

and sympathectomy, *Circulation Res.* 7: 162 (March) 1959.)

METHOXAMINE Antiarrhythmic properties of methoxamine (Vasoxyl) have been demonstrated both experimentally and clinically. Vasoxyl was shown to be able to suppress significantly or eliminate completely various ventricular arrhythmias ranging from occasional premature ventricular systoles to multifocal ventricular tachycardias. (Brill, I., Kruegen, J., and McCawley, E.: *Restoration of Sinus Rhythm in Experimental and Clinical Ventricular Arrhythmias by Methoxamine Hydrochloride*, *Am. J. Cardiology* 3: 307 (March) 1959.)

RENAL BLOOD FLOW Current concepts of regulation of intra-renal circulation revolve around auto-regulated changes in resistance to renal blood flow. One concept is based on ability of various perfusing substances to excite vasoconstriction and others to temporarily abolish it. The range of systemic arterial pressure during which auto-regulatory mechanisms are active is about 70 mm. Hg to 200 mm. Hg. Intra-renal pressure and blood volume in the kidney at any given moment are apparently not important in governing blood flow. Sympathetic stimulation and hormonal influences may stimulate vasoconstriction. Specific actions of vasoconstrictor drugs, ganglionic blockers, and adrenergic blockers remain to be worked out. (Winton, F. R.: *Present Concepts of Renal Circulation*, *Arch. Int. Med.* 103: 495 (March) 1959.)

RENAL ISCHEMIA Clamping of the renal pedicle in normothermic rats for a period of two hours produced a necrosis of the proximal convoluted tubules. In the stage of repair the epithelium was deficient in enzyme content. A focal lesion in the thick limb of the loop of Henle was occasionally observed. Hypothermia delayed the onset of the lesion. The majority of tubules showed no morphologic damage or diminution in enzyme content. Hypothermia did not produce morphologic damage or diminution in enzyme content in the control kidneys. (Duguid, W. P., Seright, W., and Thomson, J. D.: *Effect of Hypothermia on Lesion of Experimental Renal Ischaemia*, *Brit. J. Surg.* 46: 273 (Nov.) 1958.)

INDUCED ASYSTOLE Several complications, not seen when total body perfusion is carried out with the heart in sinus rhythm, were noted when arrest of the ventricles in dogs was produced by an injection of potassium citrate solution. The left ventricle developed an unusual rigor in many of the arrested hearts and irreversible ventricular fibrillation accounted for the high mortality rate. A technique was developed for the complete drainage of blood from the left heart chambers. When this technique was employed with Melrose's method for arrest, ventricular rigor and irreversible fibrillation failed to occur in every experiment. Histological studies were made on all animals. (Helmsworth, J. A., and others: *Myocardial Injury Associated with Asystole Induced with Potassium Citrate*, *Ann. Surg.* 149: 200 (Feb.) 1959.)

BY-PASS ACIDOSIS Tissue hypoxia produces increased blood hydrogen ion concentration during low-flow pump-oxygenator operation in dogs. The plasma pH is proportional to the extracorporeal blood flow rate. The plasma pH and plasma bicarbonate concentration are inversely proportional to the blood lactate concentration. The latter, in turn, is inversely proportional to the per cent venous oxygen concentration. The preoperative lactate blood concentration may be increased above normal by hyperventilation during anesthesia and hence would tend to lower the plasma bicarbonate and the pH postoperatively. Significant electrolyte shifts in the extracellular fluid in response to low-flow pump-oxygenator operation are characterized by (1) an increase in serum lactate concentration and (2) a decrease in serum concentration of potassium, calcium, bicarbonate and undetermined anionic buffers (chiefly proteins, phosphates and sulfates). (Litwin, M. S., and others: *Acidosis and Lacticacidemia in Extracorporeal Circulation: Significance of Perfusion Flow Rate and Relation to Preperfusion Respiratory Alkalosis*, *Ann. Surg.* 149: 188 (Feb.) 1959.)

VENTRICULAR TACHYCARDIA Recent clinical experience indicates that digitalis merits a trial in the treatment of ventricular tachycardia if procaine amide and quinidine have failed, providing, of course, that digitalis