Literature Briefs

C. Philip Larson, Jr., M.D., Editor

Briefs were submitted by Drs. A. Boutros, D. Duncalf, J. E. Eckenhoff, J. Jacoby, H. W. Linde, W. H. Mannheimer, D. H. Morrow, A. D. Randall, A. D. Sessler, and C. J. Wilkinson. Briefs appearing elsewhere in this issue are part of this column.

Circulation

ARRHYTHMIAS In controlling cardiac arrhythmias with xylocaine, it was found that 1 to 2 mg./kg. produced a satisfactory effect. This is followed by an intravenous infusion of 1 to 2 mg./min., rather than repeat the first large intravenous dose. Xylocaine was judged safer than other drugs used in the treatment of arrhythmias, since at twice these doses, no fall in blood pressure or cardiac output occurred. (*Spracklen, F. H. N., and others: Use of Lignocaine in Treatment of Cardiac Arrhythmias, Brit. Med. J. 1: 89 (Jan.) 1968.*)

GASTRIC HYPOTHERMIA Cardiovascular complications may occur after gastric hypothermia. In dogs, gastric hypothermia was induced, and blood flow through the circumflex coronary artery was measured. As body temperature declined, flow decreased. Body cooling by immersion in ice water was tested in another group of dogs. Reductions in blood flow were similar at all temperatures. At 28° C. (body temperature) coronary blood flow was reduced 43 per cent with gastric cooling and 48 per cent with general body cooling. Blood pressures declined slightly more with body cooling, whereas pulse rates declined slightly more with gastric cooling. During gastric cooling, the temperature of the apex of the heart was about 2° C. lower than the rectal temperature. (*Walker, L. G., Jr., and others: Circumflex Coronary Artery Flow, Arch. Surg. 96: 328 (March) 1968.*)

AORTIC DECLAMPING Four groups of mongrel dogs (eight to ten dogs per group), each dog weighing between 12 and 26 kg., were subjected to cross-clamping of the aorta for ten minutes. Clamps were applied below the renal vessels in one group and above the renal vessels in the other three groups. Of the latter three groups, dogs in one group were rendered hypovolemic (through prior bleeding to systolic blood pressure of 60 to 70 mm. Hg), while dogs in another group underwent ligature of primary branches of the anterior descending coronary artery. On declamping there were transient (average 40 seconds) but significant decreases in systemic blood pressure (32 per cent to 40 per cent of control values) and in circumflex coronary artery blood flow (22 per cent to 52 per cent of control values), whether cross-clamping was infra- or suprarenal. However, in hypovolemic dogs or in dogs with ligated coronary branches, there were more pronounced decreases in systemic pressure (56 per cent to 44 per cent of control values, respectively) and in coronary blood flow (88 per cent to 78 per cent of control values, respectively) and the return to baseline values was markedly delayed (8.5 and 7 minutes, respectively). Arrhythmias (including ventricular fibrillation) occurred on declamping in five of eight dogs with ligated coronary artery branches and in one hypovolemic dog. Rapid administration of blood (100 ml. in dogs with infrarenal clamps and 200–300 ml. in those with suprarenal clamps) through the cannulated femoral artery, just before declamping, effectively prevented declamping hypotension and abolished or minimized reductions in coronary blood flow. (*Levowitz, B. S., and others: Coronary Blood Flow in Aortic Declamping Hypotension, Ann. Surg. 167: 414 (March) 1968.*)