of the poor. Still, the hostility which a compulsory act would naturally excite, and the odium which it would cast on one of the greatest of social blessings, ought to be well considered before the details of a measure based upon so doubtful a principle are finally determined. Meanwhile, it would be well to compare the results of the investigation made a few years since by our ASSOCIATION, with the forthcoming report of the Epidemiological Society; and thus to bring every possible ray of light into the arena of public discussion, before the nature of so important a measure is decided. The authors of the present Bill are not acquainted with some of the most important bearings of the subject.

As to its political aspect, we are not sure that it should be left to the management of such changeful and unstable bodies as boards of guardians. By protecting the poor, we protect the nation; and by vaccinating a poor man's child we destroy an arrow of death, which might otherwise have poisoned a parish or a city: it is, therefore, a national affair, and does not only concern pauperism. The existing acts ought probably to be wholly abrogated, and some provision substituted which shall more effectually provide for the actual vaccination of Her Majesty's subjects, not only here and there, where union surgeons and boards of guardians happen to be zealous in the cause, but also where zeal is most wanted, and neglect most palpable. One essential to good vaccination and vigilant zeal in its promotion, is the due remuneration of qualified vaccinators. This, the bill in question does not provide for; and thus it bears most unjustly on the medical profession, and makes a proportionably fallacious provision for the due execution of its objects.

The ASSOCIATION and the profession generally would do well to petition Parliament to reject this Bill; and then, if our Association were to appoint a Committee to meet the Small-pox Committee of the Epidemiological Society, for the purpose of agreeing in the provisions of a bill to be prepared without needless delay, we are not without hope that a really efficient and unobjectionable measure might be passed during next session. Nothing can be more injurious to the interests of the profession, and of society at large, than over hasty and random legislation on this important but somewhat difficult subject. We, therefore, invite the attention of our colleagues to the Bill, which we have reprinted at p. 264, so that each may form his own opinion, and then act as the emergency requires. Our own opinion is, that at present we ought to use our influence privately, and through petitions, to get the Bill thrown out of the House of Commons, as it will probably come down to that House from the Lords.

THE MEDICAL REFORM BILL.

It is with feelings of no ordinary satisfaction that we call attention to the hopeful aspect of the MEDICAL BILL of the ASSOCIATION, as disclosed by the report of the deputation to Lord Palmerston, and the letter from Mr. Hastings, printed at page 263. There is now a unity of action and a spirit of concession among all classes of medical reformers, which cannot fail to command success. When the Bill in its modified form is ready, we will publish it in the JOURNAL, along with a few commentaries.

ORIGINAL COMMUNICATIONS.

LETTSOMIAN LECTURES FOR 1853.

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

LECTURE FIRST.

FIRST STAGE OF LABOUR: IMPORTANCE TO THE PRACTICE OF MIDWIFERY OF A COMPETENT MEDICAL EDUCATION.*

MR. PRESIDENT AND GENTLEMEN,

THE very honourable office to which you have appointed me, imposes upon me duties which are both pleasing and responsible. My first and most pleasing duty is to tender to you and to the Council of this Society my warmest acknowledgments for the honour you have conferred upon me. My next duty is a most responsible one—so responsible, that I naturally feel some anxiety, some distrust, lest I should not accomplish my task in the manner I should desire.

You have heard from my predecessors most valuable lectures on highly interesting subjects connected with medicine and surgery. It is my duty to engage your attention equally in favour of midwifery; and with such an object, I confess that I have felt some difficulty in deciding upon the most attractive point of view in which I should present it to you.

This does not arise from any poverty in the subject itself; on the contrary, obstetric medicine is rich in interest, whether it be considered in a physiological, a pathological, or in a practical aspect. My embarrassment is much more the *embarras de richesses*. I might take the subject of parturition as a physiological question, and prove to you how deeply interesting to the physiologist is the observation of the phenomena of labour, but then I should involve you in a most difficult inquiry, and perhaps entangle you in a controversial web, from which I might not so easily extricate you.

I am at liberty to examine with you the pathology of the uterus, both in its unimpregnated and in its gravid state. If this were the question, a wide field of inquiry is open to us, that would afford an abundance of interest; but then, if I were to ask you to traverse it with me, so many questions in dispute oppose themselves, and I should have so many controversial gates to open in order to advance, that I fear such a trespass on your patience. The interest of the subject would hardly compensate for, or disguise the unpleasantness of having to wade through the mire of obstetric disputes.

I prefer, therefore, to present midwifery to your notice in a practical point of view; to consider the subject of parturition, its phenomena, its difficulties, its dangers, and then to inquire with you, whether it is not a duty of the first importance to rescue it from the consequences of that neglect which it has too long received, and to use our best exertions to place midwifery, both with regard to education and qualification, in the same position as medicine and surgery. On such a subject, I have no controversy to unravel; my difficulty is of a different kind. I have rather to ask you to aid me to overcome the *vis inertiae*—the dull weight of indifference that oppresses and retards the advance of this branch of medical science.

