

amination in any given case. Indeed the confusion of the whole subject may be inferred from the numerous attempts at a rational classification of the various forms of kidney inflammation, which have been proposed, all of which differ more or less in important particulars.

This, I am inclined to think, is the result of too limited a view, and the failure to realize the different factors in the problem. To have any degree of comprehension of the disease, clinical studies, histological examinations, bacteriology, and experimental work, must be laid under contribution.

Acute inflammation of the kidneys is now said to be the result of the following conditions:—

1. Intoxication, e.g.; from bacterial toxins, alcohol, lead, cantharides, phosphorus, chlorate of potash, salicylic acid, etc.

2. Complication of :—(a), The acute infections, as, scarlatina, small-pox, pneumonia, acute rheumatism, erysipelas, endocarditis, typhoid, diphtheria, septicæmia, cholera, epidemic cerebro-spinal meningitis, gastro-intestinal disorders, etc. (b), Chronic diseases and cachexias:—arterial sclerosis, diabetes, syphilis, pulmonary phthisis, carcinoma, etc.

3. So-called "idiopathic" cases.

In prosecuting the study of such a subject it is well to remember that the kidney is not the sole field of observation, but that the participation of the blood, the vessels, and other organs, in the process should be taken into account. We should too, I think, separate from true "nephritis" or inflammation of the kidney, that whole group of cases classed under the first division which are really "degenerations" of the kidney epithelium, and are not properly inflammations at all.

There is abundant evidence to prove that the toxic substances above mentioned do bring about degenerations of the nature of cloudy swelling, fatty degeneration, or even necrosis, in the epithelium of the secreting tubules.

Moreover, it has been established by experimental studies, notably those of Wandervelde (Act. d. pois sur les cell. épithél. n. canalicules contournées, Brux., 1894), that toxins such as those of cholera, cholera nostras, tuberculosis, diphtheria, pneumonia, influenza, and chemicals, such as chromic acid, lead, phosphorus, mercuric chloride, when injected into animals exert through the blood-stream a harmful influence upon the secreting epithelium bringing about changes identical with those found in the human subject.

Still it must be emphasised that such changes do not constitute nephritis, and since inflammation in the organism is so rarely dissociated from bacterial invasion, it may well be doubted whether when inflammation does supervene, it is not of the nature of a direct infection.

In the case of true acute nephritis, the trend of the investigation of the past 15 years points strongly to the unity of the process as a result of various microbic infections. The varieties of these are numerous.