

ance both for physiology and pathology. As I have said before, this is a capital and fundamental fact, that can be repeated experimentally by varnishing to a certain extent the skin of a dog. It proves that the real chronic Bright's disease is a general affection, a defect in nutrition, in which the changes that take place in the kidneys (beginning with hyperæmia and ending with cirrhosis and atrophy) do not constitute the primary cause of the principal symptoms of the disease. Physiology fails to explain by what mechanism a morbid process, which has been confined to the kidneys from its very beginning—that is to say, at an epoch when they still fulfil their duty as purifying apparatus—could have had any effect on the production of urea, and thus act on the whole system. I beg my honourable colleagues to direct their attention to this point of renal pathology. It is a most important point, that has hitherto remained unobserved, because it can only be studied in the first stages of the disease, which only in rare cases come under notice in hospitals and clinics.

In all other cases of albuminuria that are not instances of true Bright's albuminuria, this decrease in the production of urea which runs parallel with the increase of albumen is not found. Consequently, it is of the highest importance to distinguish carefully between these different kinds of albuminuria so as to avoid a mistake that is often made and is dangerous, both clinically and therapeutically. The cause, the mechanism, the evolution, in short the *cachet* of the general chemical process of nutrition, combined with the decrease in the production of urea, and last but not least, the pathological alterations which take place in both kidneys, form a harmonious *tout ensemble*, which is always the same and constitutes the true type of Bright's disease properly so called.

6. The decrease in the production of urea which takes place in other cases of albuminuria is not in any way connected with albuminous filtration. It may exist in some cases, but varies very much according to the particular disease that has produced the albuminuria, and at the same time created disturbances in the general process of nutrition (heart-disease, etc.). Here, however, the decrease in the production of urea is not connected with the phenomenon

of albuminuria; its progress takes place in an entirely different way, and it is not till the last stage of those various affections, *i.e.*, when the kidneys have become thoroughly diseased (amyloid degeneration, etc.), that a very considerable decrease takes place in the secretion of urea in the urine for want of filtration. It results from the aforesaid, that this decrease is a mechanical effect which gives rise to the accumulation of urea in the blood with all its fatal consequences.

7. In Bright's disease, properly so called, there are two causes for the decrease of urea in the urine. In the first stage of the disease, the decrease is caused by incomplete combustion, a defective nutrition, combined with changes in the albuminoid, which is gradually developed, owing to the suppression of the cutaneous functions. Later on, that is to say, when the affection of the kidneys has reached a further stage, a second decrease of the urea takes place in the urine owing to defective secretion.

8. The tendency to exaggerate the anatomical point of view of the affection has led to neglect of the chemical and more universal aspect of it, thereby producing a conclusion which is perfectly paradoxical so far as regards scientific pathology, *i.e.*, "clinical unity" and "anatomical plurality" (large white kidney, amyloid degeneration, etc.). It is impossible to perceive in what way a general alteration, which shows itself with the same symptoms and consequently must spring from the same causes, can bring forth different anatomical results. The final difference in the lesion shows that there has been a difference in the nature of the preceding morbid processes. By combining all the conditions under which the symptoms constituting the clinical aspect can exist, the successive evolution of the process, and the constant relation between it and its special causes, we shall succeed in reconstructing the edifice of true Bright's disease, and in distinguishing it as a peculiar pathological species which differs from other species of albuminuria.

9. The passages of albumen into the urine may take place through the three physiological factors that preside over the renal functions; *viz.*, *a.* chemical constitution of the blood; *b.* degree of pressure; *c.* condition of the histological elements of the filtering apparatus.