

upper eyelids, which were of a livid red colour. They overlapped the lower lids, and projected considerably beyond them. The tumescence arched up the lid from one canthus to the other, and extended from the brow to the tarsal margin. There was considerable mucopurulent discharge. The eyelids, when everted (which was effected with difficulty), presented a concaved semicircle. The conjunctiva was of a dirty light red colour, eroded, and covered at points by false membrane (?). The sclerotic conjunctiva was slightly congested. The inferior eyelids were healthy.

The patient's constitutional power was below par. Dyspepsia and constipation were present.

The appropriate treatment of this class of cases consists in the application of collodion to the skin of the lid, injections of nitrate of silver to the conjunctiva, and the administration of tonics, etc.

CASE III. A fat infant, 2 months old, was brought to the Eye Hospital on November 18th, 1852. The upper lids were much swollen and *indurated* from infiltration. On eversion, which was performed with difficulty, the conjunctiva presented a jaundiced hue and patchy redness; it was covered by a film of lymph, which was removed with some difficulty. The surface was excoriated in places, and exuded a straw-coloured serum. The cornea of the worst eye, which had been affected seven days, was slightly turbid—opalescent. The other eye was only attacked the day before the patient's admission.

In answer to questions, the mother said she was now, as previously to her confinement, suffering from a vaginal discharge, and scalding during micturition. She had no reason for believing that any of the discharge had come into contact with her infant's eyes.

The palpebral conjunctiva was brushed over with a ten-grain solution of nitrate of silver, and small doses of calomel with quinine were ordered to be taken twice a day. Under this treatment the case did well.

Original Communications.

A QUESTION AS TO PATHOLOGICAL DISTINCTIONS IN CASES OF DIABETES.

By DANIEL NOBLE, M.A., M.D., Manchester.

THE ordinary pathological distinctions recognised in cases of what is called diabetes, rest upon the presence or absence of sugar in the urine, when this excretion happens to be unusually abundant; and whilst the so-called *diabetes mellitus* has always been regarded as a formidable malady, *diabetes insipidus* has been considered a comparatively unimportant ailment. And, thus, the detection of sugar to any extent in the urine commonly gives rise to the most serious apprehensions. Up to within the last few years, this was unavoidably the case; because, generally, it was but when the graver constitutional symptoms of a severe form of diabetes revealed themselves, that the urine was at all tested for sugar, the presence of which was looked for as giving a definite certainty to a previous diagnosis. And as, sooner or later, excessive discharges of urine, accompanied by thirst, voracity, dry skin, emaciation and debility, were ordinarily followed by dissolution; and as these conditions of imminent danger were so often associated with the renal excretion of sugar; saccharine urine became, not unreasonably, regarded as a most formidable feature of the disease, and as one threatening death at no very distant period.

But in these days, when an examination of the urine is so universally practised in the diagnosis of disease, the presence of sugar is discovered at much earlier

stages of diabetes than was formerly the case; and this circumstance, I apprehend, should lead to a more accurate appreciation of its true pathology than when the earlier phenomena so often eluded observation. I have, myself, been induced to think that saccharine urine does not necessarily constitute that very formidable symptom in disease which it was formerly considered to be; and that, in fact, it need not be regarded as the sure precursor of that particular diabetic condition which almost invariably has a fatal termination. I will illustrate my meaning, however, by narratives of certain facts somewhat incomplete, but nevertheless showing a contrast which supplies the grounds upon which I submit a question as to a probable pathological distinction, and which at the same time furnishes an occasion for suggesting a direction to the inquiries of those whose aptitude and opportunities more especially qualify them for investigations of this kind. In this view of things, I subjoin a brief account of two cases of diabetes, representing a well-known class; and then some account of two others, the pathological significance of which, I suspect, is essentially different.

