using a thermal conductivity detector, yielded coefficients of variation of 3.5 per cent in N_2O and 2.1 per cent in O_2. *(Oyama, T., Matsumoto, F., and Kamada, M.: Quantitative Determination of Anesthesia Agents: Ether, Nitrous Oxide, Carbon Dioxide and Oxygen in Alveolar Air and Blood, Jap. J. Anesth. 18: 109 (Feb.) 1969.)*

INTRABILIARY PRESSURE Neuroleptanalgesia causes an increase in the tonus of the sphincter of Oddi. It is safe for use in patients with hepatic disease but should be avoided in patients undergoing surgical operations involving the biliary system. *(Uray, E., and Kosa, S.: Effect of Neuroleptanalgesia on Biliary Pressure, Der Anaesthesist 18: 74 (March) 1969.)*

INTRAOCULAR PRESSURE Intraocular pressure was found to be decreased in 30 patients undergoing ophthalmic surgery with neuroleptanalgesia. Therefore, neuroleptanalgesia is recommended for ophthalmic surgical operations, particularly for patients with increased intraocular pressure. *(Sarmany, B. J.: Further Investigations of the Effect of Anesthetics on Intraocular Pressure with Special Reference to Neuroleptanalgesia, Der Anaesthesist 18: 72 (March) 1969.)*

DIGITALIS There was no consistent relationship between the inotropic and the dromotropic (A-V blocking) effects of the digitalis glycoside acetylstrophanthidin (A-S) in dogs. Myocardial contractile force (CF) was measured with a right ventricular strain gauge. A-V blocking ability was assessed by determining the ventricular rate during artificial atrial pacing. Autonomic influences profoundly affected both inotropic and dromotropic actions of digitalis. Contrary to prevailing opinion, parasympathetic blockade with atropine did not alter the A-V blockade induced by digitalis. The beta-stimulation-induced increase in ventricular rate produced by isoproterenol was attenuated by digitalis. At low doses isoproterenol and digitalis increased CF in an additive manner. Digitalis did not further increase CF after large doses of isoproterenol, but isoproterenol increased the CF irrespective of the dose of digitalis, indicating that isoproterenol had a much more potent inotropic action. Beta blockade with MJ-1999 (Sotolol), a drug with few quinidine-like properties, did not alter the positive inotropic effect of digitalis. MJ-1999 elicited profound bradycardia (decrease in V-R), which was unaffected by subsequent administration of digitalis. There are several clinical implications to this study. If beta stimulation were high initially but then diminished during digitalization, there would be little change in CF but a marked increase in A-V blockade. Conversely, if the initial beta activity was low but increased during digitalization, there would be a marked increase in CF with little change in A-V conduction. *(Ogden, P. L., and others: The Relationship Between the Inotropic and Dromotropic Effects of Digitalis: The Modulation of these Effects by Autonomic Influences, Amer. Heart J. 77: 479 (May) 1969.)*

BLOOD LEVELS OF PENTAZOCINE A spectrophotofluorometric method for the quantitative determination of pentazocine levels in human plasma is described. Following intramuscular and oral administration, plasma levels of pentazocine coincided closely with onset, duration, and intensity of analgesia, as well as with other pharmacologic effects. The mean peak plasma level after 45 mg/70 kg intramuscularly was 0.14 μg/ml. The mean peak plasma level after 75 mg orally was 0.16 μg/ml, but as much as 25 per cent represented products of biotransformation. The plasma half-life is about two hours after intravenous or intramuscular ad-

ministration. Side-effects of pentazocine may be more pronounced in ambulatory patients and in those experiencing minimal pain. (*Berkowitz, B. A., and others: Relationship of Pentazocine Plasma Levels to Pharmacological Activity in Man, Clin. Pharmacol. Ther. 10: 320 (May) 1969.*)

Surgery

O.R. NURSE SHORTAGE In spite of the shortage of qualified personnel for operating room work, the average operating room nurse is doing little to cope with the problem. She resents the inroads being made by non-professionals and by nurses with Associate or Baccalaureate degrees. She accepts the role of clinical teacher grudgingly when called upon to educate student nurses or clinical technicians. She prefers not to participate in monthly in-service classes or to use the operating room library. She feels that such activities are unnecessary, time-consuming, and unimportant to her job. Although she is a hard and efficient worker, the O.R. nurse prefers to leave leadership roles to her supervisor. Somehow these problems must be solved in the near future by medical and paramedical personnel. (*Ginsberg, F.: Why There is a Shortage of O.R. Nurses, Modern Hosp. 112: 130 (March) 1969.*)

DIALYSIS DISEQUILIBRIUM Hemodialysis, peritoneal dialysis, or other methods of dialysis used in the management of patients with severe acute and chronic renal failure may result in a serious complication known as the dialysis disequilibrium syndrome. Manifestations of the syndrome include headache, nausea, vomiting, twitching, tremors, disorientation, convulsive seizures, ventricular tachycardia, and cardiac irregularities. The patient usually recovers, but convulsions, coma, and death may follow. The concepts concerning the pathophysiologic mechanisms and agents involved in production of the clinical manifestations of this syndrome include: 1) cerebral edema due to "reverse urea effect"; 2) hypoglycemia; 3) alterations in Pa_{CO_2} or *p*H; 4) increase in K^+/Ca^{++} ratio and shift in electrolytes; 5) overhydration from excessive water loading; 6) significant hyponatremia. (*Wakim, K. G.: The Pathophysiology of the Dialysis Disequilibrium Syndrome, Mayo Clin. Proc. 44: 406 (June) 1969.*)

INTRAVENOUS FEEDING The methods and results of total intravenous feeding in infants and adults were evaluated. Catheters were placed by means of a percutaneous puncture of a subclavian vein using strict aseptic techniques. Alternate routes used were the external jugular vein and internal jugular vein, which were surgically exposed in infants weighing less than ten pounds. With all methods, the distal tip of the catheter was located in the superior vena cava. Every two or three days, the intravenous tubing was changed and, using aseptic technique, the skin around the puncture hole was cleaned with ether, painted with two per cent iodine and antibiotic ointment, and covered with a sterile occlusive dressing. A hypertonic (1,800- to 2,000-millimole) nutrient solution was used. It contained glucose, fibrin hydrolysate, minerals, and vitamins. Electrolytes were added as necessary. The solution supplied 6 g nitrogen and 1,000 cal per liter. Three hundred adult patients fed exclusively by vein for seven to 210 days showed weight gains, increased strength and strongly positive nitrogen balances. Twelve newborn infants nourished by intravenous feeding for seven to 400 days showed constant and predictable weight gains. (*Dudrick, S. J., and others: Can Intravenous Feeding as the Sole Means of Nutrition Support Growth in the Child and Restore Weight Loss in an Adult?—An Affirmative Answer, Ann. Surg. 169: 974 (June) 1969.*)