

**An account of the system of clinical instruction and examination followed in the Grant Medical College at Bombay, with remarks on medical education / by C. Morehead, M.D. (Principal, and Professor of Medicine.).**

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AN ACCOUNT OF THE  
SYSTEM OF CLINICAL INSTRUCTION  
AND EXAMINATION

FOLLOWED IN THE

GRANT MEDICAL COLLEGE AT BOMBAY,

WITH

REMARKS ON MEDICAL EDUCATION.

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By C. MOREHEAD, M.D.,

Principal, and Professor of Medicine.

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[Reprinted from the Seventh Report of the Grant Medical College.]

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AN ACCOUNT OF THE  
MATTERS OF CLINICAL INSTRUCTION  
AND EXAMINATION

FOLLOWING IN THE

GRANT MEDICAL COLLEGE AT BOMBAY


BY

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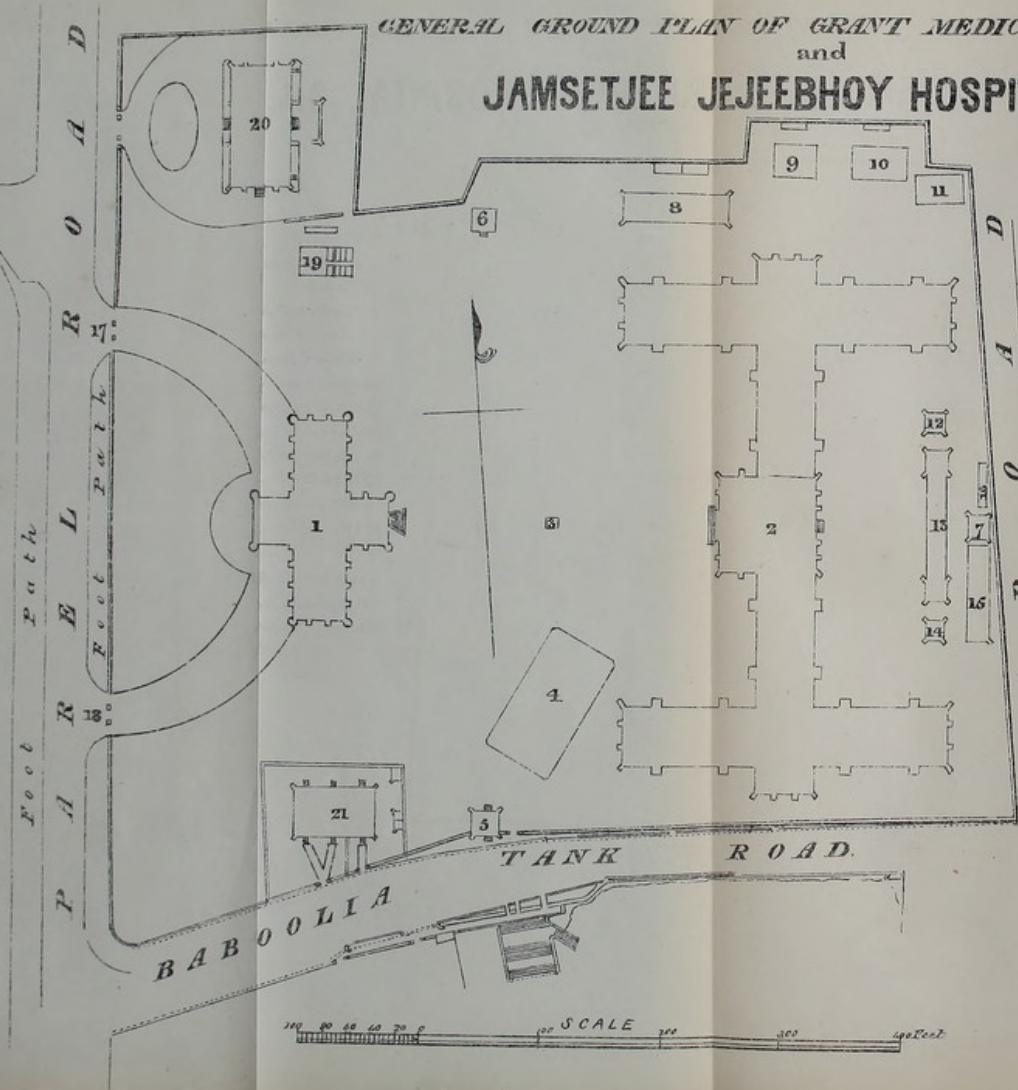
Author of "The Principles of Clinical Medicine"



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REFERENCES.

- 1. Medical College.
- 2. Hospital.
- 3. Clock Tower.
- 4. Tank.
- 5. Hospital Guardroom and Entrance.
- 6. Dead Houses.
- 8. Apothecary's Quarters.
- 9. Apprentices' Quarters.
- 10. Hospital Assistants' Quarters.
- 11. Water Cisterns.
- 12, 13, 14. Cooking Houses.
- 15, 16. Ward boys & Sweepers Quarters.
- 17, 18. Entrance to College from Parel Road.
- 19. Students' Room.
- 20. Lying-in Hospital.
- 21. Eye Dispensary, Vaccination Office, & Dispensary for Women and Children.



AN ACCOUNT OF THE SYSTEM OF CLINICAL INSTRUCTION AND EXAMINATION FOLLOWED IN THE GRANT MEDICAL COLLEGE AT BOMBAY, WITH REMARKS ON MEDICAL EDUCATION.

THE importance of an efficient system of Medical education, with reference both to the recent establishment of Medical Colleges in British India and the state of the Medical Profession in the United Kingdom, renders it very desirable that there should be no backwardness, on the part of those who have had opportunities of dispassionately considering the subject, in communicating, for the information of others, the result of their observation, reflection, and experience.

It will, it is believed, be universally admitted, that no system of Medical education can pretend to efficiency or completeness which does not include, as one of its essential conditions, a systematic and carefully conducted plan of Medical and Surgical Clinical instruction; and that no plan can be so characterized which does not require from each Student at least two years' regular and attentive attendance in well-arranged Medical and Surgical Clinical Wards, conducted by competent and pains-taking Clinical instructors, in an hospital sufficiently large to command a varied selection of medical and surgical diseases. Each Student should, moreover, for a certain period, be employed in the careful and assiduous performance of the duties of Clinical Clerk and Surgical Dresser.

But it is not sufficient that well-arranged systems of instruction be laid down for Medical schools. The protection of the community, and the character of the Profession, require that the test of



examination should be also applied ; and it may be very safely affirmed that no examination which has in view to test ability to practice Medicine and Surgery can be satisfactory or adequate unless it be conducted at the bedside of the sick in the clinical wards of an hospital.

There is abundant evidence to show that, for the most part, in the Medical Schools of the United Kingdom, Clinical instruction is imperfect ; and that the tests of ability to practise applied by examining Boards are altogether insufficient. It is true that the wards of Hospitals are open to Medical Students, and that a certain period of Hospital attendance is required by examining Boards, and that therefore the industrious and intelligent Student has the opportunity, by a course of self-instruction, of acquiring some practical knowledge of the phenomena of disease and the action of remedies. But it would seem that the instances are few in the Medical Schools of the United Kingdom in which suitable means are adopted for ensuring regularity of attendance, and the profitable use of the time passed in the Hospital wards ; and that the instances are also few in which a system of instruction is followed by Clinical teachers calculated to sustain the attention, guide the observation, and exercise and mature the judgment of the Student, while considering the phenomena of disease at the bedside of the sick. It need hardly be observed that the industrious, intelligent, and self-educating, form always but a small proportion of a body of Students ; and no system of education can be considered good which has reference merely to them, or which is satisfied with the Students' own unaided efforts.

