found and considered, for individuals vary extremely. It is not a rare observation, and I have one before me, where the easy birth of a single child exhausted the fecundity of a healthy woman twenty-five years of age at the time of the birth, and completely ruined her general health during the remaining child-bearing period of life. This woman was examined by many physicians, and all concurred in finding no cause of weakness and inability but child-bearing. On the other hand, Ansell records the case of a woman married at twenty-one, who in twenty-seven years gave birth to twenty-five children who all reached adult age, and the mother died of old age at eighty-eight.

Only-child fertility, or one-child relative sterility, occurs in two forms—as exhaustion of the fertile energies, leaving the general bodily health vigorous, or as exhaustion of both sexual power and general constitutional strength. It is a relative sterility which is familiar to the public from its frequency and its importance in social respects. In 1,767 fertile marriages of women of the age of twenty-five years, allowing ample time for the exhibition of fecundity, Ansell found 131 cases of one-child relative sterility; or one in every thirteen fertile marriages. The amount of this relative sterility may be approximated by comparing it with the average fertility of the same women in Ansell's table, which was nearly six; or, in other words, the relative sterility of these 131 only-child women was 655 children. Instead of having 131 children, they would have had 786, if they had even reached the average fertility of their 1636 sisters; and they would have had still more if they had reached a normal fertility instead of this average fertility; meaning by normal fertility, what they might have had without injury to health, judging them by other women.

DIET AT SEA.—The following instructions to superintendents have just been issued by the Marine Department of the Board of Trade: "Dietary Scales. The attention of the Board of Trade having been drawn to the increase of scurvy on board British ships since 1873, a report on the whole subject—'Sea Scurvy, Food Scales, Antiscorbutics'—has been recently prepared and forwarded to the local Marine Boards for their observations. The conclusions arrived at in this report were as follows: 1. That scurvy has been on the increase in British ships since 1873. 2. That limejuice, of itself, will not prevent scurvy, and that too much reliance is placed on it, to the neglect of varied food scales. 3. That limejuice, in connection with fresh or preserved meat and vegetables, may prevent scurvy. 4. That the dietary scale of ships should, therefore, include a fair proportion of fresh and preserved meats, as distinguished from salted meats. 5. That more fresh vegetables should be carried, notably raw potatoes. No satisfactory reason is given why fresh potatoes cannot be carried on board British ships. The allegation that they will not keep good on board ship, is clearly disproved everywhere else. 6. That it is not at present desirable to insert a statutory scale of diet in the articles of agreement with crews serving on long voyages, though it may possibly be necessary hereafter, unless the shipowners themselves move in the matter. The replies received from the local Marine Boards have confirmed these views, especially as regards the articles of diet referred to therein, and superintendents are therefore requested to take every opportunity of urging upon owners of vessels sailing on long voyages the necessity of supplying their crews with fresh potatoes, molasses, etc., and a larger supply of fresh or preserved meats, in lieu of salt beef and pork.—T. H. Farrer, secretary; Thomas Gray, assistant secretary."

VACCINATION INQUIRY.—The preliminary committee meeting was held in the Council Room, Exeter Hall, Strand, on Thursday, the 15th instant; Dr. C. R. Drysdale in the chair. Mr. Makuna stated that the object of the inquiry was to collect all available information on the subject, collate it, discuss it in conference meetings, and publish it in the *Transactions*. About three hundred and fifty members of the profession had answered to the questions in the circular, including eighty public vaccinators and medical officers of health, and several original investigators, as MM. Pasteur, Chauveau, Braidwood, Romanes, Klein, Fleming, Wydd, and others. There are twenty-five gentlemen who have, up to this time, consented to act on the committee: Dr. C. R. Drysdale, R. W. Batten, W. J. Collins, W. Easby, J. Greene, E. Gwynn, D. L. Haynes, W. K. Millican, R. Neale, A. Ransome, C. Renver, H. Tomkins, J. Tripe, C. F. Willoughby, G. Wyld, G. E. Yarrow, E. Haughton, P. M. Braidwood, C. Swaby-Smith, A. Cresswell Rich, T. E. P. Prydeaux, B. Maclehoose Duncan, Bernard O'Connor, G. Cordment, Charles E. Steele, and M. D. Makuna.

