REMARKS
ON
CHRONIC ALBUMINURIA

ORIGINATING DURING THE CONVALESCENCE FROM
SCARLET FEVER AND OTHER ERUPTIVE DISEASES.

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It is not my intention to discuss the well-known acute scarlatinal dropsy, but the occurrence of a chronic form of albuminuria at a later period, at a time, in fact, when the cycle of the disease is generally considered as completed and perfect convalescence as established. While in scarlatinal dropsy our attention is easily arrested by the more or less sudden appearance of anasarcaous swelling and constitutional disturbance, the phenomena of the chronic albuminuria in question intrude themselves much less on our senses, and may therefore be overlooked in their commencement, not only by the patient, but also by the medical attendant. Before proceeding further I will give a short description of the principal cases which lead to these remarks.

CASE 1.—*Scarlet fever without dropsy—Two months later chronic albuminuria—Recovery after several months—A year later a second but milder attack of albuminuria, likewise with a favorable termination.*

B. S—, æt. 14, a boy well developed, but of delicate appearance, had scarlet fever in January, 1854; eruption general, angina rather severe, but perfect convalescence at the end of the fourth week. The almost daily examination of the urine had never shown a trace of albumen, nor had there been at any time the slightest dropsical swelling. A fortnight later the urine was again examined, and found free from albumen. The boy was in good health, and returned to school, where he began his work with even more than usual zeal; but after rather less than three weeks he occasionally had headache, which was increased by mental work; at the same time the appetite began to fail, and later he had sometimes vomiting, especially in the morning. Five weeks after his return to school, and eleven weeks after the outbreak of the scarlet fever, I saw the boy again, and found him pale, emaciated, listless, easily fatigued, complaining of frontal headache, which at times disappeared, at other times was very severe; no pyrexia; no dropsical swelling; no lumbar pain; urine in rather increased quantity, between 50 and 60 ounces in twenty-four hours, sp. gr. 1018 to 1022, transparent, slightly acid, loaded with albumen, and showing under the microscope occasional granular tube-casts.

The treatment consisted in rest, flannel clothing, nourishing diet, with a small quantity of hock, a mixture of an accidulated solution of acetate of ammonia with the tincture of the sesquichloride of iron, similar to that recommended by Dr. Basham,* in his Croonian Lectures; at the same time the bowels were frequently acted upon by means of small doses of elaterium and jalap, and the skin by hot-vapour baths. Under this management the albumen had entirely disappeared from the urine, and the lad had also otherwise

¹ "The Significance of Dropsy," 'The Croonian Lectures for 1864.' By W. R. Basham, M.D. J. Churchill, 1864, p. 54.

recovered his health by the end of July, 1854. In February, 1855, he suffered again, though in a milder way and for a shorter period, from albuminuria, probably in consequence of over-fatigue and exposure to wet. In October of the same, and in June of the following year, I had the opportunity of ascertaining the continuance of the healthy condition of the urine, after which time I lost sight of the case.

CASE 2.—*Scarlet fever, without renal complication, in a child—Several weeks after recovery albuminuria with epileptiform fits—Albuminuria never entirely disappearing in spite of otherwise good development—Death from broncho-pneumonia with uræmic symptoms seven years after the scarlet fever—Waxy kidneys.*

C. A—, æt. 7, an apparently healthy girl, but belonging to a phthisical family, had a moderate attack of scarlet fever early in April, 1854; was seen for the last time five weeks after the commencement, was then to all appearance perfectly recovered, without there having been at any time a trace either of albumen in the urine or of dropsy. On July 28th of the same year, viz., more than three months after the beginning of the scarlet fever, I saw the child again with epileptiform convulsions, and scanty, highly albuminous urine, without dropsy. The history was that in the beginning of June, viz., two months after the beginning of the scarlet fever, she lost her appetite; that soon after this the glands of the neck became swollen, and the sleep at times disturbed, while at other times she was for days very drowsy; until suddenly, on July 28th, she was seized with violent convulsions, recurring in paroxysms during three successive days. (Dry cupping over the loins, blister to the nape of the neck, elaterium and jalap.) After the cessation of the convulsions the child soon regained its consciousness; and under a similar treatment as described in Case 1 the albumen and the tube-casts disappeared almost entirely from the urine, and the general health became much improved. In the following winter, however, a similar attack

of convulsions took place, when I had repeatedly the advantage of the advice of the late Dr. Bright, who recommended an analogous treatment to that adopted in the former attack. The urine from that time always exhibited a few transparent tube-casts and a trace of albumen, excepting the early morning urine, which usually was free ; and there was also occasionally a slight degree of anasarca, especially on the legs. In the autumn of 1861, during a severe attack of broncho-pneumonia, the urine became very scanty ; convulsions and coma supervened, in which she died. The post-mortem examination manifested waxy degeneration of the kidneys, a certain degree of fatty degeneration of the heart, œdema of both lungs, with red hepatization of the lower lobes.

