

and that opposite the sites of nodular sclerosis the paraffin showed no indentation such as might be expected from localized intimal thickenings.

Moreover, on examining the arterial wall, which had been subjected to the continuous pressure of the paraffin, he found that the intimal surface was quite smooth and free from the endarteritic irregularities such as are found in the collapsed arteries at post-mortem.

Thoma further examined cross-sections of these arteries and found that not infrequently the media was thinned opposite the endarteritic plaque. He stated also, elsewhere, that the thickened intima might overlie an area of the media which appeared normal or even hypertrophied.

From his various observations Thoma deduced his well-known theory, the main features of which are briefly these: (1) the beginning of an arteriosclerosis, either endarteritis nodosa or diffusa, results from a weakening of the media which allows the artery to dilate either over a small circumscribed area or one involving a considerable portion of the arterial wall; (2) this dilatation of the arterial wall causes a widening of the lumen, which in turn induces a slowing of the blood current at this point. This slowing of the blood stream now acts as a local irritant leading to his so-called "compensatory hypertrophy of the intima."

Thoma's theories to-day are upheld by some and denounced by others. As we have improved our technique for pathological examination, it has been shown that some of his views are untenable.

During the foregoing winter, 1909, I repeated some of Thoma's experiments, but had little success in the use of paraffin as an injection fluid. I found that paraffin was liable to produce artefacts which were misleading. When paraffin was injected into the aorta, the globules of water adhering to the fresh vessel wall produced irregularities in the mold of the hardened wax. I also found that the paraffin, after it had set and when the pressure of the fluid paraffin without had no effect upon it, underwent a considerable shrinkage, producing other artefacts, and in my specimens it always showed extensive irregularities of the intima on the paraffin core. In no instance could I substantiate Thoma's claim that the lumen