AN ADDRESS ON RENAL INADEQUACY.

Delivered before the Metropolitan Counties Branch (Hackney District), February 15th, 1883.

By ANDREW CLARK, M.D., LL.D.

Physician and Lecturer on Clinical Medicine, London Hospital; President of the Clinical Society.

GENTLEMEN,—After much, and indeed grave consideration, I have come to the conclusion that age is not to be gauged by years, but by feelings. I think that, so long as a man retains his receptivity, his power of adjusting himself to the ever varying environments of life, and his capacity to see, in the new things which the development of the ages brings before him, goodness, he may be saved from being brought within the category of "old" men. Now, I do not know that I have retained my receptivity, and I do not know that I quite adjust myself to all the varying environments of my life; but I do know that I retain, and have a very lively sense of the good things that the age is presenting to us; and on that account, if on no other, I will ask you to exempt me from being called old. I am struck particularly with the young men of this time. Looking back, I am afraid to say, but must say, thirty years, I notice a marked distinction between the young men of those days and the young men of these days—whether they be in consulting practice or in general practice. I notice, or I think I notice, a greater zeal, a greater industry, a greater frankness, a greater readiness to confess and remedy errors, a greater care in the expression of opinion; and, I think also, a less consideration of their own personality in their work. I admire the young men of the present time very much. But there are one or two things that I do not admire in them—that I quarrel with them for. I will only mention one thing to-night; it will be enough for to-night, and it will be the key-note of the subject which I am approaching. Most of the young men of the time declare that there is no such thing as functional disease, and that is one of my quarrels with them: for I think that all disease, in its primitive condition, is essentially functional. I think that, what people call structural or organic disease, is but an event in the history of disease; and that, long before the structural change appears, there has been going on, for we know not how long, changes in the physical condition, changes in the physical action or interaction of forces, various conditions in short, most powerful in relation to the actual state of living affairs, though invisible to the naked eye. I think that disease expresses itself in three different ways. First, we have disease expressing itself by what we call mere alteration of function, in which state, by no means at our command at the present time, can we discover the smallest change in the structure; and that is what I call functional disease. In the second place, disease expresses itself in visible changes of structure, which are temporary only, and not permanent. For instance, take hay-fever. I believe myself that hay-fever is preceded by molecular and chemical disturbances; and that, at a certain stage of these, there arises suddenly a swelling of the mucous membrane of the nose, together with the production of a viscid irritating secretion, which gives rise to sneezing and the other phenomena with which we are all familiar. And, lastly, there is a third aspect of disease, in which, with the preliminary physical or chemical changes, or both, with the transitory structural changes, there comes at last a permanent change: as, for example, cancer or tubercle. Take, for a moment, the case of cancer of the stomach. Years before cancer of the stomach appears, you will find in some of those people, that they are subject to pain or other distress. Somewhat later in the day, they are subject to recurring attacks of catarrh of the stomach, as it is called—states of the stomach in which the mucous membrane swells up, producing viscid irritating secretions, giving rise to what we call forms of indigestion; and then, after treatment, or independent of treatment, it subsides. This will go on for years, and by-and-by growth riots over development, and at last a permanent structural change appears; and we have what we call the third aspect of the way in which disease manifests itself. There is the first stage, and it is the first stage to-night to which I wish to allude, in which we have symptoms of disease without any visible alteration of structure discernible by any means at our command.