Before, however, we draw conclusions, we must first lay down our premises; and I shall in this lecture, having briefly explained the phenomena of parturition, point out to you where errors have been and may be committed in the management of labour, and where it is that ignorance too often causes unnecessary difficulty, and shelters itself from exposure, under the convenient cloak that nature affords her. It is an axiom, that "parturition is a natural process"; and therefore, whatever may occur in labour,

* This Lecture was delivered before the Medical Society of London, on March 9th, 1853.

Nature get the credit of it all. If the life of the unfortunate patient be not actually sacrificed; if it be only a greater delay and increased suffering; if an injury that may not show its effects for some months afterwards; if a difficulty, no matter how produced, that justifies a call for assistance; in all such instances, ignorance quietly makes her escape, and perhaps leaves to the consultant an undisputed claim to the merit of the case. "It was a very serious case—she did her best—she sent for the best assistance she could find—and from that moment was not further responsible." Such is the plausible justification that may conceal a host of blunders which converted a simple case into a most serious one.

My object is to point out where and how these blunders are committed, and to prove that the education of the obstetrician, whether in a scientific or in a practical sense, demands fully as much attention as that of the physician or the surgeon. Nay, I would say more: midwifery needs a more jealous guardianship, and for this reason; it does not possess any inherent power of protecting itself. The ignorant physician cannot succeed in his profession; because, if he know not how to combat the malady which he undertakes to cure, the progress of the disease will soon expose him. He can afford no relief, and the patient flies to a more skilful practitioner; or, possibly, an increasing mortality may soon terminate his career. If, therefore, medicine had no protection, if there were no examination required, the public now, just as they did centuries ago, would discriminate the wheat from the chaff. They would soon learn to appreciate the well informed physician, and would crowd round the Hippocrates, the Galens, the Celsuses of modern times, just as they did in the classic ages of Greece and Rome.

The surgeon who is unskilful, has a still less chance of escape; every case he meets with is an *experimentum crucis* of his knowledge. If it be the union of a fractured bone, the reduction of a dislocation, the removal of a limb, or even the passing of a catheter, his anatomical knowledge and his surgical skill are at once put to the test; his ignorance is immediately exposed, and the public are not long deceived.

I think I am correct when I state, that the most powerful plea in favour of a College of Surgeons, that which first proved its necessity, was afforded by the *palpable* mischiefs committed by ignorant men who had the hardihood to venture upon surgical practice. Their ignorance was felt as a grievance, and the remedy was applied.

Midwifery has not this advantage, because it consists neither in the curing of a disease, nor the repairing of an injury; but is essentially the scientific observation of a natural process. Nature herself combines the duties of the physician and the surgeon, and will generally succeed, even if unaided, in accomplishing the safe delivery of the parturient female. Sometimes, however, she cannot do so: difficulties interpose themselves; and then the necessity for the skilful accoucheur is acknowledged. The delivery cannot be completed without him, and a tardy admission is extracted, that education and skill are occasionally required even in midwifery. But such cases requiring interference bear no proportion to those that present themselves to the physician or the surgeon; and, consequently, the stimulus of necessity does not act in the same manner. Difficult cases are the exception, not the rule; and inasmuch as, in numerous cases, ignorant people seem to succeed very well in delivering women, the importance of a sound education is not so obvious as in medicine or surgery. But I would ask, Who can tell, in any given case, what the character of that case may be? Can any one say that flooding may not arise! that convulsions might not seize the patient! that an operation may not be required to deliver the child? And if it should happen that one single life is sacrificed through ignorance—not to say many lives; if some women are disabled through life, simply because their attendant knew nothing of parturition,—is it any answer or excuse for such a catastrophe, to say "that several women, attended just in the same way, never met with such accidents"? As well

might it be said that pilots are unnecessary, because ships are steered, often even through difficulties, without them. As well might it be argued, that the York Column, or the Monument at London Bridge, required no grating, because madmen do not always fling themselves from their summits. It required six deaths from the Monument to overcome the *vis inertiae* of the city of London: it would seem to require six hundred—I do not know how many more—to remove the incubus that oppresses obstetric medicine. If, however, the sophism to which I have alluded be admitted to be invalid; if it be granted, that it is the bounden duty of the public, or of those to whom the public have confided the responsibility, to use the most efficient means to secure the parturient female, in her hour of trial, against accident; if we allow that all women, under such circumstances, are exposed to risk, and require protection, although only a few may meet with such mischances,—it remains for me to prove that such protection can only be efficiently afforded by demanding of those who practise midwifery, an education fully equal and similar to that of the physician and the surgeon. It is my task to show you that the necessity for a scientific medical education is demanded in midwifery, the more urgently, because the very fact that women may be delivered with but little assistance, gives an encouragement to the ignorant, who are never remarkable for diffidence, to venture upon this branch of practice, where they dare not attempt it in either of the sister professions.

