

verine and Morphine Synergism in Pain Relief in Man, *Science*, 128: 84 (July 11) 1958.)

PLASMA PROTEINS AND CURARE

The levels of *d*-tubocurarine chloride and its distribution in plasma was studied in 7 normal and 2 refractory human subjects. In the two refractory patients, considerably higher plasma levels of *d*-tubocurarine chloride were found than in those of normal controls. This finding suggests that *d*-tubocurarine is found in excessive quantities in the plasma of refractory patients, and is unable to diffuse out of the vascular system in effective concentration to exert its action at the neuromuscular junction. (Aladjemoff, L., Dikstein, S., and Shafir, E.: Binding of *d*-Tubocurarine Chloride to Plasma Proteins, *J. Pharmacol. & Exper. Therap.* 123: 43 (May) 1958.)

MEPHENTERMINE The sympathomimetic amine, mephentermine sulphate (Wyamine) increases ventricular function in the isolated dog heart and in the dog with an open chest with a complete circulation. It has little effect on total peripheral vascular resistance. It increases myocardial oxygen consumption and decreases efficiency in the nondilated heart; but, the reverse was found when filling pressure was high in the heart. This is in agreement with LaPlace's Law concerning the relationship between the total tension developed by the myocardium and its oxygen utilization. (Welch, G. H., and others: Effect of Mephentermine Sulphate on Myocardial Consumption, Myocardial Efficiency and Peripheral Vascular Resistance, *Am. J. Med.* 24: 871 (June) 1958.)

VASOCONSTRICTOR DRUGS

A study was conducted in dogs of the effects of epinephrine, *l*-norepinephrine, methoxamine and mephentermine on the excitability, refractory period, rhythmic abnormalities, conduction times and action potential of the heart. Methoxamine proved to be depressant in that it prolonged the action potential and the absolute refractory period, while raising the threshold to stimulation and slowing A-V conduction. The other drugs induced ectopic pacemaker action, abnormal spontaneous beats, and multiple responses to test stim-

uli. All drugs exhibited some degree of tachyphylaxis. (Gilbert, J. L., and others: Effects of Vasoconstrictor Agents on Cardiac Irritability, *J. Pharmacol. & Exper. Therap.* 123: 9 (May) 1958.)

POLYPHARMACY

Methonium compounds, steroids and tranquilizers are only a few of the drugs introduced in the last few years which influence the response of patients to anesthesia. Side actions cannot be predicted by pharmacologists but become known only by clinical use over the years. (Dundee, J. W.: Iatrogenic Disease and Anesthesia, *Brit. M. J.* 1: 1433 (June 21) 1958.)

VITAMIN ANESTHESIA

SCTZ, a derivative of the thiozole fraction of vitamin B₁₂, is being introduced in France as a sedative and hypnotic. (Laborit, H., and others: SCTZ, A Depression of the Cerebral Cortex, *J. Internat. Coll. Surgeons* 29: 573 (May) 1958.)

EEG AND ETHER

Encephalogram desynchronization during ether anesthesia is dependent upon connection between cerebral cortex and the reticular formation. A microelectrode technique employed in cats showed continuing cortical activity where a section of cortex was disconnected from the reticular formation, while spontaneous firing of cortical cells still connected was deeply depressed. No overall increase or decrease in activity of the reticular formation occurred though there was a change in rate of individual cellular discharges in response to peripheral stimulation. Cortical response to cortical stimulation was affected only under deep ether. Chlorpromazine prevented the EEG desynchronization of ether while Dibenzamine did not. (Schlag, J., and Brand, H.: Analysis of Electrophysiological Events in Cerebral Structures During Ether Anesthesia, *Electroencephalog. & Clin. Neurophysiol.* 10: 305 (May) 1958.)

EEG A high per cent of children with cyanotic congenital heart disease had abnormal electroencephalograms as compared with those having acyanotic congenital heart disease. The abnormal patterns of the electroencephalograms were similar to changes produced by experimental hy-