as admitted in Sir Spencer Wells's paper, with regard to "cases of ovarian dysmenorrhœa or neuralgia which have resisted all treatment, and in which life or reason is endangered." In such a class of cases the extension or limitation of the question is to be largely governed by the social position of the patients. When dealing with women who have to work for a living, it is impossible not to see the necessity of extending it to a much larger proportion of cases than in the upper ranks of life.

With Sir Spencer Wells's fourth conclusion, that "in cases of nervous excitement and madness it is inadmissible," the writer is really much disposed to agree. Certainly he has in his own practice refrained, save in a few cases of well-marked menstrual epilepsy, from extending it in this direction, largely for the reason that a discussion of such a group of cases would necessarily, and by reason of the confusion existing upon the whole question, hamper its discussion in regions where its application is much more easily defended.

Sir Spencer Wells's fifth conclusion, that "it should never be done without the consent of a sane patient, to whom its consequences have been explained," must be admitted by all; indeed, this conclusion ought to be much more widely accepted concerning other methods of surgical proceedings. The writer went on to explain that Sir Spencer Wells had completely misunderstood and confused the facts of his (Mr. Tait's) own work. His earliest cases were for the purpose of relieving pain which was caused by diseased ovaries of small size, and was a departure from the principle, which had been maintained up to that time, that ovarian tumours ought not to be removed until they threatened life, a conclusion which could not be resisted with the high mortality which occurred in the practices of nearly all operators until 1878. After that, the diminution in the mortality permitted the extension of old principles and the intervention of new ones. Such cases should not be called "oöphorectomy," or "castration," or "normal ovariotomy," or "Battey's operation," or any other name which does not mean that they were cases of removal of ovaries just as diseased as if they were the biggest cystomata which could be found in our lists.

In this article, Sir Spencer asks the extraordinary question, "Who can diagnosticate with certainty the presence of irreparable disease in these out-of-the-way organs?" The writer answers that he did it for the first time in the year 1871, and has done it in hundreds of cases since, and has taught large numbers of practitioners how to make these diagnoses. Further, he finds that all over the world such diagnoses are being made, and the results of accurate and successful treatment placed on record.

In a recent paper in the *New York Medical Record*, Dr. Mary Dixon Jones, of the Brooklyn Hospital for Women, concludes some most remarkable testimony, and some extremely brilliant cases, with this sentence: "There is no advance made in modern surgery that will do more good; save more lives, or relieve more suffering, or add more to the sum of human life or human happiness than this one operation, known as 'Tait's operation.' It will save more lives than ovariotomy, because more need it."

In conclusion, the writer protests against the performance of unnecessary and improper operations, and points out that the performance of such are largely aided by the confusion of terms which had been brought about by the improper nomenclature, and therefore until those unaccustomed to this kind of work are enabled to make proper diagnosis, it was an easy matter to refer any kind of pelvic ache or ail to the uterine appendages, and the words "spaying" or "castration" seemed to have been designed as an absolute snare, by which such men were led astray to any extent to feel themselves justified in removing appendages when there was nothing the matter with them. Therefore, those who used these words were largely responsible for the harm that was accruing. On the other hand, of operations that were justifiable and proper, it was inevitable that a relatively and an absolutely large number would fall into the hands of the men who were successful in reducing the mortality to an almost vanishing point. But these cases would not be those of an improper kind, the fact that they would be gathered from far and wide, and placed in the hands of men who were responsible, by their position in the profession, for the proper treatment of such cases, would be the best guarantee for their proper selection. In fact, the present phase of the discussion was precisely that which was raised by Lawrence, Tyler Smith, Syme, and Miller, in the early stages of Sir Spencer Wells's own career concerning ovariotomy. That such operations should be performed with the utmost care, and precautions in the matter of consultations, was of course just as true as the necessity for similar precautions in all surgical proceedings. But consultations for such cases must be like consultations for other things, it is perfectly useless for them to take place with men who are wholly prejudiced against the proceedings. Such consultations must be mere matters of farce.

BRITISH MEDICAL ASSOCIATION.

FIFTY-FOURTH ANNUAL MEETING.

PROCEEDINGS OF SECTIONS.

SOME OBSERVATIONS CONCERNING WHAT IS CALLED NEURASTHENIA.

Read in the Section of Medicine at the Annual Meeting of the British Medical Association in Brighton.

By W. S. PLAYFAIR, M.D., LL.D., F.R.C.P.,
Professor of Obstetric Medicine in King's College, and Physician for the Diseases of Women and Children to King's College Hospital.

I HAVE ventured to take, as the title of this note, that given to a paper written by Sir Andrew Clark, which I have read with great interest and satisfaction, since it will certainly lead to the further study of an obscure and little understood form of disease, that it should be made the subject of a paper by a physician of his eminence. This topic was originally almost accidentally forced upon my attention from the very frequent association of this type of disease within the gynæcological work which is my special province. General physicians are constantly preaching of the evil which, in their judgment, comes of over much local treatment in women; and it was the taking to heart of these sermons which led me to a closer study of the neurotic complications of uterine disease. Having drawn the attention of the profession to the remarkable success which followed the treatment of certain cases on the principles first systematised by Dr. Weir Mitchell, of Philadelphia, it was only natural that numerous examples of this type should come under my observation, many of them entirely unconnected with gynæcology. I saw many cases in which the originating local ailment, when it existed, had become entirely overshadowed by a neurotic condition engrafted upon it, which had in time become the dominant factor of the case, and, too often, I had the humiliation of observing that this neurotic state had been cultivated and fostered by injudicious medication, as surely as mushrooms are forced in a hotbed. I soon became convinced of the great importance of some of the varieties of functional neurosis to which the term "neurasthenia" has been applied; and I also learnt how completely ignorant I had myself previously been of this class of disease, and how very little it had been studied by the profession at large. If it be the case, as Sir Andrew Clark tells us, that this subject is being at last recognised in all our modern systematic and clinical works, still more if it attracts the attention and is deemed worthy of being written on by a physician of his position, all is being done that can be desired. No one can wish for more than that a subject should be thoroughly threshed out, and discussed from every point of view, favourable and unfavourable. *Magna est veritas et prevalebit*, and the proper estimate of any form of disease can only be arrived at by an open discussion of this kind.