I shall first consider the manner in which the child is expelled from the womb, and point out the provisions of nature to secure the safe accomplishment of this process.

Let us suppose, then, the period of parturition to have arrived, and examine the conditions upon which its fulfilment depends. The child has attained its full intra-uterine growth; the womb, which envelopes it, occupies the whole of the abdomen; its mouth is closed, and the organ, thus immensely increased in volume, rests upon and above the pelvic cavity. In a mechanical point of view, then, we have to consider the body to be moved, the resistance to be overcome, and the power which impels it. The power exists in the muscular walls of the uterus, aided, when necessary, by the whole of the respiratory muscles. The resistance is three-fold: first, that which exists in the neck of the womb itself; secondly, that arising from the pelvis; and thirdly, that produced by the tissues which close the outlet of the pelvis—a resistance which constitutes the chief support to the pelvic organs in their ordinary state.

The body to be moved may be considered almost as an inert mass, yet not completely so. It seems to me to exert a certain independent, although limited, power to aid its expulsion. The motions of its limbs excite more efficiently the contractions of the uterus in the first stage of labour; and the motions of its head, in the second stage, seem to me not entirely dependent on the pelvis. The effect of pressure, perhaps the pain produced, leads it intuitively to alter the direction, so as to diminish these effects, and consequently to seek the widest space. This will be best observed by contrasting cases where the child is living, with those where it is dead before delivery. Labours are seldom so active (to use obstetric language) in the latter as in the former case.

The muscular power of the uterus is of enormous magnitude. This is well known to the practical accoucheur, who is occasionally obliged to pass his hand into the uterine cavity, to overcome these contractions, and to deliver the child or the placenta. The resistance he meets with would be insuperable, if he trusted alone to the antagonism of forces in order to oppose it successfully. If the whole of this power were exercised for the purpose of forcing open the mouth of the womb, the most serious consequences would ensue; the structure of the cervix could not resist this force; it must be torn by it, and a laceration be the result, which might extend through the peritoneum, and destroy the patient. Let us consider the means by which nature controls and regulates this power. The most accurate observers have arranged the fibres of the uterus into certain sets of muscles, which we shall briefly enu-

merate. On the external surface of the uterus, the fibres arrange themselves so as to form fan-shaped muscles, diverging from the round ligaments, which thus fulfil the duty of tendons. These muscles give great support to the womb during its growth, and now are the first to contract. They draw the womb down upon the pelvic cavity, keep it fixed in its position, and prevent a divergence to either side, which, by increasing the obliquity of the uterus, would derange its action. Thus, before the pains of labour are noticed, these muscles contract, gradually draw down the uterus, and render the abdomen less prominent than before; so also the walls of the uterus, felt through the abdomen, are more firm and resisting—a certain indication that other contractions will soon take place, that constitute the pains of labour. These occur in the fibres on the inner surface of the uterus, which arrange themselves into two sets, surrounding the openings of the Fallopian tubes, and forming concentric muscles. Some fibres pass round the lower portion of the uterus in irregular circles; these are especially to be observed at the junction of the body and neck of the uterus: others, but very difficult to trace, pass downwards towards the mouth of the womb, surrounded and imbedded in a large quantity of condensed cellular structure. By this arrangement, the simultaneous contraction of all the fibres of the uterus would equally reduce its volume; the walls of the womb would contract, and converge towards a common centre in its cavity: but a contained body, being compressed equally on all sides, would remain stationary. It is necessary that there be a succession, an order, in these contractions. The expulsive muscles must expand the opposing tissues: the fibres contained in these structures support them, and prevent over-distension; the former precede the latter in their contractions, and act alternately with them. The fundal muscles, those surrounding the Fallopian tubes, form the great expulsive force of the uterus; the fibres of the lower portion of the body and cervix are the guardians of its structure: the one set is in some degree, in opposition to the other, but that is more apparent than real. It is most essential that anything like antagonism between muscular forces be avoided; and, therefore, it is necessary that there should be some means of communication that will harmonise their actions. It is in this sense that the womb affords so beautiful an illustration of the reflex function of the nervous system: a perfect correspondence is maintained between the cervix and the fundus of the uterus, by which all collision is avoided. If the fundal muscles contract, the fibres of the cervix are passive; if the cervical fibres are excited to contraction, the fundal muscles suspend their action. So also the effort of the fundus uteri to distend and open the cervix must not be viewed merely as an illustration of mechanical power; there is, through the same reflex medium, a vital action set up, which, more than any other, contributes to the safe accomplishment of this object. The structure to be distended and opened is prepared for that purpose; the highly condensed cellular tissue of the cervix becomes softer, more yielding, more abundantly moistened with mucus; and sometimes what might be called an act of dilatation, takes place—the whole of the structure yields to the force of the fundus, with a suddenness that resembles, and has been mistaken for, the relaxation of a sphincter muscle. There is abundant evidence to prove, if time allowed me, that the fibres of the cervix do not perform the office of a sphincter muscle; and I am happy on this point to have the support of your late distinguished Lettsomian Professor, Mr. Hancock, who has shown you that neither in the bladder (an analogous viscus) do the circular fibres of its neck fulfil such a duty. “And so likewise in the bladder, the longitudinal fibres are more developed and stronger towards the fundus, whilst towards the middle and neck we find the circular and transverse in greater abundance. *But I am not inclined to consider either these, or the analogous fibres round the lower part of the rectum, in the light of sphincter muscles.*”*

