INAUGURAL ADDRESS ON MEDICAL TREATMENT.

Delivered before the Midland Medical Society, November 11th, 1885.

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Slow Progress of Disease.—Duty of the Medical Man as regards the Study of its Causes and its Prevention.—The Voice of the People as the Medical Man's Guide.—The Study of Disease and its Causes the true Foundation of Medical Practice.—Importance of Studying the Natural History of Disease.—Origin of Treatment by Drugs and other Agents.—Therapeutics as a Science.—Limitation of Value of Observations on Healthy Subjects.—Influence of Fashion on Modern Changes in Treatment.—Multiplicity of Medicines undesirable.—Specialism.—Increased Closeness of Relations between Medicine and Surgery.—Antiseptics.—Summary.

GENTLEMEN,—When I was requested by your President and Council to deliver an address before the Midland Medical Society, I felt myself too flattered to have the courage to refuse; but, since the time of acceptance, my boldness has alarmed me, for I awakened to the thought that, when the time arrived, I might have nothing to advance worthy of the attention of so distinguished an assembly. After much cogitation, and many flights of imagination into the realms of pathology and scientific medicine, in order to seek for some appropriate theme, I descended again to a lower sphere, and bethought myself it were wiser to take up some question of more universal interest. I propose, therefore, to address you on the well worn theme, the Treatment of Disease.

I adopt the expression as one most familiar to us, but use it in its very widest signification. The term can no longer be confined to the management of individual cases of illness, but must be extended to the whole of the medical art, including the prevention of disease, and a supervision of the general bodily welfare of our patients. The idea conveyed in these various functions of the medical man so widens out, that we are driven at last to ask the question, what is the relation of the medical man to the public at large? What is the origin of his existence, and what, in fact, is his *raison d'être*?

Slow Progress of Disease. Duty of the Medical Man as regards the Study of its Causes and its Prevention.—The position of the medical man and his relation to the public may bear two interpretations, very different in kind, but both supported by able men. One of these I upheld in this town many years ago, when delivering an address before the British Medical Association. The view I took was, no doubt, due to my own mental tendencies, to what I believed I had learned from studying pathology, and from analogies in other branches of science, assisted by the ardour of comparative youth, and not retarded by any latent desire to grow rich. was endeavouring to get rid of much which I had gathered from lectures and books, implying that diseases were so many entities suddenly attaching themselves to healthy individuals, and throwing them into disorder, since I found, on the contrary, that most diseases were slow in their progress, arising under conditions constantly surrounding us; that it was just as impossible for a healthy man to die of ruptured heart, or of apoplexy, as for a gentleman of unblemished moral character to commit a murder, or pick a pocket.

I maintained at the very beginning of my career that if, on *post mortem* examination, we found a very thickened pleura, it was an assumption to say that this had resulted from a previous acute peritonitis, instead of taking the fact simply as presented to us as the result of a slow growth. Pathological processes thus became, in my mind, closely similar to what is observed to be going on in the world at large, especially in the earth beneath us. As the changes in the body were not sudden, nor the result of catastrophe, but due to the slow operations of conditions which are always present; and as, in the same manner, growth in the organic world goes slowly on, so did I believe that the same law held good in all those processes which we term morbid.

Now great errors may be fallen into by drawing on superficial analogies, seeing that the resemblance assumed is the very thing to be proved; but, in the present instance, in the case of pathology, we deal with the same laws, namely, the various physical, chemical, and vital laws, which we see in operation in the inorganic, in all departments of the organic world. The doctrine of evolution,

compared with the older belief as regards this globe and all that is on it, is expressed by the idea that the "world is being made," in distinction to the older doctrine that the "world is made." Now, that which is true of the world at large, is true of its component parts; it is true not only of the building up of the body, but is true of its decay, and of the various morbid processes which take place therein. My early study of pathology showed how disease was slow in its progress, and that the affections called acute were but some accidental events occurring during its course, or at its close.

Peritonitis was not idiopathic, but the ending of some chronic disease of the abdominal viscera, just as meningitis was the termination of some anterior affection of the brain. This line of thought may be extended to a better solution of many pathological states. I have elsewhere during this year (address before the British Medical Association at Cardiff) alluded to the very complex process going on in various diseases, and selected cirrhosis of the liver in illustration. The explanation of this morbid change is by no means complete by saying it is a plastic inflammation of Glisson's capsule, for there is also a new formation of ducts and vessels, and an opening out of fresh channels for the blood.

