enlarged spleen has generally a good appetite, "yet his powers of assimilation are obviously deficient; he loses flesh, and is incapable of any muscular exertion"; "the lips are pale, and there is generally much wasting of the gums; the urine is limpid, and secreted very rapidly, but contains little or no urea". This is a state of the system often observed in connexion with amenorrhœa. Dr. Vetch further observes that, "without the co-operation of the spleen, the blood ceases to acquire its recrementitious properties, none of the secretions possess their natural constituent parts, and—what is also worthy of notice—external injuries do not produce the secretion of what is called healthy pus". This is in accordance with a favourite hypothesis of Hewson's, that the red globules of the blood are formed by the spleen and its appendages. Dr. Hewson's view has in late years been revived by Dr. Hughes Bennett, of Edinburgh, in a paper published in the *Monthly Journal of Medical Science* for March 1852. He believes, with Hewson, that the lymphatic glandular system consists of the spleen, the thymus, and lymphatic glands; and adds to these the thyroid gland, the supra-renal capsules, the pituitary and the pineal glands; all which he believes to have for their office the formation of the blood. The following are his conclusions:—

"1. That the blood-corpuscles of vertebrate animals are originally formed in the lymphatic glandular system; and that the great majority of them, on joining the circulation, become coloured in a manner that is as yet unexplained.

"2. That in mammalia, the lymphatic glandular system is composed of the spleen, thymus, thyroid, supra-renal, pituitary, pineal, and lymphatic glands.

"3. That in fishes, reptiles, and birds, the coloured blood-corpuscles are nucleated cells, originating in these glands; but that, in mammalia, they are free nuclei, sometimes derived as such from the glands; at others, developed within colourless cells.

"4. That, in certain hypertrophies of the lymphatic glands, their cell-elements are multiplied to an unusual extent; and, under such circumstances, find their way into the blood, and constitute an increase in the number of its colourless cells. This is leucocythæmia."

Professor Kölliker, on the other hand, in his article on the Spleen in the *Cyclopædia of Anatomy and Physiology*, part xxxvi, advances an entirely different view, namely, that the spleen is a destroyer, not a regenerator, of blood. He believes that the blood-corpuscles "undergo solution in the spleen, and that their colouring matter is employed in preparing the colouring matter of the bile". He grounds this theory on the circumstances, that the blood-corpuscles must be dissolved to make room for the new ones, and that not the least trace of this process has been seen in any other organ; that in no other way can any reasonable account be given of the changes which the blood undergoes in the spleen; that the author's hypothesis elucidates the relation of the spleen to the portal system of veins—the dissolved blood-corpuscles being subservient to the formation of bile; and that the diseased conditions of the spleen, and their operation on the organism, are thus better explained.

The correctness of this view of Kölliker's is denied by Dr. Hughes Bennett in the paper to which I have referred.

While, then, we find physiologists of such eminence so totally disagreeing as to the functions of the spleen, we must receive all opinions on the subject with caution. This organ has always been the puzzle of physiologists; and I do not think that it will yet lose that character. The subject, however, should be prosecuted with a zeal proportionate to the difficulties with which it is surrounded.

Manchester, April 1853.

LETTSOMIAN LECTURES FOR 1853.

By EDWARD WILLIAM MURPHY, M.D., Professor of Midwifery in University College, and Obstetric Physician to University College Hospital.

LECTURE THIRD.

THE IMPORTANCE OF A SCIENTIFIC MEDICAL EDUCATION TO PRACTITIONERS IN MIDWIFERY.*

MR. PRESIDENT AND GENTLEMEN,

IN the two preceding lectures, I have placed in review before you the phenomena of parturition, the difficulties that present themselves, and the manner in which labours are too frequently mismanaged. I have done so, in order to show you the irreparable mischief which an incompetent person can do, and to prove that a sound, nay, a high standard of medical education is too often necessary to counteract those sources of danger to which the parturient woman is liable. I have endeavoured to expose the convenient, but most mischievous sophism, "that parturition is a natural process, therefore education is not essential for the safe delivery of the parturient woman". I trust that I have convinced you what a frightful sacrifice of human life may be the consequence of this error; and if any doubt should exist, I hope, before I conclude this lecture, to remove it by the evidence of facts.

It now remains for me to direct your attention to the present state of obstetric education, which, I regret to be obliged to confess, is deficient in the extreme; so imperfect, so inadequate, that if some expansive and efficient means be not taken to improve it, the accidents will become so frequent; the public so indignant; the coroner so often called upon; the doctor, who parades a diploma, so often exposed, that I fear our whole profession may be dragged down from the honourable pedestal on which it ought to rest, into the deepest abyss of degradation—public contempt.

The history of midwifery in these countries proves that the public are gradually becoming more and more alive to the importance of education amongst those who profess to practise it. Formerly, the universal rule was to separate the practice of midwifery altogether from the medical profession. Medical education was not thought, for the reason I have stated, essential for security; and if such were true, there was the strongest, the most obvious reason, for discarding men altogether from obstetric practice. The charge of the parturient woman was therefore committed exclusively to the midwife. However, her incompetency to meet all the difficulties and accidents that presented themselves soon became manifest; medical men were called upon in emergencies; and those who, by close study and observation, prepared themselves to meet these contingencies—the Fathers of Obstetric Medicine—were called by no medical title whatever; they were neither doctors nor surgeons, but simply "men-midwives"—a kind of professional hermaphrodites—most convenient for the purpose, because they were supposed to have sufficient knowledge to assist the midwife, without making a claim to be admitted among the scions of medicine. Thus it was that William Hunter, that Denman, that Merriman, were successively "men-midwives" to the Middlesex Hospital—a distinction which I believe still wreathes the brow of the obstetric physician to that institution. Man-midwife was the general term to include all obstetric practitioners of the masculine gender. In process of time, however, the public found out the truth, that the midwives knew little or nothing, and that it was essential for their security that the person in whom they confided should be educated: they acted, therefore, quite in opposition to their natural inclinations, and called in the aid of the physician or surgeon, not only in difficult, but in ordinary labours. The obstetric physician and the accoucheur superseded the midwife; the term "man-midwife" became obsolete, and is now only preserved in some institutions as

* This Lecture was delivered before the Medical Society of London, on March 23rd, 1853.

a kind of antiquarian curiosity. Midwives are now but rarely met with, except amongst the lowest classes; and even there, I know by experience, they are received with reluctance. The poor certainly employ them; but 'tis not their will, their poverty consents".