CASE 3.—*Scarlet fever without renal complication in a man æt. 25—More than a month after recovery first symptoms of albuminuria, which affection has since continued, and still exists.*

F. H—, a well-developed muscular man, had scarlet fever of a moderately severe type, in October, 1859 ; had neither dropsy nor albuminuria during the first five weeks, while under the observation of Mr. Stuckey, of Wellclose Square, and myself. About Christmas of the same year he found his strength much diminished, especially after a long ride on horseback ; the appetite became impaired, and the spirits depressed. In February, 1860, he had an eruption of boils, of which new crops appeared at intervals in March and April, when I again saw him, and found him pale and emaciated, with glandular swellings on the neck. He had also increased desire to pass water, and passed between 3 and 4 pints in 24 hours, the colour being clear and transparent, almost as in diabetes ; the sp. gr. between 1012 and 1018. It contained no sugar, but a large amount of albumen, a small proportion of urea, many granular casts, and some fatty epithelial cells. Under a similar treatment to that adopted in Case 1 the general health improved, and the

albumen had almost, but not quite, disappeared at the end of two months, the quantity of urea having returned from a low to the average amount. Since then this patient has generally enjoyed good health, with the exception of some attacks of headache and nausea, which are always associated with deterioration in the urine, and yield to steel, combined with drastic purgatives and rest.

It is evident, I think, that the nature of the renal disease in these cases is not identical with that in the so-called scarlatinal dropsy. The latter occurs within the first three or four weeks; it is generally associated with dropsy; the urine in the beginning almost always contains blood, and a certain amount of feverish disturbance is scarcely ever absent; while in the cases under consideration the albuminuria certainly did not originate before the end of the sixth week after the commencement of the eruption, and probably still later; and was unattended with dropsy, with bloody urine, and with pyrexia.

I am aware that sometimes the acute scarlatinal renal affection (desquamative nephritis) is the origin of chronic albuminuria, which latter may manifest itself a longer or shorter period after the apparent disappearance of the former; but to this class the preceding cases can likewise not be allotted, as the urine had been frequently and carefully examined from the beginning of the scarlet fever to the end of the fifth or sixth week, and had always been found free from albumen. I am inclined to regard the relation between the renal affection and the scarlet fever in these cases as entirely different from that in which the scarlatinal dropsy stands to the scarlet fever. While the latter appears to me as much a part of the scarlet fever process as the angina and the eruption and the desquamation, the renal affection under consideration holds a much less intimate connection—perhaps not more intimate than this, that through the scarlet-fever process the entire system is left for some time after the so-called recovery in a peculiar state of deterioration, in which, through unfavorable

influences, morbid dispositions may be created, or existing dispositions developed into actual diseases. This view will gain in probability if it can be proved that not only after scarlet fever, but also after other acute diseases, chronic albuminuria occasionally develops itself—an occurrence which I have been able to witness in the two following cases of erysipelas of the face and of typhoid fever.

CASE 4.—*Erysipelas of the head without albuminuria—Several weeks after recovery symptoms of Bright's disease, together with glandular swellings and furunculosis.*

S. E—, æt. 29, an otherwise healthy female servant, was an in-patient at the German Hospital with erysipelas of the face and forehead, in January, 1852. She was discharged as recovered at the end of about four weeks from the beginning of her illness, and was seen once more a week later, when she was still quite well, and returned to service. She never had any albumen in the urine, either during the attack itself or during the convalescence from it. Towards the end of February, *i. e.* about seven weeks from the commencement of the erysipelas, she began to feel weak, and had difficulty in getting through her work. In the beginning of March she observed an enlargement of the glands of the neck and in the armpit, and about three weeks later an eruption of boils, for which she again came to the hospital in April. She was much changed, pale and pasty, but without anasarca; the lymphatic glands of the neck considerably swollen, those of the axillary and inguinal regions to a less degree. There were on different parts of the body eight or nine boils, some in the process of healing, others only commencing. The urine was pale and abundant; she had to pass it several times during the night; sp. gr. 1014 to 1020; containing no sugar, but a large amount of albumen, a small proportion of urea, some granular casts, and some pale transparent casts.