We might take again the instance of stone in the bladder, of which a section is made, and the various layers pointed out as having been formed successively as deposits from the urine. Now, it is difficult to understand how the character of the urine should have been thus ever varying as regards its constituent salts, in order to allow their deposition. Therefore, might it not be more probable that the formation of the calculus was slow, and that, from its very centre to the circumference, changes had been going on up to the time of its removal, somewhat after the manner of the metamorphic rocks? In gazing at a glacier for the first time, we might exclaim, Here is a falling stream or cataract, which has become suddenly frozen; but we know that it never had any pre-existent state of the kind; and, in a somewhat similar manner, a friend, on looking at a patient's arm with the skin all red, contracted, and shrivelled, might say, Here is the result of a burn; but I answer, No; this cicatriciform-looking surface was formed slowly, just as you see it, and we give it the name of Keloid.

Supposing, then, that pathological processes are slow in their progress, and that they are due to conditions always surrounding us in the food we eat, or the fluid we drink, or the air we breathe, ought not these causes to constitute one of the chief studies of the medical man? Why do we see one of our patients at middle age developing a consumption, or another finding an early grave from Bright's disease? Surely there were a number of circumstances acting combinedly which set these maladies in operation. These should be discovered, and when discovered removed. What higher function can be assigned to the medical man, than an attempt to elicit the different baneful influences which promote disease, and then endeavour to eradicate them? If one of his duties be the prevention of disease, he becomes the custodian of the public health, and his position is so exalted, and is placed on so firm a basis, that the importance of his status in society is at once fixed.

The Voice of the People as the Medical Man's Guide.—But there is quite another view of the medical man's function, which is this, that it should be made more directly applicable to modern life, and be altogether subservient to the will and wishes of the public. It is said that the first theory which I have propounded is eminently quixotic; with all our study, we can never arrive at the causes of disease, much less remove them; our surroundings in life are too artificial. We know that pure air ought to be breathed, and that for the sustenance of the body so much fluid, albumen, sugar, and fat should be taken in; but, as a matter of fact, our pabulum is introduced in a thousand different ways to please the palate, and to suit the habits of the country in which we reside. If a man eat and drink and breathe the mountain-air like the hermit—

"The moss his bed, the cave his humble cell,
His food the fruits, his drink the crystal well—"

then his life would be a simple problem to discuss; but with our complex diet, to say nothing of the adjuncts in the way of alcohol, tobacco, and tea, with clothing most unsuitable, what does a knowledge of the amount of albumen and fat help us in discovering the kind of breakfast, luncheon, or dinner of which every man must partake? Seeing that the whole of life is artificial, is it not feeble, foolish, and vain, it is said, to endeavour to set up any authority as to what is wrong or right? We may prove satisfactorily the inutility of alcohol and tobacco, and yet at the same time witness the long life of our patients who are not sparing in their use of wine, or who may smoke to an inordinate extent. And if the medical man think he does know what is right, and make an attempt to reform society, will society submit?

and what thanks does he receive for his pains? The attempt, I say, is described as quixotic, and therefore the medical man's function should be nothing more than an effort to relieve persons, by medicines of the various troubles which necessarily arise in our artificial society, with the addition of a little advice as regards food or dress, remembering not to go too far to disturb the ordinary conventionalities of life.

From this point of view, the public are to be the judges of what they require, and it has been boldly put forth that the popular voice is to be regarded as the dictator of the profession. It is so in other trades; the grocer and cheesemonger do not dictate to the public what is the best article for their consumption, but supply the peculiar butter or cheese which the present taste or fashion demands. In like manner, people have pains and aches; they cannot sleep or digest their food, and they call into existence a class of men called doctors to administer to their wants. "I do not require," they say, "your pathology, or even advice, but give me something to ease my pain, to give me sleep, and some fresh diet for my jaded appetite." This, according to some, is the beginning and end of the medical man's calling; one is not surprised at its having disciples, when one sees how lucrative is the method, and how futile it is found to offer to our patients improved methods of living, or to try and prevent disease. Now, of course, I can have no sympathy with those views, but, on the contrary, feel that it is our duty to try to wipe away the stain when we find our profession is being sullied by the propagation of doctrines of the kind. We can easily see that, if our sole business be to obey the patient's behests, to relieve him of local troubles, how the system becomes in the end the sheerest quackery, the mere offering of drugs for the removal of ills which the patient has portrayed for himself. This is what the public ask for, and not advice. I might take for illustration the case of the quack who has made a fortune out of the spermatophobists by treating the symptoms, and compare him with the case of a distinguished baronet, who probably never received a single fee for writing a most scientific and practical lecture about these very unpleasant people. The opinion of a highly scientific man, which might be of inestimable value, is discarded for the treatment of an ignoramus who panders to a mere sentiment of the patient, however foolish it may be. If public opinion is to be our standard, we are enabled to gauge its value by the price which it puts upon different men; and by this method we observe that the late Mr. Holloway was on the pinnacle of fame, for I believe the public valued him at about three millions of money, and since his death, institutions have been raised to his memory, which will stand as guides or warnings to the profession as to the true aims and objects it should ever have at heart.

