

excess of connective tissue. This fibrosis develops through the increase of connective tissue around the small vessels and becomes attached to the fibrous capsule of the organ. The radiating character of this fibrosis is quite distinct. Only secondarily does it involve the tubules and glomeruli which lie in its path in the cortex. The structures intervening between these lines of fibrosis are uninvolved in the cirrhotic change so that many glomeruli throughout the cortex have normal characters and the tubules lying outside of the zone of fibrosis are unchanged. With the shrinkage which accompanies all forms of inflammatory fibrosis, the involved areas tend to narrow the cortex by drawing the surface closer to the outer border of the medulla. The unequal distribution of the fibrous tissue leads to an irregular amount of contraction producing a very granular kidney. Naturally the amount of shrinkage is dependent upon the state of the disease as well as the intensity of the primary inflammatory process. This final stage is known to us as the granular kidney, the genuine contracted kidney, or true chronic interstitial nephritis.

In our discussion we have suggested a bacterial irritant underlying the inflammatory reactions in each of the involved organs. The same organism appears capable of producing inflammatory lesions simultaneously in many tissues and owes its distribution to the blood stream.

In recent years much has been done to indicate the importance of definite streptococcal infections in the inflammatory lesions of the heart and circulatory organs. Although all are not agreed upon the particular type of organism which is mainly at fault, yet it is important that various observers have had their attention attracted to an organism or group of organisms which induce a sub-infection, having more severe focal processes in one or other organ. Though we believe that these focal depositions of bacterial infection may involve many different organs and bring about various grades of inflammatory reaction, our chief attention has centred about the infective heart disease. Nevertheless, the arteries, meninges, kidneys, joints, and liver have been shown to be variously involved in different cases. A study of the organisms associated with such lesions has called forth a nomenclature greatly confusing the subject.

The important bacteria belong to the group of streptococci, and may be recognized by their biological characters and separated from the pus-producing streptococcus, as well as from the pneumococcus. By Schottmuller this variety of streptococcus was