A young Greek, about 17 years of age, was brought to me some years ago, by the proprietor of a boarding school in the neighbourhood of Alderly. The complaint was that the patient had become gradually listless and weak, incompetent alike for physical exertion and mental application; and that this state of things had, for a few weeks, been almost imperceptibly making its way. On inquiry, I ascertained the existence of thirst, voracious appetite, dry skin, and large discharges of urine—symptoms which, of course, suggested the diagnosis of diabetes. I directed that the young man should not return to school, but should remain with relatives who resided in the immediate neighbourhood, intimating at the same time to the gentleman who accompanied him, that I regarded his case as very serious, and that he ought to go to bed and have constant and systematic attendance; that, if my own services were further demanded, I must be informed, and, in that case, should visit him on the following day, and would wish to see the quantity of urine voided after a given hour. It was soon afterwards intimated that I was to render him such attendance and aid as the circumstances might require, and I called upon him accordingly on the following day. I found the poor youth much weaker than on the previous day even, and ascertained that he had parted with immense quantities of urine possessing an odour and other characteristics rendering the presence of sugar very probable. I took some of it away with me, and submitted it to simple tests; it may suffice to say that the urinometer manifested a very high specific gravity, and Trommer's copper test exhibited a very large proportion of sugar. On the succeeding morning, the debility and exhaustion had very alarmingly progressed, and I gave the worst prognosis, stating that it would be agreeable to myself if they should wish to call in some other assistance—a suggestion which, it was said, should be considered. I paid an evening visit on the same day, and was told, without seeing the patient, that, in consequence of my opinion expressed in the morning, I had been superseded; that my successor, moreover, should be replaced in like manner, if he did not speedily effect an improvement; and that, in fact, doctor after doctor should be tried upon this principle. Early the following morning, however, the patient died.

Now, in this instance, there was obviously a collapse of so speedy and decided a character, that little can be said of its specific nature; the peculiar perversion of function indicative of diabetes mellitus so rapidly carried with it a destruction of all vital energy as to preclude the attempt at any special ascription of its origin and cause.

In the course of last year, a lady consulted me on account of her daughter, who for some weeks had been

losing flesh and strength; she was not more than about thirteen years of age, and had been under the care of a well-known homœopathic practitioner in this city, who did not appear to have made any definite diagnosis. On directing my attention to the young lady, my first impression was that she was labouring under some obscure form of phthisis, but a physical examination of the chest and a quiet pulse, excluded the idea; I next thought, on learning that her appetite was unusually good, of possible mesenteric disease, but I could obtain no corroboration of this notion on extending the inquiry; it was when excessive thirst was mentioned, that I thought of diabetes. The skin was dry, the appetite voracious, and the urine extraordinarily abundant; I had brought to me the same day a specimen of the urine, and found it of high specific gravity, and containing large proportions of sugar; the nature of the case was thus put beyond doubt. For about a week I saw this patient on alternate days at my own house, and she was seen once also by Sir James Bardsley. After some seeming improvement, which did not continue for more than a day or two, she began rapidly to decline, and was unable to leave her room; therefore I attended her at home, and in three days she expired—ten days from the period when she was first brought to me.

In this case, the invasion of the malady could be traced to no particular cause; it appeared that the decline in strength had shown itself slowly and insidiously; and it was only the persistence and augmentation of the debility with notable emaciation, that led the parents to regard the illness in any serious light; for, indeed, they had been encouraged by the homœopath, they said, to feel every confidence that time and his own treatment would bring about recovery. This instance, like the preceding one, constitutes a fair illustration of a class of cases familiar to practitioners and dependent upon conditions of the system but little understood,—cases which alone, probably, at no very remote date, would have had their diabetic character made out, and the general symptoms of which would alone have suggested the importance of testing the urine for sugar in order to settle the diagnosis.

