

MEDICAL LECTURES:

THE FAULTS WITH WHICH THEY ARE CHARGED,

AND THE REMEDY.

BY

ROBERT CHRISTISON, M.D.,

PROFESSOR OF MATERIA MEDICA IN THE UNIVERSITY OF EDINBURGH, ETC.

EDINBURGH:

PRINTED BY NEILL AND COMPANY.

1864.

R38535

TO
THE PRESIDENT AND MEMBERS
OF THE
GENERAL COUNCIL
OF
MEDICAL EDUCATION AND REGISTRATION.

UNIVERSITY OF EDINBURGH,
April 23, 1864.

MEDICAL LECTURES, &c.

I HAVE taken this method of communicating my views on a most important question which will occupy much of the time and consideration of the General Medical Council at its approaching meeting, because it may shorten discussion if the members have previously before them a definite plan, and leisure to form their opinion.

A feeling has arisen in the Council, and spread throughout our profession, that the medical education of the present day is altogether faulty in kind. It is thought that the system of teaching by lectures has been latterly pushed to excess; that the subjects of lecture have been multiplied too much; that the amount of lectures on many of them has become too great; that students consequently consume their time in details which are of little ultimate benefit, or which, if eventually of use, may be more fitly learned from books; and thus, that too little of their school

years is left for the practical study of their profession. On the other hand, it is also thought that in some parts of the country there is a fault of the opposite kind; that students are induced by their position to begin their studies with professional practice in hospitals, or as apprentices, without due school training, and consequently deficient in fundamental knowledge.

I concur in both views. But on bringing to my aid the experience of forty-two years as a Professor, during which I have become well acquainted with the acquirements of students under all systems of education in this country, and have partly seen, and partly learned in other ways, much of what is both good and the reverse in continental systems of medical education, I confess I have come to the conclusion that the outcry which has been raised during the last twelve months about the faults of our medical schools is much too loud, general, and indiscriminate. It is to be feared, therefore, that the Council may be carried away by the popular cry of the times, and the present natural fondness for reform in all things.

In enlightened institutions, left to the freedom of their own action, and protected against indolence by the stimulus of powerful rivalry, it is natural to think that, in a branch of human knowledge so

steadily progressive as that of medicine, education is likely to find its just level as well by spontaneous changes made by schools themselves as by any forcible or sweeping regulations on the part of corporations, councils, or the legislature. Accordingly, sundry improvements in the system of medical instruction in recent times have emanated from the schools, and have simply been adopted by the corporations who regulate medical study. On some occasions changes have been thrust upon the schools, teachers and students being alike indifferent or opposed to them; and these innovations are in part the source of the mischief which is now complained of.

In one way or another reason will be found for paying great respect to the gradual changes thus spontaneously introduced into the details of medical education; because they have arisen from the progress of the medical sciences, the wants consequently felt by medical students, and the readiness of medical teachers to supply these wants.

Another popular cry in regard to medical education, which is too general, and has been allowed too much influence already in the Medical Council, clamours for uniformity of education in the different medical schools of the kingdom. A certain uniformity is highly advisable on many grounds,—such as

uniformity in duration of study, and uniformity, as far as possible, in subjects of study. But to uphold uniformity also in sessions, order of study, means and manner of study, to fix down Professors to certain details of teaching, as some have lately proposed, is to be possessed with that mania for minute legislation which is certain to defeat its own object sooner or later, and to do in the meantime much practical harm. Such theorists lose sight of the fact—and I am afraid very many who have engaged in the present controversy have lost sight of the fact—that there may be more than one way, and more than one good way, of attaining the same end. Medical education has been long conducted in more than one way at the various great schools of this country. He will be more than a bold man who will pretend to say which of these is the best, and a very blind and bigotted man who does not see that excellent professional men have been numerously trained in several ways. Leaning naturally to that system of which my duties have long constituted a part, I should feel myself to be a presumptuous reformer were I to urge that the Edinburgh University system ought to be thrust in all its details upon the London Hospital schools; and I should not think differently of a reformer, trained under, and a part of, the London Hos-

pital system, were he to propose to thrust the details of that system on the University of Edinburgh. Each has gradually risen to its present popularity and efficiency under its own opportunities, and possibly under its own national peculiarities. I believe that each may, and spontaneously will, go on adopting, as they have severally and silently done for a good many years past, details which may be usefully borrowed from one another. But to compel them to that course, to pronounce authoritatively what is best for each,—above all, to tie both down to a strictly uniform system, would be imprudent in the extreme, as involving danger to one or the other, or to both. Excellent professional men are sent forth in numbers from both schools. Let nothing, then, be done to endanger that result; and let it never be forgotten that minute inquisitive legislation in a matter like this is alien to the spirit of the present age, and must end either in injury or in failure.

