

ART. II.—*Practical Observations on some of the most common Causes of tedious Labour.* By ROBERT LITTLE, M.D., Physician to the Belfast Hospital, Physician Accoucheur to the Belfast Lying-in Charity, Physician to the Ulster Female Penitentiary, Lecturer on Midwifery and the Diseases of Women and Children, &c.

THERE is no subject connected with obstetric medicine that should be more carefully studied than that of tedious labour, on account of the great variety of causes by which it may be produced, and also the dangerous effects it may have both on the mother and child. When the size of a healthy child at the end of utero-gestation is compared with that of the parts through which it must pass before it can be expelled from the mother, it is wonderful that labour, in almost every case, is not far more tedious than it is, especially when the expelling powers are compared with the resistance to be overcome. Of all the causes of tedious labour there are none of such frequent occurrence as those residing in the uterus itself. It is not my intention in the following observations on tedious labour to consider the subject generally, but confine myself to weak, irregular, or inefficient action of the uterus, or rigid undilatable state of its orifice, which conditions are found sometimes to coexist, and at other times to be quite independent of each other. When the action of the uterus is strong, and when its orifice yields easily to the impelling force applied through the medium of the presenting part of the child, it is very seldom that labour is protracted; but it unfortunately too often happens that the impelling power of the one is quite too feeble to overcome the resistance of the other. Malposition, or a disproportion between the size of the child and the capacity of the pelvis, is comparatively of but rare occurrence, and it is more frequently with a feeble action of the uterus, or a rigid state of its orifice, that the accoucheur has to contend, than any other cause of tedious labour. The bad effects which may

result from irregular or weak action of the uterus, or too great rigidity of its orifice, are very numerous, and may be confined to the mother or child, or be extended to both. It is impossible for the womb to continue to act beyond a certain time without exhaustion taking place, not only of its own powers but those of the system at large, and it is on that account absolutely necessary that labour should be finished within a definite time. It requires uterine action in all cases as the chief agent in the process of parturition, and this action is allowed too often to be uselessly wasted, so that the assistance of instruments becomes necessary to supply its place.

In the practice of midwifery, instrumental assistance, from various causes, may be necessary when there is no malposition of the child nor disproportion between the size of the head and capacity of the pelvis; but these cases are very rare, and it will mostly be found that either too much resistance on the part of the orifice of the uterus, or a want of that general contractile force, necessary to overcome the resistance of all the parts through which the child must pass before it can be expelled, is the cause why the use of extracting instruments is necessary. It is impossible in such a process as parturition to supply, in a safe and efficient manner, the want of uterine action by any means that can be employed of an extracting kind; and it is on that account, both for the safety of the mother and child, of the greatest consequence that labour should be accomplished by the natural powers alone. No matter how dextrous an accoucheur may be in the application of instruments, there will, in two cases out of three, either be considerable injury inflicted on the mother or child, or both. I feel satisfied that in the practice of midwifery, at the present time, there is very generally too little attention paid to those means necessary to keep up the action of the uterus, and diminish the resistance produced by unusual rigidity of its orifice; and this arises in most instances from the great confidence that is placed in the safety and power of instruments.

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When uterine action is strong, and when dilatation of its orifice is easily accomplished, it is very seldom that any inflammatory affection succeeds delivery; so that tedious labour is to be considered not only dangerous on account of the necessity it too often produces for the use of extracting instruments, but also on account of inflammation of the genital organs, or some of the more important neighbouring parts, which it is liable to excite. Out of nearly six hundred patients who have been attended during their confinement from the lying-in charity under my direction, there have been only four cases altogether of inflammation of the uterus, or of that viscus, in common with some of the surrounding parts. In two of these cases of inflammation, instrumental assistance was required, and in the other two, although no extracting means were employed, yet the labour was very protracted. It might naturally be expected that the number of cases of inflammation would be very great, as all the patients who are attended from the charity in question, remain in their own habitations during their confinement, and are there, of course, exposed to bad air, dirt, cold, improper food, drink, and many other predisposing as well as exciting causes of inflammatory action. I attribute this comparatively rare occurrence of inflammation of the genital organs, or of these in common with the surrounding parts, to the great attention which is paid in the Belfast lying-in charity to the use of such means as will keep up regular and efficient uterine action, and at the same time promote that relaxation of its orifice that will admit of the expulsion of the child without the production of too much local or general debility, or local or general irritation.

