INAUGURAL ADDRESS

ON

THE CONDITIONS OF PROGRESS IN MEDICINE.

*Delivered before the Clinical Society of London,
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President of the Society.

GENTLEMEN,—The trust which you place in my hands by making me your President, awakens in my mind a deep sense of the responsibility I incur in accepting it. If a life devoted to those objects at which this Society aims could give me confidence in the future, I should receive the honour you confer upon me more cheerfully and hopefully than I can now venture to do; but whoever shall strive to set before himself what has been done in clinical medicine, and foreshadow in his mind what remains to be done, and the difficulties of doing it, will be apt to be discouraged rather than elated at the prospect. I fancy that the Father of Clinical Medicine must have had somewhat similar thoughts when he selected for his first aphoristic utterances, "Life is short—experience is fallacious." I confess, however, that I think these expressions of Hippocrates give more help than could have been given by any protestations of confidence which he might have made respecting himself or his art. If Hippocrates were with us this evening, he might congratulate himself that, however short is the individual life of man, by associations like these it becomes perpetual, and ever young and hopeful; that, instead of the occasional activity of one mind, we can, by a society, insure the unceasing and varied co-operation of many minds.

It is one of the most striking characteristics of our time, that the individual is less and less, and associated activity more and more. But if the *vita brevis* of the isolated labourer is thus obviated, there arises in place of it the danger of desultory and undirected exertions, which may be fruitful only of the thorns and thistles of contradictory statements, and as barren of true results as are the limited and often prejudiced observations of a single observer. To counteract this it will, therefore, be my duty to ask your earnest co-operation for extending and perfecting the labours of the Committees of this Society for investigation of clinical and therapeutical questions.

By our present rules, the President has a right to nominate such committees; but it seems to me that it is his duty to invite any member, according to the bent of his inclination, either to initiate some kind of active inquiry or to co-operate with others in it.

By putting positive questions to Nature, we are more likely to find out her secrets than by waiting, however patiently, for her own revelation of them. The more narrowly and positively such questions are framed, the less equivocal must be the reply; and however feeble and dubious the response—inadmissible, perhaps, to any single ear, or in characters invisible to any single eye—it may be plain and distinct when repeated over and over again. The aid afforded by such questions and cross-questions, putting Nature as it were upon her trial, and winning her replies by the exactest methods of research, mental or mechanical, is, as Bacon says, comparable to the lever and the screw in mechanical operations. "If," says he, "men should enter upon mechanical works with naked hands, without the force and assistance of instruments—as they have not hesitated to enter upon the works of the intellect with the naked forces of the mind—small indeed would have been the things they would have been able to accomplish, however earnest and conjoined their efforts." "And if," he continues, "to dwell a little longer on this instance, and to look into it as into a glass, we should ask, if by chance any sober spectators should see men striving to raise a mighty obelisk without mechanical appliances, would he not say they were demented? But if, so failing, they should be confident of success by increasing their numbers, would he not think they were still more mad? But if they should consult together to make a selection, and to dismiss the weak, and only by the help of the vigorous should expect to accomplish their object, would he not think they were hopelessly insane? But if, further, not contented with this, they should establish athletic exercises and summon all thus prepared for the work, would he not cry out, 'These people have gone mad even with reason and prudence?' And should not we be open to have a similar oppo-

brism cast upon us if, uniting ourselves into a Clinical Society, were contented to strive to accomplish the work before us without the assistance of the highest intellectual combinations and methods?

If the existence of this Society, ever recruiting itself, as I trust it will do, with young and devoted labourers, annihilates, as I have said, the first lament of Hippocrates, that "life is short," so I trust that our work will be so prosecuted that his subsequent statement, "Experience is fallacious," may no longer obtain. It is perhaps too much to hope that a growth which is indigenous to our minds, and which has shown so much vitality, should easily be rooted out. Hitherto, from the favouring influence of prejudice and self-love, nothing has equalled the exuberance of this sort of experience: no pernicious practice, no fanciful hypothesis, no unfounded dogma, but has been and is fed and maintained by it.

Experience in medicine is fallacious, because it is limited and imperfect; limited to few observations gleaned in some narrow area; limited to some season or short period of time; limited by the prejudice or interest or incapacity of the observer, or by defects in his methods of examination; and imperfect through our ignorance of the natural course of events, which leads us to attribute results to some accidental interference on our part rather than to the essential course of things; imperfect, also, because we are satisfied with that sort of experience which affords satisfaction to ourselves, and supplies some ready explanation to those who are dependent upon us.