To what, then, are we to attribute this remarkable and most important change in the practice of midwifery? Why should the public silence their natural objections, and demand the accoucheur? Because they have learned, by bitter and most painful experience, the falsehood of the assertion that anybody may practise midwifery. They have found that, on this principle, the safety of all that is dearest to them has been too often entrusted to incompetent persons; and that education is just as essential to deliver a woman safely, as it is to cure a fever, or to cut off a leg. They require that the person who undertakes such a charge shall give proof that he possesses an obstetric education; and they accept the diploma which is presented to them from one or other of the medical corporations, as testimony of the fact.

But is this evidence adequate? Is the Licence of the College of Physicians, or the Diploma of the College of Surgeons, or the Licence of the Apothecaries' Society, a proof that the obstetric education of the possessor has been tested and approved of, in the same manner as his knowledge of medicine or surgery? There is but one answer to this question, and that is in the negative. The College of Physicians do not examine in midwifery: the College of Surgeons have only just now established a court for that purpose, the working of which has yet to be tested: the Apothecaries' Society alone have given the subject their attention. In their zeal to improve the education of those who come before them, they have laid down an excellent curriculum of study; and I believe that they examine candidates frequently upon their knowledge of obstetrics. *But they are not obliged to do so.* They are authorised to examine in medicine, but they may accept the definition of the College of Physicians, and say that midwifery is not medicine; consequently, they are *not obliged* to ask their candidate a single question in obstetrics; and they can, with a clear conscience, sign a certificate of competency, although the successful candidate may be thoroughly ignorant of that subject. I do not say that such is their practice; I believe that it is quite the reverse. I only assert that such may be at any time their rule, without any departure from their duty; and in this consists the objection.

At present, therefore, there is no certain test of competency to practise midwifery; the accoucheur is in a great degree self-taught, acquiring knowledge from lectures on the subject, and from attendance upon a few cases, but never having that stimulus which acts so powerfully on the pupil of medicine or surgery—the fear of his examination to entitle him to practise. Nevertheless, even with this imperfect education, he is more successful than the midwife, and proves trumpet-tongued the importance, nay, the necessity, of meeting the public want by insuring to them practitioners proved by examination competent to fulfil the duties required of them.

Why the Colleges at the head of our profession have been so tardy in the race of improvement—perhaps I should say, so blind to its necessity—it is not my purpose to inquire; more especially, because they form in this respect no exception to corporate bodies in general. If the question relate to reform in the legislature—reform in the law—improvement in our sanitary system, or in the working of the poor-law,—all corporate bodies, from the first assembly in the kingdom, from the House of Commons itself, down to the humblest board of poor-law guardians, however they may differ in other respects, are found unanimous on one point: *they never initiate a reform.* The public first feel the necessity of the change; then speak of it; and ultimately demand it. The corporation then yields to the pressure from without, with a good grace or a bad grace, as the case may be. The Colleges of Physicians and Surgeons would be much more remarkable if they were exceptions to this rule, than they are in so strictly following

it. It certainly should not excite surprise that, when midwifery was the property of midwives, these learned bodies should be reluctant to admit the man-midwife among them: but when this individual has totally disappeared; when we find, in the College of Physicians, gentlemen practising midwifery, whose attainments are fully equal to those of their *confrères*; when we meet, at the corner of every street, "Surgeon and Accoucheur", glittering in well-polished labels,—the time has arrived when that title must be a reality; when the public must be protected just as much from ignorant pretenders to midwifery, as they now are secured from unqualified practitioners in surgery.

If what has been stated be granted; if we admit that it is the business of those corporate bodies which regulate our profession, and are entrusted by the public with most responsible duties, to secure competent practitioners, whether in medicine, midwifery, or surgery, the question at once presents itself—To which of these bodies properly belongs the duty of qualifying the future practitioner in midwifery? This branch of practice is allied to medicine and to surgery; it has nothing whatever to do with materia medica or pharmacy; yet, strange to say, the only corporate body which hitherto has endeavoured to fulfil this duty has been the Apothecaries' Society. The public are much indebted to them for their voluntary exertions; because, if it had not been for them, matters would be much worse now than they are. We must, however, always bear in mind that they are only volunteers: the onus of this responsibility does not properly belong to them. With whom, then, should it rest?

Let us first examine this question in reference to the College of Physicians. Midwifery and medicine are certainly allied to each other; and it is remarkable that nearly all our most distinguished obstetricians have been also physicians. A bond of union exists, sufficient to authorise that distinguished body to open its doors freely to practitioners in midwifery. Obstetric physicians have earned for themselves a sufficiently high reputation to reflect honour on their College, and to remove from those who may please to practise midwifery, the stigma which old and obsolete prejudice had fixed upon them. When the records of that College bear such names as Harvey, Hunter, Denman, and Haighton, to say nothing of living examples, I think that they need not be ashamed of the obstetric physician.

