

enough to cause extensive arterial disease, but they frequently initiate an inflammation of the kidneys which leads to extensive vascular degeneration.

If the causes of arteriosclerosis are obscure, the symptoms are still more uncertain. Frequently, cases live for years with torturous temporals, arcus senilis and a hard pulse with a curved radial. In other cases these symptoms are almost absent, and yet they suffer from arterial rupture. This shows the distinction between atheroma and sclerosis; the latter may exist in high degree and for a long time without rupture, but if fatty degeneration and softening occur the wall gives way. The distribution of the sclerosis determines to a large extent the symptoms. As a rule the smaller arteries are most involved, but it is rare that the aorta escapes. All branches of the arterial system are not equally affected, and the extent of the process in the arteries of the different organs is subject to wide variations. The large arteries may be extensively affected with a marked alteration in vascular pressure.

If the tonometer of Gaertner fulfils its expectations valuable light will be thrown upon arterial disease. In it we have an accurate and rapid instrument for measuring vascular pressure. This has heretofore been lacking, the only substitutes being the finger of the sphygmograph. The latter is very unreliable. The finger readily appreciates a change in the character of the pulse, but the conditions are so variable under which the artery is felt that at best only an approximate idea of vascular pressure can be reached.

The chief clinical signs of arteriosclerosis are increased arterial tension, palpable thickening of the arterial wall, accentuation of the second aortic sound, and hypertrophy of the left ventricle. The most important is the non-valvular hypertrophy of the left ventricle with accentuated second sound. The next most important is high arterial tension, but this may be temporary; if it is continuously found over a considerable period it is strongly indicative of arteriosclerosis. Auscultation of the posterior surface of the chest furnishes the best index of an accentuated second sound; if it is heard distinctly between the seventh dorsal vertebra and the spine of the scapula it is strongly confirmatory of arterial contraction.

The prognosis is usually unfavourable, but it depends on the extent to which the heart, brain or kidneys are involved in the degeneration. The disease once set up is apt to be progressive, because the conditions that give rise to it are irremediable. Patients should be frankly told