In all works on midwifery, very considerable stress is put on the necessity of having labour completed within a given time, and this is urged not only for the safety of the mother, but also that of the child. The means, however, which have been employed for the purpose of fulfilling these ends, have been very various, and in my opinion, in many instances more injurious than useful. I will, therefore, now direct my attention to the

separate consideration of what means can be trusted to, for the purpose of exciting regular and efficient contraction of the uterus on the one hand, and relaxation of its orifice on the other. A rigid state of the orifice of the womb is most commonly to be met with in first labours, but this is particularly the case when the female is somewhat advanced in life. Although it is most generally in first cases that rigidity of the orifice of the womb offers the greatest resistance to the expulsion of the child, yet a similar state very frequently occurs after the birth of several children, and this is even the case when the female has been married and borne children at an early period of life. There are some women possessed altogether of great rigidity of muscular fibre, and it is mostly in these that an unyielding state of the orifice of the womb is to be met with in first or in subsequent labours. In almost all those cases where the part in question yields with great difficulty, so as to allow of the expulsion of the child, there is a resisting state of the vagina and perineum. It would therefore appear to me that a tedious labour, from the cause I have just been considering, will be frequently met with in particular constitutions, no matter how favourable other circumstances may be to its speedy termination.

In cases of tedious labour, especially when the delay arises from resistance on the part of the orifice of the womb, there is very frequently a low inflammation excited in the aperture in question, which may give rise, in some instances, to considerable resistance in subsequent labours. I have met with two or three well marked cases of this kind, in patients whose history I was perfectly acquainted with. This thickening of the orifice of the womb which succeeds to parturition, as the result merely of a slight inflammatory action, does not produce a disorganization of the part, but merely a thickening, which is in all probability confined to the cellular tissue; and it is therefore to be distinguished from scirrhus induration, which is sometimes to be met with in the orifice of the womb, at an unusually early

period of life. What is very generally termed scirrhus of the orifice of the womb, occurring during pregnancy, is not at all, in the great majority of cases, allied to that affection, and is merely the result of injury inflicted on the part from the use of instruments, or some other cause, giving rise to a great degree of induration.

It is a very common thing for the bowels during the entire, or almost the entire, course of pregnancy, to continue in a very inactive state; this is partly owing to the pressure of the womb, and partly, in all probability, to the diminution of energy which the lower intestines in particular must experience during the latter months of utero-gestation.

I am quite satisfied that the uterus sometimes suffers very much on account of this inactive state of the bowels, but more particularly with reference to the dilatation of its orifice during labour. In order to obviate this state of the bowels, it is of course necessary to employ laxative medicines with the greatest regularity, but this is a thing which is too often neglected, and hence that unyielding state of the uterus which I have been considering is of such frequent occurrence.

The dilatation of the orifice of the womb may be very slow, and yet it may not be the cause of delay in the expulsion of the child, for in order that rapid dilatation may take place, the impelling force by which it is affected must be of a certain degree of strength. It is no very difficult matter to determine whether weak or irregular uterine action or a rigid state of its orifice be the cause of delay in the expulsion of the child. In those cases where the uterine orifice is not easily opened, so that the presenting part of the child can pass it with ease, there are certain characteristic marks by which it may easily be detected by the touch, so that there is little danger of confounding a want of efficient uterine action and the rigidity in question together.

The remedies which have been employed for the purpose of relaxing the orifice of the womb, and of thus diminishing

the duration of labour, have been very various, and some of them badly calculated to accomplish that important object. I will therefore now enter into their separate consideration, in order that the value which is to be attached to each may be duly appreciated.

