

clearance test from 20 to 60 per cent of normal. Return to normal ranged from 31 to 295 days. Concentration test showed 3 patients displayed a failure to concentrate at or above lower limit of normal. The study emphasizes the necessity of correcting hypotension rapidly, whatever its cause. (Hayes, M. A.: *Influence of Shock Without Clinical Renal Failure on Renal Function*, *Ann. Surg.* 146: 523 (Oct.) 1957.)

POSTOPERATIVE HYPOTENSION

This complication occurred in one patient out of every 31 admitted to the recovery room of Hartford Hospital. The incidence was highest among patients who had undergone gynecologic operations (51.4 per cent), although the group of orthopedic patients exhibited the highest incidence of postoperative transfusions required in the treatment of their hypotension (80 per cent). Postoperative hypotension can be classified in six categories according to etiological factors: cardiovascular, respiratory, pharmacological, neurogenic, hematologic or humoral. Of these, the factor most frequently responsible is the hematologic, including transfusion reactions, hemolysis and acute or chronic blood loss. (Barbour, C. M., and Little, D. M., Jr.: *Postoperative Hypotension*, *J. A. M. A.* 165: 1529 (Nov. 23) 1957.)

BLOOD VOLUME When severe macerating wounds of the thigh were produced in goats by high explosive, the decrease in measurable blood volume could not be accounted for by external blood loss. Since blood transfusions failed to increase the circulating red cell volume by the amount transfused, it appears that red cells are extravasated and then destroyed. This may explain the need for surprisingly large transfusions before anesthesia and surgery could be safely undertaken in Korean War casualties. (O'Brien, W. A., Howie, D. L., and Crosby, W. H.: *Blood Volume Studies in Wounded Animals*, *J. Appl. Physiol.* 11: 110 (July) 1957.)

BLOOD VOLUME Estimation of blood volume and blood loss by measuring plasma volumes and venous blood hematocrit determinations was much more in-

formative than estimating blood volume deficits by hematocrit determinations alone. Two volunteers bled 1,000 cc. and, when retransfused, showed no appreciable change in the hematocrit determination. The accuracy of the plasma volume and venous hematocrit method of estimating blood volume was confirmed in 2 bleeding patients and 15 normal patients who had simultaneous determinations of red cell mass (tagged Cr^{51}), plasma volume (I^{131} albumin) and hematocrit determinations performed. (Kerver, I. C., Tyor, M. P., and Ruffin, J. M.: *Blood Volume Determinations in Gastrointestinal Hemorrhage*, *South. M. J.* 50: 1147 (Sept.) 1957.)

BLOOD VOLUME Because the average percentage of cells in the entire body does not equal the venous blood hematocrit determination, an accurate determination of blood volume requires the simultaneous measurement of cell and plasma volume. In man, however, the ratio of the average percentage of cells to the venous blood hematocrit determination seems to be quite constant at 0.91. The use of this factor allows calculation of the blood volume to be made from either the plasma volume (blood volume = plasma volume $\times 100 / [100 - \text{per cent hematocrit}] \times 0.91$) or the measured cell volume (blood volume = cell volume $\times 100 / \text{per cent hematocrit} \times 0.91$). Provided relatively simple precautions are taken to minimize adsorption of iodinated protein onto laboratory glassware, the determination of human plasma volume with I^{131} labeled serum albumen agrees well with measurements made with Evans blue (T-1824). (Reeve, E. B.: *Contribution of I^{131} -Labeled Proteins to Measurements of Blood Volume*, *Ann. New York Acad. Sc.* 70: 137 (Aug.) 1957.)

VASCULAR REFLEXES Surgical shock was produced in rabbits and observations were made on the arterial pressure, pulse rate, respiration, temperature, the aortic reflex on stimulation of the cardiac depressor nerve, and the carotid sinus reflex. The development of shock was accompanied by a rapid decrease of the absolute strength of the vascular reflexes.