If it be true that in the United Kingdom the Clinical department of Medical education be, for the most part, defective, and that examining Boards do not exact sufficient proof of practical ability, on the part of those whom they authorize to exercise the Profession of Medicine, we can be at no loss for an explanation of the undoubted fact that, taken as a whole, the Medical Profession does not occupy in these countries that place in public estimation to which its nature and its objects truly entitle it ; nor can we have any difficulty in understanding how it is that



its domain is not unfrequently successfully invaded by exclusive and unphilosophical systems, and that apostates from its ranks are sufficiently numerous. How, it may be inquired, can other results than these be looked for, when a large proportion of those who have been pronounced qualified to follow the Profession of Medicine have avowedly not been properly instructed in the means of doing so, and have not been required to show proof of their capacity ?

It cannot, therefore, I apprehend, be questioned, that the first step towards placing the Medical Profession in its true position, and neutralizing the influence of erroneous systems of practice in European countries, ought to be the enforcement of efficient Clinical instruction and Clinical examination.

If these views be correct of countries in which a scientific system of Medicine has long existed, it must be very evident that when the question of the introduction of the Profession of Medicine into a new country, as India, is under consideration, Clinical instruction and Clinical examination must necessarily command a large share of attention in the system of education by which this object is sought to be effected. Nor can it be too distinctly affirmed that unless these essential conditions of Medical education be conscientiously enforced in our Indian Medical Colleges, and by our Indian examining Boards (*i. e.* unless the most perfect assurance be given that the certificate of ability to practise Medicine and Surgery is never given except to those who are really practically capable), the Profession of Medicine cannot be made acceptable to the people of India ; indeed, the attempt to introduce it as practised by really qualified men in European countries will not have been truly made.

A strong conviction of the truth and paramount importance of these principles has regulated the system of education and test examination observed in the Grant Medical College, from the time of its institution up to the present period. It may be, therefore, useful to the cause of Medical education generally to state the means by which it has been endeavoured practically to apply these principles.

As my present object is not to suggest a method of Clinical



instruction and Clinical examination likely to prove useful, but to detail one which has already been for several years in successful operation, I shall best effect this by extracting from the official Reports of the Grant Medical College those passages which relate to Clinical instruction and Clinical examination :—

*Clinical Medicine.*—In the Report of the 3rd year of the College, the Session 1848-49, the method of Clinical instruction is explained in the following manner :—

“Thirteen Students have attended the course of Clinical Medicine, and of these seven have officiated in rotation as Clinical Clerks. \* \* \* \* \*

“As this is the first Session in which Clinical Medicine has been taught in the College, it is expedient that I should explain the system of instruction which has been followed.

“The Jamsetjee Jejeebhoy Hospital is adapted for the accommodation of 240 males and 60 females, and the number of sick annually treated has hitherto amounted to about 3,700 in-patients, and 5,400 Dispensary out-patients. One ward of this Hospital, with accommodation for 20 sick, was set aside as a Clinical Medical Ward. The Professor of Medicine daily examined all the patients admitted into Hospital in the course of each day, and selected those Medical cases most appropriate for the instruction of the Students, and sent them to the Clinical Ward. This ward was visited daily at 7 o'clock A. M., and the Professor and the Students were engaged in it till 8 o'clock, and sometimes to a later hour. The cases of the patients were, on admission, taken by the Clinical Clerks, of whom there were always four on duty. The statement of the case was corrected by the Professor, then read to the Students by the Clinical Clerk, and the subsequent daily reports and prescriptions were dictated by the Professor, at the bedside of the sick, and written down by the Clerks in the College and Hospital Diaries, and also by those other Students who were keeping cases on their own account. The opportunity was frequently taken, during the morning visit, of pointing out and explaining to the class the symptoms of interest, and the indications of cure in the diseases before them, and also of interrogating them on the



course of treatment pursued, and of inviting them to offer suggestions in regard to it. The circumstance of the great proportion of the patients being ignorant of the English language gives a facility in conducting Clinical instruction in this manner, at the bedside of the sick, to an extent not generally available in Medical Schools. These Clinical conversations and interrogations at the bedside of the sick will, I believe, prove more instructive to the Students than the formal Clinical Lectures delivered in the College. I have reason to hope, that as the Students increase in knowledge, and acquire a greater familiarity with their duties as Clinical Clerks, there will be more scope for this kind of instruction, and yet no necessity for decreasing the number of patients under treatment at one time in the Clinical Ward.

“In addition to instruction communicated as now explained, 33 Clinical Medical Lectures were delivered in the College; and in conducting these Lectures the following system was observed. All the cases discharged from the ward during the interval between the Lectures were made the subject of comment. They were grouped according to the nature of the disease, and it was not unusual to preface the practical remarks suggested by the cases by a short recapitulation of the characteristic features of the disease of which the cases were instances. Sometimes, instead of a formal Lecture, the points of practical interest in the cases were brought forward through interrogation of the Students. This occasional substitution of examination for Lecture in the Clinical course has the double advantage of keeping alive the attention of the Students, and of giving the Professor a better idea of the degree to which he has succeeded in carrying the Students along with him in their practical studies.

“In Appendix E will be found still further details\* regarding the course of Clinical Medicine. These have been given with the view of showing the nature and extent of the practical studies in which the Students have been engaged in Medicine during the past Session.”

\* Embodied in a subsequent part of these observations.



In the Report of the 4th year of the College, Session 1849-50, it is observed of Clinical Medicine :—

“ The same Students who attended the course of the Practice of Medicine have daily followed that of Clinical Medicine.

“ In the last Report of the College the arrangements of the Clinical Ward, and the manner in which the patients were selected from the general wards of the Hospital, were fully explained. A similar system, in these respects, has been observed during this Session.

“ The greater proficiency of the Students has admitted of considerable modification of the manner in which the duties of the ward have been conducted. Instead of the daily reports being dictated by the Professor, they have been previously prepared by the Clinical Clerk, and have been read by him at the bedside of the patient. The statements made in them have been then scrutinized by one or two of the attendant Students, at the request of the Professor, with the view of testing the accuracy of the reports, and of correcting defects which may be apparent in the Students' manner of examining the sick.

“ The Clerk has then been required to suggest the treatment, to propose a prescription ; and the other Students have been encouraged to state objections, and propose amendments, should any occur to them.

“ The advantages resulting from these modifications have been, that the time has not been taken up in dictation and writing, but wholly occupied in observing and reasoning on the phenomena of disease. By means of conversation, explanation, interrogation, the attention of the Students has been kept more fixed and interested, and their powers of observation and reflection more carefully exercised. These objects, most important to keep in view in the education of all youth, are more especially necessary in regard to those who have not had the advantage of that early mental discipline and training which is the privilege of the young of the educated classes of other countries. While the Students have been encouraged to express themselves freely in regard to what they observe in the ward, it has been impressed upon them that they are only expected to do so after they have



carefully observed and reflected. No countenance has been given to frivolous questions and remarks.