But there is another class, which I proceed very briefly to exemplify. A gentleman between fifty and sixty years of age, of great mental endowment, one who had through life pursued a thoughtful and laborious career, had, for upwards of twenty years been accustomed to consult me when requiring medical aid; his ailments having generally been some feverish cold, or a slight degree of gastro-enteric irritation that rendered his digestion habitually weak. For four or five years prior to the summer of 1860, he had been deeply engaged in labours demanding much brain-work, of a kind, moreover, that involved considerable worry and anxiety. About the period just specified, he became troubled with neuralgic pains about the head, with broken sleep and gastric irritation to an unwonted extent. I was constantly urging detachment from business-cares and labours, but this recommendation was but imperfectly carried out; yet, to the extent to which it was so, the symptoms were always relieved. Late in the autumn the ailment assumed severer features; for great debility and some emaciation ensued. At this stage of affairs the patient, having a demand for his presence in London, asked if I would advise him whilst there to consult any one and whom, and I named to him a physician of well-earned distinction for his successful labours in pathological chemistry; my recommendation was acted upon, and the physician in question was seen; and, immediately on the patient's return home, my attendance was again requested. On inquiring if he had seen the London physician, and if he had, what had been said, I was told that he had done so and was glad of it, for the ailment had been found to be diabetes. I must confess, that upon hearing this statement I was somewhat startled, for there neither was nor

had been any excessive discharge of urine, nor any dryness of skin, nor any voracity; neither had the urine exhibited that greenish straw colour so often suggestive of diabetes, but, on the contrary, had displayed the same superficial characters which I had noticed for years in connexion with disordered digestion—a somewhat higher colour than usual, and lithic deposits on cooling. However, I could not doubt, after what had been said, that the urine at this time contained sugar, and, having procured a specimen, I took it to an analytical chemist, that it might be quantitatively as well as qualitatively examined. It was found to contain about eight per cent of sugar, and the specific gravity was 1.031. I had already said to the patient that, although the urine should contain sugar, I did not think it quite correct that the case should be designated diabetes, if by the term was understood that grave form of it, which, undermining by degrees the forces of life, terminated in death by a sort of gradual decline; and that, indeed, I wished him to rid his mind of such a notion, as being, at least in my judgment, not only not true, but calculated in itself to do him serious physical mischief. I had explained to him, moreover, that it had of late years been discovered that mental irritation, by its action on the brain, might give rise to saccharine urine, and that this phenomenon was not always of that momentous and fatal significance which the popular estimation of diabetes might lead him to think. However, he had received from his metropolitan adviser both medicinal and dietetic prescriptions—all *secundum artem*, and these, I said, he must in fairness carry out *au pied de la lettre*; I let him understand, nevertheless, that I gave preference to my own practical views, which involved detachment from harassing occupation and thoughts, change of air and recreative amusement, with such medicines and diet as his own particular experience might suggest to be the best calculated to restore the integrity of his digestive functions. After a trial of what I will call the systematic treatment for about a fortnight, he was obliged to give it up alike in its medicinal and dietetic items, for both appetite and digestion became still weaker; and, altogether, he was put more and more out of order; but, all this time, neither the skin nor the quantity of urine gave any of the usual indications of advance in the direction of diabetes as ordinarily understood. Early in 1861, all *system* of treatment was laid aside, my own more general views were carried out, and he began to improve; the quantity of sugar in the urine and the specific gravity also were diminished, varying however from time to time. In a few weeks the percentage of sugar was reduced to five, when, for what I deemed to be good and sufficient reasons, the urine ceased to be examined; the patient had possessed himself of an urinometer and was in the habit of using it himself; and in this way, I thought, he was exercising a prejudicial influence upon his physical condition by unduly fixing his attention upon it; therefore, subordinating my scientific interest in the case to anxiety for the patient's recovery, I urged that he no longer notice the urine, that he forget it, and, so long as he continued to improve, neither make nor have made any more examinations of this excretion. Through the spring the improvement went gradually on, appetite and digestion better, and the strength increased; by the summer, he might almost be regarded as well. In the month of July, however, he had a most serious attack of summer-cholera which, after some days very severe suffering, abated; I only saw him once during this illness as it occurred upwards of forty miles from Manchester; but from what I did see, and from the account furnished by the local surgeon, I am enabled to describe it as most enervating in its effects, and he was for some time much shattered by it; still, neither at the time, nor during the ensuing convalescence, was there any manifestation of the constitutional symptoms of diabetes. This gentleman when sufficiently well during the autumn went to Mal-