The Study of Diseases and its Causes the True Foundations of Medical Practice.—For my own part, I have no hesitation in still adhering to the view, which I have always held, and which I have no doubt is the opinion of all of you, that the medical man's calling has a totally different basis—that it is necessary to lay a foundation in a knowledge of anatomy and physiology of the human body, and then make it one of our prime duties to study disease, and discover its causes. The next step will be an endeavour to remove them; and, as far as we are successful in so doing, we are fulfilling one of the highest objects to which anyone can attain. When all this is accomplished, we make use of the best remedies we have to relieve our patients of the ailments which we cannot prevent.

Importance of Studying the Natural History of Disease.—A second very important function of the medical man is to study the course of diseases which have actually arisen, and observe the circumstances which favour or otherwise the recovery of the patient, to note the best temperature, the quality of air and food, which are most conducive to his welfare. This is called the study of the natural history of disease, and it is remarkable how much has yet to be done in this department of medicine. There are many diseases, notably the specific, which no drug has yet been found able to control, or at least to arrest their progress; so that, at the present day, very little medicine is given in such cases as typhoid fever and the exanthemata. Few higher duties can devolve on the medical man than to make such diseases his study, watch their course, and bring them and his patient to a favourable termination. In cases like this, where he gives no medicine, he is never seen to so great an advantage, or to take a higher professional position. If he administer a drug, and pretend that this has been the instrument of recovery, he opens the door to the possibility of another remedy being considered superior to his in some more favourable case; but, if he maintain that the treatment required for the benefit of the patient is skill in its management, and that no one but he who has had a large experience can guide the case rightly throughout, he immediately assumes a superiority which no one can assail. So far from the medical man depending upon physic

for his success, he never takes so high a position as when he gives none, and makes the friends of the patient stand aloof and rely upon his superior knowledge.

It is not only in specific diseases, which run a definite course, that a long and close study of the symptoms is necessary for their treatment, but in all other acute and chronic disorder there is a wide scope for further inquiry as to the conditions under which they occur and progress. We might take any organ we like—say the lung. One young man has pneumonia of the right lower lobe; it remains limited to that portion, and the lung then rapidly recovers itself. Another young man is attacked with an inflammation, which extends to the whole lung, and rapidly proceeds to a fatal termination. Now, supposing the individual peculiarities of these two patients to be the same, we ought to inquire into the different conditions in which the patient has been placed to bring about such unequal results. What are these, which have acted so favourably or the reverse? Or, if we take chronic diseases of the lung, as phthisis, there is much to be learned as to the conditions which may favour or not its development. Every patient with this disorder is probably swallowing medicine, and some are seeking a foreign clime. They may be taking cod-liver oil, hypophosphites, and all the new antiseptics; but may there not be room for inquiry suggesting a treatment of equal importance in other directions? For example, is tubercle more or less likely to develop with increased activity of the lung? How is this important question answered? I will tell you. A young man goes to a medical man famed for a knowledge of chest-disease. He has, of course, medicine prescribed for him; but he is especially anxious to know the value of exercise, and he is told to swing dumb-bells, to use his arms in rowing, to blow a wind-instrument, and in every way to try to expand his chest. Being not altogether satisfied, he seeks the advice of another medical man, and the latter tells the patient it is important to keep the lungs as quiet as possible; and, in order to prevent mobility of the ribs, recommends a pad or kind of truss to be placed on the suspected side. Now, it seems to me a much more important question for the profession to decide, whether the tendency to the development of tubercle is increased or diminished by exercise, than to discuss the merits of benzoic acid and the hypophosphites. So, in every other disease, there is much to be learned quite outside, and I maintain, anterior to, the question of giving physic.

