

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.

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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 anesthesia 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.

J. C. M. C.

KRANTZ, J. C., JR.: *Recent Advances in Anesthesia*. J. Am. Pharm. A. Scient. 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 trial. This new anesthetic agent is cyclopropyl ether known as cyprome ether. . . . The compound appears to be promising. Other new anesthetics 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-

ducing anesthetics by intravenous injection for surgical procedures of short duration. . . . The importance of pentothal sodium as a combat anesthetic cannot be overestimated. The mortality statistics with pentothal sodium are favorable and this agent appears to have warranted a permanent and enviable position among the anesthetic agents. . . .

"The use of local anesthetic agents in the spinal fluid to produce anesthesia dates back to the turn of the century. . . . In more recent years, with more skillful technique and more numerous new synthetic local anesthetic agents to select from, this type of anesthesia has received a new impetus and is at present enjoying much popularity. . . . Future researches are certainly to be directed toward the end of developing a better volatile anesthetic agent than ether. It appears indeed to be possible. Intravenous anesthesia needs to be made safer. Other agents need to be investigated further and better antidotes than are now available must be found. The future must investigate further and understand more clearly from the point of view of cellular physiology, what is meant by that profound hiatus in consciousness, so glibly referred to as surgical anesthesia." 6 references.

J. C. M. C.

MALLINSON, F. B.: *Modern (Non-volatile) Anaesthesia. Observations on 1000 Cases.* *Lancet* 2: 729-731 (Dec. 11) 1943.

"The patient's comfort and rapid convalescence, which should be the anesthetist's major care after safety, have been largely neglected until lately. Many anesthetists have thought that the only way to safety lies in adhering to the old and uncomfortable ways. Chloroform and ether are the chief offenders against the patient's comfort, and it is unsound to judge their safety

without following the patient's progress after leaving the theatre. Chloroform has already been widely discarded because of its toxicity, and evidence is quoted to show that ether is so toxic and so liable to produce post-operative pulmonary complications that it should also be given up. Nitrous oxide, pentothal and cyclopropane, combined with spinal or field blocks where deep relaxation is needed, can cover the whole field of surgery including air-raid and front-line work. Inexperienced anaesthetists can acquire sufficient skill to be much safer with these modern methods than if they use chloroform or ether. In 1000 cases anaesthetised by modern non-volatile drugs the incidence of postoperative vomiting was only 20 per cent, and the total postoperative pulmonary morbidity was 0.8 per cent, compared with 11.9 per cent in a comparable gas chloroform-ether series." 30 references.

J. C. M. C.

MARTIN, S. J.: *Current Considerations of the Army Anesthesiologist.* *New England J. Med.* 229: 893-898 (Dec. 9) 1943.

"The present-day military anesthetist is no longer the glorified medical technician of World War I, nor is he a superman of the present conflict. . . . According to the present scope of anesthesia per se, his primary obligations to his patient and surgeons concern adequate preoperative preparation; relief of pain; muscular relaxation, prophylaxis and therapy for adverse cardiorespiratory derangements during surgery; and prompt and effective post-operative care to prevent or minimize complications of circulation or respiration. In addition, he may be of some aid to the internist with the use of diagnostic or therapeutic blocks in treating peripheral vascular disease, the intractable pain of cancer, angina