Of all the means which have been used for the purpose of relaxing the orifice of the womb blood-letting, I think, may be considered as that which has taken the most prominent place in almost every country where the obstetric art is attended to on scientific principles. There cannot be the least doubt that the loss of blood has a very powerful effect in relaxing the entire muscular system, and of course the orifice of the womb, in common with the rest. It so happens, however, and very unfortunately for its success, that while it diminishes the resistance of the one part of that viscus, it weakens the propelling powers of the other, so that the advantages which would be gained by it on the one hand, would in all probability be lost on the other: it requires, therefore, in the use of blood-letting for the purpose of relaxing the orifice of the womb, in cases of unusual rigidity, the greatest caution lest the propelling powers of the entire organ should be so far impaired, that the labour might become tedious, not from any resistance, but a want of a sufficient uterine action to accomplish the expulsion of the child. I have seen altogether six cases where the abstraction of a quantity of blood, not exceeding in any one of the cases twenty-four ounces, had the effect of completely suspending the action of the womb; and in three of the patients out of the six, the use of the forceps became necessary, in order to save the life of the mother and child. I have certainly again witnessed, in other instances, the very best effects from the loss of blood in cases of rigidity of the orifice of the womb; and although it is a remedy that may do good, yet it is one that may do a great deal of harm on the one hand, while it does good on the other. The advantages of blood-letting, in the state of the uterine orifice in question, have been highly extolled by Dewees and

other eminent accoucheurs, and one would suppose, from the manner in which they recommend it, that it would in every instance prove an infallible remedy. In cases of very great rigidity, when the general state of the system favoured it, I have in three or four instances carried depletion as far as forty ounces, and certainly in all cases with the effect of diminishing, to a greater or less extent, the resistance in question, but at the same time the propelling action of the uterus was impaired, and while a certain amount of good seemed to result in one respect, a very great degree of injury was produced in another. It is certainly a most difficult thing to take away the quantity of blood that will promote relaxation of the orifice of the womb, without impairing its general tone, and I am satisfied that it is a remedy that will, in nine cases out of ten, retard instead of promote the progress of the labour. When the remedy in question is employed, I would advise the blood to be taken away, by means of leeches, from the verge of the anus. I have witnessed a greater degree of relaxation, from six or eight ounces of blood taken away in this manner, than five times the quantity taken away by the use of the lancet. The good effects of local bleeding, in local diseases, have been for many years well known in every department of medicine, but for the diminution of the resistance of the orifice of the uterus in tedious labour, they have hitherto been very little tried. Between the hemorrhoidal and uterine vessels there is the closest connexion, and any impression, whether of a stimulating or debilitating nature, which is made on the former, is very soon communicated to the latter. I do not think that this arises merely from the proximity of the parts, but rather on account of a kind of sympathy established through the medium of their respective nerves, so that the loss of a quantity of blood, which could not possibly do any good between other neighbouring parts of the body, whose actions are less intimately connected together, would be productive of the most decidedly good effects when taken from the verge of the anus, in that unyielding state of the orifice of the uterus I have

been considering. I would therefore advise, when it is deemed necessary to bleed for the purpose of diminishing rigidity of the orifice of the womb, that the blood should only be abstracted in small quantities, and by means of leeches, in the way I have stated. I have tried the application of a number of leeches not exceeding twelve, in about eight cases of rigidity of the orifice of the womb, and have found in every instance an improvement in the state of the part in question, without any derangement of that power necessary for the expulsion of the child. In addition to the benefit to be derived from very small bleedings from the verge of the anus, there will be a very considerable amount of good produced by the application of large folds of flannel, wrung out of warm water, in order to keep up the bleeding. Moist warmth has always a relaxing effect, when applied to the surface of the body, but this is much more considerable, if preceded by the loss of even a very small quantity of blood.

On the efficacy of warm fomentations, unaccompanied with the loss of blood, in the way I have recommended, I think there is the greatest uncertainty; and speaking from my own experience in cases of rigidity of the womb, I would say that in two cases out of three, such applications are almost completely inefficacious. I do not, therefore, think, that heat of itself is at all to be trusted to, no matter to what external part it be applied. On account of the close sympathetic connexion that subsists between the lower intestines and womb, I think different substances, thrown up in the form of enemata, are productive of far more benefit in that state of the orifice of the womb I have been considering, than any other class of remedies with which I am acquainted. Opium, and other narcotics, which are frequently employed, when reduced to a fluid form, as enemata, in an unyielding state of the orifice of the womb, are in most instances highly objectionable, on account of their producing a suspension of that muscular action necessary for the expulsion of the child. I think that the use of remedies of an anodyne nature is, like blood-letting, very likely to throw one obstacle in