There is an undoubted alliance between medicine and midwifery; but it is not so intimate as to render it necessary that a physician must learn obstetrics in order to practise medicine. The duty of the College of Physicians seems to me to be limited to this—that if any of their body profess to practise midwifery, they should ascertain his fitness to do so, in order that the public, who do not understand distinctions very clearly, may not be deceived. I do not perceive that they are called upon to do more.

With regard to the College of Surgeons, it has been objected, that "midwifery is not surgery"; and I have been given to understand that examiners have felt that a candidate for their diploma might object to be examined on obstetrics; and yet, if he were qualified in other respects, they could not refuse it to him.

It is the more important to examine this proposition, because, if it were true, it must lead to this most serious evil: the public, who do not perceive this distinction, would be deceived when a surgeon practises midwifery on the strength of the diploma which he has received from that College. A little reflection will, however, convince any one that this is only a convenient sophism. If midwifery and surgery be not identical, I do not know what surgery is. Both differ from medicine in being arts: there is the art of midwifery, as well as the art of surgery. The skill consists in the readiness of manipulation, by which necessary operations may be successfully performed. The knowledge necessary for this purpose is similar; it requires just as careful a study of relations to remove a child from the womb, as it does to remove a stone from the bladder; and if ignorance in the latter case may lead to a false incision and death, so in the former an error in delivery may rupture the uterus.

If it be said, that surgery means much more than merely skill in performing operations, that it implies a general knowledge of external diseases—a knowledge which is often as necessary to prevent an operation being performed, as to point out when it is really required—I would reply, that midwifery is just the same; it implies not alone the delivery by operation of the woman in labour, but also a perfect knowledge of all those disorders to which the womb is liable. If to surgery belong the treatment of ulcers on the leg, midwifery includes the management of ulcers of the neck of the womb—if I may be allowed to use such an expression. If the surgeon have a difficulty in deciding upon the propriety of removing a cancerous breast, the very same difficulty presents itself to the accoucheur in reference to carcinoma engaging the neck of the womb. In fact, the alliance is so intimate, as to lead to practical absurdities when we endeavour to separate them. What essential difference is there between the operation by which a child is torn piecemeal from the distorted pelvis, and that by which it is taken out of the womb opened through the abdomen? The former is a most difficult, a most disgusting, a most tedious operation, which may occupy hours in its performance; the latter is comparatively easy and rapid: both, however, are equally surgical operations. The accoucheur is permitted to mangle the child, if he will; but surgery claims her right to perform the Cæsarean section.

So, also, with respect to other operations—the removal of diseased ovaries—of polypi—of the inverted uterus—all these fall within the range of the accoucheur's practice; but they are essentially surgical diseases; and to treat them correctly, he must possess the operative skill of the surgeon. The obstetric physician who, as a physician, cannot use the knife, and must ask the surgeon's aid when it is required, may be embarrassed by these distinctions; but the surgeon-accoucheur can have no difficulty whatever. He is only following out the principle of his profession in performing any operation, from the smallest to the greatest, that may be required of him; and all operations connected with the womb, whether gravid or not, differ in no respect from operations in any other part of the body.

I hold, therefore, that *midwifery is a branch of surgery; and that every candidate for the diploma of a surgeon is bound to show that he is competent to practise it.*

So far, therefore, from a candidate having the right to refuse obstetric questions, his examiners, it appears to me, are bound to ascertain his competency in this respect.

I have the less difficulty in laying down this proposition, because it is not founded upon a mere abstract principle, which, though true in itself, is in opposition to experience. I assert, on the contrary, that the truth of the theory is proved by the practical working of it. The great majority of those who practise surgery also practise midwifery; and I affirm that they do so in right of their surgical diploma. If any man were to practise midwifery without such an authority; if he were to place "man-midwife" on his door, and expect practice, would he obtain it? Would the public place the same confidence in him as they do in the surgeon? Most decidedly they would not; and, therefore, the inference clearly is, that the diploma of the College of Surgeons is by them considered as the security that its possessor's knowledge of midwifery has been ascertained by those who gave it to him.

Now, if the list of the members of the College of Surgeons were examined, and the names of those who practise midwifery were separated from those who do not, what would be the proportion? I believe it would be found that the accoucheurs are more than ten to one. Those who are called "pure surgeons", who have been distilled from the impurities of obstetrics, form a very small minority—a most distinguished minority certainly, whose brilliancy sheds a lustre over the whole profession of surgery, but still a minority. Is it, then, to be said that the College of Surgeons is intended only to educate that small minority, and to leave the great majority of their diplomatists imperfectly qualified, incompetent to fulfil the duties which the public require of them? I do not think that any, the

most distinguished member of that body, would undertake to say that this alone is its duty. I am persuaded that, on reflection, they would acknowledge that the examination for their diploma should be perfect in itself; that it should be adapted to meet the obvious change which has taken place in surgical practice; and that care should be taken that the future surgeon-accoucheur be really what he calls himself.

I am the more earnest in urging this point, because I feel assured that the neglect of midwifery on the part of the College of Surgeons has been an error of judgment from ignorance, not from intention. The very fact that, in their new charter, they have sought for and have obtained powers to qualify practitioners in midwifery, is in itself a proof of their desire to improve this branch of practice. If, hitherto, they have felt a difficulty in examining candidates for their diploma upon midwifery, or if now they should err as to the best mode of carrying out their wishes for its improvement, the cause of this mistake may be very easily explained. The Council and the Court of Examiners are composed of gentlemen who do not practise midwifery; who are eminent as operating surgeons; who do not, who cannot, know what midwifery is, nor what it requires; consequently, they fall into the very natural error of leaving "midwifery to midwives". Their idea of obstetrics is something like Falstaff's notion of honour—

"It hath no skill in surgery, therefore they'll none of it."