Notwithstanding all these means to facilitate the opening of the womb, there still remains a difficulty to remove. The highly condensed tissue of the cervix varies greatly in its density, and is at this time more than usually vascular: it is, therefore, easily inflamed; any irritation applied would first excite, and then derange, the order of uterine action. The irritation is instantly communicated to the fundus; its contraction follows. The structure of the cervix may not yield; and if so, the irritation is increased. Ultimately, inflammation of the cervix sets in; the muscular fibres existing there contract spasmodically; and the fundal muscles cease to act, or only act irregularly. All this would happen in the majority of cases, if the child were driven down as a wedge to force open the womb. Some provision is, therefore, necessary to avoid this; and thus you will perceive the importance of the final duty of the amnion and its contained fluid. The liquor amnii, surrounding and protecting the fetus on every side, until it is able to protect itself, accumulates upon the cervix uteri, and conveys through a fluid medium the power of the fundus. By this means, the force is not merely directed upon the os tincæ, but is diffused and equalised. You are aware that any force applied to a contained fluid is distributed equally to every point of whatever contains it. On this principle, the force of the fundal muscles is not alone communicated to the cervix uteri, but is distributed to every other part of the uterine cavity; consequently, it is reflected against the fundus itself, so that, if the action of these muscles should be too powerful, they are opposed and controlled by their own reflected force.

Besides this, the fluid thus interposed between the child and the neck of the womb removes all irritation. If the os uteri dilate, the fluid insinuates itself within it; if any irregular contraction or unusual resistance occur at the cervix, the liquor amnii at once yields, but at the same time maintains a steady pressure. If the fluid enters within the circle of the mouth of the womb, the force of the fundus is conveyed by it directly against the margin of the os that surrounds it. Thus it is that a force possessing immense power is kept under perfect control, and at the same time rendered most efficient for the object which it has to accomplish. With such safeguards, it might be supposed that a steady, continuous action of the fundal muscles would soon open the womb, and expel its contents, just as occurs in the bladder or rectum; but this is not the case. Every one knows that the action of the uterus is an interrupted action, returning at intervals of variable length, the periods of repose being longer than in any other of the hollow viscera. Why is this? It is a further evidence of caution. The tissues of the cervix expand slowly, and not only is a sufficient, sometimes a very long time required for this purpose, but the structure itself must be relieved from the irritation which a continued pressure against it would certainly produce; hence the necessity for intervals of rest. The experienced obstetrician is well aware how these intervals are sometimes lengthened, where there is more than usual resistance to be overcome; he knows that the action of the uterus may be even suspended when previous efforts fail, or are producing irritation: but in ordinary cases this interrupted action of the uterus is equally a proof of the caution with which every possible provision is made to guard against injury to the opposing structure. Nature adopts for her principle, *Arte non vi*—“Time, not force”; and those who would follow her, must be content to walk in her footsteps.

In the whole of this process by which the womb is opened, there is nothing that calls for assistance. Neither medical nor surgical aid is demanded. If no accidental causes interfere with her, Nature is all-sufficient; and any one—the midwife, the nurse, the friend—may act as her handmaid; because, in fact, they have nothing to do but to offer consolations, a virtue which the midwife possesses in a most remarkable degree. But, unhappily, accidental causes do interfere, and so derange these operations, that it requires all the judgment of the educated physician, and sometimes the skill of the experienced surgeon, to bring

* Lancet, 1852, vol. i, p. 213.

the patient safely through the difficulty. Sometimes the accidents are unavoidable, and will happen irrespective of the most judicious treatment; but too often they are the results of ignorance, and would have been avoided, but for the mischievous dogma that places the parturient woman in the hands of ignorant persons. It is said, "labour is a natural process, and therefore any one may practise midwifery". Let us examine the consequences of this doctrine.

