perhaps never, altogether absent in those cases of commencing phthisis in which the more obvious expectoration of blood is wanting.

“Established Phthisis.”—The same as the last, largely mixed up with corpuscles of pus and mucus. Free tubercle-nuclei occasionally, in small quantity.

“Large Suppurating Cavities.”—Absence of specific tubercle-cells, except portions of opaque tubercle itself happen to be expectorated. Habitually, little else than pus and mucus, and large granulous cells, unless confervoid vegetations be superadded, which is not unfrequent.

“The microscopic appearances presented by the expectoration are most special and characteristic in the early stage, when other physical evidence is least marked; and may be re-enumerated as consisting of fatty epithelial cells, single or in patches; fatty bronchial cylinder-epithelium; casts of air-vesicles lined with fatty epithelium; and microscopic hæmoptysis, *i.e.*, enveloped red blood-globules. These are enough to indicate that consumption is threatened. When the many-nucleated cells and special free nuclei of tubercle are superadded, no doubt can remain. All these I have repeatedly found in cases where the patient was not apprehensive of phthisis, but complained only of general malaise or dyspepsia, as well as in other cases in which phthisis was feared, but was not supposed to be yet in active existence.”

I may remark, that it is no fair test of the accuracy of these observations, to adduce cases of phthisis in which they are not confirmed. Here everything depends upon the stage of the disease, and upon the number of observations made. Nor even will the occurrence of similar appearances in persons who do not afterwards follow the ordinary course of phthisis, invalidate them. I believe that a small amount of tuberculization of the lungs takes place in many persons unknown and unsuspected. How many have spit up small quantities of blood at some early period of life, without paying much attention to the circumstance, who never become phthisical? On the other hand, we are not at all in a position to speak dogmatically as to the value of the appearances described as means of certain diagnosis. I consider them as aids, and find them to be so in practice. But no prudent man will decide a difficult question without taking into account *all* the grounds he can obtain for his judgment, and checking one inference by another. Understood in this sense, we have not at present to settle what microscopic appearances shall, for the future, be considered to be pathognomonic of tuberculization in the lungs, but simply to observe what appearances are commonly to be noticed in such cases at different stages. In short, for some time yet to come, we have merely to observe, and not to dogmatize.

Though not strictly pertaining to the subject—at least, I have never found portions of fatty bloodvessels amongst the matter expectorated—I may be allowed to make another extract.

“Small Bloodvessels in a state of Fatty Degeneration.”—I have hitherto found these once only in large, grey, semi-transparent, miliary tubercles which lay as distinct nodules in uninflamed lung, and of which the blastema was fibrillated and contained nucleated tubercle-cells, free nuclei, and no granules. Near to the portions of fattily-changed bloodvessels, shrivelled red corpuscles, and orange as well as black pigment, were found amongst the tubercle-corpuscles imbedded in the tenacious fibrillated matrix. The tubercles were of larger dimensions than miliary tubercles ordinarily are, averaging the size of duck-shot, and including, of course, within each many air-vesicles. The right lung was strewn throughout with such tubercles, many of them quite cretified, some partially so; none softening, or becoming yellow in the centre otherwise than from cretification; none cornified. The lung was for the most part quite free from inflammation, expansile, non-adherent throughout, and partially emphysematous in front. This emphysema had every appearance of being recent, and probably dated either from the occurrence of severe epileptic fits, which supervened twice during the last month of life, or from the very protracted act of dying. The left lung was universally adherent, formed a mere bag, and contained about three pints of pus. The patient (sent to me by Mr. Bottomley three years since) had then had an immense cavity for some years. His age was twenty-eight.

“In the grey tubercles the fatty bloodvessels were unmistakable, having a clear defined outline, dividing into branches of considerable length, and having no openings or connexions with the adjoining elements. The centre of the vessel was bright and translucent, and the whole was studded with dim granules and oil-dots of various sizes. The patient had suffered from copious and repeated hæmoptysis two years before his death.

“Considering how many cases of phthisis spring into noticeable activity coincidently with an attack of hæmoptysis,—the patient so commonly declaring that his chest was strong and his health good until he suddenly “broke a bloodvessel,” which led to consumption,—this fact of fatty degeneration of small bloodvessels in the lungs, where no inflammation yet exists, at the earliest stage of the highest form of tubercle, whilst as yet it occasions neither pain nor organic irritation of the lung, is valuable and explanatory. No doubt such a degenerated vessel, under some temporary muscular exertion or mental excitement, does literally “break;” and the flow of blood is then a veritable hæmorrhage from a patulous vessel, and not a mere transudation like that through the mucous membrane of the stomach in coffee-ground vomit. If so, the popular phraseology is correct.

“I have never found bloodvessels in a yellow tubercle; and these fattily degenerate vestiges in certain grey tubercles evidently represent the bloodvessels which originally belonged to the lung, and not vessels newly formed because of, or in any sense belonging to, the tubercle.”*

I am, Sir, your obedient servant,
Torquay, December, 1854. C. RADCLYFFE HALL, M.D.

