CASES OF OXALURIA.*

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The three cases about to be described were nearly as difficult to relieve as those reported in a former number were easy of cure.

CASE IV.

Anne Stradling, aged 36, married, and the mother of several children, was admitted as an out-patient in the Colchester Hospital, on July 23rd. She attributes her ailments to having caught cold, and subsequent acute rheumatism, by exposure to the night air, about a year ago. Before that time had always robust health. She is a middle-sized woman, with the appearance of having been much stouter than she is at present. Complains of constant frontal headache, a sensation of weight and uneasiness in the loins, and pain in the right side, not extending to the shoulder. She has very low spirits, and trembles violently after the slightest exertion; complains of profuse acid perspirations, and of frequent heart-burn. Her face has an anxious and discontented appearance, and her lips and fauces are pale; tongue large, tremulous, furred, and transversely fissured; she sleeps badly; has generally little or no appetite, although at certain times she eats voraciously. No cough nor palpitation; the heart's impulse and sounds are normal; liver slightly enlarged; uterine functions regular. Never had syphilis nor ague; bowels regular.

Ordered her a mixed diet, and to eat but little at a time. R. Pil. Hydrarg., gr. iij.; Extr. Coloc. Co., gr. viij. Fiat pil. ij., alt. noctibus. R. Infus. Gent. Co., oz. j.; Ferri. Sulph., gr. ij. M. Capt. ter die.

July 30th. Obtained some of her urine, which was passed before breakfast; it was pale, of specific gravity 1012, slightly acid, and contained urate of ammonia and mucus; no oxalate. Ordered her to bring some urine passed in the middle of the day and to continue her medicine.

31st. Urine acid, pale, of specific gravity 1018, contained a considerable quantity of oxalate of lime, in octohedral crystals, much epithelium, and amorphous urate of ammonia.

Pil. Hydrarg., gr. v., alt. q. nocte. R. Acidi Nitrici, Acidi Hydrochlor., utrque, m. iij.; Infusi Quassiae, oz. j. Sum ter die.

Aug. 7th. Says she has not been so well for months.

14th. Much the same. Cont. mist. Omitt. pil.

21st. Her general health is better, the pain in the loins, however, persists. She complains also of weariness after slight exertion. Tongue clean; bowels rather irregular; urine increased in quantity, specific gravity of a portion passed at noon, 1012, pale, acid, and containing the largest crystals of the oxalate of lime I ever saw. Her lowness of spirits is not so bad as it was, nor does she complain of her former severe headache. The appetite is more regular, but she complains of a sensation of weight and distension of the right side soon after taking her meals.

R. Acid. Nitric., m. iv.; Acid. Hydrochlor., m. v.; Inf. Quassiae, oz. j. Misce. Sum ter die. R. Pil. Hydrarg., gr. iij.; Extr. Colch. Acet., gr. ij. Misce. Fiat pil. j., alt. q. nocte sumend.

28th. Is better.

September 4th. Complains of pain in the loins and weakness only. She has improved very much during the last fortnight; mid-day urine, of specific gravity 1024, acid, contained large crystals, in masses, of uric acid, little mucus, and no oxalate of lime. Pergat.

18th. No oxalate, but the quantity of uric acid excreted in the form of palpable masses of sand is very considerable. The pain in the loins persists; tongue rather foul; bowels confined.

Omitt. med. omnia. R. Pulv. Rhei, gr. x.; Sodæ Carb., gr. v. Mist. Camph., oz. j. Sumat ter die.

24th. Is better; the quantity of the uric acid has diminished, and no oxalate present in the urine. Pergat.