“The thirteen Students who are in the 4th year of their studies, and one of the 3rd Year Students, Narayan Dajee, have, in rotation, officiated as Clinical Clerks, and the following nine may be mentioned as those of them who have conducted the duties with the greatest efficiency, assiduity, and attention to the wants of the sick :—Mr. Carvalho, Atmaram Pandurung, Bhao Dajee, Merwanjee Sorabjee, Mr. Gomes, Mr. Lisboa, Muncherjee Sorabjee, Anunta Chundroba, and Narayan Dajee.

“Many of the Students have also assisted in conducting the duties of the Dispensary for out-patients—the seniors in prescribing for some of the sick, under the superintendence of Dr. Peet and Dr. Giraud; the juniors in registering the names of the patients, and in dispensing medicines.

“In addition to the daily Clinical instruction in the Hospital, 33 Lectures have been delivered in the College on the cases treated in the ward. Sometimes, indeed, the consideration of the cases has assumed more the character of interrogation of the Students than of a formal Lecture; and probably in future Sessions it will be found expedient to give still more of the time in these weekly meetings in the College to examination in the Practice of Medicine, and to restrict Clinical instruction to its only true arena, the bedside of the sick. It has already been explained in a former report, that as few of the patients understand English, those difficulties which stand in the way of conducting Clinical instruction in Medical Schools, when the teacher and the sick speak the same language, are not experienced here; and that it is incumbent on us to turn these advantages to the fullest account.

“In Appendix E will be found a tabular statement of the diseases which have been under treatment in the Clinical Ward, from which some judgment may be formed of the opportunities which the Students have enjoyed of becoming practically acquainted with disease. This statement, however, by no means exhibits the full extent of these opportunities. Asiatic cholera and small-pox have prevailed extensively during the Session, and



the assiduous Students have not failed to direct their attention to the practical study of these formidable diseases.”

In the Report of the 5th year, Session 1850-51, it is observed of Clinical Medicine :—

“The Students who attended the course of Practice of Medicine have also followed that of Clinical Medicine, and have in rotation officiated as Clinical Clerks. The Student Apprentices have also in rotation attended the Clinical Ward.

“The system of Clinical instruction has, during the Session, been conducted daily in the Hospital in the following manner, and has occupied always an hour, sometimes more, exclusive of *post-mortem* examinations, which have been made at other periods of the day, and have not been permitted to encroach upon the time devoted to the other objects of the course.

“The cases and daily reports have been taken by the Clerk, then read, scrutinized, confirmed, or corrected, before the Professor and the Students, at the visiting hour. The pathology and the daily treatment of each case was made the subject of interrogation and conversation at the bedside of the patient ; and after the treatment was determined, the prescriptions were dictated by the clerk in charge of the case to the superintending clerk of the ward, by whom they were written in the Ward Dispensing Book.

“In addition to the daily Clinical instruction in the ward, 33 Lectures have been delivered in the College on the cases. Eight of these Lectures during this Session were allotted to a detailed consideration of the diseases of the skin—an important subject, which time did not admit of being sufficiently treated of in the course of Practice of Medicine.

“Appendix E exhibits a tabular statement of the diseases which have been treated in the Clinical Ward, and a note is added to show the number of the different classes of diseases treated in the other wards of the Hospital, and in the Dispensary out-patients—these being sources of practical instruction which have also been open to the Students of Clinical Medicine and Surgery.”

In the report of the 6th year, Session 1851-52, it is observed of Clinical Medicine :—



“The Students who attended the Lectures on the Practice of Medicine have also followed the course of Clinical Medicine.

“The system of Clinical instruction has been already so fully explained in the three last Reports of the College, that it is unnecessary to say more at present than that during the past Session it has been conducted with the same regularity and care.

“Appendix I exhibits a tabular statement of the diseases which have been treated in the Clinical Ward. There is also appended to it a memorandum which shows the number of the different classes of disease treated in the other wards of the Hospital, and in the Out-patient Dispensary.”

In conducting the Clinical course during the last Session, 1852-53, the system, as detailed in the extracts from the latest Reports, has been carefully carried out, with the addition that before the selection of patients for the ward was commenced certain preliminary subjects, which had hitherto been treated of in the College Lecture Room, were considered in the Hospital.

The object of Clinical study was explained, the nature of symptoms was brought to the recollection of the Students, and the importance of familiarity with the symptoms and physical signs of health, and of precise knowledge of the anatomical relations of internal organs, and of these to readily recognized external parts, was inculcated. The anatomy of the several organs of the chest and the abdomen, and their relation to external parts, were recapitulated. The symptoms and physical signs which indicate a healthy state of the functions of these organs and of the nervous system were then stated, and both these subjects were illustrated, as far as practicable, by reference to a healthy hospital attendant, who was present.

A general notice was then taken of the nature of the symptoms and physical signs which indicate disease of the organs of the chest and abdomen, and of the nervous system.

Six or seven days were occupied in these inquiries. The subjects were treated very systematically, and as practically as possible; and were from time to time reverted to during the progress of the course. I shall in future always introduce the subject of Clinical instruction in this manner.



In further explanation of the method of Clinical instruction followed in the Grant College, I would observe that a certain plan of case-taking and reporting has been carefully attended to.

In drawing up a memorandum\* for the guidance of the Students, I have endeavoured on the one hand to guard against superficial and careless observation, and on the other to avoid a system which aims at a minuteness and variety of detail beyond the capacity of many Students, and not compatible with the circumstances of ordinary medical practice; and which, moreover, I cannot help thinking, tends to withdraw the attention of ordinary minds from the prominent points of a case, and to fix it on subsidiary, and, as regards treatment, unimportant detail. I would not, however, wish to be supposed, from these observations, to undervalue the patient and minute investigation of disease. I merely desire to express my belief that the system in question is not the best suited for the general purposes of useful Clinical instruction, or the capacity of the great body of Medical Students and Medical Practitioners.

In conducting the duties of the Clinical Ward, it has always been an object to enforce regularity of attendance, by roll-call at the commencement of the visit; also to maintain the attention of the Students by questioning, sometimes one, sometimes another,

\* 1st. To record the objective symptoms and signs (*i. e.* those of which the observer himself becomes cognizant).

2nd. To record the subjective symptoms (*i. e.* those described by the patient).

3rd. To record the history of the case.

*1st. Objective Symptoms and Signs.*

Condition of the patient, expression of countenance, state of the surface, pulse, symptoms relating to the nervous system. *Chest*: Respiration, physical signs of lungs; heart, action, physical signs. *Abdomen*: Physical signs. Tongue, &c.

*2nd. Subjective Symptoms.*

*Nervous System*: Sleep, headache, &c. *Chest*: Pain, cough, expectoration, palpitation, decubitus. *Abdomen*: Pain, appetite, vomiting, distension; action of bowels; secretion of urine, &c.

*3rd. History.*

Origin of illness, duration, symptoms and order. *Cause*: Previous illnesses, residence, occupation, habits.



without reference to any order, on the symptoms, the pathology, or treatment of the case under consideration. Then, perhaps, to ask some question on Anatomy, Physiology, Materia Medica, or Pharmacy, which the conversation held on the case under observation may incidentally have suggested, and which may serve to keep before the mind the relation between these subjects and Clinical studies.