It is in the nature of inquiries so complicated as those are with which medicine has to deal, that fallacies should at all points beset our path. Perhaps the sense of doubt arising from the fallacies of experience which weighed upon the mind of Hippocrates should also, like the whisperings of the slave in the conqueror's ear at his triumph, be ever present to us, even when our knowledge seems most assured.

In clinical medicine, the greatest corrective of fallacious experience is a true diagnosis—a diagnosis not only of the anatomical conditions, but such a diagnosis of the forces concerned as shall lay open before us a knowledge of the course which events will take. If the momentum and direction of a moving body be known, its course and the results of impediments upon it can be calculated. So if we would obtain any true experience of therapeutical measures, we must of necessity acquaint ourselves with the exact strength and tendency of the forces against which we operate. What voluminous records are there of cures and means of cure which are as valueless as the rags upon which they are printed! "What pains and expense," says Herschel, "would not the alchemists have been spared by a knowledge of those simple laws of composition and decomposition which now preclude all idea of the attainment of their declared object! What an amount of ingenuity, thrown away on the pursuit of the perpetual motion, might have been turned to better use if the simplest laws of mechanics had been known and attended to by the inventors of innumerable contrivances destined to that end! What tortures inflicted on patients by imaginary cures of incurable diseases might have been dispensed with, had a few simple principles of physiology been earlier recognised!" "But," he continues, "if the laws of Nature, on the one hand, are invincible opponents, on the other, they are irresistible auxiliaries: 1. In showing us how to avoid attempting impossibilities; 2. In securing us from important mistakes in attempting what is, in itself, possible, by means either inadequate or actually opposed to the end in view; 3. In enabling us to accomplish our ends in the easiest, shortest, most economical, and most effectual manner; 4. In inducing us to attempt, and enabling us to accomplish, objects which but for such knowledge we should never have thought of undertaking."

It is only through a perfect diagnosis that we can see in what direction therapeutical interference should be attempted. It is true that accident has sometimes aided us where knowledge has failed; but it is obviously unbecoming in intellectual creatures to satisfy themselves with such scattered fruits, when, by due culture, no doubt large harvests might be reaped. If, as Herschel says, knowledge saves us from futile and inglorious effort, it widely opens to us ways of success which are closed to ignorance. In the present imperfect state of medicine, that success may often be but partial; but even to that degree the amount of human suffering that may be avoided, and the amount of good that may be obtained, is in the total incalculable. It would be impertinent if I should attempt to exhibit before you the successes, partial or otherwise, of therapeutics; but I cannot forbear expressing our obligations to the sister science of surgery in all its departments. I assert that I have received as lively intellectual satisfaction, and have been as deeply impressed with the feeling that knowledge is power, whilst witnessing the effects of some surgical operation, as I have in contemplating the highest triumphs of physical or chemical science. It is perhaps to be regretted that medicine and surgery have been in any way dissociated. Happily, in this Society they are united. What

detriment surgery has received from the separation, others must say ; but medicine requires constantly quickening by the necessity of that exact anatomical observation which the problems of surgery amply supply. The tendency in modern medicine to increasing perfection in diagnosis is daily lessening the *hiatus* which has existed between the two branches of study, and pathological anatomy is largely confirming their identity. Clinical medicine requires ever increasing exactness in these researches.

In the reports with which we shall be favoured from the different members in this session, I feel sure that every effort will be made to give the observations contained in them the highest possible exactness of expression. This Society has two functions to fulfil : to exhibit the working of the most critical methods of research—to show, in fact, what clinical medicine should be, and to improve those methods. For myself, I am far from believing that he is the best observer who records the greatest number of facts, but he who has the perception which enables him to separate the chaff from the wheat—that which is essential from that which is accidental. In the nature of the case, such discrimination must begin somewhere ; but *where* must be left to the intellect of the observer, or to the circumstances of his work. Treatises have been written on the laws for the guidance of physical research ; but there seems to be but one rule that is universal—namely, that the student should be honest and skilful in the pursuit of truth. Honesty before skill. Then we may hope to go on towards completing the perfection sketched by Shakspeare, who, speaking of the physician, says : “ His skill was almost as great as his honesty ; had it stretched so far, would have made nature immortal, and death should have play for lack of work.”

This law of skill in research, guided by honesty of purpose, we must work out with the best means at our command, ever striving for better. Where the scalpel will not reach, the microscope may reach ; where the microscope will not help us, chemistry may help us ; where chemistry fails, the refinements of physics may come in ; and, where these fail, that finer power of the mind which enables us to deduce truth from history may lay open before us the workings of forces too fine even for that scientific exercise of the imagination which has lately been so eloquently commended to us, as shown by those hereditary tendencies to disease which as certainly take effect, and produce results as sharply defined and often as coarsely anatomical, as if their physical causes could be labelled and placed upon the shelves of a museum. But whilst, for the purposes of immediate practice, we must occupy ourselves with, and so far be satisfied in, completing and perfecting what we have already gained, a little, and but a little, reflection will be required to convince us how much more than this suffering humanity requires at our hands.