There is a third point as to which the present popular cry seems to me to be at fault. Before medical reform came to be in everybody's mouth about thirty years ago, great scandal arose from the careless way in which various licensing bodies in this country conducted their examination of candidates. The outcry led to considerable spontaneous

reforms, for which the bodies in question have not always got due credit. But since the Reform Bill for Physic passed in 1858, the cry has gone wrong in the opposite direction. This result seems the unerring course of all reforms. To listen to some people, one would think that it is impossible to examine a student and candidate too much. But if they had seen as much of examinations in medicine as I have done during the last two-and-thirty years, they might discover that they are woefully mistaken. I have not during that period known a single new examiner in the Faculty of Medicine of this University, who did not pitch his expectations of the candidates much too high ; and I candidly confess I myself fell into the same mistake. I have seen instances of young men whose flattering examination proved no test of their fitness for professional life, or even of the true value of their knowledge. I have seen many instances in which a sorry examination would have led to great injustice if not checked by knowledge of previous diligence, and of practical acquirements and sense. I have lived long enough to behold men rising deservedly high in private practice and the public services, whom their examiners would have been amply justified in arresting at the threshold of professional life, had examination been held the sole element of judgment.

The subdivision of examinations, adopted first of all at the University of Edinburgh, into two, one to be taken a year before the final one, has been considered a great relief to students, and an advantage to study, insomuch that it has been adopted by many other licensing bodies. Success in this direction led to its further extension ; and the Scottish Universities' Commissioners have authorised a subdivision of examinations into three,—at the close of the second, the third, and the final sessions of study. The object was to keep the student diligently at work, and to put an end to the baneful practice of indolence in the first years, and cramming in the latter years of student life. But the effect has been the reverse of what was desired. It has turned out that in his second year the student crams for his examinations on the subjects he studied the year before, taking lightly the subjects of study of the time being ; in the third year he again crams in matters a year behind his actual studies ; and it is only in his final examinations that he prepares himself to be examined on matters of present study. It is evident, therefore, how cautious a medical legislator must be in advancing, on theoretical grounds, in a course even practically proved to be in a sense correct. Either we must retrace our steps in sub-

division, or we must try further whether the system of examination may not be made best of all by restoring the old single examination, and resorting to other means of ensuring an early and continuous diligence on the student's part.

Keeping all these considerations in view, it is first necessary to see what amount of truth there is in the almost unanimous cry, that courses of lectures are too long, and subjects of lecture too numerous, for the medical student. I shall here take as an example the Medical School of the University of Edinburgh, both because I am best acquainted with its history, and because I understand it has been hinted at as having fallen into both of these faults.

When I was a student of Chemistry at Edinburgh in 1814, Dr Hope lectured from November 1st till the end of April six days a-week, and for some time towards the close he delivered twice a-week a lecture twice a-day. The number altogether exceeded 140 lectures. I cannot say I have the remotest recollection that any one felt or thought them too many. Assuredly I did not, even during a second attendance. In 1817 I attended the lectures on the Practice of Physic of the late famous Dr James Gregory, who lectured five times a-week, from 1st November till the end of April, delivering in all

about 125 lectures ; and in that time he got through only two-thirds of his subject, viz., as far as Paralysis in the Cullenian Nosology. But his lecture-room continued crowded to the door to the very last, though no means were then in use to enforce or ascertain attendance. Nor did I ever hear any student say that he heard too much from Dr Gregory, or that his lectures were too many. It was the same with the lectures of Dr Home on *Materia Medica*, a professor whom, afterwards in the chair of the Practice of Physic, it was the practice to decry. As a lecturer on *Materia Medica* he was a popular teacher in my time, and his course extended, without being completed, to 125 lectures in six months complete.

