

BLOOD LOSS DETERMINATION A device based on the phenomenon of electrical conductivity is used to measure electrical resistance of a solution. When blood is added to water a direct proportional relationship exists between the concentration of the blood and the conductance. The blood loss monitor was used in 62 patients undergoing thoracic or cardiovascular surgery. The device removes the blood electrolytes from sponges, brings blood from the wound by suction, and automatically compensates for temperature changes in the measuring chamber. Irrigation must be done with either water or 2.5 per cent glucose solution. Average blood loss up to the opening of the pleura was 364 cc. with a range from 150 to 750 cc. (*Kloppstock, R., and others: Instantaneous Blood Loss Determination During Thoracic Surgery, J. Thoracic & Cardiovasc. Surg.* 38: 746 (Dec.) 1959.)

HYPOTENSION The immediate physiologic consequences of a change in the body's position from a supine to an erect position are: dilatation of the vascular beds below the heart, decreased venous return to the right atrium, decreased cardiac output, decreased peripheral vascular resistance, decreased arterial pressure, and decreased cerebral blood flow. The most important compensatory mechanisms that preserve constancy of cerebral blood flow are: decreased cerebral vascular resistance, reflex arteriolar constriction, reflex venoconstriction, increased tissue pressure in the legs, reflex increase in heart rate, and reflex release of norepinephrine. In certain disease states the compensatory reactions are absent or deficient: endocrinopathies, potassium depletion, hypovolemia or anemia, central neuropathies, autonomic neuropathies, all of which are discussed in detail. (*Wagner, H. N., Jr.: Orthostatic Hypotension, Bull. of the Johns Hopkins Hosp.* 105: 322 (Dec.) 1959.)

BLOOD LOSS Postmenopausal patients lost much less blood than did the premenopausal patients during vaginal hysterectomy. Use of surgical pituitrin locally in the paracervical tissues resulted in an average salvage of 104 cc. (44 per cent) during vaginal hysterectomy and 193 cc. (33 per cent) during

vaginal hysterectomy and repair. Pituitrin reduced the necessity for transfusion by 68 percent. (*Pratt, J. H., and others: Blood Loss During Vaginal Hysterectomy, Obst. & Gynec.* 15: 101 (Jan.) 1960.)

FAT EMBOLIZATION When cardiopulmonary bypass using stationary screen oxygenators for prolonged periods has been used in dogs, microscopic examination of brain, kidney and lung tissues showed varying degrees of systemic fat embolization. These findings were not altered by changes in the heparin level, the utilization of protamine or by the type of anesthesia employed. Very few fat emboli were found if the oxygenator was omitted from the circuit. (*Owens, G., and others: Experimental Alterations of Certain Colloidal Properties of Blood During Cardiopulmonary Bypass, J. Appl. Physiol.* 14: 947 (Nov.) 1959.)

CARDIAC CATHETERIZATION Cardiac catheterization may produce cyanotic or syncopal attacks. Infundibular obstruction or spasm, resulting in an increased right-to-left shunt through the ventricular septal defect, is the most probable cause. In treatment, morphine intravenously has helped, but other drugs are of little value. Cyclopropane anesthesia with succinylcholine intravenously may cause improvement, but an emergency Tausig-Blalock anastomosis might be required. (*Brando, J. L., and Zion, M. M.: Cyanotic Spells and Loss of Consciousness Induced by Cardiac Catheterization in Patients with Fallot's Tetralogy, Am. Heart J.* 59: 10 (Jan.) 1960.)

BYPASS BLOOD FLOW An apparatus has been constructed which accurately measures blood flow electromagnetically during cardiopulmonary bypass or other extracorporeal perfusion using the square-wave electromagnetic flow meter. It is a cannulating blood flow device and does not interfere with the flow of blood in the extracorporeal circuit. Its advantages are: (1) accuracy and dependability, (2) direct read-out and monitoring, (3) simultaneous recording along with other modalities on a multiple channel recorder, (4) simplicity of inclusion in the bypass circuit