the way, while it removes another. I am therefore of opinion, that no class of remedies require to be used in that state of the orifice of the womb in question with greater circumspection, than that of anodynes. I have employed a solution of opium in several cases, and I have invariably found it to have a powerful effect in diminishing the action of the womb, without producing any very decided change in the state of its orifice. In one instance, where the quantity thrown up as an injection did not exceed forty-five drops of laudanum, the action of that organ was completely suspended for nearly twenty hours, notwithstanding that before its employment, it had been going on with the greatest regularity for a considerable length of time. In this case, the uterine action after it recommenced was exceedingly feeble, and the state of the orifice was precisely the same as before the anodyne injection was administered. On account of the necessity in all cases of keeping up the action of the womb, as a thing absolutely requisite for the expulsion of the child, no remedy of an anodyne nature is likely to prove useful, when employed as an injection, in cases of tedious labour proceeding from the state of the uterine orifice in question. I would therefore wish to exclude from whatever injection be used for the purpose of promoting the relaxation of the orifice of the womb, anodynes altogether. There is one remedy of a narcotic nature that I would wish particularly to be laid aside, because, notwithstanding the valuable relaxing effects which it is said to possess, yet I am convinced that the great reduction of the general energy of the womb is productive of more harm than all the good that can possibly result from the relaxation of its orifice, I allude to tobacco. It is wonderful what a powerful effect this substance produces on the entire system, and notwithstanding that it is capable of effecting great relaxation when employed in the form of enema, yet its effects are to be considered, in nine cases out of ten, dangerous, on account of the manner in which it weakens or suspends the impelling powers of the womb. From the trials I have made of tobacco in the

form of enema, I would be inclined to view it, in cases of rigidity such as I have been considering, as a means calculated not only to derange the impelling powers of the womb, but also favour, by the general relaxation which it produces, uterine hæmorrhage after the birth of the child. I tried the effects of the tobacco enema in three cases of rigidity, and in one of the three there was uterine hæmorrhage, accompanied with great general torpor, and in an other there was a very profuse discharge, although the womb was not in a very inactive state.

When there is very great rigidity of the orifice of the womb the relaxing effects of belladonna have been tried, not however in the form of enema, but as an application to the part immediately effected. I am led to believe that belladonna, employed in this way, or in any other form for the purpose of diminishing rigidity, is any thing but profitable, and may in some instances produce very dangerous constitutional effects. I will suppose, however, for a moment, that this medicine will produce the change to be desired in the orifice of the womb, without producing any dangerous constitutional effects; but were this even the case, still I will maintain that it is a dangerous application, on account of the loss of general uterine energy which it must necessarily occasion.

In the form of enema, I have tried the effects of an infusion of hippo, either alone, or in combination with common salt, in several cases of rigidity, and always with the most decidedly good effects; the quantity of hippo I usually employ for each enema is half a drachm, infused for half an hour in a quart of boiling water, to which about two ounces of common salt are added, if the bowels have not been previously well opened. When the bowels have been however thoroughly cleared out before or shortly after the accession of labour, the hippo infusion is thrown up without any addition, and repeated in half the quantity every hour until the desired effect is produced. The temperature at which the infusion should be used ought never to be

lower than that of the blood, and it might even with very great advantage be a few degrees higher: sometimes but certainly not frequently this enema is retained an hour. It should as a general rule be repeated immediately after it is rejected, until that relaxation is produced in the orifice of the womb, which is necessary to allow of the expulsion of the child. I have found the hippo enema only in a very few instances produce sickness of the stomach, and its operation would appear to me to be pretty much confined to the parts or neighbourhood of the parts to which it is applied. It would therefore seem that it acts on the nerves of the rectum, and through these on those of the uterus, so as to produce relaxation of its orifice. When an anodyne is given in any form the torpor of the muscular system which ensues is in most instances of considerable duration, and hence that diminution of the propelling powers of the womb, which succeeds to its use, and which continues a greater or less time, according to its nature and the extent of its dose. In the use of hippo, as an emetic or to any amount that will occasion sickness, there will be no doubt a degree of general muscular depression produced, but this will be of very short duration, if compared with that produced by the use of anodynes, and when reaction takes place the muscular contractions will be far more energetic than they were before it was administered. I do not consider emetics of any kind safe or profitable during labour, and had the hippo enemata the effect of exciting vomiting, I would not recommend their employment. When spontaneous vomiting takes place during labour, it in many instances accelerates the process without producing any bad effects; but were vomiting excited by emetics, where operation is generally very violent, such would not in all probability be the case. I think, therefore, hippo in the form of enema possesses the advantage, not only of relaxing the orifice of the womb, but also that of increasing its propelling powers, and all this is accomplished without the production of vomiting, or any other effects that could endanger the safety of the mother or child.

