

cavities, particularly the pericardium and the joints, partake of a reaction similar to that of the nutrient arteries of the aorta and heart. In how far the vessels of the meninges and the abdominal viscera respond to the irritant present in rheumatism I am not prepared to say.

ACUTE RHEUMATIC FEVER (FIRST ATTACK). Of such cases I have had only three to autopsy, aged nine, sixteen, and nineteen years respectively. All of them had associated cardiac disease, two with pericarditis, all with acute interstitial myocarditis, two with fresh mitral deposits, and one with recent mitral and aortic vegetations. The youngest case had suffered choreiform attacks during his illness.

The arterial findings being similar in these cases a single description will suffice. Macroscopically the arteries were but little changed, the oldest individual alone showing superficial fatty streaks in the intima. The elasticity of the aorta was not altered and none showed the inflammatory foci to the naked eye. Microscopically, however, there was a very striking picture present in each case. Sections of the ascending and transverse portions of the aorta showed that the intima was not thickened and the lamellae of the media appeared regularly disposed. In the media, however, the arterioles appeared more prominent than usual, and these nutrient vessels encroached beyond the outer third into the muscularis. These arterioles had an edematous perivascular infiltration in which aggregations of lymphocytes and plasma cells were constantly found. Moreover, the elastic fibers of the media in this vicinity were interrupted, often appearing as if mechanically broken. Muscle elements of the media in the neighborhood of the vasa vasorum had also, in part, disappeared, an indication of some local toxic agent surrounding the nutrient vessels.

In the adventitia the infiltration by inflammatory cells was very extensive. Lymphocytes and plasma cells were diffusely scattered through the tissue, while more densely aggregated cells were seen about some of the vessels. Polymorphonuclear leukocytes were also seen, but in relatively small numbers. Occasionally areas indicating endothelial proliferation were observed in the vicinity of the capillaries. The connective tissue was loose and rather edematous, while the capillaries were much congested. In some of the reactions