

tion has occurred, the injection of procaine, 2 per cent. 10 ml., into the ventricle may restore a normal rhythm. For operations on the diaphragm controlled respiration is essential. At the end of any thoracic operation the cough reflex should be active, spontaneous respiration should be present and the lungs should be expanded. A large proportion of patients will require oxygen in the postoperative period. 1 reference.

F. A. M.

TOWNSEND, C. G.: *Anesthesia for the Surgery of Peripheral Vascular Disease*. Post-Grad. M. J. 22: 67-71 (Feb.) 1946.

The anesthetist can provide valuable assistance to the surgeon both in the diagnosis, therapy and surgery of peripheral vascular disease. It is essential that the anesthetist who is administering a general anesthetic to a patient with peripheral vascular disease does not produce anoxemia. Failing peripheral circulation and often a poor myocardium may have already resulted in anoxia of the tissues. A perfect airway, amply oxygenated atmosphere, and a light level of anesthesia will help to avoid anoxemia. Cyclopropane is the inhalation agent of choice. Nitrous oxide, although non-toxic, may not produce adequate anesthesia without anoxemia. In spite of some objections to diethyl ether there are some factors in its favor. Light ether anesthesia can be maintained with a more highly oxygenated atmosphere than is the case even with cyclopropane. Ether produces a peripheral vaso-dilatation and the cardiac depressant action is minimal. Pentothal, in small doses and in low concentration, can be used to anesthetize the vascular case. Premedication should be given with caution and in reduced dosage for the poor risk. The age of the patient as well as the

severity and possible duration of operation should be considered in selecting a general anesthetic. Spinal analgesia is of value in the diagnosis and treatment of vascular cases. The risk of lowering the blood pressure may court disaster in a patient who may have a grossly impaired coronary circulation. Local analgesia such as brachial plexus, common peroneal, or tibial block have largely replaced indiscriminate infiltration. Digital nerve block, in the presence of vascular disease, may increase the danger of gangrene. Recently, refrigeration has been developed in the treatment and surgery of certain vascular injuries and diseases of extremities. Refrigeration relieves pain, stops the output of toxic metabolites and provides complete anesthesia prior to amputation. 22 references.

F. A. M.

OSGOOD, C. W.: *Convulsive Seizures Following Barbiturate Withdrawal*. J.A.M.A. 133: 104-105 (Jan. 11) 1947.

The controlled employment of the barbiturates in the care of institutionalized patients has been safe and effective. Withdrawal symptoms have been observed only on infrequent intervals in the Milwaukee Sanitarium during the past fourteen years. Six patients who were being treated for nervous and mental disorders developed convulsive seizures following reduction or discontinuance of barbiturates. None of the patients had a previous history of convulsions. Four of the patients developed the convulsions during gradual withdrawal. Larger than average doses of the barbiturates had been taken by the 6 patients over periods of months or years. Neonol sodium, pentobarbital sodium, phenobarbital sodium, seconal sodium and sodium amytal were the drugs which had been used. No subsequent ill effects followed

the convulsions. A knowledge of this possible reaction to barbiturate withdrawal is important in differential diagnosis. 4 references.

F. A. M.

WAGNER, F. W.: *Dental Anesthesia*. Oral Health 36: 342-345 (May) 1946.

The value of the "old and trusted friend," nitrous oxide in dentistry is enhanced by modern machines. The increasing use of 5 per cent carbon dioxide with oxygen gives the anesthetist more satisfactory control of respiration. The nasal method of administration is pleasanter for the patient and more convenient for the surgeon and anesthetist. Somnoform, now unobtainable, gave excellent results. Ethyl chloride is a useful anesthetic for children although, theoretically, it ranks next to chloroform in danger. Vinethene has proved itself to be of value. Its rapid action and the low concentration in the blood necessary to produce anesthesia increase the risk of over-dosage. Trilene, the form in which trichlorethylene is supplied for anesthesia, is colored blue so that it can be distinguished from other anesthetics. It appears to have a specific action on the fifth nerve. It is unsuitable for administration by the open method and must not be administered in a closed circuit with carbon dioxide absorption.

Cyclopropane, owing to its cost, is not much used in dental surgery. Intravenous anesthesia has attained popularity. The real danger from such drugs as pentothal sodium probably lies in the deceptive simplicity of the apparatus used for their administration.

The preliminary examination of the patient for dental anesthesia does not always receive the attention it merits. Observation, examination and application of tests for estimating operative

risk will give indications of possible trouble. Before beginning the administration of an anesthetic the anesthetist should have at hand everything he may need for emergencies. Absolute silence should be maintained during the induction of and recovery from an anesthetic. The patient should not be disturbed by questioning or attempts to have him rinse his mouth during the recovery from an anesthetic.

F. A. M.

TRETHERWIE, E. R.: *The Influence of Anesthetics on the Content of Deaminating Enzyme in Human Plasma*. M. J. Australia 2: 334-339 (Sept. 7) 1946.

It has been shown that human plasma contains an agent capable of inactivating adenyl compounds. A study of the effect of anesthetics on this enzyme in the plasma of human subjects submitted to operation was made. The method used was described in an earlier publication. Twenty estimates were made on afebrile patients before operation. After forty minutes' incubation of plasma-containing lacarnol (1 in 50), the cardio-depressant activity of the mixture was reduced an average of 53 per cent. It is evident from this work that under the influence of ether anesthesia surgical procedures in man are followed by the liberation of deaminating enzyme into the blood. On evidence it can be concluded that ether itself is responsible in man for causing the increase. It is possible that the effect is indirect. No increase in deaminating enzyme content of plasma followed surgical procedures under spinal analgesia or following tests under local urethral anesthesia. Hemolysis of blood increased the deaminating enzyme activity. 7 references.

F. A. M.