One of the causes that interfere with the efforts to dilate the womb, exists in the structure of the cervix; it may be more than usually dense and unyielding, and, notwithstanding all the provisions that nature has made to allow it to expand gradually, and to avoid irritation, still she sometimes fails: the tissues of the cervix will not relax—they become irritated—inflammation sets in, and what is called, in obstetric language, "a rigid os uteri" is the result. The consequence is, that this stage of labour is not only protracted, but the pains experienced by the patient become agonizing. The consolations of the midwife afford no comfort, and therefore she proceeds, to use her own language, "to assist the labour"; that is, she endeavours, by her manipulations, to dilate the vagina, and to open the mouth of the womb. The result is, that the inflamed cervix is yet more inflamed, the inflammation extending both to the vagina and body of the uterus. No doubt the membranes are also ruptured, perhaps intentionally; the head of the child is forced down upon these tender tissues; its body is tightly grasped by the uterus, in obedience to that law which prevails in all involuntary muscles, to seek a state of contraction; and although these contractions are increased during the pains, yet in the intervals the fibres are never perfectly relaxed. What, then, is the result? The agonies of the patient are increased in a ten-fold degree; she is dissipated by the great protraction of the labour, and exhausted by her sufferings; her friends are equally so. The midwife thinks it would be well to have another opinion; assistance is sent for; and then it is found to be absolutely essential to remove the child. There is only one operation available under such circumstances—one by which the child, if alive, is destroyed:—the head must be perforated, and the brain removed, in order that, thus reduced in size, it may be brought through the passages. In most instances, however, of this kind, the child has already ceased to exist; it dies in the womb, in consequence of the great pressure maintained on the circulation in the funis and the placenta. But this is not the only bad consequence; the patient herself, although delivered so far safely, is still exposed to risk from the pre-existing inflammation. It may reach the peritoneum, or engage the veins of the uterus, and end in the most fatal results.

In such a case as this, then, two lives may be sacrificed from mere ignorance. The inflammation was not recognized when it might have been arrested. When the difficulty that it caused is at length found out, the inflammation is considerably increased by the means that are used to overcome the obstacle; until ultimately ignorance acknowledges that the case is past her skill, and the consultant has to share all the onus, if not the odium, of these melancholy consequences.

I am persuaded that the Fellows of this Society, who practice midwifery, will bring to their recollection examples of mismanagement such as I have quoted, and will admit that I have not overdrawn the picture which I would present to you. With regard to my own experience, I may state that during my residence in the Dublin Lying-in Hospital, several such cases were sent in from the country, in which we had no alternative but to deliver them; and thus the number of perforations performed in that establishment were greatly increased beyond what they otherwise would be. To avoid an operation, is a much greater proof of skill than to perform one, and in no instance does that remark apply with more force than in the operation under consideration,—one in which the life of the child is necessarily sacrificed, and that of the mother placed in such danger, that, according to the most accurate statistics, one life in five is generally lost.

These cases are, unfortunately, not the only ones that

illustrate my argument. I shall direct your attention to one of a different kind that may arise during this stage of labour—one that requires for its management the soundest medical experience.

The womb, in its non-gravid state, is frequently the seat of a low inflammation, that shows itself prominently during the catamenial period, but subsides in the intervals. The leading symptoms are, extreme pain during menstruation, and a scanty discharge. We call it dysmenorrhœa, and relieve it by hip-baths, aperients, and sometimes depletion and anodynes. The popular theory of our treatment is derivation: we either endeavour to draw blood from the uterus, or relieve the circulation by taking blood elsewhere; but we are, in fact, treating the inflammation, which prevents the uterus from fulfilling its proper function. Now this inflammation is accompanied by a very remarkable condition of the nervous system. The neck and body of the uterus can generally be touched and examined, without causing much pain; the os tincæ is almost insensible. In these cases, however, pain is exalted to its highest intensity; if an examination be made by touch, the patient can hardly bear the finger to pass along the vagina; if the mouth or neck of the womb be examined, the pain is very great; and if the body of the womb be compressed, the patient suffers agony. This local distress is accompanied by that general nervous irritation which is so familiar to you as hysteria, and upon which I need not dwell.

Fortunately, these women do not generally conceive; but this sometimes happens. When they become pregnant, the new demand upon the constitution often relieves the prominent symptoms; they are less hysterical, and have no longer the agonies of dysmenorrhœa; but still they are much more irritable than other patients in similar circumstances; they are much more liable to uterine pains; and hence, during pregnancy they have frequent attacks of pain in the womb,—a uterine neuralgia, that is sometimes called rheumatism of the uterus. The motions of the child also often distress them very much. But these are only trifling inconveniences, when compared with those which take place when the period of parturition arrives. When these patients have to endure the pains of labour, then, indeed, their sufferings reach a climax. The pain that accompanies the action of the uterus in an ordinary, or what might be called a healthy labour, is no measure of the agony caused by its contractions when in this morbid state: consequently, the amount of suffering to which such patients are exposed, is more than they can bear. It is sufficient to overcome the fortitude of any woman; and women are remarkable for their fortitude in this their hour of trial. In the present case, however, the patient does not possess that fortitude; she is very impatient of pain; is highly irritable; and watches, with intense anxiety, every returning contraction of the uterus. The consequence is, that these contractions are feeble and inefficient. The influence of the mind on the uterus is familiar to every experienced practitioner. A slight shock, a surprise, will arrest the action of the uterus; but in these instances the sympathy (from this morbid derangement) is still more marked; hence the very apprehension of pain arrests the contraction, and, after hours of suffering, very little progress is made, although the cervix uteri does not present any unusual resistance.