I have done my best to bring this matter publicly before the profession by papers in the medical periodicals, by a discussion in the Medical Section of the British Medical Association at Worcester, and by an unsuccessful attempt to induce the Collective Investigation Committee to embrace it in the field of their inquiries. With regard to the latter point, I must observe, *en passant*, that their reason for not doing so was to my mind a strange one, namely, "that the topic was not ripe for investigation." I fancied that the very *raison d'être* of this Committee is to facilitate the study of little understood and "unripe" forms of disease; and I venture to think that conditions shattering the life and happiness of thousands of chronic invalids all over the country, are quite as legitimate subjects for scientific study as such topics, for example, as the "value of pure terebene." I am happy to say that the endeavours I have made have not been altogether unsuccessful, for the matter has attracted a good deal of professional notice, and the main fear now is that certain cases will be classed and treated as "neurasthenic," if I may be pardoned the provisional use of the word, which certainly have no right to the term. Before saying more on this, let me point out that the reason why this type of general neurosis has been so little studied as not to find even

a casual mention in most of our systematic treatises on medicine is to a great extent, I think, because it is chiefly a disease of the cultured classes, gradually increasing as the so-called "culture," or "over-pressure," or analogous causes of nervous strain are brought into operation, and not found, or to a very partial degree, in the patients of our large hospitals, I, at least, have no recollection of having seen a well marked case except in private practice; and as most of our systematic writers have drawn their experience from their clinical wards, it is not surprising that it should have been only partially recognised. Another explanation is to be found in the fact that neurology—whether the term be applied to functional or organic disease—is a comparatively modern study, and that many advanced cases have been wrongly diagnosed, and attributed to some obscure organic cause, instead of to a pure neurosis.

As it was the perusal of Sir Andrew Clark's paper which induced me to write this note, I may venture to allude to some of the views he maintains, to which I feel bound to take exception. In the first place, he objects to the term "neurasthenia," and says that the condition to which the name has been applied has been already more or less fully described under such names "nervous erethism," or "mimosa inquieta," etc. It may be so, but certainly such terms have not attracted much professional attention, as neither of them is mentioned in the four medical dictionaries I have consulted, namely, Quain, Dunglison, Littré, and Robin. I hold no brief to defend the word "neurasthenia." I have never used it myself, preferring English expressions to Greek, and it must be admitted that it has sometimes been employed in a way that is reprehensible. Still, a disease, or assemblage of symptoms, or morbid state, must have a name of some sort. The theory involved in the term "neurasthenia" is, perhaps, as near the truth as any other that we are likely to reach for some time, and it is practically more euphonic to talk of a "neurasthenic" patient, than of one who is a "nervous erethistic," or an "inquiet mimotic." The mere nomenclature is really of little moment; the thing of importance is that the morbid state, disease, or assemblage of symptoms, should be fully realised and carefully studied.

Sir Andrew next proceeds to give a graphic and very accurate description of what he properly terms "mere nervousness;" and then satisfactorily proves that anyone treating such a condition on lines other than the very common sense ones he lays down, would be committing a grievous fault. For my part, I believe that no one short of a lunatic could possibly be guilty of such an error. What Sir Andrew so well describes is, doubtless, the raw material from which "neurasthenics" are made (I find I am obliged to use the forbidden word, after all, for want of another); but such a person is no more to be described as suffering from "neurasthenia," than a person who has an inherited tendency to tuberculosis can justifiably be called "phthisical" in the absence of all lung-symptoms. A "neurasthenic" is not a person with a nervous system prone to break down, but one whose nervous system, from some cause or other, shock, overwork, mental strain, and so on, actually has broken down, and who has thus become a complete invalid, and is incapable of fulfilling the ordinary duties of life. Under such circumstances, the patient is as much a fit and proper subject for treatment as one who has broken a leg, or has typhoid fever. It is by no means easy to define the symptoms of what I should understand as "neurasthenia." They are far too multiform, and the stress of the break-down may be thrown on very different organs in different cases, so that any concise definition suited to a brief paper such as this is an impossibility. One thing I am certain of is, that there exists a distinct functional neurosis, completely shattering the life of the patient, well worthy of being called a disease, quite capable of cure in certain ways, which ways are certainly not those generally adopted, and quite distinct from what is generally known as "hysteria," although sometimes associated with it.

Perhaps I may best illustrate what I mean by a very brief reference to three of my old cases, whose welfare I have chanced to have heard of within the past few weeks.

1. In May, 1883, I was asked to see a lady, 46 years of age, who had come home from one of our distant colonies in a state of complete collapse. She was a woman of very energetic temperament, and the mother of a large family. Her state of exhaustion and cachexia was so great that she could not walk across the room. She had been carried on to the ship and off it on a litter, and a consultation of the best colonial medical men had resulted in the opinion, which her wasted and cachectic condition easily accounted for, that she was the subject of malignant visceral disease. This state had existed for three years, and was progressively increasing. The patient came under my care not with any idea that she was suffering from a neurosis, but as one dying from cancer. Not finding any evidence of this, I treated her as suffering from neurasthenia, and in two months she was a strong healthy woman, up to any exertion, and she soon returned home. Some months ago, I gave some friends who were travelling round the world a letter of introduction to her husband, and last week I had a letter from them, telling me of the hospitable reception they had met with, of my patient's continued good health, and of the amount of work she was able to do in the supervision of a large family and establishment.

No. 2 may be taken as one of the most common, and most readily curable, of all types of neurotic disease. A young lady, aged 17, broke down from overwork at school, then came complete anorexia, failing sight, arrested menstruation, excessive emaciation, cold and livid extremities, progressively increasing muscular debility, and inability to take any active part in the work of life. This girl was under my care three years ago, and has since remained as strong and well as any girl of her age need be.

3. I mention, as a curious example of one of the very few I have seen, of an intense neurosis in a man. This patient was first brought to me by my friend, Dr. Lauder Brunton, under whose care he was, and who correctly believed him to be suffering from a pure neurosis. This view, however, was not shared by all, since more than one of the many consultants who had seen him believed him to be the subject of "tubercular peritonitis." I thoroughly agreed with Dr. Brunton's view, but I declined to take charge of the case, as I had no proper machinery for undertaking the treatment of a male patient, and did not particularly care to do so. Later, Dr. Brunton again spoke to me on the matter, and I agreed to see if anything could be done, especially as the case interested me much.

This patient's illness had commenced five or six years previously, when much exposed, ranching in America. He was now 33 years of age, a very tall man, and once very strong and muscular. This is his own account of his illness, written in September, 1883. "About five or six years ago, I began to suffer greatly from indigestion, which reduced my strength very much, and brought on a very severe pain in the right side of the stomach from back to front, which all the doctors seem to agree to be neuralgia. I have the pain daily, almost hourly, and at times it amounts to intolerable agony. I suddenly collapsed about a year ago, and was in bed most of last year. I have now got into a regular weak state, get very bad nights' rest, can take next to no food, and very often bring up what I do take. I am simply devoid of muscle, and am nothing but skin and bone. I weighed the other day 8 stone 5 lbs. (he was considerably over 6 feet in height); I consider my proper weight to be 12 stone 10 lbs."