What unexplored regions are inviting our attention, will be obvious to any one who will look over the pages of any year-book of facts recording the labours in the different departments of medical knowledge. The perusal will leave upon the mind the sense of how little has any where been accomplished, and how far the lines of inquiry radiate and diverge. To take that commonest of all maladies, phthisis, it may be said to present a great chaotic field, distinct in nothing but in its mortality, and all but unexplored by science in respect of those steps and processes whereby the fatal issue is reached. The *Transactions* of this Society already contain some contributions towards a better clinical history of some forms of this disease ; and I trust that each session more may be done towards tracking the earlier history of its different varieties ; for, if anywhere in physic the principle *principis obsta* be of value, it is probably here. I trust, however, I may not be understood as if our records of the coarser phenomena of phthisis were not more than enough. Under the generic term phthisis are included many different maladies ; and, if the whole object of medicine were satisfied when these forms had been distinguished and the popular remedies prescribed, there would be no more to say ; but clinical science revolts against this conclusion, and requires a still finer discrimination of the morbid processes in question, with information as to how they begin and by what means they may be obviated or hindered. There is something very suggestive in seeing one member of a family left in health and strength to old age, whilst all the members of the same family, coming either before or after, fall victims to this disease or its alliances ; or in seeing exceptions made to its ravages through the intervention of some diverse pathological state, insanity, epilepsy, or rheumatism. Our clinical knowledge ought to show how this is determined, as from such knowledge prevention might be expected to follow.

Or to turn to another and equally extensive field of research—the large class of vascular degenerations, occurring mainly between the ages of forty and sixty. If the processes, near or remote, which bring about these morbid states of the heart and vessels, were more fully

elucidated, some part of the chapters which now treat of diseases of the brain, of the chronic diseases of the lungs, of the liver, and especially of the kidneys, might have to be rewritten. It seems probable that in a good deal of our clinical pathology we have mistaken the end for the beginning, and, being impressed chiefly by the more prominent or more easily demonstrable lesion, have regarded it as a cause, when it was but a part of another and antecedent state. I adduce these instances because I believe that, as with some other forms of chronic morbid changes, the early clinical histories are defective.

It is from *clinical* study alone that we can learn the beginnings of disease. Often, when the gathered clouds of the final storm have filled the atmosphere, it is in vain that we look round to see from what point of the heavens it began.

The apparently trifling ailments of to-day may, when we are able rightly to interpret them, foreshadow the coming of much graver events. For these inquiries, private practice affords the only opportunities. The record of individual cases, illustrative of the early traces of pathological change, would be of great value. Perhaps, as a rule, we have looked too exclusively to the wards of our hospitals, and to the records of *post mortem* examinations, to teach us our clinical lessons. This Society seems to afford special means for correcting these defects.

The opportunities of private practice, if carefully utilised, might soon solve for us many obscure problems. Take, for instance, the onset of infectious diseases. By a more accurate study of this stage, which can rarely occur in hospitals, we might learn through what ways the infection invades the organism, and thus might be enabled, if not to obviate its progress, at least to learn something more of the means for controlling it.

But I may not longer detain you with these details. Suffice it to say that any new fact, however apparently useless and disconnected, is worthy of a record. It may be, to use the language of embryology, the *primitive trace* in the development of a new form of thought and knowledge ; or, to alter the simile, its meaning may not appear until the context is discovered. The superstitious worshipper of Islam preserves every scrap of writing, lest by destroying it he might mar a portion of the sacred text ; let each one of us, engaged as we are in amassing materials of knowledge, treasure up every stray fact, convinced that it forms part of a precious record, which, if not decipherable now, will become legible by some subsequent addition. As the whole purpose of clinical medicine is the cure or alleviation of disease, the efforts of a Clinical Society can never with success deviate from the prosecution of these practical and primary objects. The advancement of therapeutics in their entirety is the end we aim at. Happily it is no longer necessary to prove that therapeutics and the administration of drugs are not synonymous. It is an ancient saying in medicine that *Nature cures disease* ; and we have learned in modern times that both in medicine and surgery it may often be our truest aim to secure our patients from interference until a healthy equilibrium is restored. The doctrine of physiological and mechanical rest in the cure of disease has vindicated and obtained for itself a permanent position in therapeutics. Every contribution to our transactions in illustration and maintenance of this doctrine will be valuable. If it often taxes the ingenuity of the surgeon to insure mechanical rest for an injured part ; how much higher are the demands made upon our therapeutics to obtain physiological rest, or any degree of it, amidst the perturbations of disease.

