

ment of a contracted or indurated kidney. He believes that many of the so-called idiopathic or primary indurated kidneys are thus classified because a sufficiently careful search for a definite causative factor has not been made. He believes that while in many cases of nephritis following acute infection there may be a long-drawn-out and progressive condition with slight disturbances of temperature and with periodic exacerbations, yet in a certain number of such cases there is a complete cessation of all symptoms and freedom from any disturbance for many years. In such cases he considers that the condition is that of healing by scar formation, and that it is not progressive, although a kidney so damaged must necessarily offer a focus of lowered resistance to subsequent insult. He compares the lesion to that found in the endocardium after a healed valvular endocarditis, or to that condition of fibrosis which is found in the lung after an unresolved pneumonia. Although the clinical course of this type differs from that of the so-called idiopathic chronic nephritis in the acute onset with the presence of albumen and casts, and in the gradual clearing up of the acute symptoms with the subsequent development of polyuria and hypertrophy of the left ventricle, yet histologically the kidneys can not be distinguished from one another.

In 1906 Lohlein<sup>5</sup> showed that in a certain number of patients who succumbed to chronic nephritis there was a definite history of a pre-existing infection followed by a quiescent period of several years before the appearance of the terminal symptoms. He based his conclusions on a study of scarlatina and diphtheria in which he found that glomerular change played a very important part in the nephritis following these diseases. He says that advanced fibrosis with hyaline change of the tufts and thickening of the capsules of the glomeruli may undoubtedly date back to a glomerular nephritis in a certain number of young subjects in which the history definitely locates the primary attack and excludes probability of subsequent irritation to the kidneys.

In view of such differences of opinion resulting from purely clinical observations, an attempt has been made to produce a chronic nephritis in animals by experimental means, in the hope that some condition might be produced analogous to that found in man, and that from the method of experimental production some light might be thrown on the etiologic process which produces the condition in

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5. Lohlein: Ueber die entzündlichen Veränderungen der Glomeruli der menschlichen Nieren und ihre Bedeutung für die Nephritis. Verhandl. d. deutsch. path. Gesellsch., 1906, 217.