All the saline purgatives when dissolved in warm water, and employed in the form of enema, at a suitable temperature, have a good effect in relaxing the orifice of the womb, and this is the case independently of their laxative properties. After the bowels have been therefore completely opened, a solution of any of the common saline purgatives may still be repeated in the form of an enema, at short intervals, until the desired effect is produced. Tedious labour from weak or irregular action of the uterus may depend upon a very great variety of causes, some of which may reside in that organ itself, and others in the system at large. It is no matter whether the causes of weak or irregular action of the womb be of a general or local nature, it requires that they should be removed as soon as possible, in order that exhaustion of the expelling powers may not be the result of long-continued action. The means which have been employed for the purpose of keeping up or establishing uterine action, have been very various, and some of them either possessed of very little advantage or useless altogether. I think that remedies administered in the form of enemata are far more profitable for the purpose of keeping up or exciting the action of the womb, than in any other form with which I am acquainted. This is owing, as I have already stated in another part of this paper, to the close connexion that subsists between the lower intestines and the womb.

The effects of common salt dissolved in water, and used at a pretty high temperature, as an enema, are certainly most powerful in all cases where the uterus acts only in a feeble or irregular manner. The expulsion of the child in labour is partly accomplished by the contractions of the womb, and partly by the contraction of the abdominal muscles, and diaphragm. It sometimes happens that the contractile powers of these different parts bear no proportion to each other, so that they may either be singly or conjointly in fault. I have, for instance, in very many cases found the uterus acting with the greatest regularity, while the diaphragm and abdominal muscles were scarcely

affording any assistance at all ; and again, I have found the two last mentioned parts acting with great energy, while the first was only acting in the most feeble manner. Although, therefore, the uterus be the most powerful agent in the process of parturition, yet the assistance which is afforded by other organs is not to be looked upon as a thing of little value. It is better, when using remedies for the purpose of rousing the action of the organ in question, that they should be also calculated to excite an increase of action in all these parts which cooperate with it in the expulsion of the child. Medicines, therefore, that produce a certain action on the nerves of the rectum, have the effect not only of increasing the action of the womb, but also that of the abdominal muscles and diaphragm. After the bowels have been completely opened, enemata of a solution of common salt in warm water produce a degree of tenesmus, or strong efforts to bear down on the part of the diaphragm and abdominal muscles, and also excite, by their stimulating operation on the womb, an increase of its energy. I never neglect, in any case of lingering labour, after the bowels have been well cleared out, to try the effect of the enema I have just mentioned, and it is very seldom, when the delay arises from weak or irregular uterine action, that it does not prove decidedly useful, if repeated at short intervals, until some degree of tenesmus be produced. When about five grains of aloes are dissolved in the solution of salt, the effect produced on the womb, and also on the other parts by means of which it is assisted in the expulsion of the child, is certainly much more powerful. The addition of a very small quantity of senna to the salt produces nearly the same effect as the aloes. The quantity of salt in each enema may vary from one to two table spoonful. There cannot be the least doubt that the warm water in which the salt is dissolved, has a powerfully stimulating effect on the womb, when applied at the inner surface of the large intestines ; so that this medicine, either alone or in combination with small quantities of aloes or senna, is not to be considered the sole agent, but merely the