Every man present, I am sure knows as well as I do, multitudines

of people who are constantly suffering from ailing health, and whose ailing health cannot be referred satisfactorily to any definite cause. The progress of knowledge is greatly enlightening our ignorance about these multitudes of people. It is telling us that some of these people owe their troubles to heredity, to the father who has "eaten sour grapes, and set his children's teeth on edge," to a capricious, weak, and irritable nervous system, to violations, petty but continuous, of simple physiological laws, and so on. But there are numbers of this multitude of ailing people whose illnesses cannot be accounted for by any one of these causes to which I have alluded. Upon this multitude I would venture to make a little inroad, and I say that one considerable part of that multitude owes its ill health to deficient excretion.

We all know the importance to the solidarity and health of the economy of an adequate production and discharge of sweat. We know equally the importance to the economy of the adequate production and regular discharge of feces. I am confident, with respect of this latter part of the question, that numbers of young women owe their anemias, their chloroses, their defects of health of various sorts, and often of long duration, to the inadequate discharge from the body of feces; and I now well understand that which one of our great fathers in medicine is reported to have said, speaking of the treatment of anæmia, that, if he had only two remedies to deal with anæmia in young women—purgatives and iron—he would prefer to rely for success on his purgatives. Well, the same thing may be said about defective excretion from the kidney. The kidney, as we all know, has a very important function to discharge, and the well-being of the economy seems, in a very peculiar and definite way, to depend upon the adequate discharge of the kidney's offices. We know that what is called Bright's disease is not, as a rule, a structural alteration in the kidney which brings about at last a fatal issue, but it is interference with the function of the organ, interference with the eliminative function of the organ; it is not simply the letting out of albumen, for similar amounts of albumen and greater amounts of albumen in other affections can be discharged from the body without serious detriment to its well being; it is interference with its excretory function; it is the retention in the blood of matters which ought to be cast off from the blood, and which, not being cast off from the blood, remain in it and poison it. There are cases which, in some measure, I venture to separate off entirely from Bright's disease, in which the kidney, without any sensible alteration of structure that our modern means of investigation will enable us to determine, cannot produce a healthy urine. Such kidneys produce a urine which, assuming the quantity to be a quantity of health, is low in density, and is deficient in solid constituents, principally the constituent of urea and its congeners. I will exclude uric acid. I have spoken on this subject once before, and, on that occasion, I committed an error. I said that the main feature of a kidney in this state was, that it could not secrete urine with a proper amount of urea and uric acid; but I find that many of these kidneys, of which I shall speak more precisely in a moment, do not have a deficiency of uric acid; I have learned that since. They have all, however, a deficiency of urea. There is a certain state of the kidney, I repeat, in which, without any alteration of structure that the eye can detect, it can, nevertheless, not produce a perfectly healthy urine. It is an urine low in density and deficient in solid constituent, principally in urea and its congeners. I call this state renal inadequacy.

You may say, "It seems scarcely wise to introduce a name like that, when probably it is nothing less than an early stage of Bright's disease. Why bring in another name?" I will not say that it is not an early stage of Bright's disease; I do not know. I think it need not necessarily be; but I shall assume that it is, perhaps, a very early stage of Bright's disease. I nevertheless think it of practical value—and we who are here to-night are practical men—to recognise by a distinct name a state which may remain as it is during the whole period of life, which is nevertheless capable of removal, and which, if unnoticed, may lead to serious injury to the patient.

Let me explain. The people who have this renal inadequacy are characterised by three things particularly. First and foremost, they are characterised by a curious inability properly to repair damages done to them either by accident or by disease. I have no doubt you, as well as I, have often been puzzled to know why, in particular cases, they could not repair a common accident; or why, in a disease such as pneumonia, the exuded stuff was not melted and speedily swept away; why a man who had met with some trifling accident in the wrist or shoulder remained suffering from it. Then, they not only repair damages of this kind slowly, but they are pecu-