Until the present time she has continued much the same, complaining occasionally of pain in the loins, and nervous feelings. She has never passed any more oxalate, but nevertheless her health has not much improved. Her diet is of very doubtful description; occasionally she has meat, and feels much the better for it, but her general food is bread and butter, or dripping. She lives in a malarious district, and has a good deal of mental anxiety. Taking these circumstances into consideration, I much doubt if she will ever be anything else but a confirmed invalid. Her case is interesting in a practical sense, for it shows the necessity of examining urine, in which we suspect oxalate of lime to exist, after a meal, and not before any food has been taken into the stomach. Her *urina sanguinis* never contained oxalate of lime, although it was frequently loaded with urates. She was always better after taking highly nitrogenized food, whilst fat and spirits, in but small quantities, increased her lumbar pain, and as far as I could judge, the quantity of oxalate. Another point in her case is, that when she ceased passing the oxalate, the quantity of uric acid in the urine was sensibly increased, and the exhibition of as large a dose of alkali as I dared to give her, had not much influence on its amount. The specific gravity of her urine rose as the oxalate left her, and now averages 1020. She passes less urine than she did.

CASE V.

Mrs. Stevenson, aged 48, has been a patient for many months at this Hospital. When I first saw her, July 23rd, she was complaining of great debility, pain in the loins, oppression of spirits, and a great disinclination to take food. Her symptoms are occasionally exacerbated, and when this is the case, she suffers severely from constant nausea and sickness; her urine is then scanty, high-coloured, and offensive. I was fortunate enough to see her in one of these paroxysms. Urine passed after her breakfast was slightly acid, of specific gravity 1024, high-coloured, with an iridescent pellicle on its surface, and contained fibrinous coats of the tubes of the kidney, altered blood-corpuscles, epithelium scales, which contained but little fat, and crystals of triple phosphate, and amorphous and rather

* Continued from page 585.

pinkish urates. There was little doubt of her having a calculus in her kidney. I ordered her a hydragogue cathartic and an opiate for each night.

August 7th. I did not see her in the interval, but found her much better. She tells me that she has suffered from occasional attacks of sickness for years, more especially since her menses stopped. She has now pain on pressing over the left kidney; and on examining her urine, I found crystals of triple phosphate, and, rather to my surprise, oxalate of lime in octohedra; pulse 110; tongue clean; bowels regular; no appetite; she sleeps badly, and the pain in the loins is increased during the night.

R. Pil. Hydr., gr. v.; Pulv. Opii, gr. $\frac{1}{2}$. Fiat pil. j., omni nocte sumend. R. Mist. Camph., oz. j.; Tinct. Hyosc., dr. ss., ter die sumend.

28th. The report says she is better; appetite has returned; passes a good quantity of water, but her legs swell a little at night.

She continued under my care until very lately. She is not much better in spite of the absence of oxalate of lime in her urine; this was brought about by small doses of nitric acid, between the 24th of September and the 9th of October.

CASE VI.

Charlotte Goodfellow, married, aged 47, has been an invalid for upwards of five years, and a patient at this Hospital since March 23rd, 1848. She came under my care in the last week of June; in the interval she had been treated for general debility, chronic cough, and amenorrhœa. She was evidently at the critical period, and her ailments were attributed to that cause. She took alkalies, iodine, and slight purgatives, and when I first saw her, what with defective diet, mental anxiety, and medicines of a rather depressing nature, she was considerably debilitated. She complained of constant pain in the head and back, of most distressing despondency, and inability to use the slightest exertion, without subsequent exhaustion. Her appetite was bad, tongue pale, and the general surface anæmic. She has a dry hacking cough, depending upon a relaxed state of the mucous-membrane of the bronchi; sleeps badly, and has dreams of a frightful nature. Bowels tolerably regular; pulse quick and small.

Ordered to take porter, and as nutritious a diet as possible. R. Pil. Scillæ Co., Extr. Conii, utrque, gr. iv. Fiat pil. ij., omni nocte sum. R. Mist. Camph., oz. j.; Tinct. Scillæ, m. x.; Ammon. Carb., gr. v.; Tinct. Hyosc., m. xv. Fiat haust. ter die bibend.

July 3rd. Is a little stronger, but otherwise much the same. Pergat.

11th. Better. Her cough is very troublesome, and the bowels are rather confined. R. Pulv. Myrrhæ, gr. v.; Ammon. Carb., gr. ij.; Tinct. Opii, m. v.; Mist. Camph., oz. j. Fiat haust. ter die sum. Pil. Hydrarg., gr. v., omni nocte.

