

circulation time averaged 2.1 seconds and intrahepatic circulation time averaged 9.9 seconds. (Reichman, S., and others: *Measurement of Hepatic Blood Flow by Indicator Dilution Techniques*, *J. Clin. Invest.* 37: 1848 (Dec.) 1958.)

(Editor: This method would seem to be useful for study of the effects of anesthesia on blood flow.)

**THYROID** Tri-iodothyronine stimulated oxygen consumption by red blood cells, and  $C_{14}$  labeled glucose studies indicated that glucose was being metabolized via this pathway at an increased rate by stimulation of the oxidation of reduced coenzyme II (TPNH). (Necheles, T. F., and Beutler, E.: *Investigation of Site of Action of Thyroid Hormone. Studies in Human Erythrocytes*, *J. Lab. & Clin. Med.* 52: 931 (Dec.) 1958.)

**CEREBRAL VASOSPASM** Major cerebral arteries and their larger branches, in contradistinction to the smaller pial vessels, are susceptible to local, or limited, as well as widespread vasoconstriction that may be induced by a variety of stimuli, including surgical manipulation, hemorrhage or disease. Cerebral vasoconstriction appears to be mediated principally by the vascular musculature, but intrinsic neurogenic reflex activity may also play a part, as may control by extrinsic innervation of the cerebral arteries. Vasospasm continues to be difficult to treat despite occasional reports of success by means of carbon dioxide inhalations, stellate-ganglion blocks or pericarotid or intracarotid injections of procaine, papaverine or other agents. It may be unwise by drug therapy to try to relieve vasospasm proximal to a recently ruptured aneurysm lest an increased flow and pressure of blood cause further bleeding. At operation, however, once an aneurysm or other lesion has been appropriately dealt with, it is desirable and usually possible to relieve existing or surgically induced vasospasm by topical applications of 3 per cent papaverine or 2 per cent procaine. (Pool, J. L.: *Cerebral Vasospasm*, *New England J. Med.* 259: 1259 (Dec. 25) 1958.)

**RENAL BLOOD FLOW** The effects of various sympathomimetic drugs on renal blood

flow in dogs anesthetized with morphine and chloralose were investigated by inserting a rotameter in the renal artery. Drugs constricting renal vessels, whether injected into the renal artery or intravenously, included norepinephrine, epinephrine, phenylephrine and methoxamine. Ephedrine constricted the renal vessels when injected into the renal artery, but not always when injected intravenously. Methamphetamine and amphetamine had no important effects upon the renal artery when injected intra-arterially, and increased renal blood flow when injected intravenously. Isoproterenol proved to have a dilator effect upon the renal artery when injected intravenously. (Aviado, D. M., Jr., Wnuck, A. L., and DeBeer, E. J.: *Effects of Sympathomimetic Drugs on Renal Vessels*, *J. Pharmacol. & Exper. Therap.* 124: 238 (Nov.) 1958.)

**GAS EMBOLI** A comparison was made of air, oxygen and carbon dioxide embolization by injecting the gases into the tail vein of mice or into the left ventricle of prepared thoracotomized dogs. Studies revealed oxygen to be tolerated about two times and carbon dioxide five times as well as air. (Kunkler, A., and King, H.: *Comparison of Air, Oxygen and Carbon Dioxide Embolization*, *Ann. Surg.* 149: 95 (Jan.) 1959.)

**PULMONARY FUNCTION** Ventilatory studies in 65 patients before mitral commissurotomy and in 22 patients postoperatively were made during a standardized steady state exercise. Oxygen ventilatory equivalent and pulmonary diffusing capacity were measured (28 patients preoperative, 12 patients postoperative). Oxygen ventilatory equivalent is defined according to the equation:  $\text{Oxygen Ventilatory Equivalent} = \text{Minute Ventilation} / \text{min. BT PS} / \text{Oxygen Consumption} / \text{min. ST PD}$ , and was found to be elevated in patients with mitral stenosis of clinical grade 2 and above severity in proportion to functional disability of the patient and decreased in postoperative patients in proportion to clinical improvement. Pulmonary diffusing capacity was unchanged postoperatively, suggesting irreversible pulmonary damage, and suggesting that this factor may be responsible for failure