liarily vulnerable. They are a people, as a rule, who are always catching cold, and who, when they catch cold, come within the category of the first characteristic—namely, that they do not get rid of the cold. They are the people who, without apparent reason, and without other existing disease, get pneumonias, pleurisies, pericarditis, and the like. Then, thirdly—and, I think, almost the most important thing to be noticed about these cases—you can never be sure of the result of the performance of an ordinary surgical operation upon them. It is this class of people, as I had the opportunity a few years ago, in London, of discovering, that die from a simple operation by hemorrhage. It is this class of people who have an abscess opened and immediately become what is called pyæmic. It is this class of people who, without being able to explain it, attracted the notice of that distinguished surgeon Sir James Paget. Some years ago he said, "Whenever I find a man in ill-health, without definite cause for the ill-health, I feel sure that my chances of success in operating upon him are diminished by at least one-half." Subsequently he found out, and recently expressed the opinion to me which I had expressed upon a patient of his, that it was due to the low density of the water. The story is this. I was summoned to see a man who was about to undergo a surgical operation, and I was asked the question, "Is this man a suitable person for a surgical operation?" I required, before pronouncing judgment, that I should have the complete urine of two days kept and sent to me. I examined it. The urine was under the quantity—under forty ounces; the density was 1008, or thereabouts; there was no albumen; there were no casts; but the urea was 1.2. I replied, that it would be at the peril of his life if any operation were performed upon him. They were not satisfied—at least, the surgeon was not—with this expression of opinion. Sir James Paget was called in, and he gave the same judgment. Meeting him afterwards in consultation, he asked me the question, "Why did you object to an operation being performed upon the patient?" I said, "On account of the state of the urine;" and he said, "I objected also on the same ground." That shows that from different quarters this question of renal inadequacy has presented itself to the surgeon's mind as well as to the physician's. This, then, is what I mean by renal inadequacy. I refer to those people who have kidneys which, though not materially altered, or at least not altered in any way that we can determine by physical investigation, are yet incapable of producing a sufficiently healthy urine (like an imperfect skin, that is incapable of producing sweat); I mean an urine sufficiently rich in the ordinary matters of waste which it is the business of the kidney to discharge from the body.

Now, how are you to know these cases? How are you to discover them? Here, I am bound to say, that I know of no distinctive symptoms whereby, in the early stage of renal inadequacy, you can discover these cases with certainty. The patients are ailing people. I began by saying that there were before all of us, in our daily life, multitudes of ailing people, the explanation of whose cases was hidden from us, and I said that I wanted to make an inroad on that multitude, and pull out from it a number of these renal inadequacy cases. Now I have to confess that, in the early stage, I know of no symptom whereby you can with certainty detect these cases. The only thing I can say is this: When you get hold of a patient who is ill, suffering sometimes from dyspepsia, or nervousness, having headaches or complaining of *malaise* and weakness, who cannot sleep well, who cannot do his work very well, examine his urine, and if you find that the urine is low in density, you had better proceed a little further, and be very precise, and get the urine of twenty-four hours; and if you find that it is under fifty ounces in quantity, that it has not a specific gravity of 1010, and that the urea in it is deficient in amount—under 2 per cent.—then, whether there be albumen in the urine or not (I am not now speaking of albuminous urine), whether there be any casts or not, whether there be granular *débris* deposited or not, you may know with certainty that the kidney is not doing its duty. Well, it may not be, although these kidneys are not doing their duty, that the defect is the cause of the patient's ill-health. How are you to ascertain that? You can sometimes, not always (always does not happen to honest men), ascertain it in this way. If you give a patient a liberal diet he gets worse; and what is the strangest thing I know about these cases is that, if you give a patient a very liberal diet, namely, food and wine, the specific gravity of the urine, instead of increasing, as you would expect, diminishes in density. Furthermore, you may discover that the renal trouble is the cause of their symptoms if you notice in them—and you can notice it very often—that a diminution in the bulk of the urine is always attended by an aggravation of their sufferings. And there is one other way, which is the other surprising thing about these cases, that