23rd. Is just the same; with the exception of her cough being relieved, she is just in the same state. I had attributed her headache and despondency to the anæmic state of her system, and that to the cessation of her menstrual flux. I now examined her carefully and found no organic disease of any kind. She brought

me some urine, which she passes in considerable quantities, pale, acid, of specific gravity 1016, and containing an immense quantity of oxalate of lime. I changed her medicine and ordered,—Acid. Nitrici, m. iij.; Acid. Hydrochl., m. ij.; Infus. Quassia, oz. j., ter die. Linctus pro tussi.

August 14th. She has gradually improved.

On the 28th, I increased the quantity of acid, with considerable benefit to her, and on the 18th of September discharged her in a decent state of health.

The two last cases shew how this disease may be masked by symptoms which pertain to other lesions. In Case V., symptoms of renal disease, and in Case VI., those of disordered uterine function, accounted for the mental and physical depression. Oxalate of lime was found in both cases, and when removed the patients experienced considerable relief. It is sufficiently obvious, that the presence of the oxalate is but a symptom of hidden disease, not of the kidney, but of the digestive organs; for the urine does not at all times contain oxalate of lime; the patient may pass large quantities of it during the afternoon, but none before breakfast; none before new matter is assimilated and received into the system, but much a little while after. It would seem, then, that the oxalate is derived from the products of primary and not of secondary assimilation; from food taken in, and not from the destructive process that is constantly going on in the tissues. Oxalate of lime is not excreted from the kidney in a direct manner; it is passed as oxalate of ammonia, crystals of which are occasionally met with, but the oxalic acid of the compound, has a great affinity for lime, and readily precipitates it from all its combinations with acids. Now, oxalate of ammonia has to be eliminated by the kidney, and has to come in contact with an urinary salt, of which lime is the base. It is more than probable, that it is, under certain circumstances, excreted instead of urea; that although this last usual urinary element may exist in the urine in considerable quantities, still oxalate of ammonia may replace a portion of it, and in some cases nearly all of it. Dr. Bird has drawn up a formula, which shews that, one atom of urea and two of water, after losing an atom of oxygen, become converted into oxalic acid and ammonia,—that is to say, if urea is existing in the blood, and is about to be eliminated by the kidneys, and any circumstances should arise which might have a de-oxidating effect upon it, oxalate of ammonia would be produced in its stead. Now, Liebig is in favor of the derivation of oxalic acid from uric acid. I do not see why it should not be produced from either urea or uric acid, as their chemical relations are very close.

The rationale of the presence of oxalate of lime, is probably the following:—A person habitually dyspeptic, of low vital energies, catches cold, or is subjected to some depressing influence, in the form of extreme mental and physical exertion, his food is not properly digested, the nitrogenous products are eliminated more copiously than is consistent with health, not in the form of urea or uric acid, but as oxalate of ammonia or oxalic acid. The vital chemistry of the kidney, on account of the general perversion of nutrition, and

some idiosyncrasy which facilitates the occurrence of diseases of this organ, is not able,—has not sufficient power, to produce more than a certain amount of urea or uric acid; the remainder passes as oxalate of ammonia or oxalic acid, and either by double decomposition or simple affinity, becomes oxalate of lime.

Starting with this theory, in our treatment it is necessary to attend to the diet, clothing and general hygiene of the patient; to employ medicines calculated to elevate the standard of health, and which may at the same time act in a direct manner upon the disease. Tonics, stimulants, and mild purgatives will alone frequently relieve the distressing lowness of spirits and dyspepsia; but change of air and moderate exercise, and the exhibition of medicines which are supposed to produce a supply of oxygen in the system, will be found to eradicate the disease in the quickest manner. Nitric acid, with or without the hydrochloric, acts like a charm in removing the diathesis. It may be combined with a mild tonic and exhibited twice or three times daily.

ON THE

INTERNAL EXHIBITION OF CHLOROFORM IN CHOLERA INFANTUM, AND DYSENTERY.