vern, sanguine from what he had been told that the water-treatment would invigorate him and perfect his cure; and, for my own part, recognising the benefit to arise from this very mental prepossession, I raised no objection; and, certainly, on his return home, towards the end of the year, he appeared quite well. For reasons, however, already stated, I neither made nor procured any chemical examination of the urine. During the spring of the present year, the patient had another very severe break-down, in the old way and from the old causes,—head-ache and functional disturbance of the stomach from excessive brain-work and irregular diet; still no suppression of perspiration, no excess in the quantity of urine, no voracity. Perfect recovery followed. At this time the gentleman is in excellent condition, looking perfectly well and cheerful, and is said by his friends to have a more healthful appearance than he has presented for some years.

A gentleman of my acquaintance, of high intellectual endowment, and, moreover, of great sensitiveness of disposition, has for the last seven or eight years had saccharine urine—a symptom which ensued upon much anxious mental effort. As he is a resident at a considerable distance, I cannot exactly speak of this gentleman as my patient, although on several occasions I have had conversations with him on the subject of this particular derangement of his health. I think it was about the year 1854 or 1855 that sugar was first discovered in the urine, but he had for many years had an imperfect digestion, evidenced very often by lithic deposits, and he had been a bad sleeper. In this case, there has been none of that steady progress in a downward direction so commonly happening when there is saccharine urine. From the time of its detection to the present there have been several attacks of illness, and on two occasions the patient had been all but given over. I saw him about three years ago labouring under irritable heart as the chief malady; he was in bed and much exhausted, so much so, indeed, that his friends, having regard to the diabetes, scarcely expected that he would rally; yet, at this time the specific gravity of the urine was not high, below 1,030 I think. The gloomy forebodings were not realised, and recovery took place, enabling him to fulfil important and responsible duties. In this instance, there was, for the most part, a somewhat inordinate appetite, but not any particular dryness of skin nor any great excess of urine. I select for illustration a case, with which I am but imperfectly acquainted however, mainly because the connexion in degree between mental wear and tear and saccharine urine was on several occasions quite notable; for example, about four months ago, the patient was abroad accompanied by an intimate friend, from whom I had shortly afterwards the information that, during this absence from home, circumstances occurred to produce great stress of mind, breaking down the health for a brief period; that, apparently in consequence, the diabetic symptoms became very much aggravated, the specific gravity of the urine running up to 1,051 from 1,025. On the enjoyment of quiet and the restoration of mental calm, the *status quo* was very speedily recovered; and, since this occurrence, the patient has been better than for a long time before. Indeed, a gentleman well acquainted with him, writing about a month ago to me on another subject, refers to our common friend as follows: "He keeps well; I suppose there never was known such a case."

I think there can be no doubt that the class of facts, very imperfectly exemplified by the preceding accounts, demand the inference that some causal relation subsists between certain pathological states of the brain and the excretion of sugar by the kidneys; showing, as it would appear, that mental perturbation is one of the first links in the chain of diabetic phenomena, and showing, moreover, that the degree of mischief exhibits some correspondence with the intensity of the presumed cause. Indeed, so

obvious is the relation in question, that it has been suggested by some, that diabetes mellitus is essentially of encephalic origin; and, certainly, if pathological distinctions cannot be established, there is much evidence that may be cited in maintenance of some such thesis. The well-known experiments of Claude Bernard, repeated and confirmed by Dr. Pavy in this country, furnish no little plausibility to the doctrine; they shew that saccharine urine can be artificially produced by mechanical irritation of the floor of the fourth cerebral ventricle. And other experimental lesions of the nervous system, moreover, have been found to produce diabetic symptoms since the one first practised by M. Bernard. Ordinary brain-disease will sometimes develop for a time a saccharine condition of the urine. The case of the late Mr. Hopwood, which attained so much notoriety in the year 1855, on a trial affecting the validity of a will, supplies an excellent illustration of this position. In 1849, five years before this gentleman's death, it appeared from the evidence given on the trial by his very intelligent medical attendant, Mr. Abraham Wood, of Rochdale, that at the period mentioned he began to suffer in his head, complaining of pain, somnolence, and intolerance of light—symptoms attributed by Mr. Wood to congestion of the brain, and which later on were followed by paralysis and dementia; "he had also another ailment", said Mr. Wood, "an affection of the kidneys". On cross-examination, he was told to say what this affection was, and he stated that it was "diabetes mellitus", and then that this was recovered from in ten days or a fortnight. Hereupon, Sir Fred. Thesiger, the cross-examining counsel, seemed to think that he had got hold of a good point for weakening the force of Mr. Wood's evidence, for, echoing the general popular impression concerning the necessary fatality of diabetes, he observed: "That (*diabetes mellitus*) is the incurable kind, is it not?" To this interrogatory Mr. Wood very sensibly replied, "It depends upon the cause." Sir Frederick, however, pursued the topic, resting upon the position that the ailment in question could never be recovered from, and that Mr. Wood did not know what he was about; but that gentleman was quite a match for the clever counsel, stating that he had not merely been led to the diagnosis by the general symptoms, but that he had tested the urine and detected the presence of sugar.

