

tassium-induced cardiac arrest was employed as compared to nonarrested cases. It is not definitely known whether the enzyme release is due to a direct effect of potassium citrate upon the myocardium, to hypoxia, or to a combination of these factors. (Quinn, J. W., and others: *Transaminase Values Following Open-Heart Surgery*, *Ann. Surg.* 152: 45 (July) 1960.)

**SHOCK** Intravenous injection of lethal doses of endotoxin in anesthetized dogs produces a rapid decrease in total blood histamine, a concomitant rise in plasma histamine, and increased peripheral vascular responsiveness to histamine. Histamine apparently performs a crucial role in progressive development of hypotension after endotoxin is administered. (Hinshaw, L. B., and others: *Role of Histamine in Endotoxin Shock*, *Proc. Soc. Exp. Biol. & Med.* 104: 379 (July) 1960.)

**STARLING'S LAW** Transfusion of 1500 cc. of whole blood in the control state produces no significant change in central blood volume, an average elevation of cardiac output of .50 l. per minute and of left ventricular stroke work of 23 g.-m. The increase in each of these parameters resulting from transfusion during partial ganglionic blockade with Arfonad was substantially greater averaging 348 ml., 2.4 l. per minute and 73 g.-m., respectively. This suggests that when hypervolemia is induced acutely in intact man marked alterations in circulatory dynamics are prevented by the activity of the autonomic nervous system. This results in reflex venodilatation and depression of myocardial contractility, and accordingly, Starling's law of the heart cannot be readily demonstrated. When hypervolemia is induced after the activity of the autonomic nervous system has been reduced, more striking hemodynamic changes occur, resembling those in a Starling heart-lung preparation when venous inflow is augmented. (Frye, R. L., Braunwald, E., and Cohen, E. R.: *Studies on Starling's Law of Heart; Modification by Ganglionic Blockade*, *J. Clin. Invest.* 39: 1043 (July) 1960.)

**CEREBRAL BLOOD FLOW** A method employing  $Kr^{79}$  permits the rapid continuous estimation of total cerebral blood flow in man.

Cerebral blood flow determined by the  $Kr^{79}$  method and corrected for intracranial volume is significantly higher than the values obtained simultaneously with the nitrous oxide method. The results of the two methods are, however, significantly correlated. The  $Kr^{79}$  method is capable of following rapid changes in cerebral blood flow during unsteady states such as those induced by hyperventilation, carbon dioxide inhalation, or *l*-norepinephrine infusion. When combined with arteriovenous oxygen differences, the  $Kr^{79}$  method may be employed to follow changes in cerebral metabolic rate as well. (Lewis, B. M., and others: *Method for Continuous Measurement of Cerebral Blood Flow in Man by Means of Radioactive Krypton ( $Kr^{79}$ )*, *J. Clin. Invest.* 39: 707 (May) 1960.)

**INTRA-ARTERIAL TRANSFUSION** Intra-aortic injections of blood have been used in treatment of terminal states during operations and especially during thoracic operations when the aorta is easily accessible. Using X-ray control and 40-60 per cent solution of methiodal it was found that blood injected into the aorta enters the cerebral and coronary arteries. An injection of 50 ml. of the contrast medium is sufficient to fill the coronaries while 100 ml. is required in order to fill the cerebral arteries. The high degree of efficacy of the method was demonstrated in experiments on animals when intra-aortic injections of blood were given after clinical death had taken place. Intra-aortic injections were given to 40 patients; positive effect was observed in 33 (sustained in 13 and transient in 20 cases). (Karyukina, A. T.: *Intra-Arterial Injections of Blood in Experimental and Clinical Terminal States*, *Eksper, Khir.* 2: 55, 1959.)

**ESOPHAGEAL ECG LEAD** Seventy patients, aged 22 to 60 years, with hypertension were examined. The esophageal ECG lead has the advantage in demonstrating earlier axis deviations to the left (increased S wave and decreased R wave at all levels) and signs of slowing of intraventricular conduction (from 0.11 to 0.16 sec.). In 19 cases changes in the QRS-complex were only found in the esophageal lead, these changes being either absent or only slight in the other leads. Changes in the T wave (biphasic, negative or dimin-