Gradually the Saturdays were deducted by all professors, and this much time left to the student's discretion. Afterwards a change in the date of the Sacrament of the Presbyterian Churches led to the Winter Session closing on or near the 17th of April. Thus the fullest courses of medical lectures came to be reduced to about 110. A resolution of the University Senate and Court, now before the Privy Council, will bring the Session to an end with the month of March ; a partial compensation, however, by cutting off certain holidays, will reduce the winter courses of lectures no lower than to 100.

I see no evidence, therefore, of a tendency in the regulations of the University of Edinburgh to elongate the courses of lectures, but quite the contrary. They have been gradually abbreviated, to suit the sense or taste of the times; and the University of Edinburgh has been the first to advance further in the same line, in conformity with the sentiments lately expressed in the General Medical Council.

The subjects of study, however, have in that University, as elsewhere, been materially increased in number. Advancing science rendered subdivision and increase indispensable. The University of Edinburgh was merely the first school to make that discovery.

Until the beginning of the present century its medical professorships were nine in number,—Chemistry, Botany, Natural History, Anatomy and Surgery in one, Institutes of Medicine, [comprising Physiology, General Pathology, and General Therapeutics,] Materia Medica, Practice of Physic, Midwifery, and Clinical Medicine. Early in the century were founded chairs of Clinical Surgery, Military Surgery, and Medical Jurisprudence; and in 1831 were added a separate chair of Surgery, and another of General Pathology. The chair of Military Surgery has been abolished. Of the remaining additions it will be diffi-

cult to find one that can be objected to as superfluous, unless it be that of General Pathology. It was strenuously objected to by the University at the time of its foundation ; a vigorous attempt was afterwards made to put it down ; many now think it is superfluous. But much may be said in its favour by its admirers, if its subject be abandoned in the Chair of Institutes, and not taken up in that of the Practice of Physic.

Of all these subjects, prior to 1825, Chemistry, Botany, Anatomy, Institutes, Materia Medica, Practice of Physic, and Clinical Medicine, seven in number, were alone required to be attended by students intending graduation. In 1825 midwifery was added, and optionally two of the remaining courses, not previously imperative. In 1831, Surgery and Pathology were added by the Act founding these chairs. In 1832, Clinical Surgery, Medical Jurisprudence, and Natural History, were also added, thus increasing the number of subjects from seven to thirteen. Every one of these subjects, however, except Pathology, had been taken spontaneously by a large majority of the students before being made imperative on all.

It is since, and not till long after, the additions of 1832, that the cry of too many courses of lectures, and too many lectures, has arisen.

The course of change has been much the same in

the other great schools of the kingdom. Pathology has escaped recognition at all of them. Natural History has been patronised in one or two other schools only. Botany has not always been recognised. In other ways, however, other courses of instruction have been added to the list elsewhere. Everywhere the same cry of redundancy has been raised.

If the student was sufficiently charged with subjects of study before 1825, there appears at first sight good reason for complaint that now he should be charged with nearly twice the number. But at the same time it must be remembered, that at almost every school medical education, before 1825, might be gone through, and usually was completed, as at Edinburgh, in three years; but that afterwards, and now, four years are required. It must be further considered that several of the new subjects, rendered imperative, were not really new, but were simply transferences from pre-existing chairs to new ones. The ground of complaint, then, is really much less than it seems. But in transferring these subjects two important conditions were entirely overlooked,—viz., that the primary courses were not lopped in their duration to suit the limitation of their subjects; and that the new ones thus created were not kept down to the due proportion of their topics. Hence, in my

opinion, has arisen much of the real ground for present dissatisfaction.

The fact is, the duration of the sessions of our medical schools was quite unsuitable for a well-adjusted organisation of such important changes as the multiplication of courses of instruction now described. As at Edinburgh, so elsewhere, these sessions consisted of six months or even more in winter, and three months in summer. For several courses of lectures, however, three months constituted too short a period, and double that time too much; but they were generally made six-months' courses, thus unduly crowding the winter work, and imposing sometimes great severity of diligence on the student at that season. Hence many were compelled to postpone some subjects of lecture too late in their curriculum of study. Thus arose the complaint of themselves and of their guardians and advisers, that too little time was left for the study of practice.