It will suffice to say that, after a fortnight's treatment, this patient was eating an amount of food that was astounding, and ere long he sailed for a sea-voyage, with his proper weight regained. On December 13th, 1885, he wrote to me: "Since my return, I have been in perfect health, which continues up to the present date. In fact, I believe I am in better health than I have ever been in my life.'

Note.—Since the above was written, I observe that Dr. Lauder Brunton has given an account of this case in his recently published work on *Disorders of the Digestive System*. Had I been aware of his intention, I should have selected another case, but I allow it to stand because it enables me to publish, through Dr. Brunton's kindness, the accompanying woodcuts, which he had prepared for his work. These, I think, will illustrate the nature of the case, and the results of systematic treatment, better than any amount of verbal description. They are taken from photographs supplied to Dr. Brunton by the patient.

Now, these are examples of some of the cases, although many other varieties exist, such as the spinal neurasthenia of Erb, simulating sclerosis, which are called, rightly or wrongly, "neurasthenia," and they are very different indeed from the picture of a merely nervous person, which Sir Andrew draws. That they have been, as he maintains, "more or less fully recognised and described by every competent observer and writer from the time of Cheyne and Whyle until now," is a statement, I say it with all respect, which will not bear investigation. More or less vague descriptions which can be twisted into a recognition of "neurasthenia," may doubtless be found in various little known books or monographs, but no clear or intelligent description of the disease. It is admirably and fully described in such special works as Ross's *Diseases of the Nervous System*; but that, and others, have been written since Weir Mitchell, Erb, and others have drawn attention to the subject. Even our most recent books, such as Quain's *Dictionary of Medicine*, and the very elaborate systematic treatise of my late lamented friend, Dr. Hilton Fagge, contain no description of disease of this class, except a short paragraph in the latter, devoted to the spinal neurasthenia of Erb. Had it been well known, Dr. Clifford Allbutt's excellent lectures on visceral neu-

roses would not have come as a revelation to so many; had it been fully known to the profession, it would not have been possible for two out of the three cases I have mentioned to have been wrongly diagnosed as tubercular peritonitis and malignant disease; above all, it is fair to ask the pertinent question: if cases of this kind are already sufficiently understood, how does it happen that all these cases, like almost every one of the same type, were able to point to a whole phalanx of doctors, under whose care they had been, without any material benefit, the cases immediately recovering, and since remaining in perfect health, as soon as the theory that they were "neurasthenic" was fully recognised and acted on? The truth is that it is only of late years that cases of this type are being estimated at their proper value, and that it is beginning to be understood that these helpless cases of chronic invalidism need not be given up in despair, and consigned to life-long illness. No doubt much has yet to be learnt about them, many errors will be committed in their treatment, possibly many failures will occur; but if they only secure the earnest and patient study of the profession, time and experience will surely overcome the difficulties that have to be faced. If we remember the history of ovariotomy, and many analogous instances with regard to comparatively new things in medicine, we need not be surprised even at opposition, or at some misrepresentation and prejudice. Time, which tests the value of all things, may safely be left to deal with obstacles such as these.

Fig. 1.—Patient at commencement of treatment.

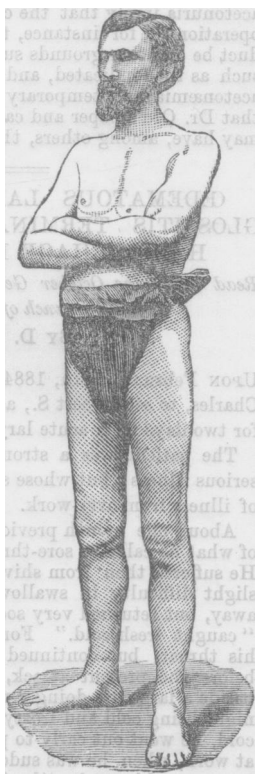

Fig. 2.—Patient after six weeks' treatment.

I purposely refrain from entering on the question of the treatment of such cases, of which I have elsewhere written. I need only say on this point that I know of no class of disease more certainly amenable to proper systematic efforts at cure than this. This is certainly not the view generally adopted. The tendency of the advanced medicine of the present day is, unfortunately, to overlook cure in the zeal for accurate diagnosis and correct pathology, forgetting that patients come to us, not to be "diagnosed," but to be relieved of their sufferings. The history of most of these cases is, that they have all been most correctly recognised as victims of neurosis; and then the medical man has washed his hands of the case, or, at most, contents himself with vague general advice and small doses of tincture of nux vomica. Even my friend Dr. Clifford Allbutt, in his admirable lectures on *Visceral Neuroses*, has not kept himself free from this error; for, while he gives us so much valuable information as to the cause and effects of the neuroses of which he treats, he is almost totally silent as to their cure. Doubtless, in the management of these cases, infinite tact, unwearied patience, and unruffled temper are required; but the results are so satisfactory both to the patient and practitioner, that no pains expended in this way can be deemed excessive.

TWO CASES OF NON-DIABETIC ACETONURIA.

Read in the Section of Medicine at the Annual Meeting of the British Medical Association in Brighton.

By T. CHURTON, M.D.,

Physician to the Leeds Infirmary; Lecturer on Medicine in the Yorkshire College.

NOTHING seems to be known concerning the presence of (?) ethyl-diacetate (formerly supposed to be acetone) in the urine, except as occurring in the later stages of diabetes mellitus. In fact, there is no record, so far as I know, of this body having been observed to exist in non-diabetic urine.[1] Hence, the following cases, which, curiously enough, came under observation in the same month, appear to be worthy of mention.