The time has now arrived to correct this mistake; and this, I am persuaded, will soon be done, because the College of Surgeons must perceive the importance of adapting their examinations so as to meet the wants of the public.

If I have satisfied you that the duty of providing not only qualified surgeons, but qualified accoucheurs, rests with the College of Surgeons, it remains for me to point out to you and to them the errors that have been committed, and the effects that must spring out of their present regulations for an obstetric qualification.

An Obstetric Board of Examiners has been appointed, of a most efficient character. The College could not have been more happy in their selection, nor could they have abler assistants to carry out any plan for the improvement of midwifery than these gentlemen. No objection, therefore, can be raised against the Board of Examiners: the error lies in the "Regulations of the Council respecting the Professional Education of Candidates for the Certificate of Qualification in Midwifery". These regulations have been founded upon a false principle—a voluntary principle; and, consequently, there is a danger that they will have an effect precisely the reverse of what is intended.

First let us consider the effect upon the future candidate for the surgical diploma. This gentleman knows perfectly well that he will not be examined in midwifery; the fact that a board has been especially appointed for that purpose, convinces him of this. He is not obliged to go before the board; consequently, he takes very little pains to improve himself on the subject of midwifery. This gentleman may be an excellent anatomist; he may be able to display great acumen in discussing the merits of curing aneurism by compression; he may even have obtained the highest prize the College can give; but he knows nothing whatever about the mode of turning the child, of using obstetric instruments, or even of removing a placenta. This neglect is further encouraged by the very small amount of obstetric knowledge which is required by the curriculum of the College. He need only attend a single course of lectures on midwifery. This course must be delivered in the summer session; and, consequently, cannot exceed sixty lectures. Now, all the teachers of midwifery, in every school in London, have been unanimous in declaring that they could not give a complete course of midwifery in sixty lessons. The College of Surgeons have been informed of this by deputation; yet no change has been made. Nay, even in their new regulations for the licentiate in midwifery, they still adhere to one short summer course of sixty lectures,

which they have been already informed is totally inadequate for the purpose.

At present, therefore, a candidate for the surgical diploma is not examined in midwifery. He is only required to attend this short and necessarily most imperfect course of lectures; and, therefore, may leave the College, even with credit, his brows crowned with laurels, yet totally unfit for the duties of an accoucheur.

Let us follow this gentleman in his entrance upon his career of practice. He selects a neighbourhood which seems to offer a favourable opportunity for his wishes; he has "surgeon-accoucheur" on a conspicuous label, or perhaps simply "surgeon"; but beside it the equally significant "night bell". No doubt he is looking out for fractures or dislocations; for opportunities to tie or compress the femoral artery; he is anxious to cut for the stone; or at least to perform amputation. No such opportunities, however, present themselves. There is always in the same locality some surgeon of established reputation, to whom the public fly in such difficulties. The young aspirant is left to himself, so far as pure surgery is concerned. He has, however, acquired some distinction as a student; he has also a good general education and address. Those most interested in him are very anxious to obtain for him some practice, and a lady prevails upon her friend to permit him to attend her in her next confinement. "He has obtained his diploma at the College of Surgeons with the highest honour; and, therefore, must be a safe accoucheur." This gentleman succeeds, or rather nature succeeds for him. He obtains thereby an introduction to the family, and makes his *début* in practice. But that practice is midwifery, not surgery; and thus the very first duty which he is called upon to perform is precisely that about which he knows the least.

If, however, this picture were reversed; if it were a labour of difficulty—of danger; if the life of a child—perhaps a first-born, most anxiously looked for—or if the still more important life of a mother be the sacrifice, on whom falls the responsibility of this most unpardonable ignorance? Is it any answer to say, that the public must know that midwifery is not surgery; and that if they employ a surgeon, they do so on their own responsibility? The public know nothing of the kind; they make no such distinctions; and they employ a surgeon, because they believe that he is a surgeon in all its branches, and in every sense of the term.

I trust, therefore, that the College will perceive the necessity of correcting this mistake; of improving their curriculum; and recognize the importance of requiring that all candidates who present themselves for a surgical diploma shall have given proof to the Obstetric Board that they are competent to practise midwifery.

This knowledge cannot be an incumbrance to the minority who would confine their attention to pure surgery; while to the great majority, who purpose taking obstetric practice, it is essential. I feel it the more my duty to press this necessity upon the attention of the College of Surgeons, because the position which I have the honour to hold, as a teacher of midwifery, gives me, as well as my colleagues, the opportunity of knowing how indifferent pupils are with regard to anything that concerns midwifery. Anatomy, physiology, the theatre where they witness the great operations in surgery—operations which they may never be called upon to perform—the dead-room, and the microscope, all receive their best attention; but that knowledge which is necessary to fulfil the very first duty that may be required of them in their entrance on practice; that which may be their only means of obtaining practice, holds no place in their estimation; nor will it do so until it is forced upon their attention by more stringent regulations than at present exist.