most powerful auxiliary in these enemas, for increasing the uterine energy. The stimulating effects of the warm water will be, of course, in proportion to the temperature at which it is employed. If the heat be below 90 of Fah. thermometer, there will be no effect, or almost none; but if, on the contrary, it be above the heat of the blood a few degrees, the stimulating effects communicated to the womb will be very considerable; and hence the success of the injections which I have been considering, will vary according to the temperature at which they are employed. In the use of any kind of enemas for the purpose of rousing the contractile powers of the womb, there will be very little benefit produced, unless the fluid thrown up be projected with considerable force, and also be in such quantity as to occasion considerable distension of the rectum. The ordinary way of administering enemas must be, in most instances, almost quite useless; but this is more particularly the case in the country, where it is very rare to find any other apparatus for that purpose, except the bag and pipe. The enema apparatus which I use, and which I consider altogether the best, is a syringe, capable of containing between a pint and quart of fluid. An apparatus of this kind, which only contains five or six ounces of fluid, is very objectionable, on account of the necessity there is of withdrawing it several times before a sufficient quantity can be thrown up.

Weak uterine action being very frequently accompanied with general debility, it is in many instances not only necessary to employ remedies which will have a local but also a general stimulating effect. No matter how useful the improvement of the general tone of the system would be to accomplish the expulsion of the child, still it is a thing that cannot be effected by the means which have been very generally in use, without considerable danger. The use of stimulating cordials by the mouth, such as warm punch, negus, &c., may, in many cases, rouse the action of the womb, and improve the tone of the entire system, without any secondary bad effects; but it will be

found again in a great many other cases, that the use of such cordials will have the effect of exciting either febrile or inflammatory action after the birth of the child; so that by the employment of these remedies, while there is a certain amount of good effected on the one hand, there is a proportionate degree of injury produced on the other. If the employment of stimulating cordials such as I have been considering, were not attended with any risk after the birth of the child, still I think they would be found in the great majority of cases to do far more harm than good, but more especially when the womb is the part which is, from its weakness, the cause of delay in the expulsion of the child. I have witnessed, frequently, from the use of warm, stimulating cordials, a complete suspension of the action of the organ in question, instead of an increase or removal of its contractile powers. While the pains of labour continue, there must be a far more than ordinary proportion of nervous energy distributed to the uterus, and hence anything that makes a powerful impression on other parts of the body, but more particularly the stomach, will be likely to derange that organ. It is therefore not at all wonderful, that the large cordial draughts which are very frequently taken for the purpose of rousing the uterus to more regular or powerful contractions, will have, in many cases, the very opposite effect, of diminishing the regularity, or weakening the strength of the pains. In the practice of midwifery amongst the poor, whose habits are generally intemperate, the use of ardent spirits in different forms is very common during labour, and for one case in which it accelerates that process, there are three in which it retards it. When a cordial is given with a view of improving the strength of labour pains, it should never be in such a dose as would produce a powerful impression on the stomach, and thus endanger the regularity of the process it is exhibited for the purpose of improving. If, previous to the accession of labour, the system has been brought, from any cause, into a general state of debility, there will necessarily be a great want

of power on the part of the womb, and in all probability also on the part of the diaphragm and abdominal muscles, so that the employment of some cordial may be not only useful, but absolutely requisite. I have, in several cases of lingering labour proceeding from general debility, given a glassful of port wine every two hours, until the desired effect was produced ; and have in no instance found it necessary to exceed twelve such doses until the pains became of a sufficient degree of strength. Although cordials are therefore very far from being profitable in most cases of tedious labour, yet still there are some instances in which they are safe, and at the same time absolutely necessary. When they are requisite to hasten the expulsion of the child, it is on account of a state of general debility, in which the womb only participates, as every other organ of the body.

The form of enema is the only safe mode of using internal stimulants, for the purpose of rousing the action of the womb, without producing any bad effects on the system in general, so as to favour inflammatory, or any other morbid action after the birth of the child. An enema composed of a wine glassful of proof spirits, and a pint of warm water, will excite the womb to increased action, while almost no derangement of the general system will be occasioned by its employment. I have in several cases, where the action of the uterus was very slow, and where the pains were very feeble, ordered an enema, of the strength I have just mentioned, to be thrown up every half hour, until the desired effect was produced. In this way, in some instances, eight or twelve ounces of the spirits have been used in the course of a very few hours, and none of the patients in whom it was used exhibited any of those constitutional effects, which it usually occasions when taken even in very small quantities by the mouth. By combining a wine glassful of spirits with a pint of warm water, and using it as an enema, it will in very few instances be retained longer than ten or fifteen minutes, and in proportion to the number of times it has been repeated, the period of its retention will be diminished. Instead of

proof spirits, I have tried, in a few cases, the stimulating effects of enemata composed of a drachm of aqua ammonia to a pint of warm water, and I think in every instance the result was not promising. The ammonia would in fact appear to me, if I might judge from the few cases in which I employed it, far more powerful than the spirits, although it was always retained a much shorter time.