CASE I.—On April 10th, 1886, Mr. Drake, of Leeds, kindly asked me to see a lady, aged 54, who was vomiting, almost immediately, nearly everything she ate or drank. The patient was well formed, but rather fat; she had clear brown eyes, and a pleasant expression; her face was moderately coloured, chiefly by minute veins. No signs of disease in the larger nervous centres, in the uterus, or in the ovaries, could be discovered. There was no pain, either constant or paroxysmal; but some hyperæsthesia of the skin over the upper part of the abdomen, more marked on the right of the middle line. Both skin and urine were slightly tinged with bile. The vomit deposited much dark green bile mixed with some mucus. The liver was not enlarged; the gall-bladder could not be found; a dull area of irregular shape, nearly in its position when distended, disappeared after an enema. The tongue was only slightly furred. The breath had a distinct trace of the sweetish odour which is observed in some diabetic patients; no sugar was found in the urine, but "acetone" was very readily shown to be present, both by tincture of iron, and by Nobel's sodium nitro-prusside and ammonia test. The specific gravity was 1020; the quantity was now small; it had never been abnormally large. The urine, both in this case and in those which follow, was tested upon many occasions not only by myself, but by the resident medical officer of the Leeds Infirmary, Dr. Griffith, and afterwards by my clinical clerks and others. It was examined daily during the progress of the case, and gave always the same reactions. The lungs, heart, kidneys, and skin were normal; temperature not high; pulse regular, soft. The patient's history was as follows. She had been married, and had several grown-up children, who were not very robust. Her husband died some years ago. She had never been very strong; had suffered from dyspepsia and occasional vomiting for many years. Last December, after nursing a sick daughter for some weeks, she felt generally unwell. On February 26th, at 3 P.M., very severe pain came on quite suddenly in the epigastrium and right hypochondrium; the pain was constant. The regions indicated were very sensitive; she could not bear a touch upon them. Hot fomentations relieved the pain to some extent. At 5 P.M., vomiting commenced; there was much bile in the vomit. On the next day the pain became less about 7 A.M., but she was found to be jaundiced on that day, and remained so for four or five days. The pain gradually, she said, died away. She got up after a week, and the vomiting returned. On the ninth day after this attack, the pain again came in the same position, and continued for three or four days; jaundice also followed quickly; both pain and jaundice subsided gradually as before. Since that time there had been no pain, except after the effort of vomiting, and no very marked yellowness of skin. The urine, however, had occasionally been of a deep tinge, possibly bilious. Three weeks ago the vomiting was unfrequent, not more than once daily; six weeks ago, she had days without any vomiting at all; now it occurred almost instantly after food, and frequently without taking any food. There had never been any symptoms of intestinal obstruction. The vomit now appeared to be composed of food, water, mucus, and bile; no acetone and no sarcinæ were found in it. Although the vomiting had thus been going on for six weeks, and had been constant after food for more than one week, the patient, though very willing to be quiet, could readily assume a smiling aspect, and did not seem very feeble.

The most probable diagnosis seemed to both Mr. Drake and myself

[1] Dr. Dreschfeld, in the Bradshawe Lecture (JOURNAL, August 21st, 1886, page 362), mentions cases recently observed by him, and refers to some cases published last year under the title of "Diæsturia," by several foreign authors, and by one English author (Dr. Windle).

to be that a gall-stone was impacted in the cystic duct, and that there was catarrh of the common duct resulting from the passage of former calculi; but neither of us had met with a case of persistent vomiting from this cause, unless either acute pain or a distension of the gall-bladder co-existed. Nevertheless, seeing that this patient had a tendency to vomit on slight causation, we should have advised an exploratory operation very speedily if we had not discovered the acetonuria. But the acetone (if I may be allowed to retain the term) seemed to indicate that there might be some affection of the nervous system resembling that of late diabetes, possibly splanchnic neuritis. Varied treatment during six days caused no improvement; an exploratory incision was, therefore, again discussed, and Mr. Mayo Robson was asked to see the patient with us. Although he shared our opinion that the signs were not such as to warrant a diagnosis of disease entirely remediable by operation, he was quite willing to explore the condition of the cystic duct, etc. The inability to promise certain relief caused some delay; next day the patient was weaker, and then it was thought she could not survive an operation; on the following day she died. It was, very unfortunately, impossible to obtain an examination.

Case II.—A few days after the termination of this case my colleague, Dr. Eddison, had under his care in the Leeds Infirmary a man, aged 52, with stricture of the œsophagus in its uppermost part. While examining the patient, at Dr. Eddison's request, as to his fitness for the operation of gastrostomy, the peculiar sweetish odour of the breath led me to test his urine for acetone (though acetonuria, I have since observed, does not always accompany this kind of breath, either in diabetic or in other patients.) The nitro-prusside and ammonia test developed within five minutes a fine red-violet colour. The urine was not otherwise remarkable, except that its colour was a rather deep red. It contained neither sugar, albumen, indican, nor bile; specific gravity, 1023. There was no history of former polyuria, thirst, or other special symptom of diabetes. Next day, the patient's urine gave a less perfect reaction with Nobel's test, a deep mahogany-red instead of the fine violet colour; with tincture of iron, blue purple streaks in a white cloudy precipitate appeared. The trachea was somewhat distorted to the left; a growth could be obscurely felt behind it; both pupils were contracted, but especially the right; the man was extremely emaciated and feeble, and had some signs of apical phthisis, and for these reasons Dr. Eddison had declined to advise an operation, which would clearly have been useless. The patient lived only a few days.

At the necropsy, a cancerous growth, two inches in length, was found in the œsophagus. The upper limit was an inch below the larynx. The growth had perforated the trachea; it had also extended laterally, and more on the right side, so as to involve the right sympathetic nerve, the lower half of the inferior cervical ganglion being lost in the cancer. The pneumogastric nerves coursed over the growth, unaffected. The left sympathetic nerve also could not be traced in the growth. Extremely complete and tough adhesions necessitated so much tearing in separating the lungs from the spinal column, that the splanchnic nerves could not be found, except near the solar ganglia. I made numerous sections of these nerves and ganglia, but discovered no distinct evidence of disease in them; nor was there any apparent change in the cervical sympathetic nerves above the cancer. But the probability of the connection between the gross condition of the nerve and the disorder of the liver, resulting in acetonuria, is obvious.

I had previously, and have since, examined very many specimens of urine from patients with various diseases, but have not found acetone in any of them, except in a case of diabetes. The tincture of iron gave, in some cases, merely a brown coloration; in others, a white cloudy precipitate, a brown precipitate, or, if bile were present, a green precipitate. In all these specimens, Nobel's test caused no striking colour-change. In the case of diabetes, which was in other respects remarkable, much sugar was also present in the urine.

The patient, admitted in February last, was a married woman, aged 24, who had probably had the disease for three years. Her husband was out of work three years ago; she was pregnant at the time, and fretted on this account much and long. Married at 18, she had had three children; two are dead—one of fits, at the age of 3 days; the other of "consumption," at the age of 15 months. In addition to abundant sugar (2000 to 5000 grains daily), urea (1000 to 2500 grains daily) and acetone, there was a variable quantity of albumen in the urine, sometimes only a trace.

She was at once put upon the strictest diet, and the urine was tested daily. The drugs employed at various times were steel, codeia, and salicylate of sodium. To our surprise, no permanent change of any kind, either for better or for worse, occurred in the urine. The quantity, 100 to 170 ounces (occasionally 200 to 250) daily; the specific gravity, 1030 to 1035; the large quantity of sugar and of urea, though varying markedly, kept within the same limits. Acetone was constantly present; nevertheless, she gained in weight during a month's treatment, and, on the whole, improved in appearance generally. It was then discovered that she had been supplied with a quantity of confectionery at frequent intervals. The supplies were stopped; she then improved in every particular, and left the hospital, promising to return if necessary. The presence of acetone (?) is, therefore, not necessarily a quickly fatal sign. (I have just heard that this woman died on August 3rd, after being confined to bed for seven weeks.)