It has also been the frequent practice, after the treatment of the case has been determined on, to require some Student, not the Clerk in charge, to dictate the prescription to the superintending Clerk. In this way the attention of all has been kept alive.

As further connected with the important subject of Clinical instruction, I have always felt it to be part of the duty of a Clinical Teacher to take care that the manner of those engaged with the sick, and all the arrangements relative to their treatment, should be characterized by a spirit of humanity, by a strict regard for their feelings, and a reasonable one for their prejudices.

The Teacher must, therefore, be watchful of his own manner and bearing towards the sick.

It has been my practice to require the Students to examine and interrogate the patients before me, not only with the view of instructing them in the right method of observing, but also with that of correcting defects in their general manner and bearing towards the sick.

This observance, trifling though to some it may seem, is not an unimportant part of Clinical instruction, for its tendency is practically to inculcate the importance of a much neglected part of medical practice—I mean the treatment and management of the mind of the patient. Inattention to this duty has done much to lessen the efficiency of the regular Practitioner of Medicine; and attention to it may explain, to a certain extent, the success that may attend the arts of the empiric.

The Students are engaged in Clinical studies during three of the five years that comprise the College curriculum, and during that time officiate about twelve months as Clerks.

I have annexed to these observations a tabular statement, showing the number and forms of disease admitted, after careful



selection, into the Medical Clinical Ward during three Sessions. They amount to 622, and constitute the means of Clinical instruction available to the Student during his curriculum.

As it was the invariable practice to make each case which was received into the Clinical Ward the subject of practical comment, a reference to the list will show that there has been ample opportunity of demonstrating to the Students, in the course of their Clinical studies, many important practical facts relative to varied forms of disease.

There has been, it will be observed, a good deal of variety in the malarious fevers, depending upon the different stages of disease at which the individuals came under treatment, as well as in the circumstance of the fevers being complicated with much variety of local disease.

The subjects of these febrile diseases were, moreover, of different classes of the community, who had been exposed in different degrees to the predisposing and exciting causes of disease. In making Clinical observations on these cases of fever, the causes, as well as the treatment of the disease, underwent consideration; and no opportunity was lost of impressing upon the Students the varied and constantly changing indications which it is necessary to keep in view in the treatment of each instance of the disease—modifications depending on the constitution and age of the individual, the stage and duration of the disease, and the nature of the local complication. Much pains have also always been taken to inculcate upon the Students the great error of the too common popular belief that all fevers are alike, and amenable to one general system of treatment.

The list also shows that the Students have had a fair opportunity of practically considering many important abdominal diseases, as hepatitis, abscess of the liver, dysentery, peritonitis. The many instances of Bright's disease of the kidney not only afforded the means of discussing the pathology of this important organ, but also of, from time to time, reviewing the whole subject of dropsical diseases.

The field of study of diseases of the chest far exceeded my expectations, and has afforded ample means of frequently



demonstrating and practically explaining the physical signs of all the important diseases of the lungs, as well as of the heart and aorta.

There has also been a fair opportunity of studying many of the diseases of the nervous system.

Though the Students have had their attention chiefly confined to the selected cases in the Clinical Ward, yet the occurrences of practical interest in the other wards of the Hospital have not been lost sight of; for example, during the period to which the Clinical list of patients refers there were treated in the Hospital, of small-pox 91 cases, of tetanus 115, of cholera 687. The Students were encouraged to watch the course of these important diseases in the different wards, and thus acquired a practical acquaintance with them, much greater than could have been gained from the Clinical Ward alone.

Of the 622 cases treated in the Clinical Ward, 104 terminated fatally.

As in by far the greater proportion of cases a careful examination of the body after death has been made, and the morbid appearances pointed out and explained, both in relation to the symptoms during life and the train of diseased processes, it must also be evident that the Students, in their course of Clinical study, have had the advantage of becoming familiar with many of the important facts of morbid anatomy.

*Clinical Surgery.*—Having now explained the manner in which Clinical Medicine has been taught in the Grant Medical College, I proceed to state that which has been followed in respect to Clinical Surgery, premising that the visit in the Surgical Ward has always been at a different hour from that of the Medical one; so that the Student, throughout his three years of Clinical study, has had the advantage of daily attending both wards.

In the Report of the 3rd year of the College, Session 1848-49, it is observed:—

“The Professor of Surgery has submitted the following Report of the course of Clinical Surgery:—

““Clinical Surgery has been taught in the College and Hospital.



The plan followed in the College has been to select two or more of the most interesting cases admitted during the week, to read over to the Students in the Lecture-room the notes of these cases, and afterwards, both by question and explanation, to endeavour to bring the chief points of interest prominently under their notice.

“ ‘ In the Hospital one ward, capable of accommodating twenty patients, has been set apart as the Clinical Surgical Ward. The patients received into this ward have, as a general rule, been selected by myself from the daily Hospital admissions. Four Students in rotation have been appointed Dressers for periods of three months, and a certain number of patients have been placed under the care of each Dresser. Notes of all the cases have, with a few exceptions, been taken by the Dressers on admission. At the Hospital visit, the notes thus taken have been read over at the bedside of the patients, and all necessary alterations and additions made. The case was then carefully copied by the Dresser, to whom the charge of the patient had been entrusted. In like manner, notes of the progress of each case have been dictated at the bedside of the patient, during the visit. The greater number of the fractures after their first adjustment have, under my superintendence, been managed by the Dressers; and all the wounds and ulcers have been regularly dressed by them. Opportunities have been taken, so far as time would permit, of pointing out to the Students the more prominent changes observed in each case; and, by question and conversation, attempts have been made to render the impression as fixed as possible. On a careful review of the progress made during the Session, I feel little hesitation in expressing my belief that it has been quite equal to what might reasonably have been expected, when the number of other subjects which required a share of attention is kept in mind.’

“ A table of the diseases treated in the Clinical Surgical Ward forms Appendix G, and a list of Surgical operations performed in the presence of the Students forms Appendix H of this Report.”

In the Report of the 4th year of the College, Session 1849-50, it is observed:—



“ *Clinical Surgery* has been taught during this Session in the same manner as was explained in the Report of the preceding one.

“ *Minor Surgery*.—The Professor reports that the opportunities of acquiring facility and neatness in the performance of the minor Surgical operations, and in the application of splints and bandages, have been considerable, as will appear from a reference to the list which forms Appendix H. He is, moreover, favourably impressed with the capability possessed by the Students generally of attaining a considerable amount of dexterity in these manipulations; and is not without hope that the arrangements of the ensuing Session will admit of a still more close and systematic attention being paid to this branch of Surgery.

“ A table of the injuries and diseases treated in the Clinical Surgical Ward will be found in Appendix J, and Mr. Peet remarks that the number has been quite sufficient for the illustration of the greater number of his Surgical Lectures; and that, with perhaps one or two exceptions, the Students have shown every disposition to avail themselves fully of the information they were calculated to afford.

“ The list of capital operations performed in the presence of the Students forms part of the same Appendix J.”