TO THE EDITOR OF THE PROVINCIAL MEDICAL AND SURGICAL JOURNAL.

SIR,

A short time since you were so good as to insert a letter I addressed to you, on the internal exhibition of chloroform in spasmodic cholera, and believing that its beneficial influence in this disease arose from its remarkable power of soothing the irritation of the ganglionic and spinal system of nerves, I was led to hope it would exert an equally useful influence in dysentery and infantile cholera. The subjoined cases will, I think, prove that the opinion was not ill-founded. I have selected these from several others, not only because they were well marked, but as shewing that chloroform is a perfectly safe and manageable remedy, even when given to infants at the tender age of twelve or eighteen months.

About the middle of September last, the weather being generally sultry and humid during the day, the temperature becoming much lower towards the evening, cholera infantum and dysentery prevailed in an epidemic form in this locality, both affections assuming a very severe type, and evincing a remarkable obstinacy to treatment. In some cases of the former disease, spasmodic convulsions were frequent, and although opium was pushed in these cases, as far as it could be administered with safety to children of such a tender age, it neither controlled the diarrhoea, nor seemed to induce more than a temporary remission of pain. Under these circumstances, as recent experience led me to regard chloroform as an agent of great power in the cholera of adults, both in the malignant and simple form of the affection, it was resolved to put its influence to the test in two cases of cholera infantum, of a very severe character. In three cases occurring at the same period, the remedies employed prior to the

use of chloroform, extending over a space of from four to seven days, completely failed to produce any alleviation of the symptoms; they must, therefore, be regarded as having been fair cases for testing the efficacy of any new remedy.

CASE I.

Mrs. Biggs' child, aged 2 years, visited September 21st, and found labouring under diarrhoea, with tenesmus, vomiting, quick and feeble pulse, furred tongue, thirst, hot skin, and great irritability, dejections slimy and very offensive. These symptoms continued unabated for the four following days, resisting entirely the usual treatment, which consisted of mild mercurials, with Dover's powder, together with absorbent and alkaline medicines, with occasional doses of *Ol. Ricini* and *Tinct. Opii*.

On the 26th, the tenesmus being very depressing, and the motions frequent and very foetid, the following embrocation was rubbed freely over the abdomen and dorsal region:—*R. Chloroform., m. viij.; Ol. Terebinth., dr. ij.; Lin. Saponis., dr. vj. Misce.*

27th. Tenesmus relieved, but the diarrhoea unchecked; extreme emaciation, and the case apparently hopeless.

27th. Continue the embrocation, and give the following mixture:—*R. Chloroform., m. vi.; Mucil. Acac., dr. iv.; Tinct. Opii, m. vi.; Aquæ destillatæ, ad oz. j. Fiat mistura.* A teaspoonful to be given every two hours.

28th. A marked improvement in all the symptoms; the infant has had but one dejection during the night; slept soundly; motion this morning improved in colour and consistence; pain and irritability much relieved. Ordered a little wine and arrowroot, and to continue the chloroform mixture at intervals of four hours.

The child has suffered no relapse, and is now, the 30th, free from other ailment than that arising from the debility consequent upon the attack.

CASE II.

Mrs. Stanton's infant, aged fifteen months, was similarly attacked on the 23rd of September, and prior to the administration of the chloroform on the 28th, a similar mode of treatment was adopted as in the former case, with the exception that the opium in this case was pushed, in the form of Dover's powder, to a further extent. The symptoms, though not accompanied by so much tenesmus, were equally obstinate, and the emaciation excessive; the stools being pink and watery. On the 28th the same chloroform mixture was administered, and the embrocation used, and with the same happy effect. The gradual recovery of the infant may be dated from the exhibition of the first dose of the chloroform, and during recovery she required no other treatment, save an occasional dose of calomel.

A case of dysentery occurred at about the same period, though prior to those above related, which resisted every mode of treatment, the child sinking about the tenth day.

On the 20th of September, another case of dysentery occurred, in a boy aged about 8 years, which promised to run an equally severe course with the former one. The