Now, the question which I would propose for this evening's discussion, and the question to which all that has preceded is introductory, is this: Is it possible to establish pathological distinctions in cases of diabetes, according to their *origin*, the *course of the symptoms*, and their *curability*—characteristics which, under many circumstances, supply the basis of such distinctions? In all these particulars, there would seem to be a wide difference between such instances as those last cited and those which I sketched in an earlier portion of this paper, the presence of sugar in the urine being almost the only phenomenon common to the two sets. May we not expect that, in further prosecution of our investigations in this direction, we may be enabled to determine distinctions in cases exhibiting sugar in the urine, just as now we can and do, but could not formerly, in the analogous instances of albumen in the urine? When Dr. Bright demonstrated the pathological connection between granular kidney and albuminuria, it was for some time afterwards regarded as constant; and albuminous urine was consequently regarded as possessing a much graver significance in all cases than it is now known to have in many; for, at the present day, this symptom is known to be expressive of pathological states various in their kind, and involving great differences alike in their origin, course, and curability; hence, we estimate the general character of albuminuria, not by the amount of albumen in the urine, but by the morbid causes which have brought this irregular excretion about. Is it not practicable, then, to establish, or to discover, in like manner, scientific as

well as practical distinctions in cases of diabetes? I would venture, myself, to express the conviction that modern researches are tending in this direction; and it is to stimulate attention to this view of the subject, that I have brought forward the question upon the present occasion, not, I need hardly say, in the form of a clinical contribution scientifically complete, but rather in that of an exposition of a course of thought initiated by the incidents of a casual experience.

Transactions of Branches.

SOUTH MIDLAND BRANCH.

CHRONIC INFLAMMATION OF THE OS AND CERVIX UTERI.

By GEORGE P. GOLDSMITH, Esq., Bedford.

[Read October 23rd, 1862.]

CHRONIC inflammation of the os and cervix uteri is one of a group of disorders, very common, indeed, in their occurrence, but to which comparatively few, I think, pay much attention during the time in which they are attending the medical practice of the hospitals. One reason for this neglect is, perhaps, to be found in the fact that, although it entails severe and long continued suffering, this is not a fatal disease, and we do not therefore frequently have an opportunity of examining the morbid changes produced by it; and, as it does not generally wholly incapacitate the patient from following her usual avocations, we do not often see her as "in-patient".

I must here, at the outset, state that the few observations I have to offer will be far from forming anything like a complete thesis upon this subject, but will merely embody the most prominent impressions made upon my own mind, while daily witnessing the complaint in a considerable number of cases. When I first undertook the duties of my position in the hospital, I had heard and read of the disease, but imagined it to be a rare affection, with which I should probably hardly ever meet; and I confess I was both astonished at, and unprepared for, the frequency with which it presented itself.