Acetone was not found in the vomit from the first patient, though much bile was contained in it. The acetone was not formed, therefore, in the stomach or in the duodenum. The chief fact in the cases first related is the occurrence of acetone in the blood without symptoms or signs of excess of sugar in it, either then or previously. It is for the future to discover what special disturbance of the nervous relations of the liver-cell causes this alteration in its mode of life and its manufactured products. Since there are cases of diabetes in which acetonæmia never occurs, and, as it seems, acetonæmia may occur without diabetes, it may be inferred that the variety, if not the species or kind of nervous disease which produces the hurried formation and casting out of sugar by the liver-cell, differs from that which causes the cell to construct acetone, and that the two varieties of disease may exist either together or separately.

It may evidently become a practical question—does the presence of acetonuria imply that the case is not one proper for an exploratory operation (if, for instance, the impaction of a gall-stone in the cystic duct be on other grounds suspected); or may a mere reflex irritation, such as that indicated, and possibly removable by an operation, cause acetonæmia as a temporary and curable disorder? It seems to me that Dr. Ord's paper and cases permit us to infer that such an irritant may have, among others, this effect.

ŒDEMATOUS LARYNGITIS: TRACHEOTOMY; GLOSSITIS TERMINATING IN ABSCESS; SEVERE HÆMORRHAGE FROM TONGUE: RECOVERY.

Read before the October General Meeting in Belfast of the North of Ireland Branch of the British Medical Association.

By D. H. CHARLES, M.D.

Upon February 18th, 1884, I was asked by my father, Dr. D. H. Charles, to see Robert S., a farmer, aged 44, who had been suffering for two days from acute laryngitis.

The patient was a strong, healthy man, who had never had any serious illness; but whose strength was, perhaps, reduced at the time of illness from over-work.

About one month previous to his present illness, he had an attack of what he called "sore-throat," brought on from the effects of a chill. He suffered then from shivering, slight fever, cough, hoarseness, and slight difficulty in swallowing. In a few days the symptoms passed away, but returned very soon again as a result of the patient having "caught fresh cold." For three weeks, he suffered more or less with his throat, but continued to do his work as usual. On the evening before the present attack, he was out late, and sat for several hours beside a large fire doing some work; after which he walked home, the night being cold and frosty. Next morning, although it was bitterly cold, he went out early to plough in his farm; but had not been long at work, when he was suddenly seized with great difficulty of breathing, or, as he put it, "he felt as if being choked or suffocated." After much trouble, he succeeded in reaching home, and immediately sent for my father, who found him in much distress, suffering from pain in the larynx and from dyspnœa. Soothing medicated inhalations were ordered by him, diaphoretics, and a purge prescribed; and a blister, as well as a hot compress, applied over the larynx.

When I first saw the patient, his condition was the following. The respiration was laboured and difficult, inspiration being accompanied by a whistling sound; the voice was hoarse, husky, and at times lost; there was frequent rasping cough; and the face was dusky, and the lips livid. He suffered from laryngeal pain, and from occasional attacks of acute dyspnœa—the latter being always induced by attempts at deglutition. The soft palate was inflamed, and the tonsils slightly swollen. By means of the laryngoscope, which I used with difficulty, I found the epiglottis very much thickened, and of a deep red colour; the false cords were also swollen and inflamed, and quite hid the true cords from view. I at once swabbed all the affected parts with a solution of nitrate of silver (one drachm to the ounce), which gave the

patient great and almost immediate relief. In fact, he spoke fairly well a short time after.

Ten hours later, we were summoned to our patient, whose condition had suddenly become worse, the risk of suffocation being imminent. Accordingly, we went provided with a tracheotomy-case, and arrived about midnight. On our arrival, we found him almost completely asphyxiated. The epiglottis had much increased in size, and was fixed and erect; while the mucous membrane covering it and the neighbouring parts was bright red in colour, and also much swollen. The superior opening of the larynx was quite closed, there being a little frothy mucus between the false cords; there was also great retraction of the sternum, and the inspiratory murmur could not be made out; pulse 130 to 140, small and feeble. In fact, our patient was now suffering from acute œdema glottidis, and demanded immediate relief. Laryngo-tracheotomy was therefore immediately decided upon, and at once proceeded with, no chloroform being administered. The conditions were decidedly unfavourable, as the bed on which the patient was lying could not be moved into a more convenient position, and, the skin of the neck having been recently blistered, could not easily be retained in a fixed position, but slipped under the fingers. The cricoid cartilage, and, I think, probably also the first ring of the trachea, were cut through; previous to which there was some troublesome hæmorrhage. There was a good deal of difficulty in introducing the tube through the opening, as the patient was struggling and gasping violently for air, which, of course, caused free jerking of the larynx up and down. As soon, however, as the tube was introduced, immediate relief of all alarming symptoms was obtained. The tube was next covered with a layer of carbolised tow, and steam was ordered to be kept going all night. Before we left, our patient was quite easy, his respiration being almost normal; the pulse also having fallen to 80.

Next morning (February 19th), the patient respired easily; but he could not swallow nor speak, owing to great swelling of the tongue, which organ quite filled the cavity of the mouth and projected between the teeth, and was tender and purplish red. Owing to this, the patient had to be fed through a small elastic tube, that was with difficulty introduced into the pharynx. Two incisions were then made into the tongue to relieve tension.

February 20th. Pulse 92; respiration good, the patient breathing easily through the tube, as well as through the nostrils when the tube is closed. The tongue is still greatly enlarged—indeed, more so than before; and the right side of the neck from the ear to the clavicle is swollen and tender. The bowels were opened yesterday, but he has not slept for the last four days. The tongue was again incised on the right side, and about one fluid-ounce of blood removed; and half a grain of morphine was injected hypodermically. Milk-diet to be continued.

February 21st. Had a good night, and slept well. Swelling of tongue not so great. Pulse 100; respiration good. Gave another hypodermic injection of morphine.

February 22nd. Slept fairly during the night. Pulse 100; temperature 98°; respiration good; no cough; bowels confined; tongue same as yesterday. Able to take milk without the aid of the tube.

February 24th. Feeling well. Yesterday, at noon, the patient says, "his tongue burst," discharging a great quantity of stinking matter. The tongue now looks smaller, and the mouth and throat can be gargled. Bowels open yesterday. Slept badly; pulse 98. Removed the tubes from the trachea, but did not close the opening, simply covering it with a piece of cotton-wool.

February 26th. Doing well. Copious discharge of pus and grumous matter from the mouth and tracheal opening. Patient says he should have been choked, had it not been for the tracheal opening. Tongue much smaller, especially the right half. Coughs a good deal when he attempts to swallow; sleeps well. Pulse 84; bowels open this morning. Can breathe easily by the mouth when the tracheal opening is closed.

