of crystals like those of calcium salts. Many of the cells were vacuolated as if containing drops of fat. In one area the media, too, showed degeneration where the muscle cells were entirely wanting, while the elastic bands were thrown into prominence by a darker blue staining, due to a calcification. Fractures were occasionally seen in the elastic laminæ. Remarkable cells were found between these calcified elastic bands. These cells were large with a spherical media and lay in a homogeneous looking matrix with vacuoles about them. One was reminded of the appearance of cartilage cells, though definite cartilage was not to be made out.

A study of these sections convinces one that the muscular changes are primary. The rupture and changes in the elastic fibres are secondary.

Descending aorta just above diaphragm.-The vessel wall was in its greatest extent narrowed. Only short stretches of normal looking The rest of the wall showed a hypertrophied aortic wall were seen. intima, in which the musculo-elastic layer was thickened, while the media The middle zone of the media showed a band of was much narrowed. calcification almost encircling the vessel. There was a narrow strip of media on both sides of the calcified band, which showed the muscle cells wanting to a great extent, while the elastic fibres lay more closely The adventitia nowhere showed change. In the calcified together. band of the media no cells were to be made out. This degenerative change in the descending aorta resembled that produced in the aorta by adrenalin chloride.

*Carotids.*—In the carotids the changes found were principally located in the intima. The media showed no changes in any part, save such as is produced by the compression of the thickened intima and slightly fatty degeneration along the border of the internal elastic lamina.

The intima was in parts normal, consisting of a single layer of endothelium lying upon the internal elastic lamina. In other parts there was a thickening of this membrane to that exceeding the thickness of the media. This thickened portion of the intima was made up of a superficial and circularly disposed layer of connective tissue (possibly of endothelial origin), while beneath this was a thick layer of longitudinally disposed muscle fibres, with extensive fatty degeneration in them. In this deeper layer of the intima many of the muscle cells had entirely disappeared, leaving behind a granular debris mixed with minute fatty granules. In some places this thickened intima occupied one-half the circumference of the vessel.

We have, therefore, in this experiment been able to reproduce by physical means two kinds of changes in the arterial walls. The one is