Original Communications.

ON AZOTURIA.

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Of late years it has become the fashion to deny the existence of such a malady as the one to which Dr. Willis gave the name of azoturia. But, if the prominence of a particular symptom may determine the nomenclature of disease, it appears to me that the term in question may readily be justified. I have often in conversation discussed the matter with medical friends, and have stated my opinions; but have avoided any publication of them, because, though satisfied in my own mind, I felt that the evidence I had to offer was not as complete as the bio-chemist of the present day demands. I may at once state that the evidence I have to offer is defective in this way: modern analysis requires that, in order to determine the real excess of urea, the urine of twenty-four hours should be collected and measured; without which proceeding it is affirmed that the absolute quantity of urea passed cannot be fixed. I have no desire to set any limits to accuracy and minuteness of analysis, and feel assured that perfect correctness can only be attained in the way indicated. At the same time, the practitioner, in dealing with cases in private practice, and especially with cases that are only seen occasionally and at long intervals, is compelled to use comparatively coarse modes of estimating; and, if his statements are made with the necessary reservation, he may hope to advance the truth, though in a less perfect manner than is in the power of those capable of adopting a more perfect method.

Although I do not doubt that many cases of azoturia occur among the poorer classes, their maladies generally assume a more tangible character; and until the out-patient system of hospitals and dispensaries is revised, it will be impossible for the physicians to devote that care to their investigation which is necessary for the present purpose. Dyspepsia or anemia are terms that cover a multitude of diseases, which a greater refinement of diagnosis would readily reduce to some other denomination.

While admitting the imperfection of my analyses, I cannot but think that, if we find a patient habitually passing urine of a high specific gravity, averaging 1030, and not due to the presence of sugar, nor associated with albumen, and proved to contain a very large amount of urea, we are justified in terming his case one of azoturia; the more so, if on close inquiry, no tangible disease can be detected to which the accompanying symptoms are referable.

It has been my lot to have met with numerous cases of protracted indisposition, accompanied by defective powers of assimilation, irregular digestion, debility, general and indefinable malaise and more or less emaciation, though this not always, in which I held the excessive waste of the nitrogenous tissues, as indicated by the increase of urea in the urine, to be an adequate explanation of all the phenomena. The diagnosis was, in part, attained *par voie d'exclusion*; but after satisfying myself of the absence of all other sources of the morbid feelings of the pa-

tient, it appeared that a persistent and palpable feature, such as the one alluded to, would justify the application of Willis's term. Dr. Prout (*On the Nature and Treatment of Stomach Diseases*, 1848, p. 94), who gives a description that in most points tallies with my own observations, distinguishes between two forms of the disease; in one of which there is diuresis; while in the other there is an excess of urea without diuresis; and he regards the affection as analogous to diabetes. He considers that he has the strongest presumptive evidence, both from observation and analogy, that, if permitted to proceed unchecked, or if injudiciously treated, it passes into diabetes or some other formidable disease, though he has no positive proof of such termination.

I have at present under observation the case of a gentleman, in whom there is an alternation of azoturia and glycosuria; though, in neither case, is there a secretion of urine justifying the term diabetes. The amount passed rarely exceeds three pints in the twenty-four hours; but, while at times the urine is almost solidified by the addition of equal parts of nitric acid, owing to the formation of nitrate of urea, at others it is found to contain a palpable amount of sugar, as confirmed by the examination of my friend, Dr. Matthiessen, the lecturer on Chemistry at St. Mary's Hospital.

I have shown elsewhere, that an excess of urea is, as was already shown by Dr. Prout, a frequent accompaniment of epilepsy—an exhaustive condition which might have been predicated *à priori*, if *à priori* reasoning were of any value in determining natural phenomena. The occurrence, however, is not uniform; in fact, it fails with sufficient frequency to have induced one writer to assert that the characteristic feature of the urine in epilepsy was an absence of urea. Dr. Parkes, in his admirable work on urine, states that he has never met with a case of genuine azoturia, though he admits the possibility of its occurrence, as he quotes a case examined by Dr. Ringer, in which a man who was not febrile, and only appeared feeble, passed no less than 1130 grains of urea in each twenty-four hours, or about three times the average secreted by an adult male. It is of such cases, and not of the coincident occurrence of an excess of urea in other diseases, as in epilepsy, that I am now speaking; and I cannot but think that, were a special series of volumetric analyses undertaken to determine the point, the view originated by Prout would receive more positive support than it yet has, and azoturia would be definitively accepted as a member of the nosological fraternity. It is possible that Golding Bird, who laid what I should regard as an undue stress upon the presence of oxalates in the urine, because they come and go like will-o'-the-wisps, often spoke of cases of azoturia when he discussed his hobby oxaluria. He admits that, in oxalic urine, the density increases with the quantity of urea, which is often present in large excess. Indeed, he continues, "I regard the presence of a greater or less excess of urea almost as characteristic of the morbid state of the urine for which I am contending, as the oxalate of lime itself." (*Urinary Deposits*, 1857, p. 241.) Without controverting Dr. Bird's statement, I may state that, in the cases of azoturia as I have observed them, this balance between oxalates and urea has not presented itself; and, in fact, I may say, that the oxalates have but rarely occurred with the excess of the latter substance.

The following is a case to which I should apply the term, azoturia.

