

administration of anesthetics is attended by greater risks when entrusted to persons of little experience.

Spinal, intravenous, local, nitrous oxide, cyclopropane, and ether anesthesia are shown to be attended by both death and complications, as reports from various sources have demonstrated. Not one of the aforementioned agents can be called safe. Vinesthene and trichlorethylene have not as yet had enough extensive use to be considered. In a reminiscent, non-statistical manner the author cites his own sad experiences.

The paper is concluded by a selection from "Practical Anaesthesia" by the anesthetic staff of the Alfred Hospital, Melbourne, Australia, in which twelve considerations are proposed as criteria for the comparison of anesthetic risks. Most germane to the subject is the last.

"Should a fatality occur, it should be discussed with entire frankness by the anaesthetist and all parties concerned, so that all possible errors of judgment and technique may be detected and avoided."

M. H. H.

AYRE, PHILIP: *Anaesthesia for Neurosurgery (With Special Reference to Trichlorethylene)*. Brit. J. Anaesth. 19: 17-31 (Jan.) 1944.

In this paper, the author discusses the problem of anesthesia in neurosurgery, emphasizing the necessity of providing the neurosurgeon with an operative field in which there is neither vascular congestion, nor venous oozing which may be attributed to the anesthetic or method of administration. He contends that the methods generally employed, to wit, basal narcosis supplemented with nitrous oxide in a semi-closed system, do not achieve this ideal. In consequence he has utilized the device of the "open" T-tube-piece, described in *Lancet*, March 6, 1937, p.

561. Administration by this method of all agents has been conspicuously successful, particularly with neurosurgical procedures. Since July 1943 trichlorethylene rather than chloroform has been used to supplement nitrous oxide. Since then 105 neurosurgical patients have been anesthetized with trichlorethylene. Seven of the patients developed cardiac irregularities. Of these, five were dismissed of no consequence; two bad-risk patients developed more serious arrhythmias. One, a 2:1 block which disappeared when trichlorethylene was discontinued; the other a total irregularity, did not cease even when ether was substituted, but finally stopped during the latter part of the operation during which time trichlorethylene was cautiously added. Electrocardiograms were not taken. As has been observed before, an increase in respiratory rate was noticed with trichlorethylene anesthesia. No complications could be associated with this increase. Post-operative pulmonary complications were relatively rare (two cases). Nausea and vomiting were minimal. The majority of the patients were "fully conscious within an hour from the time the operation ended."

The technic for preparing patients is described. Opiates are used for pre-medication, and the throat and vocal cords sprayed with 2 per cent pontocain. Induction is carried out either with 4-10 cc. of 5 per cent sodium pentothal or with nitrous oxide-trichlorethylene in a semi-closed system, after which the patient is intubated orally, and the mouth packed with gauze wrung out in liquid petrolatum. The T-piece is then connected and constant flows of gas begun.

Four cases with accompanying anesthetic charts are presented illustrating the course of anesthesia for intracranial operations.

Stress is laid upon the fact that the

method employed is an open one. Most of the complications reported with trichlorethylene have occurred with its use in closed systems. Of most importance is the fact that the type of patient dealt with requires at most, first plane anesthesia. If deeper anesthesia is required, other agents, ether or chloroform, are recommended.

M. H. H.

LUNDY, J. S.; ADAMS, R. C., AND SELDON, T. H.: *Anesthesia Today*. Wisconsin M. J. 42: 1235-1239 (Dec.) 1943.

"The present global war has resulted in a dispersion of the physician anesthetists formerly available in civil practice. Nurse anesthetists also, although more numerous than physician anesthetists, are relatively scarce. . . . Because of the trauma of war, two of the most urgently needed therapeutic measures are relief of pain and measures to combat shock. These activities are in the daily practice of the anesthetist, and it is but natural that his field of usefulness should be in demand in the practice of military medicine. . . . After the war, the number of anesthetists who can be spared from military service can, and we think will, be absorbed into civilian practice very quickly, and even then the civilian demand will not be properly filled. . . . The principal need now and in the future will be for skill in the administration of anesthetic agents and in associated activities. . . . To develop the necessary skill and judgment, it is necessary that the anesthetist be conversant with the fundamentals of anatomy, physiology and pharmacology, but, above all, he must be a relatively good clinician. . . . Advances in anesthesia are not necessarily dependent on the development of new agents, although that is a considerable factor, but are also dependent on development of new technics. . . . The

results associated with the ever expanding field of anesthesiology have meant that most complete anesthesiology records must be maintained. . . . Advances in clinical anesthesia must be paralleled by advances in essential knowledge and research acquired in the laboratory and disseminated through the published literature so that work of merit will not be semi-permanently overlooked." 4 references.

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KRANTZ, J. C., JR.: *Recent Advances in Anesthesia*. J. Am. Pharm. Assoc. Sci. Ed. 32: 287-293 (Nov.) 1943.

"Divinyl oxide is more powerful than ether. . . . With it, anesthesia is rapidly induced, but owing to hepatic injury which may occur upon prolonged inhalation of this anesthetic agent, its use is confined to operations of short duration. . . . [Cyclopropane] is more potent than ethylene and hence permits the admixture during anesthesia of a larger percentage of oxygen. Relaxation of abdominal musculature is good during cyclopropane anesthesia. During the decade of its use the gas is now established as an important and dependable agent. . . . At the Medical School of the University of Maryland in 1939, Krantz, Evans Carr and Forman succeeded in developing a chemical reaction for the convenient preparation of aliphatic cyclopropyl ethers. Four of these ethers have been prepared already, and one of them has had preliminary trials. This new anesthetic agent is cyclopropyl ether known as cyprome ether. . . . The compound appears to be promising. Other new anesthetic agents which have been produced by these investigators and are under study at the present time are: Cypreth ether, cyclopropylene ether and propethylen ether. . . . The widest use of [pentothal] recently has been in pro-