

acting upon them directly or indirectly through the vasomotor centre, suffices to produce it, or, as I have ventured to urge, that it is due in the vessels, as in the heart, to enhanced dilating stresses. The answer is not easy, as the closer the constriction in any vascular area the lower must be the pressure, which, *cæteris paribus*, is converted into velocity. Perhaps if the resistance distal to the area of constriction be high, spasm and high internal pressure may co-operate to produce hypermyotrophy. That the muscular arteries on the hither side of areas of spasm will dilate and hypertrophy under the rise of pressure caused by it needs, I think, no asseveration. And how, thereafter, under this strain, arterial disease arises—hypermyotrophy is scarcely to be called disease—I have already stated; this is, of course, a later phase, a phase in which the state of the vessel passes into the irremediable. But for a moment I may return to calcification. Calcification rarely occurs in the arteriosclerosis originating in high pressures; it is characteristic of the involutory kind. But it is a common error to suppose that calcification is a very slow process, or one confined to old age. It may scatter itself widely and profusely in comparatively short periods, and it may attain even extreme degrees so early as the fifth decade of life, possibly in rapidly decaying individuals, even sooner. On the whole, then, calcification is, clinically speaking, a presumption against hyperpiësis, present or past—hyperpiësis, that is, above the degrees usual for the time of life. Notwithstanding, I have records of a few cases, primarily of hyperpiësis, observed over long periods of time, in which calcification supervened—exceptions which test the rule. For in these it was apparent, on consideration of all the facts of each case—facts clinical as well as pathological—that the calcification appeared when the processes of hyperpiësis had ceased or become subordinate, and the life of the patient had been spared to undergo the ordinary involutory changes which are present in the vast majority of elderly persons.

PROFESSOR ADAMI said: While appreciating fully the distinction which Professor Clifford Allbutt has drawn between compensation and adaptation, I feel bound as a pathologist to cross blades with him regarding the importance and the frequency of adaptive conditions; nay, more, I would go so far as to lay down that pathological processes so far as they are reactive are coincidentally adaptive to a very great extent. As pathology widens itself from a study, histological and otherwise, of morbid states, to one of morbid processes, so inevitably are we driven to realize that this is so. I need but recall that the abundant and valuable recent studies upon acquired immunity, upon hæmolysins, cytolysins, and the like, recall to us a vast series of these adaptations. And here,