

in size; in the second place, functionally, the sounds being altered.

But rheumatic attacks chiefly tend to produce valvular affections. Now, there is no evidence, after the most careful auscultation, of disease of the valves here. Neither the hypertrophy, then, nor the reduplication of the sounds can be held to point to heart disease brought on by the rheumatic attack as the prime cause of disease in this case; in fact, these conditions both help to sustain the idea that the real origin of the trouble is to be sought for in the kidneys.

What evidence can be adduced from the history or present condition of this patient to uphold this opinion?

In the first place we must remember that he is stated to have been a heavy drinker. This habit is well known to tend towards a cirrhotic condition of the kidneys, as well as other organs—a condition characterized by hyperplasia of the connective tissue of the gland, and consequent increase in size, followed by atrophy and diminished bulk, which latter state is seen in the most advanced cases of chronic Bright's disease. Now, we must remember another fact indicated by his history. For a long time previous to the present attack the urine was excessive in amount; and the kidneys were easily disordered by slight causes.

We have here sufficient data to pronounce the kidneys to have been more or less affected for a considerable period.

Might this of itself tend to produce the abnormal heart conditions previously noticed?

To answer this question we must remember, not only that in chronic Bright's disease there is a tendency to hypertrophy of the heart muscle, but that also the lumen of the smaller arteries of the body is diminished, while their coats are thickened, and become more or less rigid. To this latter fact is due the comparatively high tension of the pulse in a case of chronic Bright's disease, and also the general enlargement of the organ; caused, of course, by the extra amount of force required to send the blood through the narrower passages.

This is sufficient answer to the query, in so far as the size of the heart is concerned; and it also explains why we have, in this case,

with a comparatively weak heart action, a better state of arterial tension than might have been expected.

In regard to the reduplication of the sounds this is said to be an occasional accompaniment of Bright's disease, but you will rarely have so good an instance as the one now before us.

The history then gives us good ground for diagnosing a case of chronic Bright's disease, and this is the primary cause of the present condition. And when we take into account the present condition of the urine of the patient, its abnormal constituents, with the other symptoms, no room for doubt is left.

The stage to which the cirrhosis of the kidneys has reached is a matter of some interest. It seems highly probable that there is a certain amount of fatty degeneration present, together with a more or less granular condition of the gland. But an autopsy alone would reveal their condition positively.

The prognosis is unfavourable, as in all such cases, where we know that there is a considerable amount of organic change. The treatment is merely palliative, consisting mainly of a heart tonic and suitable diuretic. Plenty of nourishing, easily digested food is ordered, and the state of the bowels well looked after. He receives:

R Tr. Digitalis..... ʒiij.  
Tr. Card. Co..... ʒjv.  
Aquam ad..... ʒjv.

Sig. ʒij. every six hours.

[Subsequent to the clinic, the following notes of the case were taken:

Dec. 3rd. A condition resembling eczema has appeared on the legs, epistaxis is frequent, feels pained over the region of the kidneys, orthopnea well marked. He drinks much water; urine is more plentiful; not so much albumen present. Bowels acting well. Pulse 110.

Dec. 10th. Urine much more plentiful; acid; albumen decreased; eczema disappearing; anasarca condition not so apparent; appetite better; pulse, 104; respirations, 28.

Dec. 16th. Pulse, 100; respirations, 28; the albumen in the urine largely increased. From this time he gradually sank, the quantity of urine decreasing.