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 anesthesia lasting ninety minutes, metycaine a longer period than procaine and inracaine one hundred eighty minutes. Because of the rapid onset of anesthesia and the duration the author considers inracaine the local anesthetic agent of choice. 1 reference.

F. A. M.


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.

F. A. M.