It is obvious, then, that the present outcry has a true foundation. It is exaggerated, but it has foundation enough to demand scrutiny, and, if possible, reform. How is this reform to be effected?

Those who have hitherto put their ideas of reform into print have mostly been contented with embodying in language the current sentiments and conversa-

sation of our profession, and the farthest that most of them have gone has been to suggest, that the courses of lectures on *Materia Medica* and on Midwifery should be reduced in all schools from a period of six months to one of three months only, in conformity with a resolution adopted a few years ago by the London College of Surgeons, and followed since by several licensing boards elsewhere. But, with great respect to the Council of the English College, they committed a grave error, both in the reduction they made and in stopping where they did. And no good has resulted ; for the outcry against numerous courses and numerous lectures continues as loud as ever, and nowhere more so than in London, where the reform has been carried through for some years at every school.

In the first place, an effective course on Midwifery and Female and Infantile Diseases cannot be given in three months of lectures, five days a week. When I attended in my youth the lectures of a most popular lecturer, the late Dr Hamilton of this University, whose course was confined to three months, he never finished his subject in one of these, but extended it over a portion of two ; and I never heard any one at that time complain that his lectures were too numerous. Since then the scope of Midwifery has been much extended, and our knowledge of the

diseases of infants and of those proper to women has also been enlarged. I am satisfied, therefore, that an efficient course of lectures embracing those topics cannot be given in three months, and that the lecturers on Midwifery with whom I have conversed on the subject, are right in maintaining that a shorter course than four months is most inadvisable.

The reduction made in London in the course of *Materia Medica* would have filled me with great surprise, had I not been aware that the proper object of such a course is not rightly understood in London, and seems to be quite misunderstood also in many other quarters. In the hope of rectifying a grievous error, I must be allowed a few words of explanation here beyond what is required on other subjects.

Looking to the grand object of all instruction, the practice of our art, only two great branches of medicine can be recognised—the knowledge of diseases, and the knowledge of remedies. I shall not pretend to settle the question which branch is the more important of the two. But assuredly, the former would be of miserably little use without the latter; so that, in one point of view, a knowledge of remedies is the more material of the two. This branch, however, is by no means so advanced in progress as the former. But is that a reason for lessening the amount of the

study of it? Does not the fact point the very opposite way? Is it not the case that a branch of knowledge, more advanced than another, requires a less amount of instruction, by reason of the greater fixedness of its principles, and the less necessity for taking up with controversial matters?

What does *Materia Medica* comprehend? The name has come down to us from Dioscorides unaltered, though far from a happy designation. But its scope has undergone serious alteration at many of our schools. It comprehends Pharmacy, or the obtaining and preparing of medicines, and Therapeutics, or their actions and uses; and the latter branch includes the actions and uses, not only of medicines proper, but also of qualities of matter (heat, cold, and the several forms of electricity), blood-letting, diet, exercise, climate, and a few other less important branches of regimen. It is a noble subject of instruction, if regarded in this comprehensive shape, full of practical lessons of the highest value, which cannot be given under any other branch of medical instruction, and pregnant with valuable discoveries, so soon as it shall have its share in attracting, as other medical sciences have done before it, the earnest attention of a due multitude of thinking minds and original inquirers. As thus constituted,

too, it has long been a highly popular subject of lecture. It was so in the days of my two predecessors in this University, whose incumbencies carry us back into the latter part of last century. In my own time, the *Materia Medica* class has been steadily attended by twice as many students as there have been graduates who were required to attend it. Every year it is attended with great regularity by practitioners of experience, desirous of renewing their practical studies. It is attended by the senior students alone, scarcely any taking it till their third year of study, and two-thirds reserving it for their fourth, or repeating it in their fifth year. Is this *prima facie* a subject of prelection which a College of Surgeons is entitled to demolish? and to expect all other licensing bodies to view in the same light with themselves?

But this is not the subject of lecture which the English College of Surgeons had before them. The London Apothecaries' Company, who first in London erected *Materia Medica* into a six months' course, required that it should be attended in the first year of study! In Edinburgh a first-year's student might as well frequent a lecture-room with its professorial chair empty, as obey the injunctions of the Apothecaries' Company. I have long been at a loss to

understand these discordances, and how *Materia Medica* can, within the range of human possibility, be taught in a course of three months, as in London. But I understand all now, if I have been rightly informed by most competent authority, that a London course of instruction on *Materia Medica* embraces little else than Pharmacy, with merely the briefest allusions to Therapeutics. The English Surgical College may have been right in reducing such a course to one of three months. But what has become of Therapeutics? at a time, too, when quackery is so rampant in England.

