

fibroblasts were apparent, but no new connective-tissue fibers were observed.

The main coronary arteries of the heart were but little affected, save at the periphery of the adventitia. The smaller arterioles, however, showed a dense infiltration about them, with a considerable change in the appearance of the heart tissue in the immediate vicinity. In places the infiltrating cells were mainly lymphocytes, while in others again leukocytes and endothelial cells appeared to make up the main type of invading cell. The heart muscle adjoining these involved vessels showed evidence of degeneration and not infrequently complete death. In the place of these heart muscle cells there remained a homogeneous and almost structureless material with occasional evidence of replacement by fibroblasts. The perivascular infiltration was very widespread and quite uniform throughout the heart muscle.

It is indicated in the above that the main reaction occurring about the arteries during the acute stage of rheumatic fever is in the outer coats. The adventitia and the media are probably simultaneously involved, at times by way of the nutrient vasa vasorum, or in the case of the smaller vessels, the arterioles, directly from the perivascular lymph stream. The reaction is of the acute non-suppurative variety, in which the lymphoid type of cell and the endothelial cells play the important part. Similar to the reaction in the heart, the tissues of the arteries suffer directly from the harmful agent of acute rheumatism, in which both muscle cells and elastic fibers in the immediate neighborhood are destroyed.

RECURRENT RHEUMATIC FEVER. Four cases of recurrent rheumatic fever were studied. Their ages were twenty-eight, thirty, thirty-six, and forty-four years respectively. In each case there was a history of one or more previous attacks, and the heart showed the presence of subacute and chronic interstitial myocarditis to a varying degree. Moreover, some form of recurrent endocarditis was present in each heart.

Sections of the aorta showed the intima to be fairly intact and with no definite areas of thickening. The arrangement of the media appeared quite normal and regular in its inner half. However, it was observed that the vasa vasorum were quite frequent in the