When we consider the important part played by the uterine functions, their periodic recurrence after intervals of comparative inactivity, and the complicated character of the structures by which they are maintained, namely, an organ comprising a serous, parenchymatous or muscular, mucous and glandular or follicular apparatus, we shall neither be surprised at the frequency with which some of these functions are liable to disturbance, nor at the gravity of the results attending it. The greater frequency of congestive diseases of the cervix uteri over those of the fundus, may be partly explained by the anatomical difference of the vascular return of the venous blood in these parts; the blood from the body and fundus uteri being conveyed back chiefly through the ovarian veins, passing directly to the vena cava, or a primary branch of it; while the blood from the cervix is returned by the uterine and hypogastric plexuses, branches contributing to form the internal iliac, and more liable to congestion from their proximity to the rectum and bladder, organs continually becoming distended, and thus, to some extent at least, exercising pressure on the cervix.

A patient, during the period of life when the sexual functions are active, comes complaining of general ill health and exhaustion; the complexion being pale, and, as is frequently the case, of a peculiar dusky hue, quite distinct from the cachectic sallowness of carcinoma, looking more smoky, if the expression may be allowed, and often presenting well marked dark areolæ round the eyes, so expressive of an exhausted and tried condition

of the system. The pulse is generally of low power and increased in frequency; while the patient's whole manner is often nervous, excited, or irritable, the depression of spirits being sometimes extreme, and the ordinary symptoms of chronic hysteria more or less present. The patient seems bereft of the feminine fortitude we so much admire in her sex when suffering from disease in general, and readily enters into a long and emphatic description of her sufferings, finishing it by a shower of tears, and evincing much fretfulness and impatience at one's close questions. There is not, as a general rule, much disturbance of stomach; we do not meet with that distressing nausea and vomiting so commonly accompanying the earlier stages of schirrus; but there is frequently dyspepsia and flatulence; the bowels being for the most part costive, and often refusing altogether to act without the continual use of purgatives.

Leucorrhœa is generally of early occurrence; and this discharge, so commonly present in most uterine ailments, presents in this disorder somewhat peculiar characters, arising from the anatomical structure of the part in which it is situated. In the cervical canal, the mucous membrane is thrown into longitudinal *rugæ*, an appearance forming the "arbor vite uterina"; in these folds the membrane is studded with large mucous crypts, called the *glandulæ nabothi*; these being stimulated to undue action, secrete a thick gelatinous mucus, as after the stimulus of impregnation; but, instead of remaining in the cervix and closing the canal, these pledgets are ever and anon discharged with the other matters thrown off by the uterus. I have had these masses shown me by patients, who have regarded this symptom with alarm. Of course the thin white vaginal discharge often accompanies; but, as far as I am aware, the above mentioned secretion is characteristic of this affection.

An almost constant and important symptom, also, is *menorrhagia*. The patient complains that the menstrual periods are accompanied by a more profuse discharge than natural, and that the interval between each period becomes gradually shorter, so that, in the worst cases, they say that there is an almost constant draining.

But the symptom most prominent, and that which, with the last mentioned, especially leads the patient to apply for relief, is *pain* of a peculiar heavy, dull, aching character, referred to the upper part of the sacrum, sometimes extending round the pelvis and into the groins. This I have found, in the cases I have treated, to be almost continually present; not always in the same degree, but generally amounting to a settled uneasiness, subject to occasional exacerbations, especially upon exertion.

The *internal examination* reveals an enlarged, tumified, and hypertrophied state of the os; the lips of which are frequently everted, leaving the aperture large and gaping, so as easily to admit of the introduction of the tip of the finger, while the body of the uterus is slightly increased in size and weight, as may be estimated by poising it on the finger. The engorgement of the os varies much in extent and character. Sometimes there is so much hardness and irregularity, that the diagnosis between this condition and the first change produced by carcinoma is attended at first with some doubt. To this point, as being one of great practical importance, I shall again presently revert.

The frequency of ulceration as an attendant upon this disease has been attested by so many observers of undoubted character and authority, that, although it is still disputed by some, for whom we entertain all respect, yet we cannot entertain any doubt as to the fact. These ulcerations are often mere excoriations of the epithelial layer, and can hardly be detected without the aid of the speculum, even by those most skilled in digital examinations: that these do exist, however, and that they are the proximate causes of many of the symptoms, such as leucorrhœa and menorrhagia, which attract