CASE OF ACUTE DIABETES MELLITUS SUCCESSFULLY TREATED.

By T. OGIER WARD, M.D.

The following case was mentioned recently at the London Medical Society, as exhibiting the beneficial effects of following a plan of diet and regimen very similar to that recommended by Dr. Headland, in a paper then read to the Society.

The patient, a gentleman aged 53, was a remarkably fine man, the youngest of twenty brothers and sisters, most of whom were equally well grown as himself, but who all died prematurely. He was subject to sore throat, and for the last nine years to vomiting after his meals, particularly after dinner, and to occasional pains in the right side, which, however, he studiously concealed from me. He lived well, though not a great eater; and his habits were regular; but for the last year or two he had almost given up wine or spirits, drinking two or three pints a day, but not often to excess, of Welsh ale, of which he was very fond. He had for several years suffered from chronic ophthalmia, which had destroyed the sight of one eye, and materially affected that of the other. He was also very corpulent; and, though for the last year he had begun to lose his flesh and strength, still he continued employed, walking daily one way between Kensington and London, and sometimes he walked to the City and back.

He first consulted me December 27th, 1853, on account of the vomiting after meals. He then presented the following symptoms in addition: A general feverish condition, indicated by a rapid pulse, hot and dry skin, great thirst, furred tongue, loss of appetite, and high coloured, but abundant urine, about two pints daily, depositing a copious sediment of purpursates and lithates. The bowels were regular, and the motions of a healthy colour. Thinking that it had to treat a feverish state connected with, but dependent upon, an irritable stomach, I prescribed a light diet and abstinence from all stimulants, and a mixture of potassium-tartrate of soda and nitric ether, which was continued for three days. The fever having then abated, and the pulse becoming slower, though still above the usual rate, I turned my attention to the irritation of the stomach, and ordered a mixture of bismuth and magnesia, which I have generally used with success in such cases. The effect of this treatment on the stomach was excellent; the vomiting ceased; but the urine, in spite of the magnesia, was still high coloured, and loaded with lichates as before, though it was abundant in proportion to the quantity of fluid drunk. Having taken a specimen for examination, under the idea that its dark colour was due to the urine being in excess, I was surprised to find that there was but little more than the proper quantity; and seeing that its specific gravity was 1044, I tested it for sugar, of which it gave abundant evidence by every test that was used. Although the vomiting had ceased, the tongue was still furred; and fearing that, if I left off the bismuth, the symptoms might return, I added some liquor opii sedatives to the prescription, and enjoined a strict attention to the following diet and regimen. For breakfast, tea or coffee, without sugar, but with milk, an egg, and a small quantity of stale crust toasted, or a plain biscuit; for lunch, a chop or oysters, with a small bit of crust, and water to drink; for dinner, meat, with greens or a little turnip and crusts or biscuit, and a small quantity of sherry or brandy and water; and for tea the same as breakfast, without the egg; but this meal he seldom partook of, rarely taking more than an egg or a cup of tea. As I could not prevent his going into the City daily, the main point in his regimen was to prevent him from taking cold, and to endeavour to keep up perpiration, or at least a free state of the skin, by plenty of clothing by day and night, and carefully avoiding exposure. In a few days after the addition of the opium, his stools were clayey, and his bowels rather confined; but this condition was easily remedied by compound rhubarb pill, of which, however, he only took a dozen during his illness.
I now kept a daily register of the quantity and specific gravity of the urine. On January 29th, that is, in a little more than a month, the quantity was a pint and a half, of specific gravity 1024. The same treatment was continued to February 10th; when, finding that the quantity of urine was stationary at a pint and half, while the specific gravity varied from 1016 to 1020, and that Mr. L. began to tire of his medicine, I prescribed some phosphate of ammonia, in doses of five grains thrice a day. This, however, was so disagreeable, that on the 13th I ordered the following medicine, as the stomach was rather irritable, and the urine still thick.

**B. Sode hypouphlitis,**
**Sode carbonatia, a 5s.**
**Aciid hydrocyanici dili. (Schedelli m).**
**Aquæ 3i. M.**

Fiat hæastus ter die sumendum.