We occasionally meet with educated people who have a contempt for our profession, style it the *ars conjecturalis*, and assert that it has no scientific basis. I maintain that, in the discovery of the causes of disease and their prevention, we are pursuing a strictly scientific method. If an agriculturist see a particular crop fail, and, by careful watching, discover something injurious in the soil, or the absence of some ingredient necessary for the plant's growth, and, in consequence, he either remove the one or supplies the other, and so his future crops flourish, it will be admitted that he is pursuing a rigidly scientific method. He cannot make his withered crop recover its vigour, but his knowledge enables him to produce a better one for the future. If a medical man know that alcohol produces cirrhosis of the liver, inform his patient of the fact, and remove it in time, he is pursuing the same scientific method as the farmer. If, also, under more complex conditions, he can discover the circumstances which favour or arrest the development of disease, and he act up to his knowledge, he is still following a strictly scientific procedure. There is, therefore, I say, much to do quite outside and long anterior to the act of administering drugs for the cure or relief of symptoms. All systems, therefore, which begin with the cure by drugs, are erroneous, narrow in principle, and savour of quackery, as making direct appeal to popular feeling. The proof of this lies in the fact that all quackery consists in physic-giving, and nothing else. Take away the quack's pills, and there is nothing left; take away the pharmacopœia, and there is a large basis of science and art still remaining for the benefit of mankind. The public care nothing of anatomy, physiology, and pathology; they come into contact with the medical man at one point only, and that is treatment; therefore, a system which makes this the prominent feature is sure to be popular. This is my principal objection to a wide-spread heretical system; its foundation is physic-giving and the treatment of symptoms. Every lady can carry her chest of medicines in her pocket, with little book containing directions for the use of its contents.

Origin of Treatment by Drugs and other Agents.—After considering these primary and important functions of the medical man eventually come to treatment by means of drugs and other agents. Now this method arose, no doubt, in superstition. If part of the body were in pain, it was to be relieved by rubbing something to it, something especially which could be like heat or cold, and at the same time a liquid was put into

mouth. We see the process repeated every day in the streets; if a poor man fall in a fit, or faint, he is pulled up on his legs, or set up, shaken, rubbed, and various things, especially spirits, are forced between his lips. I feel some sympathy with these well-wishers, for every one of us must constantly find ourselves in a similar position, and rather sorry plight, when called to a house to witness a patient die of apoplexy, and the wife and daughters beseech us to do something to save his life. To get rid of their importunity, and to occupy them, we set them all to work to make mustard-poultices and such like trifles. Old books on medicine, or herbals, will show how every known plant was dragged into the service of the *materia medica*, and very often a large number of them were combined together for medicinal use. There is no account ever given to show that their value depended on strict observation, but it is rather too evident that they were administered for the most fanciful reasons, as the colour of the flower, the shape of the leaf or fruit. It required the era of Bacon to discard all these fancies, and bring into force the method of observation and experiment. It would be interesting to know, at the present time, how many medicines are given from a knowledge of their use, and how many, because we consider them likely to do good by simply following the dictates of our minds. I mean when, for example, all of us, without exception, as far as I know, write down on a piece of paper, measuring six inches by four, some drug for every trouble with which the patient presents himself, it would be rather difficult for us to give always a good reason for our action. I think it is not difficult to see that our art had not a scientific basis, but, on the contrary was, like all other arts of ancient times, formed out of the fancies of the human mind. What we have been doing since, was not to begin afresh, but to take this huge *materia medica*, and gradually purge ourselves of the worthless articles, and endeavour to preserve those which time has proved valuable; and, further, to endeavour to discover, by observation and exact experiment, the true nature of their action. Of a large number of the most valuable of these drugs, there is no history of their introduction into medicine. Many, however, still keep up their fame, though probably valueless, because of some physiological action which accords with a purely imaginary notion of the nature of the disease in which they are given.

Therapeutics as a Science: Limitation of the Value of Observations on Healthy Subjects.—As regards therapeutics as a science, I will not say much, because opinions seem to differ as to the true method of investigation. Those who are the most esteemed cultivators of this branch of medicine, believe that the method is, first, to observe the action of a drug on a healthy animal, or on man, and then make the result applicable to pathological states; and they thus raise pharmacology to a branch of science. For my own part, although not denying it, I have been reluctant to hold this view in its entirety, because the method has seemed to me to have often failed when put into practice, and so brought discredit upon the therapeutic art. I speak with hesitation, because pharmacology is a branch of medicine above all others the most difficult to pursue, requiring a large amount of labour, of intense application, and a rigidly scientific mind, for the record of results, and I know how few are equal to the task. The select number who are engaged in it I regard as the most scientific men in the profession; and whether I look to London, to the provinces, or to Scotland, I admire them for the devotion they give to so abstruse a subject. Perhaps one ought not to impute blame to such men for all the inferences which have been drawn from their observations, and the applications of these to treatment. There is the well marked example of Dr. Brunton's, where a correct application of a known action in a drug was made serviceable in the very first trial. I mean the use of nitrite of amyl in angina pectoris, owing to its ascertained antispasmodic qualities; but what other examples of a like kind come to mind? It is true that experiments with digitalis show similar results to those observed when it is given as a remedy in disease of the heart; but it is quite another thing to assert that the results obtained in the first place, by experiments on animals, would have suggested its successful use in the case of the feeble irregular heart of mitral disease. But, take other well known drugs, especially those which the physiologist has found to have a well marked effect on the animal system, as, for example, strychnine. This excites the spinal cord and throws the creature into movement; therefore it must be a remedy for paralysis. A human being cannot move his arms or legs, but this drug shall throw them into action. Now, I have seen hundreds, many hundreds, of persons with paralysis take strychnine, and I never remember to have seen it of any service. I should regard it as almost an useless remedy in this disease. On the other hand, it is most valuable in gastric and intestinal weakness, but I am not aware that its administration in these disorders was due to any suggestion of the physiolo-