Let us, then, suppose such a case in the hands of an ignorant person; the pains are too violent to be relieved by consolations, and therefore something must be done. "The pains are doing no good": warm stimulants are given; these failing, ergot of rye is perhaps tried as a display of medical knowledge; the uterus contracts spasmodically, the agonies of the patient are greatly increased; but this temporary effect soon ceases, and leaves the patient more exhausted, and more dissipated than ever. Possibly, the same manipulations may be attempted as in the former case, and the attendant endeavours to dilate the mouth of womb mechanically. Fortunately, the patient can hardly bear this; but, if she should, the result is the same—inflammation of the os and cervix sets in, and the difficulty is greatly increased. At length we arrive at the same con-

clusion as in the former instance. Ignorance can do no more; the case is past her skill, and assistance must be obtained: perhaps she may not make so honest a confession, but rather allow the anxious friends to arrive at the same conclusion. They urge her to have a second opinion—and aid is sent for: but under what circumstances? The patient is worn out by protracted suffering; the constitution may have received a shock from the intensity of pain, which gives rise to the most serious consequences; atony of the uterus, with its attendant, hæmorrhage, may occur at any time during the labour; convulsions may take place; and if the practitioner is fortunate in escaping these evils, and safely delivering his patient, still he is exposed to the risk of a protracted recovery; because a patient so exhausted is much more liable to attacks of fever or of inflammation than are healthy women.

Such a case as this requires the aid of the educated and experienced physician, as completely as any case of hysteria that he undertakes to treat. The disordered actions dependent on the womb in its unimpregnated state are the object of the physician's attention, and are acknowledged to require for their treatment all the advantages of a sound medical education: but the very same derangements, when the womb is gravid and is about to expel its contents, become, from this accident, unworthy of his care. The simple fact of the womb being gravid, and not gravid, seems to form the line of demarcation between ignorance and education. I am sure, sir, you will admit that such a position is untenable, and that cases like these, as well as those previously alluded to, prove that the obstetrician requires an education fully equal to the physician or the surgeon.

Thus far I have confined your attention to labours that are called "natural", where no assistance is required, and where it is assumed that there is no occasion for a medical or a surgical education to understand its management. Those labours, however, which are exceptions to the rule are acknowledged to require something of this kind, but then it is argued that whenever assistance is needed in such cases, it can always be obtained as soon as the necessity is known. This is not always true, especially in country districts. It is my duty, however, to point out to you that the argument itself is invalid. If, for instance, I were to direct your attention to those labours that are called "preternatural", those in which some other part of the child than the head presents, I could point out many instances, where the life of the child has been lost because the attendant did not know what assistance to give, or how to give it. Most of these, however, belong to the second stage of labour; and as I wish in the present lecture to confine your attention to the first stage, I shall only mention one instance in which ignorance sometimes contrives to do irreparable mischief.

When the arm and shoulder of the child are found to present at the mouth of the womb in place of the head, the case is one where art must supersede nature: the acknowledged rule of practice is to deliver the child, the moment that it can be done with safety to the mother. It is, therefore, of the greatest importance that this deviation be recognized early in the labour, and that the person in charge be prepared to turn and deliver the child, the moment a favourable opportunity presents itself—that is, as soon as the mouth of the womb is sufficiently open or sufficiently yielding to admit the hand to be passed through it without risk. Now, if a case of this kind unfortunately fall to the lot of an ignorant person, the worst consequences ensue. Nothing, whatever, is known of the presentation in this stage of the labour—their skill does not consist in recognizing positions; everything is done to console the patient under her sufferings; vain promises are made that "the birth will soon come"; perhaps stimulants are given to support her strength; but at last the period arrives when all these means fail, and an examination is made to ascertain the cause of the delay. It is then found out for the first time that the labour is unusual; the arm is felt in the vagina, and assistance is promptly sent for; but under what circumstances? The membranes are broken, and the liquor amnii has been dis-

charged long before; the uterus is contracted strongly about the body of the child; the protruding arm may be swollen so as to fill the whole vagina. To turn the child, under such circumstances, is always an extremely difficult and sometimes a most dangerous operation; the child never escapes, and I have known cases where the uterus was ruptured in the attempt. Thus, in fact, one life is certainly lost, and possibly both: because the patient has had the misfortune to entrust herself, in the first instance, to an incompetent person. Time, which was of the highest value, was lost; the period at which the child could have been delivered safely, and without risk was unnoticed, and the difficulty was only ascertained when it became dangerous.

