ing adrenergic beta-receptors with nethalide would cause exogenous and endogenous catecholamines normally reacting with vasodilating receptors to be shifted to exitatory (vasoconstrictor) receptors. (*Luria, M. H., and others: Successful Therapy of Prolonged Hypotension with an Adrenergic Beta-Receptor Blocking Agent, Circulation 29: 494 (Apr.) 1964.*)

DEXTRAN Perfusion of Macrodex (dextran) to the circumflex coronary artery oxygenated at 1 or 3 atmospheres pressure leads to ventricular fibrillation and edema of the perfused region in dogs. This may be due to the higher viscosity. On the other hand, perfusion of oxygenated Rheomacrodex at normal atmospheric pressure could maintain heartbeat and blood pressure at levels near the normal as long as exsanguination was not performed. Perfusion at 3 atmospheres absolute pressure during 200 minutes enabled heart function to bear the work load of the circulation. Thus a variation in the molecular properties of dextran could induce ventricular fibrillation or reverse hypodynamic pressure changes after coronary occlusion and insure an apparently undisturbed heart function. (*Petropoulos, P. C., and Meijne, N. G.: Comparative Results of the Cardiac Function During Perfusion of a Main Coronary Artery with Lower or Higher Molecular Weight Dextran Under Normal and Hyperbaric Oxygenation, J. Thor. Cardiov. Surg. 47: 651 (May) 1964.*)

HUMAN CORPSE BLOOD Transfusion of anemic patients with blood drawn from human corpses (without ACD solution or other additives) has long been performed in Russia but only recently successfully performed and reported in the United States. In most cases of sudden death the blood undergoes a peculiar type of fibrinolysis which obviates the need for anticoagulant solutions. Blood was usually administered as packed cells. No significant alterations in the stored blood or in the recipients were noted. Interest in this procedure in the United States has lagged because of the need to draw the blood within six hours after death of donor, an autopsy must be completed, suitable donors are sporadic and the yield has not been large (1–4½ pints per phlebotomy in this study). (*Kevorkian, J., and Marra, J. J.: Transfusion of Human Corpse Blood Without Additives, Transfusion 4: 112 (Mar.–Apr.) 1964.*)

CEREBRAL BLOOD FLOW Cerebral blood flow and oxygen consumption were measured by the nitrous oxide method and radioactive krypton techniques and correlated with frequency analysis of resting electroencephalogram in both healthy community volunteers and psychiatric patients having various degrees of chronic brain damage. The healthy group showed no correlation between the electroencephalogram and cerebral blood flow and oxygen consumption; whereas, the senile group did show a positive correlation between electroencephalogram changes and cerebral blood flow, cerebrovascular resistance and oxygen uptake. The resting electroencephalogram abnormalities indicate the existence of derangements of cerebrovascular physiology. (*Obrist, W. D., and others: Relation of Electroencephalogram to Cerebral Blood Flow and Metabolism in Old Age, Electroenceph. Clin. Neurophysiol. 15: 610 (Aug.) 1963.*)

CEREBRAL BLOOD FLOW Before craniotomy, postural changes from horizontal to the erect position had no effect on internal carotid blood flow of monkeys. The same changes under halothane anesthesia produced postural hypotension and decreased internal carotid blood flow. Craniotomy in the sitting position may result in a rapid and dangerous decrease in cerebral blood flow. (*Galindo, A., and Savolainen, U. P.: Craniotomy and Internal Carotid Blood Flow, Ann. Surg. 159: 437 (Mar.) 1964.*)

ACIDOSIS Occurrence of severe metabolic acidosis in six patients after abdominal operation was demonstrated. Arterial blood *p*H was found to range as low as 7.04, P_{CO_2} as low as 19 and standard bicarbonate as low as 11.0 mEq. per liter. The acidosis was corrected with sodium bicarbonate; amounts varying from 152 to 437 mEq. were required for correction. In 18 months metabolic acidosis was detected in 60 patients, 42 of whom required correction with sodium bicarbonate. Occasionally acidosis alone is responsible for

the patient's poor clinical condition and following correction of the acidosis, there may be a remarkable improvement. In other instances, correction of the acidosis may produce only partial clinical improvement. In one patient, consciousness returned as the acidosis was corrected. (*Norman, J. N., and Clark, R. G.: Metabolic Acidosis in General Surgery, Lancet 1: 348 (Feb. 15) 1964.*)

ACID-BASE BALANCE Changes in acid-base equilibrium of blood following infusion of hyperosmotic solutions have been studied in nephrectomized dogs with P_{CO_2} held constant. Infusion of hyperosmotic sodium chloride or mannitol consistently leads to a fall in plasma bicarbonate and hence in blood *p*H. The magnitude of the fall in plasma bicarbonate can be largely accounted for by the magnitude of the osmotically induced transfer of water from the intracellular to the extracelluar space. Some transfers of bicarbonate between these two compartments cannot be excluded, but even under rather extreme assumptions, the effect of such transfer on bicarbonate concentration is relatively small compared to the effect of dilution. A corollary of these results is that intracellular *p*H should rise, since bicarbonate concentration within the cells should rise as water is withdrawn. Although no studies in intracellular *p*H were performed in these experiments, studies of the acid-base changes in cerebrospinal fluid, another compartment that apparently permits rapid equilibration of water and P_{CO_2} but not of bicarbonate, show that cerebrospinal fluid *p*H rises as blood *p*H falls and that this rise is due to an increased concentration of cerebrospinal fluid bicarbonate. (*Winter, R. W., and others: Mechanism of Acidosis Produced by Hyperosmotic Infusions, J. Clin. Invest. 43: 647 (Apr.) 1964.*)

OXYGEN DISSOCIATION CURVE At saturations below 80 per cent the oxygen dissociation curve of human fetal blood has been described with considerable accuracy and, as in other mammalian young, is known to be displaced to the left of that for the adult blood although both curves share a similar shape. Presented data define the oxygen dissociation curve in the physiologic range above 80 per cent saturation. Specific constants have been derived from these data for the equation that describes oxygen dissociation. The oxygen-dissociation curve for fetal-neonatal blood at *p*H 7.4 is identical with that for adult blood at *p*H 7.6 (*Nelson, N. M., and others: Further Extension of the In Vivo Oxygen-Dissociation Curve for the Blood of the Newborn Infant, J. Clin. Invest. 43: 606 (Apr.) 1964.*)

TISSUE GAS TENSIONS Oxygen and carbon dioxide tensions of tissues were estimated by sampling liquids that were instilled in hollow viscera and permitted to remain until they reached gaseous equilibrium with the surrounding tissue. Under normal conditions, oxygen tension of tissues of the urinary bladder is lower than that of its venous blood. During the breathing of enriched oxygen mixtures, the difference in oxygen tension between the tissues and the venous blood becomes even greater. These differences are attributed to diversion of blood flow from the capillaries to vessels where gas exchange is limited. Implicit in this mechanism which curtails capillary blood flow is the likelihood of impairing the exchange of other substances between blood and tissues. (*Bergofsky, E. H.: Determination of Tissue Oxygen Tensions by Hollow Visceral Tonometers: Effect of Breathing Enriched Oxygen Mixtures, J. Clin. Invest. 43: 193 (Feb.) 1964.*)

HYPOTHERMIA In 15 patients undergoing neurosurgery under hypothermia the temperatures were recorded in the brain, esophagus and rectum. The esophageal temperature came closest to the brain temperature, the difference not exceeding 0.4° C. (*Lechowski, S.: Regional Differences of Body Temperature During Intracranial Operations in Hypothermia, Der Anaesthesist 13: 47 (Feb.) 1964.*)