gist. Take another drug, conium; the experimenter showed how it rendered inactive the motor columns of the spinal cord, and therefore it was a remedy for chorea. It was given largely, even to poisonous doses, and then put aside as valueless. It might have been anticipated that a disease which was not to be arrested by such powerful sedatives as opium or chloroform was not to be subdued by conium. Then, again, there is phosphorus; this was a scientific remedy, because the brain contained it, but doomed soon to become ridiculous, when the public believed their minds were being invigorated by swallowing zoedone. I never remember seeing more than one patient the better after taking phosphorus, and therefore I am bound to look upon this as a coincidence. In my private pharmacopœia I have attached to the word phosphorus the name "humbug."

Another good example is the use of digitalis in disease, owing to its supposed physiological effects. I have, within the last week, seen it given in pericarditis, typhoid fever, and pneumonia, in order to lower the rapidity of the pulse, and on different occasions in, I believe, every known disease where the action of the heart is quickened. No remedy at the present time seems more popular amongst medical men; but I have failed to learn that, in a single instance, it has had any marked effect. It seems to me, on theoretical principles, not possible that a remedy should act in the manner hoped for, when the rapidity of the heart's movements depends upon many different causes; the only true way to discover its value is to make clinical observations of its action in the different diseases in which it is administered. The application of a physiological result to morbid processes, to my mind, in this, and in many other cases, has been fraught with harm, and I cannot regard the method as truly scientific. Do not mistake me. I do not decry the knowledge obtained by an experiment on a healthy animal, for we ought to be in possession of this, in order to compare it with the results observed in states of disease. It is one thing to deny that the action of bromide of potassium on a healthy animal would ever have led to its use in epilepsy, and another, to deny that its action on a healthy animal could assist us in explaining its use in epilepsy and other disorders. Or again, although experiments with arsenic would never suggest its great power in neuralgia and anæmia, they might throw a light upon its action when these effects are known.

If it be, then, that we give medicines, not because their value has been proved, but because we think they ought to be useful, we have only got a few steps beyond the method of our forefathers, and have scarcely, I should say, reached the scientific stand-point. But I apprehend that human nature remains much the same; and therefore, when people are ill, they must take something. If there be any difference of treatment from past times, I may for a moment say that this is not due to any change in the constitution of human beings. There is not a single fact to support so preposterous a supposition; the only suggestion for it being that some senile doctor found that his patients did not necessarily die under his old treatment any more than they do under his new.

[To be continued.]

WEIGHTS AND MEASURES.—Mr. Cox and other inspectors appointed by the magistrates or local boards have, of late, been busily at work among the chemists and druggists, and have succeeded in making some very extensive seizures of weights, scales, and measures. Some of the defendants have been fined three or four pounds; and, in some instances, the chairmen of the Bench have intimated that they had the power to raise the fine to fifteen pounds. They insisted that it was the duty of every one engaged in trade to have his, her, or their weights, measures, and scales in perfect order. This was especially the case with dealers who retailed poisons and powerful drugs. The inspectors declared that they were ready, every Thursday, to stamp and verify scales, weights, and measures, at the Sessions House, Broad Sanctuary, Westminster.

BRISTOL MEDICAL SCHOOL.—Mr. Richardson Cross, the lecturer on anatomy, and, till recently, one of the surgeons at the Royal Infirmary, has given up general surgery, with the intention of devoting himself entirely to special ophthalmic work. The energy and skill which Mr. Cross has thrown into the anatomical department of his school have already borne much good fruit, and been thoroughly appreciated.

BEQUESTS AND DONATIONS.—The annual report of the Weekly Board of Governors of the Derbyshire General Infirmary acknowledges the receipt of an unusually large legacy of £4,500, under the will of Mr. George Buxton, in addition to one of £500 under the will of Miss Ann Taylor, of Birmingham, and another of £100, under that of Miss Elizabeth Eld, of Barton.