a common finding and atrial fibrillation is frequently observed, it is possible that ionic alterations occurring in the heart muscle during faulty energy conversion within the myocardium are sufficient to activate an ectopic focus. The rate of discharge from this ectopic focus will govern the type of arrhythmia that ensues. (*Gelfand, M. L.: Cardiac Arrhythmias in Elderly, Geriatics. 14: 483 (Aug.) 1959.*)

VENTRICULAR FUNCTION The relation between left ventricular end-diastolic volume and stroke work in the intact dog at rest during exercise was studied utilizing a biplane cinefluorographic technique. A definite relationship exists between left ventricular end-diastolic volume and the work of the stroke immediately following, provided conditions are held reasonably constant. End-diastolic and end-systolic volumes regularly decrease with the onset of mild exercise in the same preparation. Stroke work usually increases during exercise. Pressure and kinetic work are usually under-estimated when calculated from mean values for pressure, volume and velocity instead of from integrated data. (*Chapman, C. B., Baker, O., and Mitchell, J. H.: Left Ventricular Function at Rest and During Exercise, J. Clin. Invest. 38: 1202 (July) 1959.*)

THYROTOXICOSIS Intravenous infusions of procaine were administered to 70 thyrotoxic patients during the preoperative period in order to reduce their acute nervousness; 5 ml. of a 0.5 per cent solution were infused on the first day, and 10 ml. daily from the second day on. Eight to twelve infusions were administered altogether prior to the operation and 1 to 2 after the operation had been performed. An improvement in the patients' general condition becomes manifest after 3 or 4 infusions: sleep is restored, headaches become less intense, tachycardia stops. The use of procaine reduced the preparation period before the operation to 10 or 12 days. (*Mikulyak, V. G.: Experiences in Preoperative Preparation of Thyrotoxic Patients. Vrach. Delo 4: 418, 1957.*)

HYPERTHYROIDISM The physiologic aberrations in hyperthyroidism uncomplicated by congestive failure was compared with the abnormalities found in patients in whom hyperthyroidism and congested heart failure coexist. In 14 patients without congestive failure the hemodynamic responses during exercise were qualitatively normal. In the patients who had been in congestive heart failure the absolute level of cardiac output was normal in 4 and was markedly elevated in 3. All had inadequate responses of cardiac output to exercise. Atrial fibrillation occurred only in patients in congestive failure or in those with antecedent heart disease. The peripheral circulatory load in thyrotoxicosis is hemodynamically similar to that of systemic arteriovenous fistulae. Congestive failure occurred in the presence of the circulatory load of thyrotoxicosis under the following conditions: when myocardial function was reduced by heart disease of other etiology; when thyrotoxicosis transiently caused an inadequate myocardial function; or when the circulatory load apparently overcame the reserve of the otherwise normal heart. (*Gracttinger, J. S., and others: Correlation of Clinical and Hemodynamic Studies in Patients with Hyperthyroidism With and Without Congestive Heart Failure, J. Clin. Invest. 38: 1316 (Aug.) 1959.*)

EFFICIENCY OF VENTILATION The efficiency of ventilation was studied in normal, emphysematous, and obese patients. In 7 normal subjects the efficiency of the chest wall and diaphragm was less than 7 per cent. The efficiency in 6 patients with emphysema was not greatly different at any particular work load, but this work load produced a smaller exchange of air. The 5 obese patients had values of efficiency which tended to be low. These low values were attributed to inordinately high energy costs required to move the adipose tissues overlying the chest and the abdominal walls. The possibility that the muscles were abnormal cannot be excluded, although there is no evidence to support this view. This extra energy expenditure presumably contributed to the dyspnea that was experienced by the obese patients on exercise. (*Fritts, H. W. Jr., and others: Efficiency of Ventilation During Voluntary Hyperpnea: Studies in Normal Subjects and in Dyspneic Patients With Either Chronic Pulmonary Emphysema or Obesity, J. Clin. Invest. 38: 1339 (Aug.) 1959.*)

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