THE EXTENDED APPLICATION OF MEDICAL INSTRUCTION.

To the Editor of THE LANCET.

SIR,—Your leader on the extended application of clinical teaching, in the last number, must have afforded solid satisfaction to every lover of surgery awake to its present requirements. I have but recently completed a lengthened tour to all the great surgical schools of the European continent, and have been forced to the conclusion that, relatively, I might almost say absolutely, the provisions for teaching surgery clinically everywhere exceed those made in London. They do so even in such towns as Tubingen, Prague, Pavia, Pisa, Florence, Bologna, Lyons, and Strasburgh, to say nothing of Berlin, Vienna, and Paris.

You have pointed to some defects in the system prevalent amongst us, and suggested a remedy; be pleased to grant me space for a few comments.

In general terms it may safely be asserted that undue importance is relatively attached to the higher operative surgery, and particularly to its mere manual exercise. It is reserved for appropriate days and hours, and the entire proceeding renders the expression, “surgical theatre,” one of the most literally appropriate in the English language. What is the object for crowding together in one hour as many great operations as possible? If it be imparting instruction, the means are ill suited to the end. One or two operations during the surgeon’s visit, with indications, steps, and probable results, *thoroughly well* considered, would be more in accordance with the laws of intellectual culture. The mind can no more than the stomach digest a rapidly-gulped, huge pile of heterogeneous food, however in itself nutritious.

However anxious the surgeon may be, so large is the amount of work to be got through on an *operating-day*, (why did Liston, that incarnation of the surgical spirit, disapprove of operating-days?) that the best powers, backed by the strongest will, cannot suffice to convey to the assembled learners that amount of information which is indispensable to render all the bearings of the manual proceedings intelligible, as they should be to prove useful.

Let any one reflect how little the mass of those who witness the operation see of the patients afterwards. The house-surgeon and his dressers attend to the wounds in undisturbed quietude. The beautiful process of healing, the havoc of the sloughing phagedæna, the bright, flashing, and dim jaundiced eye of the delirious and pyæmic patients respectively, are, with all their concomitants, the privileged lot of these diligent officers. Truly, *those who walk the hospital* (another very literally correct expression) see the sores at the surgeon’s visit, but the dressing has been done two or three hours previously, and with it the great opportunity of learning gone. This is merely an instance. Is it not marvellous how this custom should have prevailed so long among practical Englishmen? The surgeon’s visit, to be a demonstration of clinical surgery, should be a waiting visit—all the wounds dressed and the patients examined in his presence. In Dupuytren’s clinique, all the fractures were put up, when required, a

* The various points referred to were largely illustrated in the drawings submitted to the meeting of the Association; and will be so illustrated whenever the essay is published.

second, third, and even a fourth time during his visit, and often by his own hand. A house-surgeon's visit at ten, and a surgeon's visit at two, might, I conceive, very properly give place to a single morning visit. I am very well aware of all the objections that may be urged against this plan; but if the advantages and disadvantages be fairly contrasted, under the twofold aspect of patients' and students' welfare, the two considerations to be weighed above all others, there can be little doubt as to the ultimate result.

You express an opinion "that the duty of superintending the cases of emergency alluded to (fractures, strangulated hernia, and retention of urine), or a certain proportion of them, should be entrusted for clinical purposes, in rotation, to one of the three or four assistant-surgeons of the hospital, and not to house-surgeons or dressers, whose fleeting term of office almost certainly ensures a supply of untrained and inexperienced officers in this very important department of the science." On the object to be attained, I have already expressed agreement with you; as to the means we somewhat differ. The assistant-surgeons have already enough to do; certainly they would have enough, if, by reorganization of the departments now confided to them, they were made external cliniques of value commensurate to their capabilities. To them almost exclusively flock the syphilitic patients, and a large moiety of other cases, among the most important for the student to become intimately acquainted with. At present these treasures are very inadequately availed of. The fact is, the assistant-surgeon has too much to do, without the aid of a proper organization. Intellectual power without method simulates physical force without leverage. If the out-patients were classified according to diseases, and confided to junior assistants (say third-year's students), who should prescribe for the mass of cases, and pass on to the assistant-surgeon only the more interesting ones, he would be able to do them full justice as a clinical teacher.

For the better management of the in-patients, I would suggest the appointment of a class of officers between the house-surgeons, and assistant-surgeons, who should be elected for two years from amongst house surgeons, according to merit, allowed a salary sufficient to defray expenses of maintenance, be obliged to reside in the immediate neighbourhood of the hospital, charged with the duty of being present at all cases of emergency (due notice being given to them of their admission), leaving the treatment as much as possible to the house-surgeons, but superintending it, and commenting upon it, as also upon the diagnosis and probable results of the case, for the benefit of students, for whose convocation I perfectly agree with you a place should be devised. The surgeon would, of course, have to be called to all cases of sufficient severity to require his superior judgment and skill. Upon the proposed officers should devolve the active supervision of the clinical note-books, which are now for the most part so managed as to fall very far short of what they might be.

