

shows processes of decomposition in protoplasm or nucleus, may be accepted as indicative of a true fatty degeneration, in the sense that the metabolism of fats cannot be properly accomplished in the functionally incapacitated cell. It is probable that the accumulation of fat in excess, in the tissues of the arteries, owes its presence both to true degenerations as well as to processes of a hyperphysiological nature. On the other hand, an accumulation of fat may occur within a tissue, in which its presence is not associated with cell activity or inactivity, but in which the living cells play no direct part, the fatty materials accumulating in the vitally inactive intercellular substance through chemical affinity. These extracellular deposits play no small part in the localization of lipoid masses in the arterial walls. We have recently pointed out the affinity of old amyloid deposits for fat, a process which appeared in part physical rather than chemical. We will later refer to a similar affinity for fat possessed by the hyaline intercellular substance of chronic endarteritis. In these latter instances, the fat is found to deposit only as the tissue changes of the vessels have passed from one state to another, until the nature of the degenerative process is such as to attract fat or lipoid bodies to itself.

In the arteries the important tissue changes associated with the deposit of fat occur in the intima. The muscle cells of the media may also show fat granules in their protoplasm, and, in fact, demonstrate these in the aorta of all individuals over fifty years, but no such important significance may be attached to this medial degeneration as a similar process in the intima. Virchow made a distinction between the superficial fatty deposits (fatty degeneration) of the intima and atheroma. The former he claimed was a process of fat accumulation within cells which remained superficial, while the latter was destructive and deep, lying upon the inner zone of the media. Jores has pointed out, and we believe rightly, that the distinction thus given is superfluous, and that many areas of superficial fatty changes may continue to increase and by the development of a fibrous plaque over the surface, come to take a deeper