In the Report of the 5th year of the College, Session 1850–51, it is observed of Clinical Surgery :—

“ The system of instruction in the Clinical Ward was very similar to that of former Sessions. The tabular statement which forms Appendix G shows the number and nature of the Surgical diseases which have been under treatment in the ward during the Session. The greater number of the fractures treated in the Hospital have been entirely managed, as regards the application of bandages and splints, by the Dressers, by whom also cases of all patients admitted into the Clinical Ward have been regularly kept.

“ Of the minor operations of Surgery a large proportion have been performed by the Students themselves, under the superintendence of the Professor. In Appendix H will be found a table of the operations performed. It exhibits the opportunities



which the Students have had of acquiring neatness and dexterity in this very essential part of the practice of Surgery.

“ Upon the day set apart weekly for instruction in Clinical Surgery in the College, the cases of interest treated during the week were brought under notice, and the Surgical operations that had been performed were made the subject of comment ; and this course of instruction was in general carried out more in the way of conversation than of formal Lecture.”

In the Report of the 6th year of the College, Session 1851-52, it is observed :—

“ The list of diseases treated in the Surgical Ward, and the operations performed, will be found in Appendix J.

“ The system of instruction has been the same as that of preceding years, and is already fully explained in former Reports.”

With the view of illustrating the means of instruction in Clinical Surgery in the College, a statement of the number and forms of diseases admitted into the Clinical Surgical Ward during the same three Sessions, with a list of the operations performed in the presence of, and partly by, the Students, is annexed.

Of the three years during which the Students are engaged with Clinical Surgery, each Student officiated about ten months as Dresser.

Regularity of attendance is enforced by roll-call, as in the Clinical Medical Ward.

*Diseases of the Eye.*—The Dispensary for the treatment of these diseases is in the same compound with the Grant College and Jamsetjee Hospital, and the Students in their 5th year have in rotation attended the practice of the Institution, and profited by the instruction of the Oculist. As it is in contemplation to connect the Officer in charge of this Dispensary with the College, a more systematic Clinical course of instruction, in these forms of disease, will then be arranged.

*Vaccination.*—The office of the Presidency Vaccinator is also in the College compound, and the Students, therefore, enjoy the means of becoming practically acquainted with the appearance and course of the Vaccine disease. This advantage is of some importance at the present time, when the spread of vaccination



in India, and the best means of effecting it, is under the consideration of the Government.

*Clinical Midwifery.*—In this department instruction in the Grant College has been hitherto defective. A Lying-in-Hospital has, however, been lately built in the compound of the College, and is now open for the reception of patients; and a distinct Dispensary for the treatment of the diseases of women and children has been also established. Both these Institutions are under the immediate management of the Professor of Midwifery. There is, therefore, every reason to hope that the department of Clinical Midwifery will soon become as efficient as those of Medicine and Surgery.

#### MANNER IN WHICH THE DIPLOMA EXAMINATIONS HAVE BEEN CONDUCTED.

The detailed arrangements have been always publicly notified, and the attendance of those interested has been invited. The Examination in Chemistry, Anatomy, Physiology, and Materia Medica has been conducted by the Principal and Professors of the College. One day has been given to each subject for written examination, and one to each subject for oral examination—that is, four days have been given for the written examinations, and four for the oral examinations. The latter have always been conducted with formality by the Professor of the subject under examination, in the presence of the Principal and the other Professors; each Candidate has been separately examined, and half an hour has been usually allotted to the oral examination of each Student in each subject. Notes are made during the examination, and at its close the result (qualified or not qualified) is determined.

In the subject of Anatomy there has been also a day given to dissection. Each Candidate has been required to dissect a part of the body, and to demonstrate his dissection.

In the subject of Chemistry there has been practical examination in the Laboratory in the analysis of substances, and into the dexterity of the Candidates in the manipulations of practical Chemistry.



In the subject of *Materia Medica* there has been also examination in the Dispensary of the Hospital. Each Candidate has been required to read three prescriptions, and to compound them in the presence of the Examiners.

Students may present themselves for examination in these subjects at the end of their 3rd year, and those who are successful receive a Certificate, to which the designation "First Examination Certificate" is given.

*Final Examination.*—The examination in Medicine, Surgery, Midwifery, and Medical Jurisprudence has been conducted by a Board of four Medical Officers nominated by Government, and unconnected with the College. They have been designated Government Examiner and Assessors. Candidates for this examination require to be provided with the "First Examination Certificate," also a Certificate from the Principal of the College, showing the period of attendance in the College, the length of time of officiating as Clinical Clerk and Surgical Dresser, and setting forth the character of the Candidate for regularity of attendance and propriety of demeanour.

The nature of the final examination, and the manner of conducting it, will be best explained by extracts from the reports made by Dr. McLennan, the Government Examiner, to Government.

In the report dated 18th April 1851 it is observed :—

"The Examinations commenced on the 25th March, when the nine following 'Candidates for Diploma of Graduate,' who had obtained the 'First Examination Certificate,' presented themselves :—

\* \* \* \* \*

\* "The mornings of the first three days, and of four subse-

\* In the report of the 4th year (1849-50) of the College, when as yet no Student was qualified for final examination, under the head "Examination for Honors," it is observed :—"In this (the Prospectus) it will be observed that one day was allotted for Clinical examination in Medicine and Surgery at the bedside of the sick in the wards of the Hospital. This course was followed with the view of testing the real practical acquaintance with Medicine and Surgery possessed by the Students.

"Such a mode of examination should, it may be with safety affirmed, be



quent days, on which there were no other duties to be done, were taken up with Clinical examinations, and in hearing the reports of cases taken at the bedsides of patients in Hospital. On these subjects, as regarded Medicine, Surgery, and the diseases of females, the Candidates generally acquitted themselves to my perfect satisfaction.

“The fourth day’s examination was taken up by the Candidates in answering in writing, without assistance, the questions contained in printed paper marked A.\* They were allowed from 11 A. M. to 5 P. M. to answer the questions, had no access to books, and were not allowed to communicate with each other. I was present during the whole time.

“The fifth day’s examination was similarly conducted, in answering the questions contained in printed paper marked B.†

adopted in all instances when the object is to ascertain the extent to which a capacity has been really acquired of practically applying the sciences of Medicine and Surgery.”

\* A.

1st. Distinguish the treatment of inflammation of the contents of the cranium from that of delirium tremens, and show how remedies applicable to the one disease are inapplicable to the other.

2nd. State the different effects of tartarized antimony, mercury, and nitrate of potash, when prescribed in acute inflammation.

3rd. With what pathological conditions is blood in the sputa connected?

4th. Mention the various proximate causes of jaundice, and describe the symptoms which arise from the passage of gall-stones; likewise state what is the principal constituent of bile, and what of biliary calculi.

5th. State what are the principal abnormal conditions of the urine, and how they are distinguished.

6th. Enumerate the varieties of colic; explain the cause and treatment of each.

† B.

1st. What are the immediate, and what the consecutive bad effects of concussion of the brain, when severe; and what is the treatment of such an injury in its various stages?

2nd. When an aneurismal tumour in the lower extremity is rapidly formed, yet causes no immediate risk to life, ought it to be operated for immediately, or should some delay be allowed to occur? State the reasons



As the papers were only printed on the evening of the day before each examination, and as the forms of types were instantly broken up, their contents were quite unknown, excepting to the examiners.