The use of anodynes, I have every reason to believe, is as injurious in tedious labour, from weak or irregular action of the womb, as when the delay arises from rigidity of its orifice, and I have in many instances regretted much the employment of such remedies for the purpose of suspending the pains of labour, and of thus giving the womb, and also the rest of the body, time to recover their weakened powers. I do not therefore think, that the very general idea that prevails, respecting the advantages of remedies, calculated to suspend the pains of labour for a time, in order that their strength and regularity may be afterwards improved, is at all a good one. If any thing at all could justify the employment of anodynes, in lingering labour proceeding from a want of regular uterine action, I think it would be the advantages of sleep. No one could question the propriety of procuring as much repose as possible in cases where the action of the womb is either weak or irregular, provided that could be effected without any risk of weakening or suspending altogether that action, which it is the duty of the accoucheur to increase, when it is defective to the necessary extent. The use of opium, which is the only remedy of an anodyne nature that can be trusted for the purpose of procuring sleep, and of suspending the pains of labour, is, like cordials, very dangerous after the birth of the child, for the production of inflammation or fever. I have tried the anodyne effects of hyosciamus in many cases, but I never found it in any one instance answer the purpose, no matter whether the object was to procure sleep, or quiet the action of the womb.

Nothing has altogether a more beneficial effect in keeping up the pains of labour, than a cheerful state of the mind, and hence every thing that produces mental disquietude becomes a cause of tedious labour. While therefore certain physical impressions should be guarded against as causes of lingering labour, mental impressions should not be overlooked. Every one who has been engaged for some years in the practice of midwifery, must have witnessed many instances where the slightest mental emotions produced a complete suspension of the pains of labour. Any thing therefore that can possibly produce mental disquietude, should be avoided as far as the circumstances of the case will admit. In some females who are of a hysterical temperament, it is impossible, no matter what care be taken on the part of the attendants, to avoid all conversation of a gloomy kind, still the mind will be filled with a number of imaginary dangers. The nervous system, in the great majority of females, is far more easily affected with external impressions during parturition, than at any other time, and hence a word or a look, that would scarcely arrest the attention in any other state of suffering, would during labour give rise to the most dangerous consequences. The frightful stories which it is the delight of almost all nurses to relate, are productive of far more harm than is generally supposed. I have known more than one case, where the imprudent conversation of a nurse give rise to an almost complete suspension of the uterine action, notwithstanding that the labour had been going on for some time before the conversation took place in the most regular manner. It is therefore absolutely necessary, in all cases, to prevent as far as possible every kind of mental impressions of a depressing nature, and at the same time, it is well to inspire the female with as much confidence, as the nature of her case will warrant. It is in fact no great matter, whether the action of the womb during parturition be interrupted by fear, sedatives, or any other cause, when it is interrupted at all. I am therefore decidedly of opinion, that fear, from a

great many different causes, has altogether a far greater influence over the parturient process than is generally supposed, and although this particularly is the case amongst the rich, still it is extended in a greater or less degree to females of every rank in society.

The position of the body has unquestionably a very considerable effect in either increasing or diminishing the pains of labour. During a very considerable portion of the first stage, or until the orifice of the womb has been to a certain extent dilated, the female should be kept as much as possible in an erect or kneeling posture. I say an erect or kneeling posture, because it is impossible for a female to remain in the erect position during the pains, but more particularly when they are strong, and have been going on a considerable length of time. Although I think as much motion as possible should be made during a considerable portion of the first stage of labour, still the greatest care should be taken that such exercise does not produce too much debility, and thus become a cause of delay instead of a means of accelerating it. I am quite satisfied that exercise, although favourable when carried a certain length, yet when taken beyond what the powers of the system can sustain, becomes a cause of delay in the expulsion of the child in far more cases than it is generally supposed.

