

bination. In 14 cases where recovery took place rapidly, a remarkable diuresis occurred. The author's experience with this method of management has been encouraging and deserves continued trial. (Poisvert, M., and others: *The Treatment of Shock and Circulatory Distress With a Combination of Isoproterenol and Hydrocortisone*, *J. Chir. (Paris)* 92: 131 (Sept.) 1966.)

CARDIAC MASSAGE The complications following closed chest cardiac massage includes such trauma as fractured liver, ruptured spleen, fractures of the ribs, hemothorax, and hemoperitoneum. One case of a large hematoma of the transverse mesocolon is reported. One case of perforation of the stomach is reported which may have been due to overdistension by mouth-to-mouth respiration. In this article a case is reported of a 47 year old physician who had cardiac arrest followed by external cardiac massage for less than three minutes. He had severe pain in the chest following this, but roentgenograms showed no evidence of fractures or other trauma. On the sixteenth hospital day, he developed a temperature of 103° F. and pain in the right upper abdomen. A mass was felt, and the abdomen was explored on the following day. An abscess was found in the right upper quadrant arising from a perforation of the transverse colon just distal to the hepatic flexure. Treatment was associated with a number of complications but the patient finally left the hospital. It is postulated that there was an initial trauma causing edema and interstitial hemorrhage of the bowel wall and a hematoma of the mesentery, and that these lesions ultimately progressed to necrosis and perforation of the bowel wall. One other case is cited in which a patient developed a large area of infarction of the small bowel secondary to an embolus originated from a mural thrombus which was forced into the systemic circulation during the time of chest compression. (Tobias, S.: *Perforation of the Transverse Colon Following External Cardiac Massage*, *Arch. Surg.* 94: 335 (March) 1967.)

VASOPRESSORS The effects of infusing norepinephrine, phenylephrine and angiotensin at different rates in dogs, and of infusing nor-

epinephrine in man were studied. Norepinephrine 0.2 $\mu\text{g./kg./minute}$ decreased urine volume about 60 per cent but had no other significant effects. Norepinephrine 0.3 $\mu\text{g./kg./minute}$ initially elevated blood pressure and reduced pH, standard bicarbonate, urine flow and creatinine clearance. Norepinephrine 1 $\mu\text{g./kg./minute}$ produced a more marked metabolic acidosis, hypovolemia and death. Neosynephrine 10 $\mu\text{g./kg./minute}$ had a similar effect to norepinephrine 1 $\mu\text{g./kg./minute}$, however, angiotensin 4 $\mu\text{g./kg./minute}$ produced transient changes of the same nature. Infusion of norepinephrine in phlebotomized dogs rapidly produced acidosis and death. In man, 2 $\mu\text{g./kg./minute}$ of norepinephrine resulted in changes in the same direction as the animal experiments. Infusion of sodium bicarbonate reversed the changes produced by norepinephrine and prevented death. (Morris, R. E., Jr., Thomas, T. D., and Robinson, P.: *Metabolic Effects of Vasopressor Agents*, *Bull. N. Y. Acad. Med.* 42: 1007 (Nov.) 1966.)

FRESHLY DRAWN BLOOD The use of freshly drawn blood for transfusion should be justified by the clinical and laboratory findings manifested by the patient in relation to the known effects of storage of blood. Clinical situations for which freshly drawn blood is often requested are: (a) treatment of chronic anemia; (b) bleeding due to thrombocytopenia; (c) blood for extracorporeal circulation; (d) correction of leukopenia; (e) hemolytic disease of the newborn; (f) treatment of coagulation disorders; (g) burns; (h) severe liver disease; and (i) blood for hemodialysis. A review of these situations reveals that only rarely are there indications for issuance of freshly drawn blood. In most situations an appropriate blood component, or relatively fresh blood, rather than freshly drawn blood is preferable. (Oberman, H. A.: *The Indications for Transfusion of Freshly Drawn Blood*, *J.A.M.A.* 199: 93 (Jan.) 1967.)

SICKLE CELLS The effect of microincision of sickled erythrocytes by a laser beam suggests that the cells may be subject to avulsion of their rigid cellular processes as a result of mechanical injury incurred in normal circulation. Such injured cells may undergo either