I shall take another example of a still more serious character from the class of complex labours. It sometimes happens that the after-birth is attached to the mouth of the womb: and when it is thus situated, hæmorrhage is the necessary consequence of the dilatation of the os uteri. The most frightful flooding may take place the moment the womb opens, or the discharge may return with every pain in a less degree and gradually exhaust the patient. I know no case in the whole range of obstetric practice that requires more decision or more promptitude, nor one in which the line between ignorance and education is more strongly marked; because, here, ignorance has not time to take refuge behind a second opinion. Flooding will not wait; and if the proper treatment be not carried into effect in the first instance, the patient's life is sacrificed to the delay. In order, however, that this treatment be adopted, the nature of the case must first be ascertained, the attendant must know that the placenta presents, and here it is that ignorance shines so conspicuously. She knows nothing whatever about it; the hæmorrhage alarms her, and it is well if she does not leave the unfortunate patient to her fate. One fact is worth a thousand arguments, and I shall in illustration quote one case from Dr. Waller's valuable clinical remarks.* "The patient", he reports, "had been under the care of a midwife, who, on the preceding day, finding hæmorrhage, ruptured the membranes; this not succeeding, she left her. Another woman was sent for in the evening, who also got alarmed at the bleeding, and like her predecessor decamped, leaving the sufferer to her fate. A medical man saw her on the following morning, who immediately requested my (Dr. Waller's) attendance. At that time the hæmorrhage had abated, the pulse, though rapid and soft, was not so feeble and faltering as I have frequently witnessed in similar cases: there was a general warmth of the surface; but the countenance was deathly and corpse-like. On introducing the hand for the purpose of examination, the placenta was easily felt lying in the vagina, but no portion of the child; the knees presented. The child was readily drawn down: some difficulty was experienced in bringing the head through the pelvis. Notwithstanding the discharge was trifling, the signs of sinking had increased. . . . After an interval of about fifteen minutes, the pulse fell, the patient threw back her head on the pillow, and instantly expired."

Thus, from mere ignorance, was this woman's life sacrificed. All the aid that Dr. Waller could afford, failed, because it was too late; and even the effort of nature, the complete separation of the placenta, was unavailing, because, although the hæmorrhage had abated, no timely aid was given to save the patient from its effects.

Time will not permit me to trespass further on your attention this evening; but I trust that I have succeeded in proving to you the dangerous consequences that result, even at this stage of labour, from ignorant persons undertaking the practice of midwifery; and that the death of the parturient woman, and much more frequently the death of the child, is too often attributable to this cause alone. I might also advance instances in which, although the patient escaped with her life, the foundation had nevertheless been laid of very serious diseases, which left her a patient ever afterwards. I need only allude to that much controverted subject, inflammation and ulceration of the neck of the womb.

* Medical Times, January 15th, 1848.

This disease is produced by various causes; but the history of such cases points to none more common than a previous labour, in which inflammation of the os uteri had commenced, had been unnoticed, and had been suffered to advance until the tissues became disorganized. When labour was concluded, and the patient recovered from its immediate effects, the inflammation which had but imperfectly subsided, was readily reproduced.

If such facts are true, you will admit that it proves the importance of a competent education among those who practise midwifery; and not only so, but the necessity of excluding from this branch of practice, those who do not prove themselves competent. I shall reserve to the concluding lecture some further observations upon this part of the subject.

In my next lecture, I shall enter upon the consideration of the second stage of labour.

Henrietta Street, Cavendish Square, March 1853.

GALACTAGOGUE AND EMMENAGOGUE EFFECTS OF WARM AND STIMULATING APPLICATIONS TO THE MAMMÆ.

By JOHN ROSE CORMACK, M.D.

DR. J. O. McWILLIAM published in the *Lancet* of September 7th, 1850, some very interesting details regarding the use, among the natives of the Cape de Verd Islands, of fomentations with the leaves of the *Ricinus Communis* and *Jatropha Curcas*, for the purpose of accelerating and bringing on, or increasing the flow of milk when the secretion was tardy or deficient after childbirth; and in the *London Journal of Medicine* for October 1850, Dr. Tyler Smith described some trials made by him with the leaves of the *ricinus communis*, for the purpose of showing that similar galactagogue effects might be produced in London as in Boa Vista, by adopting measures similar to those employed by the natives of that island. The method adopted by Dr. Tyler Smith was essentially that detailed by Dr. McWilliam.

