

depressed. The prolonged effect of slowing absorption by epinephrine is attributed to its minimal destruction locally. Hyaluronidase promotes absorption by depolymerizing the hyaluronic acid or the connective tissue ground substance which is followed by a reduced hydrophilic capacity, giving a more fluid ground substance and an increased permeability. Fluids injected with hyaluronidase are thus exposed to a greater number of capillaries. Systemic treatment with adrenal glucocorticoids is followed by an increase in the rate of subcutaneous absorption. The explanation of this enhancing effect may be related to the anti-inflammatory and anti-edematous effect of adrenal glucocorticoids. Systemic antihistamines speed up absorption by blocking the vascular response to liberated histamine and 5-hydroxytryptamine. Systemic diuretic therapy will speed up absorption when edema fluid is present at the subcutaneous site of drug injection. (Schou, J.: *Absorption of Drugs From Subcutaneous Connective Tissue*, *Pharmacol. Rev.* 13: 441 (Sept.) 1961.)

POTASSIUM Fluothane anesthesia caused a rise in the serum potassium level due to the mobilization of intracellular potassium. Oral or intravenous administration of potassium should be considered following prolonged administration of Fluothane. The other ions studied (sodium, calcium, chloride and magnesium) and bicarbonate showed only insignificant changes. Particularly in patients with impaired kidney function, it seems desirable to watch potassium levels following prolonged Fluothane anesthesia. (Staub, M., and others: *Electrolyte Studies during Fluothane Anesthesia*, *Der Anesthetist* 10: 330 (Nov.) 1961.)

TRICHLOROETHYLENE After inhalation of trichloroethylene, trichloroacetic acid appears first in blood and then in urine within three to four hours. Elimination reaches a maximum on the second or third day and then decreases exponentially for 10 to 15 days. Evidence points toward the lungs and possibly the spleen as centers of transformation. Use of trichloroethylene for anesthesia is generally frowned upon for intrathoracic, pediatric and abdominal surgery. It is most often recommended for minor procedures for which little relaxa-

tion is required. (DeFalque, R. J.: *Pharmacology and Toxicity of Trichloroethylene*, *Clin. Pharmacol. Ther.* 2: 665 (Sept.-Oct.) 1961.) (Abstractor's Note—There are 442 references in this review.)

HYDROXYDIONE The rapid intravenous injection of a 5 or 10 per cent solution of hydroxydione caused loss of consciousness after four minutes in 75 of 100 cases studied. Cramp-like pain along the vein was observed in four instances. Extravasation occurred in three patients, resulting in violent postoperative pain in the antecubital region, erythema, and cyanotic swelling of the forearm and hand. The third case, a child of five years, in addition showed arterial spasm and thrombosis necessitating disarticulation of the arm at the shoulder joint. (Lanicz, C., and Louvet, M.: *L'Hydroxydione (Viadril) en Injection Rapide Concentrée*, *Agressologie* 2: 395, 1961.)

ANTIEMETICS The routine prophylactic use of the many available antiemetics is not justified. Of 2,230 patients studied postoperatively, 23 per cent vomited and in only 3.5 per cent was the vomiting persistent. Even in the group receiving general anesthesia only 15 per cent had persistent vomiting. Therefore, routine prophylactic use of antiemetics is unjustified because of this relatively low incidence of protracted vomiting; because of the relative ineffectiveness of compounds in the barbiturate and antihistamine groups; and because of the important side effects, particularly hypotension and prolonged somnolence, often associated with the phenothiazine derivatives. (Adriani, J., Arens, J., and Antony, S. O.: *Post-anesthetic Vomiting*, *Amer. J. Surg.* 103: 2 (Jan.) 1962.)

LOCAL ANESTHETICS Tetracaine inhibits growth of staphylococcus aureus and monilia in bronchial washings in more than half of cases while lidocaine does not appear to do so. A survey of past records seems to indicate that tetracaine also inhibits growth of mycolacterium tuberculosis in a similar fashion. (Erllich, H.: *Bacteriologic Studies and Effects of Anesthetic Solutions on Bronchial Secretions During Bronchoscopy*, *Amer. Rev. Resp. Dis.* 83: 414 (Sept.) 1961.)