Department of Reviews and Abstracts

Selected Abstracts

Schade, H.: The Transmission of Pulsations from Arteries to Veins and Its Bearing on the Circulation of Blood. Ztschr. f. Kreislaufforsch. 28: 144, 1936.

This report, compiled posthumous by O. Hepp, is based on extensive studies of animals and models. Work on models demonstrated that the efficacy of the transfer of the pulsation from arteries to veins increases as the arterial pulse amplitude and the pulse frequency are increased until optimum values are reached.

Animal experiments and roentgenological studies in man demonstrated pulsatory fluctuations in blood velocity in the peripheral veins. These were synchronous with the arterial pulse. In the presence of functionally efficient venous valves, these pulsations in the veins cause an effective acceleration of flow toward the heart. Changes in tone of the veins and in the degree of extravascular support offer an automatic regulation of the transmission of the pulsations from the arteries to the veins. Records of peripheral venous pulsations were obtained with a special sphygmograph which excluded the possibility of retrograde transmission from the heart. These peripheral venous pulses were of relatively small amplitude.

L. N. K.

Palme, F.: Action of Adrenalin on the Carotid Sinus. Ztschr. f. Kreislaufforsch. 28: 173, 1936.

Topical application of 1:1,000 adrenalin solution to the exposed carotid sinus of the rabbit caused a protracted hypertension.

L. N. K.

Walter, J.: Effect of Calcium on Adrenalin Reaction. Arch. di. sc. biol. 38: 300, 1935.

Experiments were conducted on perfusion of the isolated rabbit's ear and frog's limb. The normal calcium chloride content of the perfusing fluid was 0.2 per cent for the rabbit and 0.1 per cent for the frog. A fourfold increase in the calcium caused vasoconstriction; absence of calcium caused vasodilation; and subsequent restoration of calcium, marked vasoconstriction. A decrease in the calcium reduced the normal vasoconstrictor response to adrenalin (1 to 10 million for the rabbit, 1 to 5 million for the frog). Increased calcium content had a different effect in the two cases.

E. A.

Smith, Dietrich C., and Mulder, Arthur G.: The Effect of Accelerator Nerve Stimulation and of Adrenalin on Recovery From Ventricular Fibrillation in the Cat. Am. J. Physiol. 115: 507, 1936.

In cats spontaneous recovery from ventricular fibrillation following faradization of the ventricles occurs in the large majority of animals.

Evidence is presented to show that the time of fibrillation varies directly with the weight of the cat (size of the heart).