

creased (PAP increased and LAP decreased), while cardiac output remained constant. In another group of dogs, the right side of the heart was bypassed and a constant flow of blood was pumped into the pulmonary artery while the left atrial pressure was kept constant by a reservoir system. The pulmonary arterial pressure also increased after digitalis injection, indicating that active pulmonary vasoconstriction was the probable cause of the increased resistance. (Linde, L. M., and others: *Pulmonary and Systemic Hemodynamic Effects of Cardiac Glycosides*, *Amer. Heart J.* 76: 356 (Sept.) 1968.)

BLOOD PRESSURE MEASUREMENT

Simultaneous recordings of cuff pressure, Korotkoff sounds and intra-arterial pressure from the same arm were made in human subjects. The first Korotkoff sound closely approximated intra-arterial systolic pressure. On the other hand, muffling of Korotkoff sounds (cuff diastolic pressure) occurred at a cuff pressure 8.7 mm Hg higher than the intra-arterial diastolic pressure, probably because cuff pressure was incompletely transmitted to the occluded arterial segment. Although the same barrier to pressure transmission was present at systolic pressure, pulse-wave reflection and delay in penetration of the diminutive pulse waves into the distal part of the compressed arterial segment reduced the cuff-to-intra-arterial gradient. (Frcis, E. D., and others: *Dynamic Reactions Produced by Deflating a Blood Pressure Cuff*, *Circulation* 38: 1085 (Dec.) 1968.)

CALCIUM UPTAKE BY THE HEART

The effects of chloroform, halothane, ethyl ether and pentobarbital upon calcium uptake by canine myocardial sarcoplasmic reticulum were studied. At the concentrations studied, chloroform, halothane and pentobarbital all depressed calcium uptake, while ether did not. In addition, halothane and chloroform did not uncouple calcium transport from ATP hydrolysis, while pentobarbital did uncouple the two processes. (Lain, R. F., and others: *Calcium Uptake Activity of Canine Myocardial Sarcoplasmic Reticulum in the Presence of Anesthetic Agents*, *Circ. Research* 23: 597 (Nov.) 1968.)

BLOOD VISCOSITY Contrary to statements that, if hemoglobin were dissolved in the blood plasma rather than enclosed in corpuscles, the viscosity of the blood would be greatly increased, it was found that when the corpuscles of dog or goat blood were disrupted with ultrasound, giving a solution with the same hemoglobin concentration, the relative viscosity was reduced drastically. Blood corpuscles apparently do not contribute to reduced blood viscosity. (Nielsen, K. S., and Taylor, C. R.: *Science* 162: 274 (Oct.) 1968.)

BLOOD VISCOSITY-FLOW

Hemoglobin solutions prepared from hemolyzed human erythrocyte packs have Newtonian flow properties. All solutions have viscosities lower than the apparent viscosities of erythrocyte suspensions that have equal oxygen-carrying capacities. The presence of cell debris in hemoglobin solutions causes non-Newtonian (pseudoplastic or rheopectic) flow behavior. (Tay, F. A., and others: *Science* 162: 277 (Oct.) 1968.)

PROPRANOLOL During cardiac operations with halothane anesthesia, or postoperatively, 20 patients with tachycardic arrhythmias were treated with the beta-receptor blocking agent, propranolol. All patients were digitalized, the mean dose being 1 mg/18 kg. Atropine was not used preoperatively. A decrease of pulse rate was achieved in every case (mean decrease 25 per cent); pulse deficit and arrhythmias disappeared in the majority of cases. The slowing of the heart caused prolongation of diastole, increase in stroke volume, and improvement of coronary perfusion. (List, W. F.: *Experiences with Propranolol during and after Cardiac Surgery*, *Dev. Anaesthetist* 17: 82 (March) 1968.)

BARORECEPTORS IN INFANTS

The majority (57 per cent) of 40 normal infants studied had initial falls in blood pressure during head-up tilt, which promptly returned to normal values. This supports the concept that baroreceptor reflexes are present and active in the full-term newborn infant. (Moss, J., and others: *Vascular Responses to Postural Changes in Normal Newborn Infants*, *Pediatrics* 42: 250 (Aug.) 1968.)