A gentleman, aged 53, but looking much older, consulted me in January 1861. He had always been very temperate, and had enjoyed good health till after an affray with poachers ten years previously,

when he had an attack of jaundice. He recovered from this, and remained well till, four years ago, he became subject to bilious attacks accompanied by irregular action of the bowels. Three years ago, after much annoyance and mental excitement, he suffered from carbuncles on his back. Since that time he had been in bad health; suffering from a feeling of numbness in the left leg, and occasional severe attacks of diarrhoea. He complained of occasional neuralgic pains, and at times entire absence of sensation in the left foot. He walked into my room like a man debilitated by disease, but in no way resembling a paralytic. He complained of having been affected with seminal emissions. I examined him very carefully afterwards in bed, and could find no trace of loss of parallelism or loss of motor power. I could not satisfy myself, by the æsthesiometer, of any material impairment of tactile sensibility; no tenderness of the spine and no abdominal derangement were traceable; nor was there any disease of the rectum or prostate. I commenced the treatment with steel, and the application of an anodyne liniment; and ordered wine, beer, and nutritious food. The patient, being a teetotaler, was with great difficulty persuaded to take any fermented liquors. I obtained a specimen of the morning and evening urine before my next interview, when I had a consultation with a leading physician on the case. Both specimens had a specific gravity of 1035, were strongly acid, exhibited no increase of phosphates, and contained neither sugar nor albumen. There were no crystalline forms in either, and specifically no oxalates; but both specimens almost solidified on the addition of equal volumes of nitric acid, by the formation of nitrate of urea. The joint examination elicited no proof of any organic disease; and it was agreed that the case was one of azoturia. The quantity of urine never was large that was passed in the twenty-four hours; it rarely attained to three pints. I find that on one occasion I had the advantage of obtaining a volumetric analysis from Dr. Ringer; and the estimate was seven drachms and a half in the twenty-four hours—an amount considerably above what Dr. Parkes considers the average in the healthy adult. The gentleman remained under my treatment for three weeks; and improved materially under the administration of mineral acids, opiates, and tonics of various kinds. It was not till after twelve days' observation that I discovered a few oxalates in his urine. In a medical report which I gave the patient at his request, on leaving town, I stated that I regarded the azoturia as the source of debility; and that the drain caused by a persistent waste of tissue, indicated by an excess of urea in the urine, sufficiently accounted for the anomalous nerve-symptoms to which he was liable.

I saw the same gentleman again at the end of 1862, when he was passing through London after he had, without medical advice, been taking the waters of Kissingen, and thereby brought on severe diarrhoea. He was naturally weak in consequence; but the urine presented a specific gravity of 1025—lower than I had ever seen it formerly, and I have a memorandum that it contained but little urea.

There are many insidious morbid conditions for which we may find an adequate explanation in the urinary secretion, with important hints as to treatment and *regime*. The insidiousness of degenerative renal disease as indicated by albumen, is a point that can scarcely be too often mooted; and it is surprising how often and how long patients continue ailing and complaining of feebleness and want of power without presenting any very tangible symptoms, when an examination of the urine reveals the cause of the *anæmia*, the weakness, and the *apnoea*,

and at once suggests the proper indication. Although albuminuria is a much more frequent cause of these insidious symptoms than azoturia, still I am satisfied that there are numerous cases of chronic disease going through a weary life, for which the undue waste of the nitrogenous tissues indicated by a high specific gravity of the urine and an excessive proportion of its urea affords a satisfactory explanation.

ON SYPHILITIC ULCERATION OF THE PALPEBRAL CONJUNCTIVA.

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OF the secondary symptoms of syphilis, there is one which appears to have been rarely observed by writers on this subject, or, if observed at all, to have scarcely attracted particular notice or description: I allude to an ulcerated state, evidently, from its history, of syphilitic origin, appearing on the palpebral conjunctiva, and generally involving the adjoining tarsal cartilage. It is certainly an affection, as compared with other secondary symptoms, of rather rare occurrence; and in my own practice, of now a long duration, I do not remember (excluding, perhaps, two or three instances of it in congenital syphilis) to have met with more than about seven or eight cases; and of these, two of which occurred recently, I am enabled to add a brief report. Before doing so, however, I wish to premise a few remarks.

The subject of syphilis has for a long time, but more especially at a comparatively recent period, attracted considerable attention and research, both in this country and abroad; from which, I believe, a more correct knowledge of the specific distinctions of the disease has been acquired than was previously possessed.

At the present time, the conclusion arrived at seems to be, that there are two forms of primary syphilitic ulceration. One is the soft suppurating sore, sometimes accompanied, or soon succeeded, by enlargement, and not unfrequently suppuration, of the adjoining inguinal glands, but not contaminating the system, although communicable to others, and capable of reproducing repeatedly, by inoculation, similar sores in the same or in a different individual. It may be observed that occasionally, from some inflammation being excited, a degree of hardness is produced even in this form, but still distinct from the circumscribed and generally characteristic induration of the other.

The second form is the indurated sore, sometimes called the Hunterian chancre, the character of which is, in the first place, the secretion of an adhesive material, fibrine instead of pus (which latter occurs in the other form); thus appearing at first often rather as a pimple or hard tubercle, than a pustule. With this second form there is also not unfrequently some indurated enlargement of the adjoining inguinal glands, but it is not apt to undergo a suppurative process. This second form is the one which infects the blood; enters into the patient's system, producing secondary symptoms; and, although communicable to others, is not autoinoculable, except in its earliest period, before the adhesive effusion takes place. It, as a rule, occurs only once during life; whilst the first form may occur many times.

The first form I would compare to the porrigio (impetigo) larvalis (Willan), which, by contact, is often conveyed from one part of a child to other parts, or to those of its nurse. The second form I would rather compare, as infecting the general constitution, and mostly occurring once only during life, to small-pox, although