February 28th. Continues to progress favourably, but has had a slight attack of diarrhœa, and grumous matter and blood still continue to be discharged freely from the mouth. The tracheal opening is closing. The patient is very thirsty, is slightly hoarse, and has a troublesome cough. Pulse 64. Right tonsil large. Prescribed a mixture of tincture of perchloride of iron and glycerine.

February 29th. After my visit of yesterday, the patient had an attack of hæmorrhage from the mouth, which lasted for one hour; and, subsequently to this, he had five returns of the same. There has been no bleeding to-day, but much red grumous matter continues to escape. There is tenderness and swelling in the submaxillary and sublingual regions, as well as pain at the base of the tongue. He can now protrude the latter a little, as well as open his mouth slightly. The exact source of the hæmorrhage not being discoverable even after careful examination, the right side of the mouth below the tongue, and between it and the teeth, was stuffed with strips of lint soaked in solution of perchloride of iron.

March 1st. I was hurriedly summoned to my patient's side, sharp hæmorrhage having set in. I found him very weak, faint, and pale, and sitting up, as he said he could not breathe in the recumbent position. He had evidently lost a great quantity of blood, judging from the amount of it to be seen about. Pulse 46, feeble. On examination, blood could be seen welling up from a ragged-looking cavity in the right side of the root of the tongue. This cavity was accordingly swabbed out with tincture of pernitrate of iron, and stuffed with lint; and a mixture of iron, digitalis, and ergot was ordered.

March 2nd. No return of the hæmorrhage; slept well during the night; tongue smaller; no pain, and very little tenderness; tracheal opening almost closed. Renewed the plugs.

March 3rd. Had a good night; but there was a slight return of the bleeding this morning, and afterwards during the day. Pulse 104; feet and ankles swollen. Removed the plugs, which had a very fœtid odour.

March 4th. Another return of the hæmorrhage, but it did not last long.

March 5th. Much better; no hæmorrhage; found that the patient had got up and dressed himself, and gone down stairs. Pulse 84; copious discharge from the tongue.

March 6th. Had a return of the bleeding last night, and again this morning, the blood appearing to be arterial in its character. Patient complains of pain in the right ear, and of tenderness in the submaxillary region. The discharge from the tongue is very fœtid.

From this date my patient continued to improve, without any relapse, until complete convalescence was established. Up to the present he has enjoyed good health, his only complaint consisting of some difficulty in articulation, chiefly of the dentals, which, however, is growing less and less; and the right side of his tongue remains to the present date wasted and somewhat shrunken. Neither has he complete control over the organ, as he cannot hollow it out or protrude it very far, and, when protruded, it deviates towards the right side.

REMARKS.—There are many points of interest in the above case. I shall confine myself chiefly to the nature of the disease, the complications, and the present state of the patient.

First, that the case was one of contiguous œdematous laryngitis, according to Sestier's classification, seems to me most probable. An abscess at the root of the epiglottis might have given rise to many of the signs and symptoms; but a careful consideration of the progress of these tells against such an hypothesis, although Dr. Morell Mackenzie observes that it is very difficult to diagnose this affection with certainty. The patient is not very clear in giving the history of his illness; but there is no doubt as to the hoarseness and slight cough, and to the attacks of dyspnœa after swallowing. There was never any difficulty in deglutition, so that there could not have been much tonsillar or pharygeal trouble. Had he kept to his room for a few days, when he first complained, there would, in all probability, have been no further trouble; instead of this, however, he did his usual work, and, as the weather was severe, the disease progressed; the congested membrane became inflamed, and finally swollen with the inflammatory products. There was nothing to account for the dyspnœa, except obstruction at the larynx. The lungs and heart were healthy, while the laryngoscope showed a swollen glottis and epiglottis, both in a state of acute inflammation; and neither the tongue nor the tonsils were swollen; so that, beyond question, the larynx was alone at fault.

The application of the solution of nitrate of silver only gave temporary relief, and, in the end, an operation had to be done, in order to save the patient's life. That of laryngo-tracheotomy was the one chosen, both on account of its comparative ease of performance under the difficulties to be overcome in the case, and also to keep the incision as high up as possible. Some of these difficulties I have already referred to: the patient almost moribund in the convulsive stage of dyspnœa; the low-lying fixed bed, which made an assistant's help well-nigh impossible; and the feeble illumination of a small candle, unsteadily held by a little girl; and, although the hæmorrhage gave little trouble, there was considerable trouble and difficulty in introducing the tubes, partly the result of the patient's voluntary and involuntary struggles.

Secondly, the complication of inflammation of the tongue in this case is a very rare one. A point worthy of note is the acuteness of the attack. On the night of the operation, the tongue was of normal size; sixteen hours afterwards, it almost filled the mouth; and the only assignable cause of this enlargement appeared to be the extension of the disease from the epiglottis. The patient had not been taking

mercury, nor had the tongue been injured in any way. Neither Holmes, Erichsen, Bryant, Druitt, nor Keetley, makes any mention of this as a cause of glossitis; but Gross, in his *System of Surgery* (vol. ii, page 444), says: "Not unfrequently the organ (the tongue) suffers secondarily from extension of disease in the surrounding parts." The brunt of the inflammation evidently fell upon the epiglottis, in its extension inwards from the pharynx, and afterwards involved the tongue. While pure serum alone is found in the most acute cases, the effusion is most frequently semi-purulent; it may even be pure pus, or pus and blood. Although, as a sequel of this inflammation, circumscribed abscess is said never to occur (Mackenzie), yet, in the present case, the evidence is strongly in favour of the formation of such an abscess in the base of the tongue. Notwithstanding all our efforts —although I am sorry I did not make much more extensive incisions into the tongue—the inflammation of this organ soon terminated in suppuration, and an abscess formed in its base. I believe the right side alone was involved, as the pus all appeared to come from the right side, and the subsequent hæmorrhage from the same source. The right half, too, at present remains shrivelled and wasted.

As to the hæmorrhage, like all cases of severe hæmorrhage from the tongue, it was very troublesome, almost, as we have seen, bringing the case to a fatal termination. On one of my visits, indeed, I went prepared to tie the external carotid artery; but, I am glad to say, for my patient's sake, this *dernier ressort* had not to be put in practice.

Lastly, the present state of the tongue is interesting. Is the wasting and partial loss of power over the organ due to motor paralysis? or, is it simply the result of loss or degeneration of muscular tissue, and to adhesions formed at its root? I am inclined, on the whole, to regard the latter view as the more correct. There is, for example, a thick band to be felt along the right side of the root of the tongue, which is evidently caused by adhesion of the abscess walls to the surrounding connective tissue and investing mucous membrane. The improvement in articulation also is in favour of this view. At first the patient could not articulate his dentals; now he can do so quite easily.