“The sixth day was occupied with the oral examination of the Candidates in Medicine. Each Candidate was examined separately, for periods varying from 45 to 25 minutes. The examination was conducted by myself and the Assessors, consisting of Surgeon M. Stovell, European General Hospital, Surgeon Watkins, Civil Surgeon, and Assistant Surgeon Campbell, Superintendent Lunatic Asylum, and quite independently of any aid from the Principal and Professors, who, though present, took no part in the proceedings. Those Candidates whose written replies to the questions were least satisfactory were first examined, and were detained under examination for the longer period; and those whose replies, both written and oral, were quite satisfactory, were only detained the shorter period.

“The subjects on which the Candidates were questioned were—fevers and their sequelæ; diseases of the abdominal contents, for or against the immediate performance of the operation, and mention from which line of conduct in a speedily developed aneurism most success might be reasonably expected.

3rd. Describe the difference of practice as to performance of amputation in the case of gangrene in a limb, between the gangrene arising from constitutional causes, and that arising from external injury. Enumerate the kind of injuries of limbs which would be likely to be followed by traumatic gangrene.

4th. When the urine cannot be voided through the natural passage, from the presence of stricture, what operations may be necessary for drawing it off; and what are the reasons which would induce you to give the preference to one mode or to another.

5th. What are the peculiarities of congenital hydrocele? What its occasional complications, and what its treatment?

6th. Mention the circumstances necessary to be attended to in the use of chloroform in Surgical operations, and the cases in which its use is contra-indicated, with the reasons for its inadmissibility, independently of cases connected with operations; enumerate some other Surgical cases in which advantage may be derived from the induction of anæsthesia by the inhalation of its vapour.



more particularly of the liver, stomach, and intestines ; dysentery ; diarrhœa in adults and in children ; small-pox ; endermic application of medicines ; diseases of heart and lungs ; rheumatism, gout, scurvy ; diseases of head and spinal cord, apoplexy, meningitis, &c. &c. hysteria, chorea, chlorosis, melæna ; croup, laryngitis, diphtherite ; dropsies, renal, cardiac, and other forms ; scarlatina ; diseases in which mercury is contra-indicated ; diabetes, albuminuria, and other diseases of kidney ; diseases of bladder and abnormal conditions of the urine ; diseases arising from intemperance ; scirrhus of stomach and pylorus ; cirrhosis, fatty and other degenerations of the liver.

“The seventh day was taken up in the oral examination of the Candidates in Surgery. The course pursued was the same as with Medicine, and the subjects on which the Candidates were examined were—inflammation and its consequences, ulceration, suppuration, and gangrene in various tissues and parts ; hectic fever ; aneurism, and varix, varieties of ; cure of, by various modes ; collateral circulation ; arteries, wounds of, hæmorrhage, suppression of, by nature and by art ; hernia, inguinal, varieties of, anatomy of ; hernia, congenital ; hernia generally ; hernia, irreducible, treatment of ; femur, dislocations of, fractures of its neck ; rectum, diseases of ; testes, diseases of ; fractures of olecranon, patella, lower jaw, ribs, &c. &c. ; dislocations of shoulder, elbow, knee, of cartilages of knee joint, of ankle, compound ; erysipelas, varieties of ; phlebitis ; burns and scalds ; mouth, diseases of ; vertebral column, in various situations, fractures of ; bladder, affections of ; calculi, varieties of ; gangrena, senilis ; hospital gangrene ; anthrax ; state of shock or collapse ; wounds, varieties of—gunshot, incised, punctured, lacerated ; tetanus, idiopathic and traumatic ; hydrophobia ; trismus nascentium ; tumours, malignant and non-malignant ; periostitis, necrosis, and diseases of bone ; chest, and abdomen, penetrating wounds of ; naevi ; morbus coxarius ; urethra and prostate, diseases of ; ophthalmia, varieties of—iritis, cataract, extraction and depression of ; short sight ; fracture of base of skull.

“The eighth day was taken up in giving written answers on



Midwifery and Medical Jurisprudence to questions contained in printed paper C.\*

“The ninth day was engaged in the oral examination of the Candidates in Midwifery, in the same manner as on the previous occasion of Medicine and Surgery. The subjects on which the Candidates were examined were—labour, varieties of; labour, natural, mechanism of, stages of, treatment of; false and true pains; uterus, structure of; hæmorrhage, uterine; cyanosis; still-born, proportions of; causes of; milk, secretion of; pregnancy, duration of; signs of death of fœtus in utero; diseases of circulation, maternal and fœtal; impregnation, effects of; placenta, adhesion of; stethoscope, uses of, in Midwifery; labour, premature inducement of; reasons for so doing; deformities, &c. &c.; ergot of rye, administration of; effects of, on mother and fœtus; metritis; phlebitis, uterine; peritonitis; phlegmasia dolens; convulsions, puerperal varieties of, treatment of; labour, instrumental turning; pelvis, male and female, differences of; dentition; placenta prævia; pregnancy, extra uterine; discrimination between presentations of arm, of funis, of nates; mania, puerperal; uterus, inversion of.

“The tenth day was passed in the dissecting room, in the

\* C.

1st. Name the contents of the uterus towards the end of pregnancy, in an order beginning from its parietes.

2nd. What are the symptoms, causes, and cure of retroversio uteri?

3rd. What are the causes and treatment of uterine hæmorrhage before and after delivery?

1st. Describe the symptoms of poisoning from opium; differences of its action as modified by age; and the treatment to be followed in a case of poisoning from this cause.

2nd. What are the diagnostic symptoms of chronic poisoning by lead?

3rd. What is the strength of the acidum hydrocyanicum dilutum of the London Pharmacopeia? and what of that called Scheele's Acid? What would be the best treatment for an overdose?

4th. What are the native names for nux vomica and datura stramonium? What peculiar symptoms are produced by an over, or poisonous dose of each? And what is the difference between the parts of the cerebro-spinal system on which each poison is supposed chiefly to act?



performance of operations of Surgery. Each Candidate performed at least two operations, the one an operation for aneurism, or taking up an artery, and the other an amputation, or lithotomy. Three Candidates were under examination at the same time, and the following operations were performed in the course of the day: taking up the common carotid, 2; subclavian, 3; external iliac, 2; temporal, brachial, anterior tibial; lithotomy; amputation of foot, Chopart's operation 2; of leg 2; of leg at ankle joint, Syme's operation; of shoulder joint; of thigh (circular and flap); of fore-arm; of great toe. All these operations, with two exceptions, were performed with much dexterity and precision. Performance of operations for hernia, and the dissection of Surgical regions, had been gone through previously in my presence during the examination for Practical Anatomy, necessary before obtaining the 'First Examination Certificate.'

"The eleventh day was taken up with oral examination in Medical Jurisprudence, and practical exercises in the laboratory, viz. in the analysis by each Student separately of three solutions, one of arsenious acid, one of bichloride of mercury, and the third of a combination of starch and sugar, each supposed to be the subject of investigation before an inquest. In all of these, with one exception, they perfectly succeeded, and by the great majority the analyses were performed in a rapid and correct manner; indeed, the only one in which any delay occurred was the third, as might have been anticipated.