if you diminish the quantity of food, if you make the patients careful about their ingoings and careful about their outgoings, you will see at once a great improvement. I have, for example, a case in my mind's eye, which I saw with two or three doctors some time ago. The patient was a man who was extremely distressed, short of breath, with palpitations, headaches, and great distress of body in various ways; he had a weak heart also. The doctors who had seen him said that he wanted keeping up. Being a rich man, he was kept up, and he was no better for the keeping up. He had meat and wine in plenty, but he got weaker and weaker. He was then put upon a starving plan—that means, upon a physiological plan, upon a plan which would give him just enough good food for the maintenance of the body and no superfluity, with enough water to form an abundant vehicle for the chemical operations which are necessary, not only for the formation of waste matters, but for carrying them off. He was put upon an old woman's diet, three meals a day; tea and toast for breakfast, a midday dinner, with a little animal food, and tea and toast for tea—a John Abernethyan diet. In a very short time the urine, which had gone down to 1004, began to rise; instead of getting lower and lower in density with the diminished diet, it got higher and higher, and the patient got better and better—not quite well, but pretty well. These circumstances with reference to the state of the urine, the diminution of the urea, the fact that the increase of food makes the patient worse, and that, within certain limits, the diminution of foods makes him better, with attentions to the secretions—these circumstances put together will soon enable you, I think, with sufficient accuracy to determine what is the sort of case that you are dealing with; and I venture to think that the knowledge which you will acquire as you go on will be sufficiently useful to you to justify me in having presumed to occupy your time for a few moments to-night. You will know one or two things about these patients which, for their safety and their well-being, it is well to know. You will know that these people cannot be operated upon with the ordinary chances of success. You will know that if they take cold you must treat the cold in them as a serious thing. You will know that if they are ill, that if they have a headache or pneumonia, you will be able to warn the patient's friends (and foresight is an important thing in medicine) that they may not recover immediately from the effects of the disease—nay, more, that the unabsorbed pneumonic products may remain to be centres and sources of future mischief. These are important points.

I have said that you cannot distinctly recognise these cases by any definite symptoms, but as the cases progress, if they be not well managed, that is if the management be not adjusted to the fact that they are chimneys being choked, and that you cannot keep a roaring fire on, if these cases go on they develop symptoms which are exceedingly characteristic of this state of renal inadequacy, and they develop symptoms curiously enough, which make the case at last resemble most closely a class of cases which Dr. Ord has drawn attention to, and has termed myxœdema, and a class of cases which my friend Dr. B. has for five or six years been collecting for me. Cases of renal inadequacy after a certain time assume characteristics so like myxœdema, and so like those other cases to which I have referred that they can scarcely be distinguished. They get puffy, they get pink and white, their skin begins to get dry and glossy, and by-and-by wrinkly, and ceases to sweat; their face gets puffed up and swollen, without being actually cedematous. Their articulation becomes slow and almost painfully deliberate; the hair begins to fall, then the pinkish or pinkish-blue aspect appears upon the face, and they sometimes stagger a little in their gait. When you see these cases you know at once that they are either the so-called cases of myxœdema, or they are the cases in which in an advanced degree you will find extreme renal inadequacy, the urine being sometimes as low as 1004, without any albumen, without any casts, and defective in the main solid constituents of urine—urea and its congeners. And though I cannot prove to you that there is no ordinary Bright's disease in such cases, I can, as it happens, mention to you one case—not in a very advanced degree, I admit—in which I had the opportunity of examining the kidney of a person with renal inadequacy who died from another cause; from fever. There was no evidence in the kidney capable of being recognised by any ordinary pathological anatomist of the existence of distinct structural lesion. Although, then, we cannot in the early stage recognise these cases, we may, I think, in the later stages do so. Now, what is the prognosis in these cases? Suppose you meet with one of these cases, and you have determined in one way or the other—either in the ways I have rudely set forth to you, or in other ways that you will discover for yourselves—that you are dealing with