In this disease, the prognosis must be regarded as extremely unfavourable. According to Sestier, the affection proved fatal in 158 out of 213 cases, notwithstanding the performance of tracheotomy on thirty occasions; and Bayle reports a mortality of 16 out of 17 cases. But, of the different varieties of œdematous laryngitis, that in which the disease begins in the pharynx, as it evidently did in the present one, and which I have accordingly named contiguous (after Sestier), is the least fatal, although it is said to be nearly always so if it spreads from the neck or chest.

CASE OF CEREBRAL ABSCESS WITH TYPHOID-LIKE RASH.

By WILLIAM BOULTING, L.R.C.P.L.,
Assistant-Physician to the North London Hospital for Consumption.

THE following case is of interest because, in the absence of any reliable history, it at first appeared to be one of typhoid fever, and it illustrates the dangers of neglected otorrhœa.

R. B., female, 40, unmarried, was admitted to the Hampstead Home Hospital on June 6th. She was semi-conscious, and the only history obtainable was that she had for some weeks suffered from headache, which had got worse, and rendered her incapable of work. She kept calling out "Oh, my head," and localised the pains at the occiput. Her appearance was that of a typhoid patient. Temperature 102.8°, pulse 100, respiration 20. The pupils were contracted; she seemed scarcely able to open her eyelids. There were sordes on the lips and teeth; the tongue was red and tremulous; there was abdominal tenderness, most marked over the right iliac fossa. Several lenticular rose-coloured papules, fading on pressure, were seen on the abdomen. She was put on milk-diet, and an ice-bag was applied to the head; she complained of the pressure of the bag, especially on the right side.

June 7th. She was delirious during the night. There was a crop of herpes on the lips and nose. The following is a record of the temperature, pulse, and respiration during the day.

	Temperature.	Pulse.	Respiration.
4 A.M.	102.6°	104	17
8 A.M.	102.2°	103	16
12	101.8°	102	16
4 P.M.	102.5°	90	27
8 P.M.	103°	89	12
12	100.6°	86	12

June 8th. The spots had faded; there were two fresh ones. She moaned, and complained of pain in the head; she was delirious; she vomited slightly after the milk; she passed a motion after a gruel enema, partly solid, dark yellow.

	Temperature.	Pulse.	Respiration.
4 A.M.	101.2°	84	15
8 A.M.	101.1°	100	17
12	101°	103	20
4 P.M.	100.4° (after enema)	100	16
8 P.M.	101.6°	104	23
12	102 6°	110	18

June 9th. She was in the same condition; the spots were fading; there was slight external strabismus.

	Temperature.	Pulse.	Respiration.
4 A.M.	102°	104	22
8 A.M.	101.6°	100	17
12	102.2°	100	30
4 P.M.	104.6°	120	30
8 P.M.	104°	120	20
12	101.4°	98	22

June 10th. The pupils, hitherto contracted, were now dilated; there was marked external strabismus. Nothing was detected on ophthalmoscopic examination. Her face was flushed; breathing was stertorous, with working of the buccinators. She had a severe rigor at 5.30 A.M. She was occasionally slightly sick; sonorous *râles* were heard at both bases.

	Temperature.	Pulse.	Respiration.
4 A.M.	97°	96	22
8 A.M.	103°	108	44
12	102.8°	130	43
4 P.M.	102.4°	102	40
8 P.M.	100°	100	32
12	99.2°	100	32

June 11th. The patient had a rigor at 4 A.M. The left pupil was dilated at the visit. She passed urine under her. In the afternoon, the face twitched several times, and there were hiccough and much vomiting. There was another rigor at 8 P.M., lasting thirty-five minutes, during which the patient tried to rub her right ear. The pulse became very feeble, and the left pupil dilated. There was some ptosis of both eyelids, especially of the right. She seemed quite deaf, and insensitive to light. Owing to the patient's condition, it was impossible to examine the ear, but there was no discharge or odour. The brother informed me that he had heard she had suffered from discharge from the ear, and had been deaf of one ear—he could not tell which—for many years.

	Temperature.	Pulse.	Respiration.
4 A.M.	99° (rigor)	96	30
5.30 A.M.	102.8°	—	—
8 A.M.	102.6°	160	44
12	99.2° (enema)	115	35
4 P.M.	97.8°	92	32
8 P.M.	97° (severe rigor)	—	—
10 P.M.	102.6°	108	30
12	99°	100	35

June 12th. At 8 A.M., the temperature fell to 96.6°, but there was no rigor. On reapplying the ice-bag, there was a marked raising of the alæ of the nose and angles of the mouth. At 5 P.M., there was a slight rigor, with clonic convulsions of the right arm. At 6 P.M., the breathing became more laboured; there was cough, and cyanosis; the squint disappeared, and the right pupil again became contracted. The patient died at 6.45 P.M.

	Temperature.	Pulse.	Respiration.
2 A.M.	98.2°	88	26
4 A.M.	97.8°	—	—
8 A.M.	97.6°	100	32
12	98°	100	33
4 P.M.	102°	103	24
5.30 P.M.	105.4°	160	36
6.30 P.M.	101.8°	160	40

NECROPSY.—The meningeal veins were very congested. There was slight bulging of the right parietal lobe. On removing the brain, about half an ounce of fœtid pus escaped from an opening corresponding to the superior surface of the petrous portion of the temporal bone. The dura mater here was softened and coated with pus. The abscess was situated in the temporo-sphenoidal lobe and partly in the parietal lobe, and contained another half-ounce of pus. It communicated with the descending cornu of the right ventricle, the choroid plexus of which was coated with lymph. The left ventricle was unusually full of fluid. The petrous portion of the temporal bone was

necrosed, and pus welled out of the section. The mischief clearly arose from the middle ear.

I am indebted to Mr. Bond, our resident physician at the North London Hospital for Consumption, for kindly offering his aid in the necropsy, of which I availed myself.

THE USE OF CUCAINE IN MAJOR OPERATIONS.

By A. W. MAYO ROBSON, F.R.C.S.Eng.,
Surgeon to the Leeds General Infirmary; Lecturer on Operative Surgery, Yorkshire College.