Of late years, the ergot of rye has claimed a greater share of attention than any other remedy, for the purpose of rousing the action of the uterus in cases of tedious labour, from the want of regular or strong labour pains; there was for a considerable time after this remedy was brought into pretty general use for the purpose of increasing the pains of labour, very great diversity of opinion amongst accoucheurs respecting its advantages, and notwithstanding that this has not as yet altogether subsided, yet it is becoming less and less every day. I have tried the ergot altogether in fifty cases of tedious labour, in which every circumstance was favourable for its employment, and I found in thirty-four out of fifty, that it had the effect of improving the pains

both in frequency and in strength. When it was given by the mouth, it was mostly in the form of decoction or infusion, but never in that of powder. From the trials I have made of the ergot in the form of decoction and infusion, I would decidedly prefer the former to the latter. It is not as yet known to what principle this remedy owes its active properties; there is one thing however certain, that it requires to be boiled for some minutes, after being reduced to the state of fine powder, before that principle can be completely extracted. When it is, therefore, used for the purpose of rousing the action of the uterus, it will either succeed or fail in accomplishing that object, according to the manner in which it is employed; this is at least the case, provided all other things be equal. The average dose of this remedy, which would appear to me to be the most successful, is about thirty-five grains of the fine powder, boiled in about half a pint of water for some minutes. I have always found it most active when dissolved in a pretty large quantity of water, and when given while the decoction was at a high temperature. If the decoction or infusion be given when it is at a low temperature, it will be a considerable time after it is administered before it produces any effect, and when it does, it will be so slight in many instances, that it can scarcely be said to do much good. I think that many of the failures of the ergot arises not from any want of a sufficient dose, but from want of its being administered in a suitable form. From the number of cases in which I have tried the efficacy of the remedy in question, in order to expedite labour, I think I cannot possibly be deceived relative to its advantages; but, at the same time, I am sorry that it will not be found by any means so generally successful as one would be led to suppose, on reading the accounts which are given by some accoucheurs of its advantages in almost every instance. I think the ergot, if even successful in two-thirds of those cases in which it is administered, is to be viewed in the light of a specific for the excitement of uterine action. No remedy, I care not for what disease it be em-

ployed, will uniformly prove successful ; and it is only in a considerable portion of cases that any medicine can possibly be expected to succeed. This medicine, I am satisfied, is much more certain in its operation when the decoction is employed in the form of enema, either by itself or in combination with common salt. The last mentioned substance is unquestionably a most important addition to the ergot, and one that should never be omitted, no matter whether the bowels be in a constipated state or not. The reason why it is a more certain remedy, when given in the form of enema than when administered by the mouth, is, I have no doubt, as has been already stated, owing to a much more intimate connexion subsisting between the uterus and the rectum, than between the uterus and the stomach. While the accoucheur is endeavouring to rouse the womb, he should, at the same time, try to excite every part into more powerful action, that can aid, in any way, the expelling powers of that organ. The ergot when, therefore, given in the form of enema, has the effect of exciting the diaphragm and abdominal muscles into powerful action, and of thus rendering the contractions of the womb more efficient.

I have in some instances combined with the substance in question a small quantity of hippo, and I am quite satisfied that the exciting effect was altogether much improved. When the decoction of ergot is used as an enema, without any addition, it should be pretty strong ; but if either common salt or hippo be added, it will succeed in a great proportion of cases, although it be very weak. For the simple decoction, one drachm may be boiled in a quart of water for fifteen minutes, and when it has cooled down to the temperature of about 104 Fah. it may be used. I think never more than half a pint should be thrown up at a time, although it should be repeated in that quantity every fifteen or twenty minutes, until the whole is employed, or else until the desired effect is produced.

In comparing the effects of different remedies for the purpose of increasing the action of the womb, I am of opinion that

many of those which I have mentioned in the foregoing observations, and which are very little in use, are more certain in their operation than others which enjoy the greatest fame. For instance, the ergot of rye, which is now very generally esteemed a specific, is not by any means possessed of the same advantages, I care not how it is administered, as a solution of common salt or hippo, either alone or combined together in the form of enema. I have succeeded in rousing the action of the womb in cases of tedious labour with common salt, when used in the manner I stated in a foregoing part of this paper, in a far greater proportion of cases than with the ergot of rye, which has acquired such celebrity.