"The questions in Medical Jurisprudence were on the following subjects:—corrosive, irritant, narcotic, narcotico-irritant poisons; differences in immediate and remote effects between poisoning from arsenious acid and corrosive sublimate; matters to be attended to in reporting on cases of poisoning; hydrocyanic acid—properties of, strength of, various forms of, tests of; deductions from examinations of marks and injuries in dead bodies; blood stains, modes of discriminating or testing; age of child found dead, ascertainment of; infanticide; violent death, signs of; evidence to be deduced from examination of head, chest, and abdomen; pregnancy, concealment of; ovaries, appearances



in; deductions to be thence drawn; various irritant poisons, difference of solubility, of vaporisability; antidotes what, examples of; arsenic; chronic poisoning from mal-administration of arsenic as a remedy; arsenic, tests for; objections to tests; stomach-pump, use of, in what cases inadmissible.

“ The result of these protracted and searching examinations has been the ascertainment that of the nine Candidates who presented themselves eight have been deemed qualified for the Diploma of Graduate, and one only has been rejected.”

In the Report of the Government Examiner dated 8th April 1852 it is observed :—

“ The final or Diploma Examinations of the Students of the Grant Medical College having terminated on the 6th instant, I have now the honor to submit, in duplicate, a report of the proceedings for the information of Government, and of the Board of Education.

“ Examinations on the very important subjects of Clinical Medicine and Clinical Surgery commenced in the Hospital on the 12th January, and were there conducted three times a week for two months, or till the 12th March.

“ During these examinations I had ample opportunity of appreciating the scientific, patient, and methodical care with which instruction in these essential matters had been communicated, and of witnessing the admirable results, which were evident in the intelligence and diligence exhibited in the mode in which the Medical and Surgical Clinical Clerks and Dressers performed their duties.

“ On Medical subjects their reports of the origin, progress, and treatment of each case of disease were excellent, and their prescriptions were generally most appropriate.

“ In Surgery the same results were apparent, and I had numerous opportunities of seeing how thoroughly they had been instructed in the application, arrangement, and modification of apparatus, and in the treatment and dressing of fractures, wounds, ulcers, and burns, &c. &c.

“ In these courses the training of the Students was admirable, and the results were quite satisfactory. During the continuance



of the examinations each Student officiated for some time in the capacities both of Clerk and Dresser.

“ In consequence of the departure on the 15th March of Professor Peet, the examinations in Operative Surgery, and in the dissection and demonstration of Surgical regions, took place on the 10th and 12th of that month; and on these days each Student was required to take up and tie an important artery, to perform a capital operation, and likewise one or more operations of lesser importance on the extremities, &c. Several operations of lithotomy, amputations at the hip joint, shoulder joint, of the thigh, leg, arm, fore-arm, thumb, great toe, and the fingers, Syme’s amputation at the ankle joint, Chopart’s and Lisfranc’s amputations of the foot, catheterism, &c. were performed, and the following arteries were taken up:—external iliac, 3; femoral, 3; common carotid, 2; subclavian, 2; brachial, 2; anterior tibial, 2; posterior tibial, and radial. The Surgical regions of the lower part of the abdomen and upper part of the thigh, of the neck, and upper and lower extremities, were dissected and demonstrated. These operations and dissections were generally well done, and, with two exceptions in one Student, with dexterity and precision.

“ The written examinations were conducted in a manner precisely similar, and with equal precautions, to those of last year. The papers of questions contained in the appended papers were only printed the evening before each examination, and the forms of types were immediately broken up. The Students on each day were allowed from 11 A. M. to 5 P. M. to answer the questions, had no access to books, and were not permitted to communicate with each other.

“ The oral examinations were conducted by myself, assisted by the same Assessors (Messrs. Stovell, Watkins, and Campbell) as last year, and by the Principal and Professors of the College, in a manner similar to that then detailed.

“ The subjects of examination on all the branches, the time during which each Student was under examination, and the general conduct of the procedure, were precisely as detailed in my report of last year. I need not, therefore, recapitulate.



“The concluding day (the eleventh, not including the morning examinations in the Hospital on Clinical Medicine and Surgery) was taken up with practical exercises on Toxicology in the laboratory. Three substances (sulphate of magnesia, sulphate of zinc, and oxalic acid) resembling each other, but one supposed to be a poison, were submitted for detection and analysis; sweetmeats poisoned with bichloride of mercury were submitted for examination and analysis. The supposed contents of the stomach of an unknown person, found dead, were submitted for analysis (they contained hydrocyanic acid); clothes and a knife stained with what was supposed might be blood, were submitted for report (one was really blood, the other was not). In all of these matters they acquitted themselves exceedingly well.

“The result of these protracted examinations has been the ascertainment, that of the six Candidates who presented themselves, five were deemed qualified for the Diploma of Graduate, and one only rejected.”

The statement which has now been completed of the system of Clinical instruction and examination followed in the Grant Medical College consists of little more than a recapitulation in a connected form of facts already published in the annual official Reports of the College. The perusal of the following extract from the Annual Report of the Medical College of Bengal for the Session 1852-53 has suggested to me the expediency and usefulness of re-stating these facts in the manner now adopted:—

“Seventeen Candidates presented themselves, and the following report of the result was submitted by the Examiner:—

“It will be observed that of the unprecedented number of seventeen (17) Candidates, all, save one, have been declared qualified, and that the lad who was unsuccessful failed in one of the subjects only (Midwifery) on which he was examined.

“This result, arrived at after a patient and searching examination in every instance into the acquirements and knowledge of the pupils, in the several branches noted

1. Practical Surgery, and Surgical Anatomy in the Dissecting Room.



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|-----------------------------------|--|
| 2. Practice of Medicine.          | in the margin, cannot but be satis-    |
| 3. Practice of Surgery<br>(Oral). | factory to the Council and to Govern-  |
| 4. Midwifery.                     | ment, as furnishing proof of diligence |
| 5. Medical Jurisprudence.         | on the part of both teachers and       |
|                                   | pupils.                                |

“It has been remarked before, however, that owing to the inadequate means afforded by the College Hospital of teaching so large a body of pupils to apply the knowledge acquired by lectures and reading, with readiness and confidence, to the actual practice of their Profession, by the aid of an extended and complete system of Clinical instruction, the Graduates were, in many instances, not considered capable of acting independently until they had passed a probationary period, of longer or shorter duration, at some of the Government Medical charities, under the guidance of the Superintending Medical Officer; and this course, it appears to the Assessors and to myself, it will be advisable to pursue with the greater number of those who have obtained the Diploma of the College on the present occasion.

“As offering ample scope for remedying for the future this defect in the system of professional tuition at the College, the opening, which has recently taken place, of the spacious new Hospital, must be matter for congratulation; and in strongly recommending that the fullest advantage be taken of the enlarged opportunities now available for imparting efficient Clinical instruction in the departments of Medicine, Surgery, and Midwifery, the Assessors also join me in earnestly urging upon the attention of the Council the propriety of ascertaining in future the qualifications of the Candidates for the College Diploma, by a more practical system of examination than it has hitherto been possible to carry out. We would, in fact, suggest that the mode of testing the knowledge of the Students, now understood to be in force at the University of London, should be also adopted at the College here, as it has already been to a certain extent, and, it is believed, with great advantage, at Bombay.

