

Certain minor advantages such as freedom from the danger of air embolus at the time of transfusion was abolished. The post-transfusion survival of red cells was not improved by storage in plastic bags. (Dudley, H. A. F., and others: *Plastic Bags for Storing and Transfusing Blood*, *Lancet* 1: 294 (Feb. 8) 1958.)

DEXTRAN It has been found that extracts and homogenates of spleen are capable of splitting dextran; this proves the possibility of enzymatic splitting of dextran in the animal body. Prepared protein fractions from liver, kidneys, lung, brain, and muscle possessed also enzymatic activity against dextran, but were slightly different from each other. The most active preparations are obtained from spleen and liver, then from kidneys, lung, and muscle. The enzyme is absent from blood. Chromatographic examination showed that the only product of dextran breakdown is glucose. The obtained breakdown of dextran with production of glucose indicates that the precipitated protein fraction is capable of disrupting the 1:6-glucoside bond of the dextran molecule. (Rozenfeld, E. L., and Lukomskaia, I. S.: *Splitting of 1:6-Bonds of Dextran by Animal Tissue*, *Biokhimiia* 21: 412 1956.)

POLYCYTHEMIA An increase in hematocrit reading from 40 to 60 per cent was achieved by repeated transfusions in a volunteer. Minute volume and oxygen consumption during exercise decreased when air and 14 per cent oxygen was being breathed, but not for 100 per cent oxygen breathing. The classical concepts of carotid and aortic chemoreceptor activation are not adequate to explain this ventilatory effect of polycythemia. (Hornbein, T. F., and Roos, A.: *Effect of Polycythemia on Respiration*, *J. Appl. Physiol.* 12: 86 (Jan.) 1958.)

IRREVERSIBLE SHOCK Recent experimental work related to the importance of the liver in shock is summarized. The liver is not of great importance in the early phases of hypovolemic shock but gains in significance with diminution of oxygen supply to the tissues. The liver does not share in the protective reflexes

of the body and the anoxia that results leads to significant metabolic alterations. Experimental work suggests that death from shock can be prevented by increasing the circulation of oxygenated blood through the liver. (Erskine, J. M.: *Relation of Liver to Shock*, *International Abstracts of Surgery (S. G. & O.)* 106: 207 (Mar.) 1953.)

VENTRICULAR FIBRILLATION

Many factors which may and probably do play a part in the production of ventricular fibrillation during hypothermia are discussed. Prolongation of the refractory period and differences in the refractory period in various parts of the ventricular musculature due to temperature gradients in the muscle set the stage for ventricular fibrillation. Other causative factors may include: Changes in blood pH, myocardial calcium-potassium imbalance, mechanical stimuli, overactivity of cardiac sympathetic nerves, increased amounts of catecholamines, insufficient coronary flow, and anesthetic agents and other drugs. (Bader, H.: *Ventricular Fibrillation in Hypothermia. A Review of Factors Favoring Fibrillation in Hypothermia With and Without Cardiac Surgery*, *J. Thoracic Surg.* 35: 265 (Feb.) 1958.)

HEART BLOCK The acute effects of heart block on the cardiac output and systemic and pulmonary blood pressure of the dog have been investigated. The left atrial pressure increased promptly, but returned to normal within an hour. There was a prompt and sustained fall in cardiac output, heart rate and peripheral blood pressure. (Mowlem, A., and Campbell, G. S.: *Acute Effects of Complete Heart Block on Pulmonary Circulation*, *Surg. Gynec. & Obst.* 106: 333 (Mar.) 1958.)

REOPERATION AFTER CARDIAC ARREST

Between 1949 and 1956, 28 patients had 42 operations after successful cardiac resuscitation. Death occurred in only one patient of this series. The anesthetic agents used or the method utilized appeared to have little bearing on the outcome of the operation. Skill in management appeared to be the factor of paramount importance. (Howland, W. S., and