It seems probable that a large number of acute diseases may be sufficiently treated by only following these indications of rest. Yet the greatest misunderstanding prevails both in our profession as well as with the public, respecting the objects pointed out, as if they were of so trivial a nature as to require no skill nor attention. Yet I might venture to assert that they challenge the exercise of the highest faculties, and still often leave us far from their perfect attainment. I may be excused for saying that the expression, *Nature cures disease*, is both a good and a bad expression. It is a good expression if it represent to our minds, however imperfectly, that a principle of compensation prevails throughout a living body, causing the disturbance of the physiological balance in an organ, to be corrected by a correlated change in it or in some other part, as, for instance, when the fainting heart feebly supplies the brain, and this centre of voluntary action failing, the patient falls down, and the circulation is restored. To say that *Nature cures disease* is a bad expression, if it create in our minds a metaphysical conception, as if there were in us some personal *anima* controlling the operations. The former use of the term is that for which we, as a Clinical Society, must ever contend ; and our chief object is to encourage amongst ourselves those researches which shall show how Nature in this sense cures disease, and so have plainly before us the circumstances which should direct and control our therapeutical interference. Of equal antiquity with the expression which I have just quoted, is that more

famous one which must ever be remembered in a Clinical Society, that the two special objects of medicine are to *do good or to do no harm*. The latter alternative has, from Galen downwards, been thought a matter of too easy attainment; but doing no harm is not always an easy virtue in medicine. I desire, on this point, to call the attention of the members of this Society to the present state of our practice in regard to many chronic and acute diseases, that we may by improved records learn what is the value of positive treatment in many of them. As to the doing good by the administration of remedies, which is the more popular view of therapeutics, I need not say a word to stimulate exertion in this direction. We are all impressed with the importance of the subject; but it is to be urged that the cases which shall be brought forward to illustrate any treatment, or the effects of any particular drug, shall be so selected as to lead, as far as possible, to positive conclusions.

Gentlemen, I fear I have detained you too long; yet I cannot forbear expressing a feeling which I am sure is in every mind at this moment—that we ought to be thankful we are enjoying the blessings of peace, which enable us to meet on these occasions to encourage each other in the pursuit of knowledge, which we hope may contribute to the welfare and happiness of mankind. I earnestly trust these blessings may ever be continued to us. The sure foundation of such a hope must ever lie in the fulfilment of that sentiment of one of our greatest heroes: “England expects every man to do his duty”—in the arts of peace as well as in the circumstance of war.

RECOLLECTIONS OF WORK IN AN AMBULANCE.

By WILLIAM MAC CORMAC, F.R.C.S.,
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VIII.

SEPTEMBER 13th.—Some short extracts from my diary of this date may not be uninteresting. I find it mentioned in this day's report that, after a busy morning's work, I walked out to see Dr. Frank at Balan, where I assisted him to disarticulate an arm at the shoulder-joint, and Mr. Blewitt to amputate a thigh. I also performed an amputation of the thigh myself. When I returned to Asfeld in the afternoon, I found a poor fellow who had been sent about from one ambulance to another since September 1st, having been wounded in the thigh on that day; and I performed amputation of the thigh in his case also. I find that 19,500 cigars were daily requisitioned from the inhabitants for the troops, and other things in proportion.

Sept. 14th. There were more operations to be performed again to-day, as indeed there were every day. Twelve o'clock was the hour upon which we had now fixed as the time for performing such operations as were required. At first they used to be done at all hours—indeed, as it were, all day long; but, for several reasons, it was convenient to fix upon a particular time as soon as we were able to do so. To-day I had occasion to excise two shoulder-joints and one elbow-joint, to amputate the thigh, and to perform excision of the knee-joint, the only instance in which I performed that operation. It proved fatal, just as, I believe, have all the resections of this joint during the present war.

Sept. 15th. I excised an elbow-joint, and amputated the thigh for a gun-shot smash of the femur. My thigh-amputation of the 13th at Balan proved fatal to-day. My first case of amputation at the hip-joint died also to-day, having survived the operation only four days. The femoral artery had been twisted. There was no hæmorrhage. I suppose this is perhaps the largest arterial trunk to which torsion has been ever applied.