To treat the whole department of *Materia Medica* in the same way is a different matter. To do so will be its utter ruin. The University of Edinburgh has refused so to deal with it. The Edinburgh College of Physicians have come to the same resolution, without my interference; indeed, without my knowledge, until their resolution was passed. But should the policy of the London College of Surgeons carry the day, all I shall say further is, that my usefulness, whatever it may hitherto have been in the vocation I have exercised in the University for thirty-two years, will be at an end. Such, too, must have been the feeling of my present colleague, Dr Douglas Maclagan, when he was extra-academic lecturer on

Materia Medica in Edinburgh, at the time the Edinburgh College of Surgeons heedlessly followed the lead of the sister College of London. Though the only extra-academic lecturer on that branch, and President too of the College at that period, he ceased to lecture on his mutilated subject.

But Materia Medica may be very differently dealt with, and the object of the London College at the same time attained. The fact is, that the time is come when Materia Medica may be wisely dismembered, and Therapeutics, under that or some fitter name, put into its proper place by separating it from Pharmacy. Pharmacy is an elementary branch, easily taught at an early period of medical study. Therapeutics is the most advanced of all branches of medicine, except Medical Jurisprudence; for it cannot well be taught except to those who know even something of diseases. Moreover, the one requires in the teacher a thorough knowledge of Chemistry, and a considerable practical acquaintance with Botany. The other demands the knowledge of the experienced physician. And these two widely separate qualifications will be seldom met with combined adequately in one teacher in these changed days of modern physic. An excellent course of Therapeutics, extended to the topics mentioned above, may be given in four months; and I

am convinced that no course of lectures on the practical branches of medicine would be more popular in fit hands—which, after all, is the best test of the importance and necessity of a subject of lecture. The separate branch of Pharmacy might be easily disposed of in three months. All that a physician needs to know of it might be taught even in two only. But, in my opinion, it might be sunk, for physicians, as a separate course of instruction, and included by subdivisions in Chemistry, Botany, and Practical Pharmacy.

Reform, however, cannot stop there. Other subjects may be reduced from six months to shorter courses. Physiology, disjoined as it ought to be, from Pathology and Therapeutics, may be effectually taught in four months. Pathology ought never to have exceeded a course of the same duration. Had it been so arranged from the first, it would not have been so strenuously opposed here, and might have met with more respect at other schools. Further, I see no reason why Systematic Surgery should not be well taught in a course of four months.

On the contrary, there are three branches for which even six months' courses are inadequate. These are Anatomy, Chemistry, and Practice of Physic. Few will doubt that Anatomy would be far better taught in two courses of four months. If

Surgery needs six months, surely Physic would require twelve. But I am sure that each may be efficiently taught in two-thirds of these periods, the Practice of Physic occupying two successive sessions of four months each. As to Chemistry, in its present advanced condition, it is unsatisfactorily handled in a single six months' course. But let the teacher deliver a course of the Principles of Chemistry in four months, and then, in a following course of the same duration, branch off into its several divisions according to the professional demands of each class of students, —we might then have Chemistry taught so as to bring forth better practical fruits than now. Here, for example, two months of Medical Chemistry would exhaust its applications to Pharmacy, Physiology, and Medical Practice; and time, too, would be left for the professor to dispose of the applications of his science to other professions besides that of medicine.

Two other subjects would be profitably extended to a less amount. Botany, extended to four months, would enable its professor to teach not only scientific, but likewise Medical Botany, thereby disposing of an important branch of Pharmacy. Medical Jurisprudence, similarly extended, could embrace all subjects of Hygiène not disposed of under Therapeutics, and thus would be filled up an important

blank existing in the present system of instruction at every medical school of this country.