a case of renal inadequacy; what is to be the future? What are you to say to the friends (for this power of prognosis is very important in our dealings with society) about the future of such a case? Well, judging from my own experience, I would say that if you can get the patient under complete control, if you can place him under proper physiological conditions, if you can regulate his food, his work, his exercise, and if you can make him sufficiently careful about exposure, I think, although you may not heal the kidney, for the kidney will continue to be inadequate, you may indefinitely prolong the life. At the same time it must be remembered that on account of this renal inadequacy, which so far as I know, we cannot remove—at least I cannot remove it—you must be prepared to tell the friends that the life is a perilous one, that the patient is liable to peril from slight surgical operations, liable to inflammations, and that when he has inflammations they will be difficult to repair. Again, if the patient falls into an accident it may beget untoward complications, and if the disease goes on, and he is not careful, he will be liable to hæmorrhages.

The first case of the kind (and the word hæmorrhage recalls it to my mind) in which I clearly recognised the idea of renal inadequacy, occurred in the person of the celebrated mathematician Archibald Smith, to whose observations we owe it that we can steer an iron ship. He came to me fifteen or sixteen years ago in ailing health; and, adopting the vernacular of the time, and not thinking so carefully then as circumstances force me to think now, I said, "It is overwork." Now I am not so ready to speak of overwork as a cause of disease. I am heretic enough to say that work kills nobody; it is bad management and worry, not work. Archibald Smith was a very interesting man; I paid close attention to his case, and became intimate with him, so that I had an abundant opportunity of watching him. I began at last to notice what curiously pale urine he had. I thought, "This is because he drinks too much liquid;" but I found that, though he did drink a good deal of liquid, he could not discharge more than the normal amount by the kidney, which is another circumstance about these cases which I did not mention. He was a great drinker of water, but he could not for the life of him discharge more than fifty ounces by the kidneys. I was struck with this, and I watched the state of urine more and more, and I found that it was always a pale urine, of a density varying from 1010 to 1002 or 1003, never containing albumen, never containing casts, never containing any amount of *débris* which might be broken up casts—nothing to indicate that there was renal disease in the ordinary sense of the word; but I noticed as he went on that, as his general health failed more and more, the urine became habitually lower and lower, until at last he died suddenly of hæmorrhage; and a *post mortem* examination by Mr. Patten of Putney revealed no ordinary evidence (I am bound to say there was no microscopical examination) of renal disease. It seemed, as far as I could make it out, to be a case wherein, without any obvious disease of the arteries, without any such obvious change as Sir William Gull and Dr. Sutton have described, the vessels gave way, and the patient died from hæmorrhage. You can say with regard to these cases, in the way of prognosis, that, if care be taken, if compensation be made for the defective kidney, then probably they may go on indefinitely, that is, they may reach the full term of life allotted to man.

If, then, that be the prognosis, how is one to manage a case of this kind? Well, I think the first thing to recognise in chronic disease is that, perhaps in seven out of ten ordinary cases of disease that come before us, it is not we who are the curers of disease, it is nature. I think that sometimes we are the curers in spite of nature; but in the majority of instances, it is the organism which resists the advance of disease, and it repairs the damages which the disease has done; and our chief object in the treatment of every chronic affection is to place the organism in the conditions most favourable to the development of the highest health of which the organism in those conditions may be capable; for in that highest physiological condition I assume that it will exercise and continue to exercise the greatest resisting power and the greatest repairing power. That means, then, that you are to put the patient under close obedience to the laws of health. In doing this, you will probably be open to the reproach that, in dealing with chronic cases, your rules of diet and your rules of management are very much the same. You may be scoffed and jeered at. But, after all, the physiological laws of the organs are much the same for most men; and, although it is true that the law of the individual very often traverses a little the law of the race, yet, in the main broad points of management, the physiological laws for every organism are so nearly alike as to necessitate a certain sameness in the management of organisms. I apprehend the first rule is to place your patient under physiological con-