Although cucaine is in general use in minor surgery, its employment in major operations is still *sub judice*. I venture to think, therefore, that the following records of cases which have just occurred in my practice, may prove of interest. A middle-aged man was admitted into the Leeds General Infirmary, under my care, with an epithelioma about the size of a walnut, near the apex of the tongue on its right side. I advised removal by means of the galvano-écraseur, but as the patient objected to take ether, I decided to operate under cucaine, of which one grain, dissolved in ten drops of water, was injected deeply into the tongue beyond the tumour, the needle of the syringe being pushed up to the hilt, and the fluid expelled in several places as the point was withdrawn. After ten minutes, he assisted by projecting his tongue to its utmost, when I pushed two harelip pins through, crosswise, beyond the tumour, the loop of the écraseur being placed beyond them. The included part was removed without difficulty and absolutely without pain; in fact, he exclaimed at the end of the operation, as well as he could with the portion of tongue remaining, "That is up to the mark." He made a good recovery.

The next case is that of a gentleman, aged 26, sent to me by his physician for the purpose of having a very large varicocele excised. He being desirous to do without ether, I injected a grain of cucaine as in the last case, by one puncture just beneath the skin where the incision was to be. After ten minutes, I made the incision, applied a double ligature to the varicocele, excised an inch and an half, and inserted a single suture in the skin, the whole operation occupying above five minutes. He said he felt no pain, and only a slight sensation when the scissors divided the veins. Healing occurred by first intention, and he was out on the ninth day.

Until I used cucaine in the above cases, I had only employed it in small operations, such as amputation of digits, removal of ingrowing toenail, circumcision, removal of needles from the hand, etc., and in all such cases, I have found it to act much better if, immediately after injecting, a tourniquet was applied to prevent the circulation carrying the drug away from the part to be operated on.

As hydrochlorate of cucaine is very soluble in water, I find it most convenient to carry it in half-grain or one-grain powders, which can be dissolved immediately before use. Only twice have I seen any unpleasant effect follow its employment; once in a circumcision in an adult, when a one-grain injection was followed by faintness and dizziness, which lasted for an hour and a half. Again, in the case of a middle-aged gentleman, who became partly aphasic and unable to write, half an hour after a grain had been syringed into the roof of the nose for the purpose of anæsthetising before removing a nasal polypus. His symptoms lasted four hours, after which he was perfectly well. Query, could the anæsthetic effect have extended to Broca's convolution?

IS GOÎTRE HEREDITARY?

By ALLEN THOMSON SLOAN, M.D.Edin.

Whatever may be the primary source of goître, there is every reason for supposing that, once established, it is often continued in families by inheritance, or, at least, in this manner a strong predisposition to the disease is acquired. The question whether the malady is hereditary or not has given rise to much discussion; and not a few writers, including St. Lager, dispute the fact (*Du Crétinisme*, p. 108). His arguments, however, are by no means convincing, and simply confirm the typically "endemic" nature of the disorder, without in the least degree proving that a disease, which is endemic, cannot at the same time be hereditary.

That heredity plays an important part in the production of goître, a study of my cases clearly shows; thus, of twelve cases collected by me, at Wishaw, Lanarkshire, eight show distinct heredity. In six, the mother and grandmother both suffered from goître; while, of the remaining two, one had a cousin affected with the disease, while the other's mother died of the exophthalmic variety. It is interesting to note this case; the mother for years subject to exophthalmic goître, and the daughter, a strong, healthy girl, now with the ordinary form of bronchocele.

Of eighteen cases collected at Penrith, Cumberland, ten are distinctly hereditary; in eight the mother being affected, in two the father suffering from goître. In one case, grandfather, mother, and aunt were afflicted with the disease; in another, it revealed itself in grandmother, mother, and aunt; while a third was congenital, the mother also being goîtrous. No less than five cases instance the occurrence of the affection in members of the same family, those affected being sisters. Some of these had lived for a long time in different parts of the country. Dr. Crawford mentions the case of a woman with goître, whose grandmother, father, paternal aunt, and cousins, also had it, although they did not all live in the same place, and no other person in their neighbourhood was affected with the disease. (*Cyclop. of Prac. Med.*, p. 335.)

The disease is not only hereditary, but may even be sometimes congenital. In one of my own cases the goître has existed from birth, and recently I had notes sent me of two cases of congenital bronchocele, where the mother also was affected. Dr. Keiller records an instance where he delivered "a Mrs. K, aged 24, of her first baby, which, with the exception of a very large goîtrous tumour, was a remarkably fine male infant. Mrs. K. was brought up in Cumberland, her mother being a native of Keswick. None of her immediate relations had goître." (*Edin. Med. Journal*, 1855.) Dr. James Reid has seen three infants who had the thyroid tumour fully developed; and Foderé thinks he observed a distinct goître in three cases of newly-born children (*Edin. Med. Journal*, 1836, p. 49.) M. Godelle, physician to the hospital at Soissons, had a preparation of the body of an infant, which lived a few hours only, and which came into the world with a goître, the mother being affected with the same disease. Mr. Bramley affirms that in India both children and animals are born with it; and cases of congenital goître have been recorded in Derbyshire. I think the facts just mentioned go to prove that goître is really a hereditary disease.

OBSTETRIC MEMORANDA.

PROTRACTED PREGNANCY.

There are two cases which have lately occurred in my practice, which are rather interesting, and which show the unusual length of time that gestation may sometimes reach.

Case I.—A married woman had her last menstruation during her late pregnancy on August 6th, 1885; the child was born on July 6th, 1886. Three or four days after the cessation of the menses, she had an idea that she was pregnant, as she was sick every evening. This symptom continued up to the third month. About September 25th, she noticed a slight discharge, which continued for three or four days, and only during the mornings. She quickened on December 8th. On May 8th, she had regular labour-pains, which at first came on about once a week or fortnight, but latterly every two or three days. In the beginning of June, she was very poorly, and after this she became rather alarmed at her confinement not having taken place; and having consulted me with regard to her state, I advised comparative quiet, and occasional doses of castor-oil. There was nothing unusual about the labour when it took place; it was of rather short duration. The child (female) was large, and I should say, about the average weight. The patient made a good recovery. This case is, I think, one of the longest on record. From August 6th, 1885, the date of the last menstrual period, to May 8th, 1886, the date of the first symptom of labour, an interval of 273 days took place. From August 6th, 1885, to July 6th, 1886, the date of confinement, an interval of 334 days took place. Of the length of the gestation there could be no doubt, and for the two following reasons: 1, the evening sickness coming on three or four days after the cessation of the last menstrual period; 2, the quickening taking place in the fourth month.

The above case will answer Mr. Woollitt's question (*vide* Journal, October 2nd, page 662) in the affirmative.

Case II.—A single girl stated that she had only had a single intercourse with a man, which took place on November 23rd, 1885. Labour commenced on September 15th, 1886. The child (male) was born on September 19th, which would be ten calendar months except four days; in other words, 42 weeks and 6 days, or 300 days, from the coitus to the birth of the child, or 296 days to the commencement of labour. This child likewise was large. This case is three days longer to the commencement of labour than that reported by Dr. Reid