

bacteria in the kidneys as a causative factor in the acute interstitial lesions.

This conclusion does not seem to me to be warranted for it is amply proved that in these specific diseases germs are to be found in the urine where no gross lesion of the kidneys exists, at least clinically, and the production or not of nephritis depends on the correlation of several factors, outside of the mere presence of bacteria.

With a view of gaining further information and ascertaining whether bacteria were present or not in the various forms of Bright's disease, I have availed myself of the pathological material of the Royal Victoria Hospital from about 325 autopsies and also the clinical notes of all the cases of nephritis in the Wards for the past four years.

In approaching this investigation, I have thought that more valuable information would be attained by examining sections of kidneys which presented evidence of nephritis microscopically, in addition to those which were taken from cases which were recognised clinically. For by this means one gets a wider view of the subject, inasmuch as the study embraces all grades of the disease from the incipient forms up to the most advanced stages. Particularly valuable is the study of the early stages since it is only thus that a true appreciation of the process can be formed.

Sections were made from 105 kidneys presenting the various forms of nephritis. All cases in which there was cystitis or any evidence of an "ascending" infection, or local tuberculosis, were excluded as unnecessarily complicating the subject.

Some of the material of the early years was hardened in Müller's fluid, so that many kidneys presented evidence of post mortem growth of bacteria, these were excluded in drawing conclusions. The material, however, which was hardened in Formol-Müller was satisfactory. All cases in which there was clearly a terminal infection as shown by plugs of bacteria in the capillaries were also excluded.

The method of staining was as follows:—

Celloidin sections, cut as thin as possible, were placed in carbolthionin for from 12 to 24 hours in the incubator. The formula of the stain was:—

Solution of carbolic acid, (1—40) 100 cc.

Thionin,..... 1 gramme.

Filtered as used.

The sections were then decolorised in weak acetic acid, dehydrated in aniline oil, washed in xylol and mounted in balsam.

Those sections in which pus cocci, or micro-organisms positive to Gram, were suspected, were also prepared by the Gram-Weigert method. The results were very satisfactory. Carbol-thionin is certainly the best