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COMMUNICATIONS

The antihypertensive properties and effects on urate and electrolyte excretion of tienilic acid, bendrofluazide and spironolactone

C.J.C. ROBERTS*, A.J. MARSHALL, S. HEATON & D.W. BARRITT

Departments of Medicine and Cardiology, Bristol Royal Infirmary, Bristol 2

Influence of coronary artery occlusion on the myocardial distribution of digoxin

M.A. DAVIS, D. MACLEAN & P.R. MAVOKO
(introduced by I.H. STEVENSON)

Cardiovascular Division of the Department of Medicine, Harvard Medical School and Peter Bent Brigham Hospital, Boston, Mass. and the University of Dundee

Speculation continues as to whether or not digoxin enhances the risk of ventricular dysrhythmias during acute myocardial infarction (Lown, Klein, Barr, Hagemeyer, Kosowsky & Garrison, 1972). Any heterogeneous distribution of digoxin might increase the arrhythmogenic potential of the ischaemic myocardium. Two aspects of the relationship between ischaemia of the myocardium and myocardial digoxin concentrations were therefore studied in 28 open-chest dogs with anterior wall infarction; firstly myocardial digoxin uptake and secondly, but more importantly, the rate and duration of the 'washout' of the drug from the myocardium. The uptake of ^{125}I labelled digoxin by the ischaemic myocardium, although directly proportional to regional myocardial blood flow (RMBF), was less severely depressed than was RMBF. As 'washout' times during continuing coronary occlusion were prolonged for up to 12 h, the concentrations of ^{125}I labelled digoxin in the ischaemic myocardium became steadily higher relative to those in the normal myocardium and reaching up to 208% of the normal. In addition, the more ischaemic the myocardium, the slower was the 'washout'. Thus, in acute myocardial infarction the distribution of digoxin throughout the myocardium is markedly heterogeneous and the effects of continued administration of the drug merit further study.

Reference

LOWN, B., KLEIN, M.D., BARR, I., HAGEMEYER, F., KOSOWSKY, B.D. & GARRISON, H. (1972). Sensitivity to digitalis drugs in acute myocardial infarction. *Am. J. Cardiol.*, **30**, 388–395.