ABSTRACTS

onds and the duration varied greatly. There were 15 deaths, 2 of which occurred in the operating room. Eleven of the deaths were felt to be unrelated to the curare; 2 were unexplained and 1 of these may have been due to respiratory obstruction shortly after return to bed. One 4-day-old female was given curare and infiltration anesthesia for operative relief of atresia of the jejunum. No premedication was given. Respiratory depression developed during the administration of curare. The dose selected was 10 mg. Efforts to support the respiration by various means were unsuccessful and the heart, which seemed unaffected as long as the patient could be oxygenated, failed after more than two hours. Autopsy revealed that the brain tissue contained 0.25 mg. of curare per 200 mg. of brain tissue. It was later discovered that 1 cc. or 20 mg. of curare had been given instead of the 10 mg. planned.

Pulmonary complications included bronchopneumonia, 2 cases; atelectasis, 2 cases, and mild bronchopneumonia in one of the fatal cases. The results in 25 tonsillec- tomies anesthetized with pentothal and curare were appreciably better than a parallel series of cases without curare. A re-evaluation of the signs of anesthesia would overcome the main disadvantage of the use of curare. It is suggested that the concentration of the drug be changed to 1 per cent (1 cc. = 10 mg.) to lessen the hazard of mathematical error. 8 references.

F. A. M.


In emergency surgical procedures the clinical condition of the patient must be considered when the anesthetic is chosen. Good muscular relaxation is necessary for exposure, hemostasis and gentle handling of tissues. "Before an anesthetic agent is selected its pharmaco-logic action should be considered and this action correlated with the clinical condition of the patient. It is generally accepted that ether produces a general peripheral vasodilation and when carried to the lower planes, a depression of vasmotion is common. Pentothal sodium also produces a peripheral vasodilation. Spinal anesthesia and regional blocks produce vasodilation in the anesthetized area. Frequently there is a compensatory vasoconstriction in the unanesthetized area. The body's first reaction to blood loss or trauma preceding shock is a peripheral vaso-constiction. This is the automatic attempt of the body to maintain sufficient blood for the vital centers. Following the administration of blood or plasma to patients who have had a severe drop in blood pressure, the pressure may rise to 100 to 120 systolic. This rise may occur before the total volume of blood lost has been replaced and is only possible because of the peripheral vasoconstriction still present. The administration of an anesthetic which produces vasodilation at this time will produce an immediate severe drop in blood pressure."

Treatment of shock, adequate premedication and emptying of the stomach should precede the administration of an anesthetic. The type of replacement fluid indicated can be determined best by evaluating the hemoglobin, hematocrit volumes per cent and plasma protein content of the blood. There is no substitute for whole blood. If a person is to receive repeated transfusions, consideration of the Rh factor is essential. The symptoms of hemolytic transfusion reactions are: a sense of increased heat in the skin, headache, a sense of constriction in the chest, pain in the lumbar region, rigor and fever. The first 100 cc. of every transfusion should be given slowly and transfusion
stopped if any of the above symptoms appear. Excessive quantities of fluids may cause pulmonary edema. Two large needles should be inserted before surgery in patients who require immediate operation and in whom bleeding has not been controlled.

Clinical experience has shown that patients in shock do not tolerate spinal anesthesia well, nor do they tolerate deep ether or deep pentothal anesthesia. These contraindications are relative and depend on the care and attention of the anesthetist. Regional block offers the patient the greatest margin of safety. By relieving pain regional block may prevent the onset of shock. When block anesthesia is not adequate cyclopropane is the agent of choice for supplementary anesthesia. Procaine, intracaine and metycaine are the local anesthetic agents most often used. An overdose of any of these agents produces respiratory paralysis ahead of cardiac failure so there is usually time for resuscitative measures. Procaine usually produces anesthetic lasting ninety minutes, metycaine a longer period than procaine and intracaine one hundred eighty minutes. Because of the rapid onset of anesthesia and the duration the author considers intracaine the local anesthetic agent of choice. 1 reference.

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The number of aged persons requiring anesthesia has increased with the extended life span. The degenerative diseases, diabetes, cancer, arthritis, heart and blood vessel diseases and kidney diseases are more prevalent in the older patients. Often the anesthesia and complications are of greater concern to the patient and to the surgeon than is the operation itself. The physiological preparation of the older patient is more important than the preliminary sedation. Hidden fears, often childish and unreasonable, may be discovered by friendly conversation. One and one-half grains of a barbiturate such as delvinal or seconal given at bedtime the night before operation assures a restful night. If pain is also present the barbiturate should be supplemented with an intramuscular injection of 50 mg. of demerol. Large doses of barbiturates may produce psychoses in the aged. In order of their safe effectiveness, codeine, gr. 1 (64 mg.) pantopon, gr. 1/3 (22 mg.), and demerol, gr. 3/4 (50 mg.) are the analgesics which have been most effective for older persons. Morphine is associated with too many unpleasant side-effects to be considered safe. Atropine occasionally produces tachycardia and tenacious secretions. The author has found the use of scopolamine gr. 1/150 a good supplement for the barbiturates or the recommended opiates.

Induction with general anesthetics should be pleasant and as speedy as possible. Hyperventilation with oxygen should be carried out for several minutes before the anesthetic is started. High oxygen concentrations should be used when gaseous anesthetics are used. Intravenous barbiturates are given in smaller doses in the aged than is necessary in the robust, young patient. Spinal and caudal anesthesia should be given in small fractional doses.

Only the minute-by-minute requirements of the patient should be administered to maintain anesthesia. Normal blood pressure and oxygenation should be present when the patient leaves the operating room. Care in the postoperative period should include provision of good airway, avoiding drafts, prophylactic administration of penicillin and replacing of blood by transfusions.

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