Another effect which springs from the false principle upon which the duties of the Obstetric Board are established, is that an injustice is committed against the student who obtains every qualification which will really make him what he professes himself to be—a surgeon-accoucheur. He has obtained his diploma to practise surgery, and his license to practise midwifery; but whether his future opponent may

do so is quite a matter of taste. Let us suppose this rival to be a gentleman not particularly desirous to burden his mind with too many duties or too many examinations. He will do nothing which he is not obliged to do; consequently he neglects obstetrics altogether, and is perfectly satisfied if, by the aid of a grinder, he is triturated sufficiently fine to be sifted through the surgical examination. No doubt he thinks it a great blessing that he has only one examination to go through, and laughs at his competitor for taking so much pains to go through another which is not required of him. He obtains his diploma from the College; but the moment it is in his possession, he will not hesitate to practise midwifery on the strength of it. The document will be, perhaps, displayed in a gilt frame, to give the public confidence, and to prove to them that he is qualified in every respect. There is no certainty that his incapacity will be exposed, because Nature is his hand-maid. Sooner or later, however, the moment may come when his knowledge is put to the test; a difficulty may suddenly arise to which he is unequal; and a life may be sacrificed to his incompetency. But is it just to allow the prospects of his more industrious competitor to depend upon such a contingency? Is the inattentive and incompetent student to make the practice of midwifery, because it is easy, a means of accomplishing what he never could hope to do without its aid? Is he thus to defeat his better educated rival? And yet, according to the present regulations, this may be done. An evil greater even than this results from them, because a serious injury is also committed against the public.

The diligent student is not satisfied unless he has every qualification necessary to his practice. He will go before the Obstetric Board. Even members of the College, who have already obtained their surgical diploma, are now hastening to it. There is no doubt that those, who are devoted to their profession, will embrace every opportunity of giving proofs of their intelligence; consequently, they avail themselves of this examination. But the public are in no danger from them; they are injured by the idle and the ignorant: and there is no branch of medical science which shelters these defects more than midwifery; there is none which requires more protection.

So far, therefore, as the student in surgery is concerned, an obstetric examination which is voluntary is mischievous, because an encouragement is given to the most unsafe class—to the careless—to neglect midwifery altogether; and a serious injury is done to the industrious student when he finds himself opposed in practice, even successfully, by this very idler, who, like him, practises midwifery, and has had the good fortune to escape exposure. The public only know both equally as surgeons.

This examination, however, is not only voluntary to the student in surgery, but is open to the whole world. The chemist or the greengrocer, the laundress, or any other old woman, may go up to be examined. It is true that the curriculum required, although not very severe, would be quite too much for these sagacious individuals; neither do I think that they would so easily escape the present Board of Examiners. But where is the security that such will always be the case? Curricula are frequently altered; examiners are changed; and I think that I can appeal to experience how unequal the examinations at the College have been, sometimes enabling candidates to pass with the utmost facility, and again becoming a most respectable test. Now, it is just possible that at some future time it may be argued, that midwifery is practised by a great many old women, and other similar characters. They seem quite competent for the purpose, but are manifestly unequal to the present regulations. "It is a pity not to encourage them to come forward and prove their knowledge"; and consequently it would be most advisable to suit the curriculum and examination to their comprehensions. Such may be the argument for admitting these, and for dubbing, by the authority of the College, some future Mrs. Gamp a "Licentiate in Midwifery".

Another, and a far more important objection—because,

while the former is prospective, this is immediate—is that which has been already very strongly urged. A new and much easier course of study is laid down for the obstetric examination than for the diploma of the College; hence it must lead to the constitution of a new and inferior class of practitioners. The student may obtain from the Society of Apothecaries his license to practise medicine and pharmacy. He gains a license to practise midwifery from the College of Surgeons. He wants nothing more. He calls himself a general practitioner, or perhaps a “*Surgeon-Accoucheur*”; but is quite content to send all the broken bones, all the aneurisms, all the lithotomy cases, to some Teale, or Hodgson, or Fergusson, in his neighbourhood. He confines himself to a very lucrative general practice. In order to accomplish this, he can finish his education in three years (the surgical student requires four); he can exhibit certificates of having attended within that time the practice of a medical and surgical hospital, and lectures on the practice of physic and practice of surgery; he can prove to the public that he has attended to medicine and surgery just as much as any surgeon, and knows midwifery besides, which they know nothing about. If this be not an argument in favour of the licentiate in midwifery, that will tell in due time with powerful effect, I should be greatly surprised.

In fact, by the present regulations, students are at once separated into two classes; into the future surgeons, who know nothing in the world of midwifery; and the future accoucheurs, who are equally ignorant of pure surgery. Now, it would be a curious question to determine which of these classes would predominate; nor do I think there would be much difficulty in arriving at a correct conclusion. We need only examine the curriculum appointed for each, to decide.

The College requires that the surgical student be engaged four years in his professional education. He must attend a surgical hospital for three years, and two winter courses of lectures on the principles and practice of surgery; a medical hospital for one year, and one course of lectures on the principles and practice of medicine. Besides this, anatomy, physiology, demonstrations, and dissections, must occupy his attention for three winter and two summer sessions. *Materia medica* and midwifery are disposed of in one summer session, and chemistry in one winter session.

The candidate for the certificate of qualification in midwifery can complete his education in three years; his anatomy and physiology may be finished in two winters; he has one course of lectures on surgery, and one on medicine to attend; a surgical hospital for one year; and a medical hospital for one year. He need not trouble himself about *materia medica* or chemistry; and in midwifery, the leading subject of his study, he is not asked to attend more than one short course of instruction. He is certainly obliged to attend thirty labours; but it is not said *when* or *how*; and, consequently, he finds no difficulty in this. Many students come up from the country, having attended thirty, forty, or even fifty labours, before they have attended a single lecture on midwifery. The cases are attended hazardous, and the education is that of the midwife. They learn nothing but patience and to support the perinæum.

It is only necessary to compare these curricula, to determine which the majority of the students will select. They have only to decide whether they will study surgery in its higher branches, so as to become skilful operators, or content themselves with a more modest education for a quiet, comfortable, money-making general practice. I fear that they might be inclined rather to the latter than the former course; that the licentiates in midwifery would greatly exceed the licentiates in surgery, and the College become rather a College of Accoucheurs than a College of Surgeons. I do not think that the Council could have contrived a more ingenious method of relieving themselves from the perhaps too onerous duties of the Examining Board, than by establishing licentiates in midwifery.

