

Literature Briefs

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Literature Briefs were submitted by Drs. L. Bachman, C. M. Ballinger, A. Boutros, T. B. Caldwell, R. B. Clark, M. I. Gold, D. H. Morrow, E. S. Munson, J. W. Pender, H. Roe, P. H. Sechzer, A. D. Sessler, and S. M. Shnider. Briefs appearing elsewhere in this issue are part of this column.

Circulation

ATRIAL FIBRILLATION In man spontaneous atrial fibrillation resulting from myocardial infarction was invariably preceded by one or more premature atrial contractions which led to a brief (2 to 30 sec) period of atrial tachycardia. This sequence was observed in 32 episodes in eight patients. However, not all premature atrial beats led to tachycardia and fibrillation. Twenty-eight spontaneous reversions of atrial fibrillation to sinus rhythm were associated with periods of atrial tachycardia. (Bennett, M. A., and Pentecost, B. L.: *The Pattern of Onset and Spontaneous Cessation of Atrial Fibrillation in Man, Circulation* 41: 981 (June) 1970.)

APNEA AND ARRHYTHMIAS Apnea increases the degree of A-V block and the incidence of A-V junctional escape rhythm or ventricular automaticity in patients with atrial fibrillation. Apnea reduces the incidence of A-V junctional tachycardia and has no effect on the rates of subsidiary pacemakers, but occasionally shortens the coupling interval of premature ventricular contractions. Cheyne-Stokes respirations increase the effects of apnea and often lead to runs of ventricular tachycardia in patients with atrial fibrillation who had only occasional premature ventricular contractions during normal respiration. (Urbach, J. R., and others: *Effects of Inspiration, Expiration, and Apnea upon Pacemaking and Block in Atrial Fibrillation, Circulation* 42: 261 (Aug.) 1970.)

MYOCARDIAL POTASSIUM Potassium was lost from the myocardium of each of 18 patients who developed anginal pain during atrial pacing. The potassium deficits averaged 0.23 ± 0.08 mEq/l. Eight patients with coronary artery disease and four patients with normal coronary arteries who did not develop angina during atrial pacing had significantly smaller potassium losses (0.06 ± 0.06 mEq/l). The potassium losses in the 18 patients with clinical ischemia correlated with increased myocardial lactate production ($r = 0.83$) and with decreased pH of coronary sinus blood ($r = 0.86$). ST depressions averaging 1.8 mm appeared in the ischemic group, but were less than 1.0 mm in the asymptomatic patients. When pacing was discontinued, positive myocardial potassium balances appeared in both groups. (Parker, J. O., and others: *The Effects of Ischemia and Alterations of Heart Rate on Myocardial Potassium Balance in Man, Circulation* 42: 205 (Aug.) 1970.)

ORTHOSTATIC STRESS Patients in congestive heart failure tolerated orthostatic stress better than normal subjects, and subsequent treatment of the congestive heart failure with one to three weeks of bed rest did not decrease their tolerance. (Jeffrey, F. E., and others: *Increased Tolerance of Patients with Circulatory Congestion to Orthostatic Stress, Amer. J. Med. Sci.* 259: 323 (May) 1970.)

REGIONAL CEREBRAL OXYGEN UTILIZATION Regional cerebral oxygen utilization rates in 15 patients with cerebral disease were reported. Blood containing radioactive oxygen-15-tagged hemoglobin was rapidly injected into the internal carotid artery of the patient. A second injection was made under identical circumstances except that the blood was labeled with water- 18 O. After each injection, the distribution of radioactive label in the brain was measured and recorded, as a func-