ditions which you know by your experience and your training to contribute most to the development of health. In the second place comes in the something which traverses these laws; and that something is the defect in the organism. It is not enough to say to a man with renal inadequacy exactly what you would say to a man who had no recognisable defect in his organism. You would say to him, "Eat and drink, and take exercise, be warmly clothed, have sufficient sleep, do your appointed work, and have no fear." It would not do to say that quite to a man with renal inadequacy. So that, although the first rule to be laid for the individual with regard to the physiological laws which subserve the health remains, it must be plus those modifications which the defect in the organism requires. You would not mind a man pursuing an active course of vigorous life eating a pound of meat a day; but if you allowed a man with renal inadequacy to eat a pound of meat a day, it would certainly kill him. So that the second rule about these cases is that, whilst laying down the simple physiological laws of simplicity and regularity of diet, you will modify these laws so far as the kidney is concerned, because you know that it is the business of the kidney to throw out chiefly azotised waste, and you will be careful to supply the organism with no more of such azotised matter than is needful for the maintenance of its integrity. We all supply to ourselves a good deal more than is necessary for the integrity of our organs; and fortunately in health the margin of oscillation is so wide that we need not be over-scrupulous; but, in a case of this kind, the whole future for evil or for good will depend upon whether we fully recognise that law of modification which the defect of the organism requires.

What, then, would be the general rule for such cases as I have described? In the first place I should say to myself—"I must take care that I do not give to this patient more azotised food than is necessary for the maintenance of the integrity of the organism; in the next place, I must take care that I get all the supplementary, complementary, excretory organs to do fully their appointed work, that they may, if possible, take some share of the defective work of the kidney upon their shoulders." Then I should take care also to give no agent in my dietary which would be calculated to check, or seriously to check excretions; I should furthermore take care in dealing with my patient, that, as he is very vulnerable and very liable to inflammations brought on by chills, or by wet, or by what people call over exertion, to caution him about these points. And further, as these tissues are vulnerable from all sides, I should recommend him not to take violent exercise. Taking these principles, and applying them in detail, my advice in the case of a man who came before me, say forty-five years of age, would be something like this. I should ask him—"Now, you have a defect in your body, and you must take care not to make that defect greater, but do all you can to remedy it, and this is what you will do. When you get up in the morning sponge yourself with warm water and use a little soap; do it quickly that you may not get a chill, have a good rubbing afterwards, so as to make the skin act as well as it can act." Then I should tell him to clothe warmly, not over-warmly so as to weaken the skin, but sufficiently warmly to protect him from the vicissitudes of such a climate as this. Then I should say to him—"You will have three meals a day, and these meals must be something after this fashion, for as your chimney is choked, you must not put too many coals on the fire. You will take for your breakfast bread and butter—plenty of butter if you like it, and an egg, if not nervous a cup of tea, which has not stood too long, or if very nervous a cup of cocoa; then you will dine in the middle of the day." If he were a very intellectual patient I should get him to take white meat; but if he were a stupid patient, and most patients are stupid, I should say—"Take a little meat, not more than half a pound by any means, with plenty of potatoes or other vegetables, and you may have some pudding." With regard to drink, I should give him as little alcohol as I found the intellectual strength or wisdom of the man would bear. If he were a very wise man I should say—"You will do best to take none;" but if he were not a very wise man I should strengthen him in his foolishness by giving him a glass of claret and water. Then I should say—"You can have one more meal in the evening, about six or seven o'clock, and you will take for it just what you do for your breakfast—bread and butter, and perhaps an egg—or a tiny bit of fish or the wing of a chicken, with a cup of tea, or if sleepless or nervous a cup of cocoa." And I should allow him to take about a claret glass full of water on waking in the morning, and the same on going to bed at night. Now this seems to be a very reasonable diet, but I will confess to you that I have lost many a patient by prescribing it. When people have looked at