The objections to this clause,* then, may be briefly

summed up in this—that it is founded upon a false principle. It assumes a distinction between midwifery and surgery which does not exist: there is no essential difference between them. Hence, if *any one* present himself to the College of Surgeons for examination, he demands an authority to practise as a surgeon. It is the duty of the College to ascertain that he is a surgeon, not only as regards the practice of midwifery, but every other branch connected with it, just in the same manner as it is their duty to know whether the candidate for a surgical diploma is competent to practise midwifery. There is no necessity, therefore, for framing an easy curriculum for the former, and a more difficult one for the latter. The curriculum should be uniform, but so adapted as to meet the requirements of the obstetric examination.

I press this point the more decidedly, because nothing is so easy as to effect this adaptation. The College requires that the student be engaged four years in the acquirement of professional knowledge. Let them only specify what is to be done in each year, and they will find an abundance of time for a perfect curriculum of education. All that is required by the Obstetric Board, by the Society of Apothecaries, and by the College of Surgeons, can be accomplished within that time. The pupil may, if he please, pass each examination in succession; and it is only necessary for the College to provide that he receive, at the same time, his license to practise midwifery and his diploma for surgery.

I have now, I fear at the risk of exhausting your patience, endeavoured to demonstrate the following propositions.

1. That a great sacrifice of human life may be the consequence of neglecting the education of the accoucheur; and that it is not true that, because parturition is a natural process, any one may practise midwifery.
2. That midwifery is essentially a branch of surgery, and is constantly practised in alliance with it. The title “*Surgeon-Accoucheur*” is universal.
3. That it becomes the duty of the College of Surgeons to ascertain that *all* those who receive from them authority to practise surgery, are also competent to practise midwifery.
4. That a certificate of qualification to practise midwifery should not be given to any student, until it has been ascertained that he is also qualified to practise surgery.
5. That there is no occasion for an easy course of study for midwifery and a more difficult one for surgery; and where no necessity exists, the distinction leads to the establishment of an inferior class of practitioners, which would be most injurious to diligent students, to the profession, and to the public.

It only remains for me to prove by facts what I have stated to be the probable results of neglect of the education of the accoucheur, and to convince you what ignorance may do in the practice of midwifery. Time will only permit to quote extreme cases; which however, will be sufficient for the *a fortiori* argument which they illustrate.

On August 15th, 1846, a coroner's inquest was held at Towcester, to inquire into the circumstances attending the death of Anne Smith. “It appeared from the evidence of the witnesses, that the woman was taken in labour of her first child about the middle of the day on Friday. Mr. G., (M.R.C.S.Eng.) was sent for, and arrived in about an hour. He told them she was going on well, and that he would return in a short time: he did so in about three quarters of an hour, and remained within call (but not in the patient's room). He was several times requested to go up ‘to help the woman’, but did not, until immediately before the birth

required to produce the following certificates:—Of being 21 years of age—of having been engaged for three years in the acquirement of professional knowledge—of having studied practical pharmacy for six months—of having attended lectures on anatomy and physiology, with demonstrations and dissections, during two winter sessions—of having attended one course of lectures on the practice of surgery—of having attended the medical practice of a hospital during twelve months—of having attended the surgical practice of a recognized hospital during twelve months—of having attended one course of lectures on Midwifery and the Diseases of Women and Children—of having personally conducted thirty labours.”

* “All other persons [except qualified surgeons and physicians] will be

of the child, which took place about six o'clock. He tied and cut the cord in the usual manner; and shortly afterwards in making traction broke it off at its attachment to the placenta: a gush of blood followed, but the nurse could not speak with confidence as to the quantity. Mr. G. then gave the patient a dose of tincture of opium, telling her friends there was something more to come, and left promising to return between eight and nine o'clock. A short time after Mr. G. left, the patient became very faint; and one of the women noticed a pool of blood on the floor under the bed. A message was dispatched for Mr. Collier, surgeon, who attended without delay, and found the patient exsanguineous, and in a state of syncope. He immediately removed the placenta, and ordered wine and brandy to be administered. The hæmorrhage ceased after the extraction of the placenta. Mr. Collier sent home for ammonia and other stimulants; but death took place before the return of the messenger.*

This M.R.C.S.E. not only by violence broke off the funis, but did not even know the amount of danger to which he exposed his patient. Her life was sacrificed to his ignorance of midwifery.

In March 1845, a coroner's inquest was held in Norfolk. Considerable excitement prevailed in consequence of the death of a married woman named Jane Mary Lovett; the melancholy event being attributed to grossly ignorant treatment on the part of the medical man who attended her: and so it was, as will be seen. The woman was safely delivered of a female child, without any more difficulty than on former occasions. Ann Cassel, a midwife, was examined and gave the following evidence. She stated "the after-birth did not come. Mr. Gaches tried to get at it. Mrs. Lovett (the patient), said to him 'I cannot stand it'. I made answer and said, 'It must be got'. I then asked Mr. Gaches if he did not want further help. He said he did not think any doctor could do more than he was doing for her. I said to him 'Let her rest a little time'. The poor woman exclaimed 'Let me lie and die, don't let me be meddled with any more'. Mr. Gaches at length removed a round substance, unlike anything the midwife had seen before, which Mr. Gaches had taken away with him. After Mr. Gaches left the woman, I said to her husband, 'For God's sake go for Mr. Gaches, I think your wife is dying'. The husband went, and he (Mr. G.), came directly; but the woman died before he arrived."† The substance which the midwife never saw before, proved on the *post mortem* examination to be the inverted uterus, which Mr. G. actually tore out of this unfortunate woman's body, and carried home for a more careful examination.