By the plan I propose, both the in- and out-patients' departments would be much more efficiently managed, and the senior students would not be deprived of opportunities of practice, which they would do if the assistant-surgeons were invested with the powers you propose. I take for granted that it is eminently desirable to allow students, in proportion as they give proof of competency, the largest possible opportunities for practically learning their profession, consistent with the welfare of patients, and the interests of the school at large.

Lest whatever value these remarks may possess be lessened by the detracting influence always produced upon the conservative spirit of constituted authorities by the apparently too sweeping propensities of ardent lovers of progress, it is but just I should state that I am well assured of the difficulty of interfering with a fundamental part of medical education, without re-organizing the whole; of establishing new offices before the working of those already in existence has been methodized; of interfering with private interests which, administered as our hospitals and their appointments are, are greatly concerned in the question. But, after all, these difficulties have been, are, and ever will be common to all projects of reform, and whoever has not the resolve to deal with them temperately but firmly, can never hope to aspire to the high position of a progressive reformer for the public good.

This would, indeed, be an exception to the order of nature, if so great an end as that in view could be attained at little sacrifice, without much labour. By what precise means the attainment is to be realized remains to be determined. I have offered some suggestions, but it is very improbable that the necessarily hasty expressions of such a communication as this should be free from the necessity of modification. But leaving aside the question of details, the fundamental essential is

beyond the pale of debate. *A surgical clinique*—I had almost said *a surgical school*—has yet to be founded in London. There can be little doubt as to the judgment which posterity will pronounce upon whomsoever founds it.

I am, Sir, your obedient servant,

JOSEPH SAMPSON GAMGEE.

Upper Woburn-place, Jan. 1855.

STATISTICS OF CHOLERA.

To the Editor of THE LANCET.

SIR,—We are told that the mortality in the metropolis from cholera, in the years 1853 and 1854, has been less by about 3000 than in the epidemic of 1848 and 1849.

In endeavouring to fathom the cause of this, I have fallen upon a trifle, which appears to me of some importance to the Registrar-General. I am aware that it has been said anything may be proved by statistics, and that anything may be seen by the aid of the microscope; but I very much doubt if anything more extraordinary could be discovered by either statisticians or microscopists than the following, which I found in searching for facts concerning the last epidemic.

In one of the metropolitan districts, a parochial registrar permitted me, on payment of a shilling, to search his mortality records for the three months, July, August, and September, 1854, and I obtained this result:—

Total deaths in — parish for three months ... 122

Amongst the practitioners of the place, the deaths were thus distributed:—

		All Causes.	Cholera.	Fever and Diarrhœa.
Messrs. A & B	...	30	15	7
„ C & D	...	10	7	0
Mr. E	...	50	30	7
„ F	...	27	2	10
„ G	...	1	0	0
„ H	...	3	1	0
„ I	...	1	0	1
Total	...	122	55	25

Now, Sir, without troubling you or your readers with algebraical formulæ or decimal notation on this statistical question, I would ask you both to give a passing glance at the figures as they stand—faithful obituary parochial records.

What might not our ingenious and praiseworthy friend, Mr. William Farr, make out of this, if his cerebral animation led him in this path? What, if he were to inquire into all the parochial registers as I have looked into this?

Upon this subject of epidemics, we want facts and faithful records; and until we obtain these, arguments are useless.

The *old* Board of Health consumed a large quantity of ink, to show that no disease was contagious, and that quarantine was worse than useless; and as to cholera being contagious, any man who held this notion must either be a fool or a knave. Universal belief now is, that cholera is contagious—four years only since the Board wrote. The *old* Board marked out the spots of dirt and filth for the revelry of cholera, but they many of them came out clean in the Bills of Mortality. The *old* Board made many decisions which the *new* must reverse; and Major Graham must have the *names* of the medical men who certify the deaths in his Reports, for by this, and this only, can his Returns be made available for medical inquiries and research. While the root of the tree is rotten, we can neither have healthy blossom or productive fruit.

I am, Sir, your obedient servant,

December, 1854.

QUÆSITOR.

P.S.—As my object is to state facts only, I will not ask for valuable space to introduce verbose deductions. *Res non verba quæso.*

THE SERVICES OF ARMY AND NAVY MEDICAL OFFICERS.

To the Editor of THE LANCET.

SIR,—It would have been highly gratifying and encouraging to medical officers of the army and navy to have found that their services during the recent campaign in the East had been deemed deserving of the thanks of their country, expressed through Parliament. The disappointment which they cannot but feel at such an omission will not be lessened by the reason assigned for it by the Duke of Newcastle—viz., that he be-