

Literature Briefs

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Briefs were submitted by Drs. R. B. Boettner, A. Boutros, D. R. Buechel, R. B. Clark, D. Duncalf, F. C. McParland, D. H. Morrow, R. C. Morton, J. W. Pender, A. D. Randall, L. J. Saidman, and C. J. Wilkinson. Briefs appearing elsewhere in this issue are part of this column.

Circulation

BETA-ADRENERGIC BLOCKADE The electrophysiologic effects of stimulation of cardiac nerves, injection of analeptic agents into the fourth ventricle, beta-adrenergic blockade, total extrinsic cardiac denervation, and commonly-used cardioactive drugs on the heart of the awake dog were studied. Results indicate that autonomic nerve activity can have an important influence on experimental arrhythmias. This view was supported by clinical experience with beta-adrenergic blocking agents and cardiac sympathectomy. Propranolol, 0.2 mg./kg. intravenously, was used to achieve beta blockade; its effects included a substantial lengthening of the functional refractory period of the AV node, but did not change the refractory period or excitability of atrial muscle or alter significantly the threshold for producing ventricular fibrillation when single shocks were applied during the vulnerable period. It was suggested that propranolol would effectively control sinus tachycardia, reduce ventricular rate in atrial tachycardia or fibrillation, and inhibit ventricular ectopic beats. (Wallace, A. G., and others: *Electrophysiologic Effects of Beta-adrenergic Blockade and Cardiac Denervation*, *Bull. N. Y. Acad. Med.* 43: 1119 (Dec.) 1967.)

BETA RECEPTOR BLOCKER Properties of a new compound, I.C.I. 50172, are compared with the properties of propranolol. The classical beta receptor blocking agents block both the inhibitory and the excitatory actions arising from beta receptor stimulation. I.C.I.

seems to block only the excitatory responses and not the inhibitory responses. In anesthetized and conscious dogs, I.C.I. in doses which reduced or abolished the inotropic and chronotropic effects of isoproterenol, epinephrine, and norepinephrine did not affect the fall in arterial diastolic pressure produced by isoproterenol. The indications are that I.C.I. blocked beta receptors in the heart but not in the smooth muscle of blood vessels or respiratory tract. (Dunlop, D., and Shanks, R. G.: *Selective Blockade of Adrenoceptive Beta Receptors in the Heart*, *Brit. J. Pharmacol.* 32: 201 (Jan.) 1968.)

ATRIAL SEPTAL DEFECT The fates of 62 patients more than 40 years old who had atrial septal defects were analyzed. Ninety-four per cent had cardiac symptoms, 73 per cent had pulmonary artery hypertension, and 48 per cent had large left-to-right shunts. Forty-eight of the 62 underwent surgery; six (12.5 per cent) died in the early postoperative period (one month). In the past six years mortality has been cut to 6.5 per cent.) Seventy per cent of the survivors were improved at least one functional class; none were worse. It is concluded that operative treatment of ASD may be undertaken with relatively low mortality in patients over 40 years of age despite pulmonary hypertension and large shunts or congestive failure. In these patients, clinical and hemodynamic benefit is to be expected. (Gault, I. H., and others: *Atrial Septal Defect in Patients Over the Age of Forty Years*, *Circulation* 37: 261 (Feb.) 1968.)

NITROGLYCERIN Hemodynamic effects of nitroglycerin (0.6 mg.) were studied in patients with coronary artery disease. The studies were performed at the heart rates which ordinarily produced anginal pain in these patients. Sublingual nitroglycerin was given five minutes before elevating the heart rate by