

PROGRESS OF MEDICAL SCIENCE.

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UNDER THE CHARGE OF

WILLIAM OSLER, M.D.,

REGIUS PROFESSOR OF MEDICINE, OXFORD UNIVERSITY, ENGLAND.

AND

W. S. THAYER, M.D.,

PROFESSOR OF CLINICAL MEDICINE, JOHNS HOPKINS UNIVERSITY, BALTIMORE, MARYLAND.

Arteriosclerosis and Palpable Thickening of the Arterial Wall.—FISCHER and SCHLAYER (*Deut. Archiv. f. klin. Med.*, 1909, xcvi, 164) publish the results of a clinical-anatomical study, undertaken for the purpose of determining the alterations in the arterial wall which render it palpable. Their material consisted of seventy-five arteries obtained from twenty different subjects. A comparison of the palpability of the artery and its anatomical condition showed that in one half of the cases in which, anatomically, there was sclerosis of the intima, no thickening of the artery was demonstrable during life. On the contrary, in 65 per cent. of all cases there was palpable thickening, though no intimal lesion was found. Indeed, of the instances showing the most marked palpable thickening, excepting the nephritic, no sclerosis could be seen on microscopical study of the vessel wall in 75 per cent. of the cases. Therefore, they conclude, sclerosis of the intima is of minor importance in determining the palpability of a vessel. The authors found sclerosis of the media only rarely, showing that the most marked thickening of the vessel wall may be present independent of an arteriosclerosis. According to the studies of Romberg and of O. Müller, it has been established that very thick-walled arteries are to a certain extent functionally insufficient. But this thickening and impairment of function need not imply an arteriosclerosis. Microscopical examination having shown normal intima and adventitia, the cause of the thickening of the artery, in all cases in which it exists in the absence of arteriosclerosis, must be sought in the media. Thickening of the media plays a certain, though minor, role. It is apparent that the explanation of this palpable thickening must be found principally in a functional change in the media, which

is not demonstrable anatomically. In contradistinction to the arteries in cases of contracted kidneys, these changes are coincident with diminished function, the result being practically the same as that produced by sclerosis of the arteries.

The Effect of Cardiac Stasis on the Distribution of Blood to the Internal Organs.—The general venous stasis of cardiac origin has usually been explained on purely mechanical grounds. No experimental evidence has been brought forward, and proof of other factors is therefore lacking. THACHER (*Deut. Archiv. f. klin. Med.*, 1909, xcvii, 104) has made a careful study of acute experimental cardiac insufficiency to determine the probable explanation of the phenomena in man. As he is careful to point out, his work does not apply to chronic cardiac insufficiency, which will be considered in a future paper. In rabbits, cats, and dogs, the inflation of a balloon within the right auricle is followed by immediate passive dilatation of the large veins, liver, and brain; but by a fall in the volume curves of the intestine, spleen, kidneys, and extremities. This fall in the volume curve does not coincide with the fall in the arterial pressure that follows such partial obstruction of the right auricle. The blood pressure falls within a few seconds and then remains constant or may recover slightly, whereas the volume curves continue to diminish for as much as five or six minutes longer. The lack of dependence of the volume curves upon the arterial pressure is more striking just after removal of the obstruction, when the blood pressure rises immediately; the volume curves fall temporarily and then recover gradually. In the brain and liver, organs in which vasomotor control is known to be extremely weak, the venous stasis following cardiac obstruction causes an acute passive congestion. In all the other organs examined, decrease in volume was noted, not merely a mechanical result of arterial anaemia, but due to an active contraction of the bloodvessels. The main factor which influences the distribution of blood to the organs is therefore not mechanical, but rather biological, that is, the vasomotor innervation of the organs. The constriction of the vessels in the spleen, kidneys, and extremities is a protective mechanism to prevent the blood pressure from reaching a dangerously low point.

The Use of Fats in the Treatment of Disorders of the Stomach.—As a result of experimental evidence which shows that the liquid fats are devoid of any excitative influence on gastric secretion, and that their presence exerts an inhibitory influence on the normal energy of the secretory process excited by other food-stuffs, a number of observers have administered liquid fats in disturbances of the stomach associated with hyperacidity. The beneficial effects of such treatment are corroborated by the series of cases reported by MOORE and FERGUSON (*Proceed. of the Royal Society of Med.*, 1909, iii, *Med. Sec.*, 25). In sixty-two cases with subjective manifestations of gastric disorder, there were given on consecutive days a plain test-breakfast, and a test breakfast preceded thirty minutes by one ounce of almond oil. In every instance the administration of oil was associated with a marked reduction in both free HCl and total acidity. The greatest reduction was found in those cases, which gave the highest average acidities with the plain