“The advantages of the system alluded to are detailed at some length in the *London Medical Times and Gazette* of the 20th



November last, an extract from which is annexed for the information of the Council.\*

“The Council will observe that to give effect to this method of testing the real practical knowledge of the Candidates for Diplomas, it will be necessary that the Government Examiner (assisted by one or more Assessors, if deemed necessary) should be present at the Hospital twice or thrice a week, if not daily, for about one month before the close of the Sessions of the year,

\* “In publishing last week the list of successful Candidates for the degree of Bachelor of Medicine at the University of London, we noticed that, in accordance with some recent regulations of the Senate, the examinations for the Medical Candidates had undergone some remarkable modifications. These changes are of so important a nature, and are so well calculated to improve the *status* of the Graduates, that we are induced to advert more particularly to the subject.

“In Surgery, the Candidates were examined by demonstrations from dry and wet preparations, illustrative of various Surgical accidents and diseases, and of their treatment; but in Medicine, the Candidates were required to examine patients in the wards of an hospital, and afterwards to report in writing on the cases, and also to examine microscopically various specimens of morbid products.

“This is certainly the greatest improvement of all, and must elicit, better than any other test, the capabilities of aquirements of the Medical aspirant. It is comparatively easy for a person of ordinary attainments to pick up by reading a fair knowledge of the symptoms, the progress, and the treatment of disease; but such a person is still very far from being qualified to practice his profession, with satisfaction to himself, or with benefit to his patients. So far may this mere book knowledge be carried, that we have known Students acquire by rote such an amount of information as to gain for them the highest prizes at the Medical schools; and yet they possessed no knowledge of actual disease at the bedside of the patient; nay, more, they had probably committed the unpardonable error of neglecting their hospital practice, and their attendance in the dead house, for the purpose of cramming their heads with the contents of books, which, when unaccompanied by Clinical experience, are of little practical value. Unlike other professions, the study and practice of Medicine are based upon experience and observation; the human body is to be demonstrated and dissected; the materials of our body and of all surrounding objects are to be chemically analysed, weighed, and otherwise physically tested; the properties of Medicines are to be investigated by their known effects upon the patients; Surgery is to be learned by the cultivation of the senses of sight and touch, and its



that he may be able to form a clear judgment of the tact and acquirements of the aspirants in diagnosing and treating disease at the bedside of the patient.

“This Report is under the consideration of the Council.”

From this extract, then, it may be learnt that Clinical instruction in Medical Colleges has not yet been so matured as to render further information and suggestion on the subject uncalled for and superfluous.

The statement made in the Bengal Report that the mode of practically testing the knowledge of Students followed for the first time by the Examining Board of the London University in November 1852 has to a certain extent been adopted at Bombay, hardly corresponds with the facts recorded in the official reports of the Bombay College, and reproduced in this paper. A comparison of the method of practical examination in Medicine and Surgery adopted by the University of London, as explained in the *London Medical Times and Gazette*, with that detailed by the President of the Examining Board at Bombay, will at once show that there is little in common between the limited and superficial plan of the former and the lengthened and searching system of the latter.

A comparison of dates will, moreover, show that practical examination in Medicine and Surgery, first followed by the University of London in November 1852, has always existed in

manipulations and appliances must be gained by actual service in the hospital ; and true principles of Medicine can only be acquired by diligent observation in the wards, by careful chemical and microscopical examination of the different textures and fluids, and by constant attention to the microscopical appearances. Books are invaluable as guides to actual observation, and lectures are commendable upon the same grounds—neither are to be neglected or undervalued by the Student or the Practitioner ; but books and lectures are only the finger-posts to direct our steps ; they do not of themselves constitute the road to the goal which we wish to attain.

“In thus combining the practical with the theoretical, the University of London has shown itself duly conscious of the true aims and objects of Medical education, and has afforded an example to all other Examining Medical Boards.”



the Grant Medical College, and was fully carried out by the Examining Board in April 1851, and April 1852.

It is, therefore, very apparent, that in thus combining the practical with the theoretical, the example has been afforded to all other examining boards, not by that of the University of London, but by the Government Examiner of the Grant Medical College at Bombay.

I have in a former part of these observations expressed my belief that the Medical Profession suffers in estimation in the United Kingdom from the defective state of Clinical instruction and examination, and that these defects must also tend to favour the introduction and extension of unscientific and empirical systems of practice.

These opinions are, however, quite compatible with the conviction which I also entertain, that in no country is the science of Medicine cultivated with more success, or the Profession followed in a truer spirit. The industry, the intelligence, and the right principles of a portion of the followers of Medical Science, are active and fruitful, in spite of the defects of the systems of Medical education. Though it be true, then, that the Profession of Medicine can never, as a whole, occupy its proper position in a country, unless the system of education and test examination be sound in principle and honestly conducted, still it is equally true, that however perfect the system of Collegiate discipline may be, the Profession can never reach its most advanced state unless there be an after-course of persevering and patient self-education on the part of its followers.

The spirit that leads to this may no doubt to some extent be excited and encouraged by the example and precepts of those who are engaged in Collegiate instruction, and by the institution of Societies for self-improvement ; but these means will not go far towards forming a body of matured, conscientious, and scientific Medical Practitioners, unless they are brought to bear on minds humble, industrious, intelligent, and impressed with a sense of responsibility.

It has been the object of these observations to show that the endeavour is being made to establish in Bombay a correct



system of Medical education ; and it has also been made known in the official reports of the College, that, through the instrumentality of the Professors, a Medical Society for the Graduates has been formed, with the view of encouraging professional study and research.

Medical education has existed seven years in Bombay, and eighteen in Bengal. There are now fifteen Graduates of the Bombay College, and about 100 of the Bengal College. It is of interest and importance to inquire whether, in many instances, that spirit of self-education, without which there can be no high-toned Profession of Medicine, has been evinced by these Graduates. To this question I fear it must be replied that no evidence has yet been given of the awakening of this spirit ; but that there is much reason to apprehend that the Indian Graduate of Medicine is like the Indian student of every other subject—impressed with the idea that when he leaves his school he is a proficient master. It is to be hoped that the time is not very distant when this unhappy delusion will be dispelled, and that the educated at our Indian Schools and Colleges will become, by the self-discipline and training of their maturer years, fitted to compete in the arena of active life with the ripe intelligence of the educated classes of European countries.

In conclusion, I would recapitulate the objects which I have had in view in writing these remarks. *1st*, To show in what respects systems of Medical education are in general defective. *2nd*, To detail the system pursued in the Grant Medical College where the endeavour has been made to avoid these defects. *3rd*, To state my belief that a high-toned Medical Profession cannot be created by a system of Collegiate education alone, but that the after self-training of well-constituted minds is also essential. *4th*, To express my opinion that Indian Students of Medicine and of other subjects have as yet shown none of that spirit of after self-education, without which there can be no proficiency in any subject, and no maturity of intellect.

I have been induced to make these statements because it seems to me to be the duty of every one who is engaged with progressive subjects to state without reserve the conclusions to which



he has been led after dispassionate inquiry and adequate experience.

The opportunity which I have very lately had of visiting the Medical Colleges at Calcutta and Madras has, in all probability, tended to suggest a more confident expression of opinion than perhaps would have been adopted had my field of observation and inquiry been exclusively confined to my own Presidency.