

Bradykinin, produced at birth, may be a mediator of neonatal circulatory changes, including constriction of the ductus arteriosus, dilatation of pulmonary vasculature and constriction of umbilical vessels. (McInnon, K. L., and others: *Kinins: Possible Mediators of Neonatal Circulatory Changes in Man*, *J. Clin. Invest.* 47: 1295 (June) 1968.)

HEMOGLOBIN CATABOLISM Varying quantities of normal canine erythrocytes damaged by incubation with N-ethylmaleimide were injected into the circulatory systems of anesthetized dogs. The quantities of hemoglobin injected ranged from 0.058 to 0.552 g/kg body weight. Although 0.364 g hemoglobin/kg body weight was associated with normal sequestration, above that amount the rate of catabolism of hemoglobin to carbon monoxide reached a maximum. As a result, large quantities of hemoglobin entered the plasma. These data indicate that: (a) the maximal rate of hemoglobin catabolism in these dogs averaged about 0.07 g/kg body weight/hr; (b) hemoglobinemia can result from overloading the reticuloendothelial system with damaged sequestered cells and, therefore, may not always reflect "intravascular" hemolysis; (c) the sequestering function of the reticuloendothelial system does not appear to limit the maximal rate of hemoglobin catabolism. (Coburn, R. F., and Kane, P. B.: *Maximal Erythrocyte and Hemoglobin Catabolism*, *J. Clin. Invest.* 47: 1435 (June) 1968.)

PHEOCHROMOCYTOMA Blood volumes in patients with pheochromocytoma, especially those with fixed hypertension, are low. Preoperatively, plasma volume and erythrocyte mass are determined. Deficits are corrected by blood transfusions and by the use of alpha- and beta-blocking agents. In patients thus prepared, no postoperative norepinephrine infusions have been necessary. Halothane is particularly suitable for anesthesia because of its depressant effect on catecholamine liberation and its ability to prevent hypertension during surgery. (Kalf, G.: *Anesthesiologic Problems in Patients with Pheochromocytoma*, *Der Anaesthetist* 17: 43 (Feb.) 1968.)

VEINS The veins have served medicine well. Their size and accessibility have made possible the development of our vast array of modern diagnostic and therapeutic methods which depend upon the simple technique of venipuncture. What are the functions of the veins? First, they act as conduits by which blood can return from the tissues to the heart. Second, they may contribute to the total peripheral vascular resistance, especially in the presence of precapillary vessel dilatation. Third, they probably play an important role in the control of fluid exchange between blood and extracellular spaces by altering the ratio between pre- and postcapillary resistance. Fourth, they almost certainly act as a blood depot, for a large quantity of blood lies in the postcapillary side of the circulation. (Browse, N. L.: *The Veins and Cardiovascular Reflexes*, *Ann. Roy. Coll. Surg. Eng.* 42: 307 (May) 1968.)

TRANSFUSION Hypotension and homologous blood transfusion can produce periarterial hemorrhage, alveolar hemorrhage, and edema in dog lungs. These do not occur with autologous transfusion. The underlying event is pulmonary arteriolar vasoconstriction associated with periarterial hemorrhage. This is followed by a decompensatory vasodilatory phase characterized by capillary engorgement, diffuse pulmonary hemorrhage, and edema. (Verth, F. J., and others: *Pulmonary Microcirculatory Response to Shock, Transfusion, and Pump-Oxygenator Procedures*, *Surgery* 64: 95 (July) 1968.)

HEMOPHILIA Substances used for treating or preventing hemorrhage from hemophilia include fresh plasma or fresh blood factor VIII concentrates prepared from animal plasma or concentrates of human origin such as Colin's fraction I and antihemophilic globulin. However, all of these substances have serious disadvantages. A new substance, antihemophilic cryoprecipitate, rich in factor VIII, was prepared from human plasma by cold precipitation and used to treat eight hemophiliacs on 12 occasions. Assays showed a steep rise in factor VIII activity after the infusion, and in some cases clotting function was restored to normal. The venous blood clot-

Downloaded from <http://pubs.asahq.org/aneesthesiology/article-pdf/31/1/101/298314/0000542-196907000-00036.pdf> by guest on 03 July 2022