On August 5, 1848, at the Staffordshire Summer Assizes, William Harding Flint, of Longnor, described in the *Provincial Medical Directory* as M.R.C.S.E., (which, however, was questioned,) was accused of killing and slaying Elizabeth Riley, at Sheen, in Staffordshire.

"It appears that Mrs. Riley, the wife of a respectable farmer at High Sheen in Staffordshire, was taken in labour, and sent for the accused party, who arrived between two and three o'clock on the morning of March 29. It appears that he made an examination, and then went to bed, where he remained until between seven and eight o'clock. On making an examination at this time, he is said to have pronounced it a preternatural presentation, and to have sent the husband to Longnor for his instruments. He appears to have been impressed with the necessity of turning; and he performed some manipulations, during which he told the women about him that he had turned."‡ The manipulations were as follows. Sarah Mellon, a midwife, stated "He was pulling a hand and foot", and asked Sarah (the midwife), to help him. He was asked if he wanted more help; but he said "I have brought one, and shall have another in four minutes, nay two; I shall want no more help". The woman was, however, so obviously dying, that the friends insisted, contrary to his wishes, *lest he should*

expose his patient, (or rather himself,) on throwing back the clothes, and seeing what was the matter.

Elizabeth Hirobin, a neighbour of the deceased woman, being ordered to state what she really saw, shaking her head and holding up her hands, said "Oh such a sight!! I saw a leg and a foot, an arm and a hand, and something like intestines hanging out nearly a foot; but I walked away to another part of the room: I could not stay". The midwife was curious to know about the child he professed to take away, and she said "Dr. Flint, tell me one thing; you said you brought forth a child and put it away. It is no such thing; you have not". Dr. Flint replied, "What was that substance then?" The midwife very properly retorts, "You are a doctor and ought to know better than me; but if you don't know, I'll tell you to the best of my knowledge. I never saw anything like it in my life; but I think it was part of her womb and her bowel-skin".* This unfortunate woman died in ten minutes afterwards. A pen-knife was found lying on the bed; so that this gentleman—calling himself a surgeon—in attempting to turn a child, brings down a foot; but he is so thoroughly ignorant of midwifery that he pulls at the arm and foot together; the uterus is ruptured, and the intestines descend. He mistakes the coil of intestines for a child; and to assist the delivery evidently cuts the bowel across with the pen-knife, and removes it; saying (very truly) that more was to come. A life is thus sacrificed to the grossest ignorance.

I have, in these details, confined your attention to those instances, and only a few of them, which have come before a public jury; but that such are not the only evidences of malapraxis, I shall quote one from many proofs that are noted in the secret records of practice. It is only by accident that such facts become known; and I am persuaded, that if we had all the mismanaged cases, all the deaths of children and of mothers from mere ignorance, that fall under the observation of distinguished practitioners who are consulted in such cases, they would fill a volume. One of these eminent men was the late Dr. John Greene Crosse, of Norwich, who relates the following extraordinary case. His words are these:—

"The most extraordinary and anomalous case which I have hitherto met with in the whole course of my practice is the following. Some of the circumstances appear so monstrous, that credit would not be given to the narrator, except by those to whom he was known, by the station which he held, or the correct statements which he had offered to the public on other subjects. Yet, were I to publish this case, I could scarcely refer by name to other parties—fellow-witnesses of the dissection—for delicate reasons that must occur to every one." Such is the reason why this case remained quietly in Dr. Crosse's case-book until after his death, when it was published in Dr. Copeman's collection. He proceeds: "I was called up at two o'clock this morning by Mr. —, to go to H., a distance of seven miles, to a case of midwifery, attended by some unaccountable circumstances; and though the woman was dead, the *three surgeons*, who had been with her, wished me to go for their satisfaction, as they did not like to quit the house, leaving the woman undelivered, unless they could explain what happened. They, moreover, wished to inspect the body, which they feared would not be allowed if they quitted the house." The woman, aged 40, had borne seven children, and thought herself again pregnant and near her full time. She was feeble and jaundiced. Labour commenced the day before Dr. Crosse was sent for. Mr. H., who was engaged to attend the patient, when he arrived, and made an examination, found "a soft tumour in the vagina, reaching nearly to the external labia, which he supposed was the *liquor amnii distending the membranes*. Soon afterwards, Mr. — (another surgeon, who had been sent for on its being found that Mr. H. was from home), arrived, and on examining, *thought the placenta was presenting, and that it was a case for turning*. Mr. H. ruptured the presenting part, or the part low in the vagina,

* Lancet, 1846, vol. ii, p. 302.

† Lancet, 1845, vol. i, p. 311.

‡ Lancet, 1848, vol. ii, p. 160.

* Lancet, p. 161.

expecting the waters to escape ; but only a little blood flowed. He brought away several portions of a solid substance, not unlike placenta after being well washed in water." Having acted thus far under the impression that the case was a placental presentation, the same belief was entertained by both gentlemen present, and turning was agreed upon. "So Mr. H., having removed his coat and bared his arm, introduced it through the mass into the vagina ; and believing he must reach the uterus, could not explain why he did not distinctly feel the child, but thought, at one time, he got the foot of the child : he, however, could not retain it ; he got hold of something else, and no doubt used some force with his hand. On withdrawing his hand, he brought away a firm, whitish substance, which appeared like a bean. Mr. H. likened it to a bile stone. Mr. — next introduced his hand ; he could not detect a fœtus. He, however, felt the spine ; and said he could feel a bag of such stones as the one brought away by his more active and more experienced companion. *Neither of them suspected that the hand had been introduced anywhere but into the uterus.* Numerous portions of the whitish soft mass, resembling, by candle-light, well washed placenta, were brought away. The woman died half an hour after these attempts, though there had not been much loss of blood : there had been a gradual loss, but no rapid flooding."

