

anesthetized dogs. Threshold values of the baroreceptors were found to lie toward the lower end of the range of pressures usually quoted for the normal pulmonary arterial pressure in the dog. The baroreceptors signaled each rise in pressure above the threshold with an increase in the frequency of discharge and the number of impulses per cardiac cycle. In both intact and isolated pulmonary artery, pulsatile pressure was a more effective stimulus to the receptors than was a steady pressure. (Coleridge, J. C. G., and Kidd, C.: *Relationship Between Pulmonary Arterial Pressure and Impulse Activity in Pulmonary Arterial Baroreceptor Fibres*, *J. Physiol.* 158: 197 (Sept.) 1961.)

**CARDIAC OUTPUT** Cardiac output was measured with peripherally injected Evans blue T 1824 and a computing ear oximeter in 28 normal children (5 to 13 years) and 18 normal adults (24 to 54 years). The average values of 3.19 liters/minute/square meter in children and 3.06 liters/minute/square meter in adults confirm that the recognized relationship between cardiac output and body size for adults holds also for children of the size studied. There was no significant difference in the cardiac index of 17 children breathing 50 per cent nitrous oxide in oxygen and 11 others inhaling a mixture of 50 per cent nitrous oxide in oxygen plus 0.25 per cent halothane. (Jegier, W., and others: *Cardiac Output and Related Hemodynamic Data in Normal Children and Adults*, *Canad. J. Biochem. Physiol.* 39: 1747 (Nov.) 1961.)

**ARRHYTHMIA** Two factors, a sympathomimetic amine with cardiac actions and an increase in systemic blood pressure, are required for the consistent induction of bigeminy in cyclopropane-anesthetized dogs. In animals in which a large dose of dichloroisoproterenol (DCI) did not increase the adrenaline threshold for bigeminy, previously ineffective mechanical elevation of blood pressure induced bigeminy. Neither methoxamine nor DCI alone caused bigeminal rhythm, but their combination effectively induced bigeminy of long duration. (Sutter, M. C., and Dresel, P. E.: *Mechanism of Selective Blockade of Cyclopropane-Adrenaline Cardiac Arrhythmias by*

*Dichloroisoproterenol*, *Canad. J. Biochem. Physiol.* 39: 1783 (Nov.) 1961.)

**BODY HEATING** During fifty minutes of increased body temperature to 99.5–100.8° F. cardiac output increased 60 per cent from control values, mainly because of increased heart rate. Finger blood flow increased rapidly to reach an early maximum, but forearm blood flow increased gradually throughout the heating period. Increased limb blood flow was confined to skin vessels and average increase in cutaneous blood flow during heating was 1.8 liters/m.<sup>2</sup>/minute. (Kororezdis, G. T., Shepherd, J. J., and Marshall, R. J.: *Cardiovascular Response to Acute Heat Stress*, *J. Appl. Physiol.* 16: 869 (Sept.) 1961.)

**CARDIAC ARREST** Histological and histochemical changes in the myocardium of dogs after coronary artery ligation were compared with those in dogs subjected to extracorporeal circulation and induced cardiac arrest using potassium chloride, anoxia and anoxia with mild hypothermia. After coronary ligation there was nuclear rarefaction and almost total loss of glycogen in 5 to 20 minutes. After only total cardiopulmonary bypass for one hour, essentially no changes occurred. After 30 minutes of anoxic arrest, severe functional impairment of the myocardium and abnormal nuclear morphology were noted comparable to that noted after coronary artery ligation of 5 to 15 minutes. After anoxia and local mild hypothermia, variable improvement of histology was noted, although there was some postperfusion impairment in cardiac function. One hour after potassium citrate arrest, there appeared to be no histologic changes. However, there was extensive necrosis of the myocardium in the recovery period. Decrease in histochemical glycogen was greatest after coronary artery ligation, less after hypoxia with or without hypothermia and least if cardiac arrest was due to potassium citrate. (Miller, D. R., and others: *Elective Cardiac Arrest. Its Effect on Myocardial Structure and Function*, *Ann. Surg.* 154: 751 (Nov.) 1961.)

**CARDIAC MASSAGE** The brachial arterial pulse was recorded during cardiac massage in a patient who had an asystolic cardiac ar-

Downloaded from https://pubs.ascp.org/ajph/article-pdf/23/2/283/280389/0000542-19620300-00064.pdf by guest on 07 December 2024