that dietary, which sometimes I have written down, they have been amazed at it. I have in my mind's eye a great man who had sprung from the people and made himself wealthy by his own exertions, but who, not being a man of culture or intellectual tendencies generally, wanted to have his heart's desire in the reward of success. He looked at my dietary, and said to me—"Good heavens, sir! is this the reward of success in life? What is to become of me?" Nevertheless, I think it a sufficiently liberal dietary for any organism which is at all crippled, and I am not prepared to say that it is not a sufficiently liberal dietary for any man who leads a sedentary life, and wishes to make the best of his brains and his strength.

I have detained you very long, and I will not detain you many minutes more. I will just say, in looking over these cases, which I think form a considerable percentage of ailing people—I do not know how many, because my experience is not large enough to say—I believe it is in our power to do an immense deal of good for them if we are firm in asserting what we know to be correct, and if we can gain the confidence of the patient so that he will follow what we suggest. I am sure that in our dealing with these cases many valuable lives might be preserved if we had the courage to face the accusation, of being, as I am, a starving doctor.

CLINICAL LECTURES ON DISEASES OF THE NERVOUS SYSTEM.

By A. HUGHES BENNETT, M.D.,

Physician to the Hospital for Epilepsy and Paralysis, Regent's Park, and Assistant-Physician to the Westminster Hospital.

On a Case of Peripheral Disease of the Facial and Hypoglossal Nerves on both sides, the Symptoms simulating Bulbar Paralysis: Polyuria and Polydipsia: Return of Cancerous Growths to the Base of the Skull, and various parts of the Body, after Excision of the Mamma.

Antecedent History.—A. S., aged 54, married, cook. The patient stated when she was first examined, that she had been in good health, and had not suffered from syphilis or other diseases, till the year 1869. She then discovered a tumour in her right breast, which was removed by Mr. Marshall, of University College Hospital. Microscopical examination of the morbid lesion demonstrated it to be scirrhus cancer. After this, the patient continued well for some years; but, in 1872, it was noticed that hardness appeared in the cicatrix of the above-mentioned operation. This slowly increased during two and a half years, finally developing into a tumour, which was again removed by the same surgeon. This also was found to be of a cancerous nature. Subsequently to this, the general health remained good till about two years ago, when the patient suffered from general weakness, *malaise*, and other indefinite symptoms. These continued to increase till about six months ago, when she began to experience constant thirst, and to pass large quantities of urine. Shortly after this, it was observed that the tongue was shrivelled and protruded to one side, and that her speech was altered. These symptoms have continued since.

Condition on Examination.—The patient is found to be a pale, sallow, delicate-looking woman. She complains of languor and general weakness. She also suffers from noises in the ears. Otherwise, there are no definite complaints. The intelligence is normal, although the patient is nervous and emotional, which she accounts for by living in constant dread of a brutal husband. The motions of the eyeballs and pupils are normal, the sight is unaffected, and the ophthalmoscopic appearances of the fundus of the eye are healthy. At rest, the face is straight, the motions of its lower parts are especially very limited, and the features are smooth and expressionless. The actions of the lips are particularly deficient; the patient cannot whistle or spit; she has difficulty in opening the mouth, showing the teeth, etc., and the lower lip hangs down so that the saliva constantly trickles down the chin. The articulation is somewhat indistinct and mumbling, but not to a great extent. The sensibility of the skin of the face is normal. The tongue, when protruded, is much twisted to the left side; its movements are very slow and imperfect, and it can with difficulty be pushed beyond the teeth. It is small, as a whole, and the left side is distinctly more atrophied than the right, it being much shrivelled and puckered. Its sensibility is normal. The patient is partially deaf with the right ear, from which occasionally there is a purulent discharge. Taste and smell are normal. There is no difficulty in swallowing. The func-