The third gentleman arrived (like Dr. Crosse) after the woman's death had taken place ; and in the presence of the four, a *post mortem* inspection was made. "The corpse was lying on the bed doubled up, in the usual position for examining during labour, with her clothes on." I (Dr. Crosse) introduced my hand into the vagina, and felt lacerated parts, but could not distinguish fœtus or os uteri. On withdrawing the hand, portions of a substance twice as big as a walnut escaped, of precisely the same appearance and consistence as what had been removed during life. Placing the corpse on the back, I made an incision in the course of the linea alba into the abdomen, extending from the sternum to the pubes ; and as soon as the peritoneal cavity was opened I discovered a quantity of coagulated blood, as much as eight or ten ounces, spread in a thin layer over the intestines. The uterus immediately presented itself : it contained an acephalous fœtus, plump and full grown in its limbs and body, and apparently not less than eight months old. The placenta was cut through. The membranes were entire ; the os uteri was open to the extent of a shilling ; *but it had never been dilated nor meddled with in all the examinations which had taken place during the supposed labour ;* for the uterus lay high above the pubes and forwards, pressing immediately behind the anterior parietes of the abdomen. Pulling aside the uterus, and also the intestines, so as to examine the cavity of the pelvis, I found the whole cavity filled with a morbid mass. Through the most compact part of this morbid mass, in the centre of the pelvis, anterior to the rectum, was a *lacerated opening leading into the vagina ;* and it was clear that the hand of the accoucheur had made its way through this passage into the peritoneum. One inexplicable circumstance was now explained: *the gall bladder was ruptured at its larger end ; several small white biliary calculi were amongst the viscera near it, and numerous others in the cavity ; one big as a nut, others varying in size from a pea to a bean. Altogether I collected fifty-six of these calculi ; not including two or three removed per vaginam during life.** Such a case as this, where the hand was forced through a morbid mass—through the vagina into the peritoneum—up to the gall-bladder—with the result of bursting it and delivering gall-stones, requires no comment.

I have now, sir, to apologize for having so long occupied your attention. I can only plead the vast importance of my subject. I have brought before you a branch of medical science which embraces within the range of its studies the physiology of generation, the laws of our organization,

the development of tissues, the pathology of the ovum (as yet among the arcana of medical science), and the pathology of the uterus : a branch of practice which includes not merely the phenomena of parturition and the management of labour, but also the important but as yet imperfectly understood class of diseases which affect the female generative organs, as well as the disorders of infancy and childhood, scarcely better known. I trust that it will be admitted that midwifery is worthy to be considered one of the medical sciences, and that in a practical point of view it equals in importance general medicine and surgery. I have endeavoured to prove how completely it has been neglected, and to demonstrate the melancholy sacrifice of human life that may be, that has been, the consequence. When such is the case, when an absolute necessity exists for its improvement and protection, I cannot forbear raising my voice against the present system of obstetric education, convinced that it leads to its still further degradation.

I trust that I may be pardoned for so great a trespass on your attention, in my effort to prove the danger to which the public must be exposed, when an obstetric education is totally neglected : and in my desire to show that the very attempt to supply this deficiency will produce precisely opposite results, give encouragement to presumptuous ignorance, and thus become only a delusion and a snare.

Henrietta Street, Cavendish Square, April 1853.

THE RESULTS OF RE-VACCINATION, AS OBSERVED IN 257 CASES.

By W. BIRD HERAPATH, M.D., Surgeon to St. Peter's Hospital, Bristol, etc.

IT may be interesting to the readers of the ASSOCIATION MEDICAL JOURNAL, and to the profession generally, if I communicate the results of re-vaccinating the inmates of two large public schools, with which I am professionally connected—the Red Maids' School, and Queen Elizabeth's Hospital. The former establishment contained, at the time of the experiment, 101 girls, and the latter, 158 boys.

The occasion of this extensive re-vaccination was the occurrence of small-pox. One case having shown itself in each establishment, it was thought desirable to prevent the extension of the disease by isolating the infected children, and to simultaneously destroy or remove the pabulum of the disease, by at once submitting the whole of the inmates to the process of vaccination.

The success of the experiment was perfect : not a single fresh case occurred. The two patients suffering from the disease passed through the stages safely and satisfactorily, without a single bad symptom, although they were both thickly covered with pustules. However, it is but fair to state that from the modified form of the pustules, the slightness of the accessory and secondary fever, and the subsequent progress of the cases, there is no doubt that they were cases of varioloid, rather than of variola : the disease in the girl being varicella umbilicalis ; and in the boy varicella coniformis, two varieties of varioloid, described by Erasmus Wilson in his work on *Skin Diseases*. Both these children had been vaccinated previous to their admission into the school ; and their arms bore the evidence of two distinctly foveolated moderately large cicatrices.

It is a wise regulation of the trustees, that evidence of vaccination, or of having had small-pox, shall be shown by each candidate for admission to these excellent institutions before their election : and it is part of my duty, as their medical officer, to examine each applicant and to report thereon ; and to exclude all who do not satisfactorily prove to have had the small-pox or to have been effectually vaccinated. Of the two hundred and fifty-nine inmates, only one admitted of any doubt on this point. This one case was reported to have been vaccinated, and was admitted by my predecessor ; but upon re-examination, at the date of

* Copeman's "Cases of Midwifery". By the late John Green Crosse, M.D. pp. 49-52.