It will be seen that the plan contemplated in this paper for attaining the wishes of professional men at large, and the aims of this Council, involves a change in our School Sessions. Instead of dividing the year into two unequal sessions, one of six or five months, and another of three only, let it embrace two of four months each. Let each school take its own way of arranging them. In Edinburgh I would strongly advise a quadrimestre from November to February inclusive, a vacation during the month of March, and then the second quadrimestre commencing with April. I sincerely hope that all schools will give the student a month of freedom between the two sessions, whatever their length may be.

It is easy for the Members of Council to see how, with this arrangement of sessions, and the alterations of courses of lectures proposed above, students may pass through their curriculum of study in four years, preserving ample time for contemporaneous study by practical observation and reading. For brevity's sake, I shall let every one work out the details for himself. In a general way, taking as an example the organisation of the Medical Professorships at

Edinburgh, let me merely point out that there will be, as now, thirteen subjects of lecture, from which the two Clinieal branches may be in the first instance deducted, but to which must be added three for the extended courses of Anatomy, Chemistry, and Practice of Physie. Thus there are fourteen topics to be studied in eight sessions during four years. Here, surely, is ample time left for contemporaneous hospital study and clinical lectures, even though it should be insisted that hospital study should commence with medical study.

But I hope the Council will not give its sanction to that absurd arrangement. It is just as important that a student of the fundamental sciences of medicine should not have his mind distracted by the fascinations of hospital practice, as that a student of clinieal instruction should not be withdrawn from hospital study by the severities of the fundamental sciences. During his first two quadrimestres at least, let him confine himself to his Chemistry, Anatomy, Botany, Natural History, and Physiology. The other subjects will drop into their right place without any help from regulations; and, studied in courses of four months each, there will be no want of time for every description of practical study, including steady hospital attendance. As to that important source of in-

struction, I am satisfied that two years, the last two of study, if in constant conjunction with clinical lectures, and relieved from a crush of other lectures, are enough; but I have no objection to yield a portion of a third year to the sanguine admirers of "hospital walking," if they insist upon it.

I have turned the matter over and over, and looked at it on all sides, and the result is, that the Council may easily attain its object by thus altering the length of the sessions; but that they can never do so by dealing with sessions of five or six months and three months, without either a most inconvenient complexity of attendances, or without injuriously maiming sundry important branches of instruction.

One thing more, however, is necessary, otherwise the student can never cultivate unembarrassed the practice of his profession in the latter years of study. The system of examinations must be radically changed. As they stand, I declare my conviction, based on an experience which few possess, that the present system gives no satisfaction that the judgments of University Faculties and other Examination Boards are always right. Nor can any one fail to see that the suspension of multifarious examinations over a student's head during all his student days, must be

a sad obstruction to spontaneous study, and especially to that habit of reflection, without which clinical and hospital observation becomes an empty unproductive routine.

But introduce Class Examinations, and the only remaining difficulty is at an end. I do not mean the weekly oral examinations which some teachers add to their lectures, and of which the value has been generally much overrated. I mean formal written examinations on carefully set questions, held three or four times in a session, judged of with the aid of previously affixed "numbers of merit," and carrying the privilege of exemption from future Faculty Examinations on all but matters of pure practice. Under such a system, skilfully followed out, we shall secure the student's diligence and attention; we should examine him when he ought to be best prepared; we point out to him his defects in good time for their being remedied; we allow him time to part with those details, which a teacher must impress in order to inculcate principles, but which are a fearful burden to him if he has to carry them for years till he enter the examination-room; and above all, we render the subjects and amount of examination so great that an error of judgment, for or against the student, is most improbable. I have

made trial of these examinations, and I conscientiously feel that they will introduce a new and better era of medical instruction. They ought not to take the place, however, of a final examination on matters of practice. A practitioner should be prepared to undergo examination in practice at any time. Candidates, to prove their fitness for translation into practitioners, ought to be similarly prepared; and with such opportunities of hospital study as the above plan of instruction provides, ordinary diligence cannot fail to prepare them. Thus, Examining Boards will have evidence in certificates of Class Examinations to prove the amount of diligence and ability of the student with regard to each subject of study; and they will test the whole by personal knowledge of his capability to bring every branch of study to bear upon the grand object of his education, an adequate acquaintance with professional practice in its several subdivisions.

The idea of four-month sessions has been lately proposed by others. I am glad of this; my own opinion on the subject was formed long ago, and independently.