Dr. McWilliam's account of the native practice is as follows:—

"The *bofareira* (*ricinus communis*) grows in most, if not all, the Cape de Verd Islands. That used by the natives for the purpose I have mentioned is called by them *white* *bofareira*, to distinguish it from what appears to be nothing more than a variety of the same species, the *red* *bofareira*. The white, or that which possesses galactagogue qualities, is recognized by the natives by the light green colour of the stem of the leaf; whilst the leaf-stem of the *red* is of a purplish red hue. The latter plant is carefully avoided, as it is said to be a powerful irritant; and if applied, as it occasionally has been, by mistake for the *white*, it produces an immediate and often immoderate flow of the menses.

"In cases of childbirth, when the appearance of the milk is delayed, (a circumstance of not unfrequent occurrence in those islands), a decoction is made by boiling well a handful of the *white* *bofareira* in six or eight pints of spring water. The breasts are bathed with the decoction for fifteen or twenty minutes. Part of the boiled leaves are then thinly spread over the breasts, and allowed to remain until all moisture has been removed from them by evaporation, and probably in some measure by absorption. This operation of fomenting with the decoction, and applying the leaves, is repeated at short intervals, until the milk flows upon suction by the child, which it usually does in the course of a few hours.

"On occasions where milk is required to be produced in the breasts of women who have not given birth to, or suckled a child for years, the mode of treatment adopted is as follows:—Two or three handfuls of the leaves of the *ricinus* are taken, and treated as before. The decoction is poured while yet boiling into a large vessel, over which the woman sits, so as to receive the vapour over her thighs and generative organs, cloths being carefully tucked around her so

as to prevent the escape of the steam. In this position she remains for ten or twelve minutes, or until the decoction cooling a little she is enabled to bathe the parts with it, which she does for fifteen or twenty minutes more. The breasts are then similarly bathed, and gently rubbed with the hands; and the leaves are afterwards applied to them in the manner already described. These several operations are repeated three times during the first day. On the second day, the woman has her breasts bathed, the leaves applied, and the rubbing repeated three or four times. On the third day, the sitting over the steam, the rubbing, the application of the leaves, and the fomentation of the breasts, are again had recourse to. A child is now put to the nipple, and in the majority of instances it finds an abundant supply of milk. In the event of milk not being secreted on the third day, the same treatment is continued for another day, and if then there still be want of success, the case is abandoned, as the person is supposed not to be susceptible to the influence of the *bofareira*."

Dr. Tyler Smith did not subject his patients to the steaming process.

From a number of observations which I have made at various times, and in cases of very different character, I am fully satisfied that the cases of Drs. McWilliam and Tyler Smith do not in any way support the notion of a special galactagogue power belonging to the leaves of any particular plants. It will be found, I think, that simple warmth, still more hot fomentations, and in a yet higher degree stimulating embrocations and cataplasms, have an extraordinary power in exciting the mammary glands to the secretion of milk, even in circumstances apparently the most adverse to the performance of their function. The leaves of the *ricinus communis* and of the *jatropha curcas*, when applied to the mammæ, produce decided stimulation; as we might expect, when we remember that they belong to the natural family *Euphorbiaceæ*, of which acidity is the leading character. This acidity exists in a very high degree even in the seeds of the *ricinus communis*; and Pereira quotes, along with similar cases, the case of a girl, eighteen years of age, who died of gastro-enteritis, from eating about twenty of these seeds.

My object at present is to establish, by the brief narration of a few facts, the following propositions:—

1st. Warmth and stimulants applied to the mammæ often act powerfully as *galactagogues*.

2nd. Warmth and stimulants applied to the mammæ often act powerfully as *emmenagogues*.

3rd. The leaves of the *bofareira* (or *ricinus communis*) and *jatropha curcas* act as *galactagogues* and *emmenagogues*; but not from their possessing any peculiar or specific power.

I. WARMTH AND STIMULANTS APPLIED TO THE MAMMÆ OFTEN ACT POWERFULLY AS GALACTAGOGUES.

CASE I. MILK RESTORED TO THE MAMMÆ BY HOT FOMENTATIONS. Last month, a lady, when nursing her infant, about seven months old, was attacked with acute bronchitis of moderate severity, which was successfully treated by low diet, and tartar emetic in small doses. At the end of four days, the bronchitis was cured; but the milk, which had previously been failing, almost entirely left the breasts. On the fifth day, from exposure to cold, she experienced a relapse of the bronchial affection. As she had been considerably weakened by the previous attack, and as the symptoms of the relapse were not sufficiently severe to justify recourse a second time to antimony, I ordered her to take a draught containing ammonia and chloroform, as an anodyne, expectorant, and diaphoretic, every eight hours; and to carry out similar intentions, I also directed a succession of pillow-cases, filled with heated moist bran, to be applied to the chest. When I saw her on the following day, after this treatment had been employed, she told me that she had profusely perspired for some hours; she was (after copious expectoration) free from cough, and pain in the chest; and, what was equally a source of pleasure and surprise to