This prescription was but little more agreeable than the former; and on the 10th I returned to the bismuth. The stomach now recovered its tone; Mr. L.'s flesh and strength were returning; and on the 19th I took my leave, all traces of sugar having disappeared from the urine; its specific gravity was normal, 1025, as it still continued to contain much liti. Its usual quantity of lithates, I strongly urged him to continue the same diet and regimen, which he promised, and I believe, continued to observe for some months longer.

In the middle of April I saw him again for the purpose of giving him a certificate respecting the state of his health, in order to prevent his being put under arrest; and although at that time I could detect no evident disease besides the ophthalmia, which was getting worse, I did not hesitate to declare that, after so recent a recovery from diabetes, the effect of an imprisonment could not fail to be most injurious, if not fatal. Upon this certificate the judgment was allowed to stand over; and I strongly advised him to consult some eminent oculist respecting the condition of his eyes. He did so in July last, and while under treatment he had a sudden attack of jaundice, with pain in the right side; and as the gentleman he consulted did not believe that he had suffered from diabetes, he prescribed mercury, which soon produced a violent salivation, but without any beneficial effect, and he was sent to Margate for change in September, where he was ordered to drink largely of seawater, which he did for a week, when he became disgusted with it. He stayed there about a month, during which time a rash came out on his body, attended with great itching, and bleeding when scratched; and he had ascites and anæmia, though the pain the side was removed. He returned home, having lost his appetite, and the liver increasing rapidly, so as to prevent his lying down for the last few days of his life. He died November 3rd, still jaundiced and enormously swollen with dropsy.

**Remarks.** This case presented several features that appear to me worthy of notice in its origin, progress, and termination. With regard to its origin, the time when the urine began to be saccharine cannot be fixed with precision, but it cannot probably be referred to an earlier period than that when Mr. L. began to lose his flesh and strength. The urine, however, was not only saccharine, but loaded with lithates, and deeply tinged with purpurine; moreover, it had not been in quantity, notwithstanding its saccharine condition; in short, it presented the ordinary appearance it assumes in liver disease, which was doubtless present, although Mr. L. carefully concealed his symptoms by denying that he suffered from pain or any ailment whatever, except the diabetes, which he could not control. In this disease within the year, indicated clearly that the condition of the urine depended upon this cause. Assuming, then, that disease of the liver coexisted with the vomiting and the diabetes, the anomaly of a highly saccharine state of the urine, with little increase in its quantity, is explained; for this latter condition, or rather a decrease of the normal quantity, together with an excess of the lithates and purpurine, constantly attend disease of the liver. We may, therefore, conclude that the diabetic condition originated in disorder of the stomach, induced by indulgence in the use of Wehal ale* (an imperfectly fermented liquor), and was followed by liver disease, also attributable to the same cause. Next, with regard to the progress of the diabetes, it has been observed by Dr. Protrout that the urine does not acquire its saccharine character until it ceases to deposit the lateritious sediments, and that a return of these sediments in the urine is a favourable symptom. Dr. Beno Jones also remarks, that when uric acid is found in excess in the urine, it is probable that the diabetes may be temporarily, if not permanently, removed. In the present case, the lateritious deposits not only co-existed with the diabetes, but they continued in great abundance after the urine had lost its saccharine condition; doubtless because, although the gastric affection on which the diabetes depended was removed, the liver disease was unchecked, and was advancing to its fatal termination. It has also been stated by Dr. Protrout that persons affected with diabetes are very liable to be carried off by some intercurrent acute disease—a remark that seems to have been verified in this instance by the sudden attack of pain in the liver and jaundice (probably the effect of the hepatitis passing from a subacute to an acute form), which eventually caused Mr. L.'s death in a few months: and it is much to be regretted that neither the surgeon nor the physician who were consulted gave any credence to the advice of his friends that he had, as neither of them would scarcely have subjected him to a course of mercury sufficient to cause profuse salivation, but would have used other means to subdue the liver disease. The cessation of the diabetes at the same time with that of the irritability of the stomach is an interesting fact in the pathology of this obscure disorder, and connects the two affections together as cause and effect. Up to this attack of vomiting, Mr. L. had never had any illness; and the discovery of the presence of diabetes was accidental.

