his realization of disaster is sudden. In actuality the patient has been slipping away for some time, quietly, inconspicuously, without fuss or noise, before the anesthesiologist becomes "suddenly" aware of what is impending.

It is not at all uncommon to hear it said that "I've used this technic—or dosage—in 500 cases and I can't understand what happened this time." It is not the 500 successes that merit self-praise. Success is the responsibility of the anesthesiologist who administers an anesthetic. It should be expected. It is the five-hundred-and-first case *that fails* that calls for rigid self-examination in humility of spirit, for the failure should have been prevented. One death in 500 is an appalling rate. It is double that estimated by Gillespie who calculated on the basis of a large sampling that one death occurs in every 1000 anesthetics administered. Even 1 in 1000 is too high, especially when reckoned on the basis of the mortality rate per 100,000 of the population. Studies into causes of deaths in operating rooms show that the rate for anesthesia is high. The Philadelphia Anesthesia Study Commission, on the basis of an analysis of such fatalities, came to the conclusion that half of the deaths should have been prevented. In the study by Ruth, Haugen, and Grove, overdosage was responsible for 22.8 per cent of the anesthetic deaths, with cardiac failure, hypoxia, and respiratory failure crowding on its heels. Cerebral degeneration in the culminating event of only a brief period of hypoxia, and may occur unrecognized during spinal anesthesia. To reestablish respiration or restore satisfactory blood pressure or pulse rate will not correct the cerebral damage already sustained. The too little comes too late to

prevent a further increment from being added to the mounting mortality figures. The statistical fact that spinal anesthesia is three times as lethal as the condemned chloroform anesthesia of fifty years ago* is one to make the thoughtful ponder the deadliness of the technic so nonchalantly exercised.

Overconfidence and habit foster the growth of carelessness. Safety, not overconfidence nor the rigidity of custom should be the watchword for anesthesia, especially with spinal anesthesia where the drug, once injected, cannot be withdrawn. There is a growing realization that "average" doses are overdoses for many individuals. The "average" as customarily understood among anesthesiologists permit too wide a latitude into the upper limits of dosages: 100-200 mg. of procaine; 10-20 mg. of pontocaine; 5 to 15 mg. of nupercaine.

By definition, the perfect spinal anesthesia should involve *only* the nerve roots supplying a specific area. The practice of employing *minimal* doses for the anesthesia to be accomplished serves the aim of perfect anesthesia as well as enhancing the safety of the method. By minimal dosage a minimum of nerves are paralyzed and the incidence of respiratory and cardiocirculatory complications materially reduced.

The use of supplementary anesthetic agents permits the use of small amounts of several agents, for instance, cyclopropane, pentothal, and curare. It also assures the desired anesthetic effect while reducing the danger of overdosage by one of them. It is desirable that technics be developed which will permit more accurate placement of the anesthetic drug in the subarchnoid space so that the maximum effect will involve the nerves supplying the operative area.

The custom of using large rather than minimal doses of drugs for spinal anesthesia is to be deplored. Dosage is no substitute for skill, judgment, and constant vigilance on the part of the anesthesiologist, especially after the drug has been injected. In the final analysis it is not the drug that is most important but what is done with it.

* Corlette, C. E.: Spinal Anesthesia and Chloroform; a Comparison of Mortality, M. J. Australia 1: 545-547 (April 20) 1946.