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SOME POINTS IN THE PATHOLOGY OF KIDNEY DISEASE.*

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Mr. President and Gentlemen:

The pathology of kidney disease has been a more or less close study of mine for the last four years, and as a consequence of this my views have changed much in that time. I have in my possession microscopic specimens of some sixty cases of "Bright's Disease," eleven of which are from *post mortem* examinations made by myself. You must not expect me to classify these. I think the less one does in the classification of Bright's disease the better, at least from a pathological standpoint. The chronic character of the changes seen in all my specimens will be the first thing to strike any observer. I think I am right in saying that death from "simple acute Bright's disease" is very rare, if occurring at all.

I am going to deal only with a few points in kidney pathology, and shall divide the observations into (*a*) those bearing on the malpighian tuft, (*b*) those bearing on the tubular contents.

The former of these will receive the major share of attention, so that a few physiological facts stated here will help our pathological examination further on.

(1) The tuft is a living filter.

(2) Its filtering quality depends on how well the vascular and nerve supply keep healthy the vascular tuft epithelium.

(3) If the nutrition of this epithelium is depressed or affected by impaired nerve supply, or by retarded or toxic blood supply, albumin is allowed to strain into the tubes and appear in the urine.

(4) The capillaries that make up the tuft differ in construction, physiology, and pathology, from those of any other situation of the body. Treatments with the best method of microscopical technique fail to show any endothelial outline in their walls.

Each capillary seems like one continuous tube, with nuclei placed irregularly along its course. On account, I suppose, of the continuous character of the capillary tubes, no leucocytes can diapedese in health or disease. It matters not how severe the inflammation may be, no pus can be found free within Bowman's capsule; and if one does find any there, its occasional presence can be explained by its diapedesing from without, or by histological manipulation.

Having refreshed our histological and physiological knowledge, we can proceed to a study of the changes seen within the tufts.

I will dwell briefly on the following in the glomeruli:

(*a*) Œdema and fatty degeneration of the vascular epithelium.

*A paper read before the Ontario Medical Association.