Lastly, with respect to the termination of this case: if so defined an instance of diabetes as is indicated by urine of specific gravity of 1044 may exist, and yet be overlooked, and may be cured, at least apparently, in less than two months from its discovery, may we not draw a rather more favourable prognosis in the earlier stages of the complaint? and is this not a hint to examine the urine with care, in order to detect the earliest appearance of the saccharine diathesis? Sugar has been detected in the urine in nervous diseases, epilepsy, pertussis, gout, dyspepsia, boils and carbuncles, Bright's disease, tuberculosis, abscesses, diseases of the respiratory system, etc. It has been observed occasionally to be intermittent, as indeed might have been the case in this instance; but, in most of these cases, it has not been stated with accuracy whether the urine was abnormal in quantity; what was its specific gravity; nor for how long the saccharine condition continued. One conclusion, however, may be drawn from this list of diseases, viz., that the change in the urine was merely symptomatic, and most probably originated in the stomach, which, more than any other organ, has its functions disturbed by sympathy with affections in other parts of the system.

Considered, then, from this point of view, diabetes seems to present a more favourable field for remedial efforts than it has hitherto been deemed capable of affording; and we may hope that, since other cachetic conditions, as anaemia, scurvy, purpura, dropsy, tuberculosis, and albuminuria, in their early stages, admit of an easy and radical cure, so diabetes also, when detected, and properly treated in its outset, may cease to be one of the opprobria medicorum. Indeed, it is evident that cases of symptomatic diabetes must have hitherto been generally cured without any special treatment, simply because the discovery of the frequent existence of the disease in this form is quite recent; for, if such cases had not mostly been cured by general treatment, they would have continued to increase in vio-

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* Wehal ale is usually sweet; and, according to Dr. W. Jones, ale contains from 12 to 130 grains of sugar in the ounce.
I have used a tincture of asparagus as a diuretic for sixteen or seventeen years, with increasing confidence in its usefulness and efficacy. I have thought it worth the notice of our Association at this particular period, because the time is now approaching at which any gentleman may easily make the experiment of its use. I use the following formula: Take dried tops of asparagus five pounds. Bruise and press out the juice; evaporate at a low temperature till reduced to one pint, and strain. Lastly, add a pint of rectified spirit. Mr. Daly, chemist, of Warwick, can furnish any person desirous of trying the tincture with a limited supply, and will be happy to make any quantity that may be ordered of him.

The peculiar odour communicated by this substance to the urine, in a remarkably short time, is perhaps as familiar to the laity as the profession. It was this fact that first led me to think that asparagus might constitute a valuable adjunct to our list of diuretics; if not indeed by virtue of any specific diuretic quality it possessed, at least by its power of directing other agents of acknowledged diuretic power to the kidneys.

On referring to such authorities as fell in my way, I found that, whilst some mentioned asparagus as a diuretic in general terms, without any specific reference to its medicinal administration, others omitted entirely to notice this plant, and its diuretic properties entirely. It appeared to me evident that any deductions drawn on this subject had been founded entirely on its effects as an article of food, and not upon any direct experiments of its medicinal administration. The fallacy and unsoundness of generalisations so vague, we might have discarded numerous of our best remedies as delusive, innocuous, or useless.

Suffice it to say that, after some sixteen years' experience, I have found the tincture of asparagus a useful adjunct to our diuretic remedies. In many cases, I have found it possessing direct diuretic properties when taken alone in water; but, in still more instances, I have found it most useful in promoting the diuretic properties of other drugs, as I conceive, by directing them at once to the kidneys. I have repeatedly in my own practice, and also in consultation, simply added from half a dram to two drachms of tincture of asparagus to each dose of an unsuccessful diuretic, and found that copious diuresis was the result.

Mr. Daly informs me that the exact loss by weight in drying the plant is eleven parts out of twelve; in other words, that twelve parts by weight of the fresh shoots are only equal to one part of dried. I have not tried the infusion of the dry shoots, but should think them worthy of trial.

The tincture of asparagus presents the advantage of being capable of combination, so far as I know by experience, with every diuretic substance in use, be it from the animal, the vegetable, or the mineral kingdom.