We were all put on the alert to-day by the circumstance of double sentries being posted all round the ramparts. The drawbridge, which we had to cross on entering the hospital precinct, was raised in the evening; and some of our staff were shut out that night, as, not being aware of the change, they had remained till rather late in the evening in town. The alert was a false one. Bazaine was reported to have made that sortie from Metz which, in point of fact, he never did make, although opinions may differ as to the possibility of his having been able or willing to do so. From this time forth we were in a certain sort of prisoners on parole. The sentries at the gate allowed the members of the staff to pass in and out during the day; but no one else, without special permission, could pass; and at night we were shut in as securely as in any fortress.

An incident, very unpleasant, and which might have been attended with the most serious consequences, occurred about this time. One of the junior members of the staff, who had recently joined, went out one morning in the dusk to forage for trophies. He passed into the deep wide ditch outside the ramparts by a covered way beneath them. He had not pursued his innocent avocations very long until the hail of the German sentry from one of the ramparts above recalled him to a sense of the situation. The unfortunate young fellow knew not a word of German, and but little more of French. Not much time, however, was lost in words or attempted explanations. The German soldier did not understand the nature of the appeal made to him, so he solved his difficulties by firing. The dusk and a not unnatural acceleration of his pace saved our young friend, who got round the sheltering corner of a bastion, and gained the covered way again in safety. It is perhaps unnecessary to add that this gentleman was very careful in future not to venture out much after dark. Of course we remonstrated about this rather summary treatment, and were told that the sentries had orders to fire at once on any one found straying out after nine in the evening, who could not give the countersign, or otherwise account for himself. The difficult circumstance about times such as these is, that a mistake, once made, is impossible to rectify.

Sept. 16th. To-day I tied the subclavian artery on the right side, for secondary hæmorrhage after amputation of the arm. The bleeding was stopped, but the poor fellow ten days afterwards died pyæmic.

CASE XLVI.—Louis Dessoyes, *maréchal du logis*, 2nd Artillery, was wounded on September 1st. His arm was amputated in the upper third on September 3rd, in the Eglise St. Charles of Sedan; and he was transferred to our care on September 9th. He was doing well until September 17th, when serious secondary hæmorrhage occurred, and we were obliged to tie the subclavian artery. I cut down upon its third stage in the usual way; and the artery was then occluded by twisting a loop of silver wire round it, instead of tying a piece of silk. Dr. Sims applied the silver wire with the dexterity and address which characterise all his operative procedures. The wound in the neck never gave any trouble. It healed up very kindly, and for some time we thought all would go well with our patient. By the 25th, symptoms of well marked pyæmia had become fully developed; on the 26th he was delirious; and on the 27th he died. We found, at the *post mortem* examination, abscesses in the left knee, left shoulder, right shoulder, and between the layers of the abdominal muscles. No internal abscess was discovered. The artery at the seat of ligature was carefully examined. A large firm clot occupied the vessel throughout the second stage up to the seat of ligature. In the distal portion of the vessel, hardly any clot was found. Had further hæmorrhage occurred in this case, it would have come, as usual, entirely from the distal extremity.

Sept. 20th. Six thousand five hundred of the wounded of the battles of August 31st and September 1st, which amounted on the French side alone to twelve thousand five hundred men, had up to this date been “evacuated” on Mezières, for distribution thence to different parts of France and Germany. These men were sent either to France or Germany, according to the category in which they had been arranged by the medical officers. Those certified as slightly wounded, and able to serve again in a month, were sent to Germany as ordinary prisoners of war. Those, however, who were classed as being gravely wounded, and, though capable of being transported, unable to serve their country for a space of three months, were allowed to return to their French homes without restriction. Doubtless, at this time, just after the disastrous capitulation of Sedan, the German generals did not anticipate a prolongation of the campaign for so long a period as the subsequent events have shown. The system of speedy “evacuations”, so thoroughly carried out by the German authorities by means of their admirable *Elappen* system, offers many advantages, by disencumbering the neighbourhoods of great battle-fields of the enormous masses of wounded which the gigantic scale on which some modern battles have been fought too surely produces. There are, however, the counter-vailing cases of individual hardship and death caused by the transport of men weakened by injury and disease through long distances, more especially when these have to be travelled during inclement weather.

The next few days were varied by visiting Balan and Bazeilles, where our detached ambulances were; assisting Drs. Frank and Blewitt to do some operations; inspecting some of their interesting cases; and in paying a visit to Bouillon, in the hope of getting there letters and newspapers.

And now to continue, after this digression, the account of our wounded at Asfeld: I find that in all we had under treatment 229 cases of injury of the lower extremity, of which 51 terminated fatally. The following table gives an analysis of these cases, and of the operations that were performed on account of the injuries received.