Under the influence of rest, a generous diet, iron, and occasional doses of elaterium, the patient gradually gained

strength and colour. In June the urine was almost free from albumen, and also in other respects improved. For more than four years afterwards she was able to do her work, and enjoyed good health; but in the beginning of 1857, under the influence of over-work and frequent exposure to cold and draught, she had an attack of subacute rheumatic fever, when I had again the opportunity of examining the urine, which contained much albumen and many pale, transparent tube-casts, and was of low specific gravity. She was much improved under a similar treatment to that before adopted, and considered herself quite well when she left this country in the summer of the same year; but the urine always contained a small quantity of albumen and transparent casts, with occasional fatty cells.

CASE 5.—*Typhoid fever without renal complication—Several weeks after recovery Bright's disease, with symptoms of uræmia—Perfect recovery.*

M. B—, æt. 24, a strong-looking man, generally in the enjoyment of good health, was admitted into the German Hospital with typhoid fever on February 12th, 1853, having been ill already about ten days. The diarrhœa was rather severe, and the typhoid rose-spots numerous and remarkably elevated; the course of the disease otherwise normal; and the man was discharged as "cured" on March 14th. Had never had any albumen in the urine, either during the height of the disease or later. After having followed his employment as a pedlar, in which he was much exposed to the inclemency of the weather, for three weeks, he felt unusual lassitude, lost his appetite, had frequent desire to pass urine, and a troublesome cough. When he again applied at the hospital, towards the end of April, he was pale, had a slight degree of anasarca of the legs and hands; the urine was highly albuminous, and contained a few blood-globules and granular tube-casts; it had become during the last days scanty, after having been just before rather abundant.

Soon after having returned home from his visit to the hospital, he had epileptiform convulsions, followed by a semi-comatous state. Under the influence of cupping over the loins, enveloping the whole body in a warm wet sheet, and of drastic purgatives, he recovered in a few days from the semi-comatous condition; and later, under such treatment as described in Case 1, the urine became quite free from albumen, and every trace of anasarca had disappeared by the end of July, 1853. In June, 1854, when I had the last opportunity of examining this man, no relapse had taken place, and the urine was in good condition.

To this class must be referred, I believe, Dr. G. Johnson's¹ Case 25, the main points of which are—

J. C—, æt. 28, an otherwise healthy man, had typhus fever in the beginning of December, 1848. No albumen in the urine during the fever; discharged cured on January 3rd, 1849. Towards the end of the same month shortness of breath, puffiness of the face, and swelling of the legs. On readmission into King's College Hospital, on February 17th, considerable anasarca and ascites, with scanty, high-coloured, clear and acid urine, of sp. gr. 1020, containing at first transparent casts with epithelium, but without oil, but a fortnight later with oil and fatty cells. Death on April 1st. The kidneys were enlarged, and belonged to the modification of Bright's disease termed by Dr. Johnson "granular fatty degeneration."

These cases sufficiently show, I think, that chronic albuminuria may originate, not only after scarlet fever, but also after other eruptive fevers, and, perhaps, after all acute diseases, although I am inclined to think that the presence of an animal poison in the eruptive fevers, and the further changes produced by it in the blood—changes which probably disappear only very slowly and gradually—may cause a greater disposition to renal affections than is caused by

¹ 'On the Diseases of the Kidney, &c.' By George Johnson, M.D. London, 1852, p. 408.

other acute diseases, as simple bronchitis and pneumonia. They teach us also, to use Dr. Johnson's words, "the importance of watching fever patients during their convalescence until the health is quite re-established." Over-exertion and exposure to cold and damp air ought to be particularly avoided; the diet, the dress, the habitation, ought to be considered.

I would further point out the insidiousness with which the disease has developed itself in the preceding cases. Lassitude, anorexia, swelling of the lymphatic glands, anæmia, eruption of boils, increased desire of micturition, were the principal symptoms; the more common renal symptoms—anasarca, admixture of blood to the urine, and lumbar pain—were altogether absent in four out of the five cases, and but slightly marked in the fifth. This shows the necessity of always examining the urine under such circumstances, even if the usual "renal symptoms" are absent. An early diagnosis is all the more important as we have then, with appropriate treatment, a fair chance of a cure, as Cases 1 and 5 demonstrate. Flannel dressing, rest, a moderately nourishing diet, the administration of drastic purgatives, especially elaterium, to relieve the work of the diseased organ as much as possible, iron, and also the occasional use of the hot-vapour bath and the warm wet sheet, were the chief treatment, in the principles of which there is nothing new, but which have been taught by Bright, Addison, Owen Rees, Johnson, Basham, and other authorities on renal diseases.

Finally, the question offers itself, whether amongst the great number of cases of Bright's disease the origin of which is inscrutable to us, a certain proportion may not originate during the convalescence from eruptive fevers, and that thus these diseases belong to the remote causes of chronic renal affections?