AN ADDRESS ON THE SURGICAL ASPECT OF IMPACTED LABOUR.¹

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MR. PRESIDENT AND GENTLEMEN,—I feel much the honour you have done me in asking me to deliver your annual oration, but when I first received the communication from your secretary I had, as usual, much difficulty in the selection of a subject of which to speak, for although the triumphs of abdominal surgery are always fresh, yet the constant reiteration of points as to which the minds of most men are made up is apt to pall upon the taste. At the same time there are many points upon which it is impossible to make up one's mind till those who supply the material on which to form a judgment have taken us into their confidence, and till, by outside criticisms, we have been led into a correct line of practice.

I have first of all to observe that the progress of modern abdominal surgery has influenced surgery in general throughout its entire extent, a fact which may be abundantly illustrated, but which will be shown in one striking instance, namely, that the use of short ligatures, now universal, was distinctly the result of the practice arrived at first within the abdomen, and completely established only within the last ten or twelve years. You must have seen, as I have, the tedious manœuvres formerly in use which necessarily accompanied the use of the long ligatures, causing much anxiety to the house-surgeon, who had to go from bed to bed, pulling gently at the ligatures till they came away, and sometimes they would not come away, but remained for years, with the fistulous tracts, attached to important structures like nerves, frequently causing distress to the patient.

Of course the converse is also true, that general surgery has largely influenced the progress of abdominal surgery, but I think it is more true that the influence is exerted in the direction I first indicated. The influence of the recent practice in abdominal surgery has also had a very considerable effect on the practice of medicine, even to the extent of withdrawing large groups of cases from medical treatment into the realm of surgery. I need not recall to you how hopeless the treatment of a suppurating kidney used to be; how the case was kept month after month in the medical wards, where useless treatment by drugs was employed. Is is now dealt with successfully by nephrotomy or nephrectomy.

In the third great division of the practice of medicine, obstetrics, the prospect of the interference on the principles laid down by abdominal surgery is less striking; but even here it is to be hoped that our progress will not be without effect. The medical and surgical aspect of obstetrics is sharply defined, and I, who practise purely as a surgeon, is but little of obstetric work, and, save for the incidental occasional conduct of a case in which there could be any question as to the possibility of relieving a parturient woman by an opening through the abdominal wall, my association with obstetrics is absolutely negative.

I come before you this evening to risk a question before a body of men likely to give me suggestions distinctly trenching upon the department of practice with which I have just confessed myself as having nothing to do. It is certainly more than twenty years since I have seen a case of normal labour, and I ask your indulgence, therefore, if, upon purely obstetrical grounds, I should make a slip. I have done my best to bring myself up to date upon the matter by the consultation of all the authorities within my reach, but no man can indicate an exact knowledge of obstetrics unless he is in full association with its object. My purpose in this new inquiry is to examine whether our methods of dealing with impacted labour are not capable of improvement. I of course am not speaking about impactions that can be relieved by the forceps or by turning, but of cases in which the impaction is due to some deformity of the pelvis, or similar cases of an extreme kind. Such cases are met with in remote districts of the country, where the accurate measurements of pelvic diameters, as recommended by skilled obstetricians, are not practicable. It might be possible, under favourable circumstances and in highly-skilled hands, to say, before labour has begun, or during the early stages of the

process, that the diameter of the pelvis is, or is not, less than three inches, but, as a matter of fact, such a pronouncement is not within the skill of the ordinary practitioner; and, moreover, in the great bulk of the cases of which I am about to speak, labour would be too far advanced, and they may have already made tentative efforts at relief, so that an accurate measurement and knowledge of the real condition of the pelvis may become impossible; or they might, by the previous experience of the patient, by the knowledge of the fact that she had a previous impacted labour, which required the most serious means for overcoming the obstruction, have a knowledge which would guide them in the proper treatment of the case. If by any reason they came to the conclusion that the least diameter of a given pelvis was not less than three and a half inches, the authorities were agreed that it was a case in all probability by which delivery could be effected by the forceps, and if not less than three inches then podalic version would be successful. When, however, they came upon cases, more especially when they were unexpected, where the diameters of the pelvis were restricted below this, the difficulties became greater and greater.

I am not here to speak to skilled obstetricians, nor indeed am I prepared to accept their verdict upon the point, for ninety out of a hundred men who had to make their living by extending the practice of midwifery are not skilled obstetricians, are not under circumstances in which, had they even been skilled obstetricians, their skilled knowledge of the art could be maintained. They did not live with the full association and stimulus of hospital appointments and teaching engagements, with all the resources of skilled aid, and the most recondite costly appliances at their call. Men who existed under these favourable circumstances could maintain their high level of the science of the obstetric art, but with the majority of practitioners, the conditions of their life rendered this impossible. I find that the skilled obstetricians speak with authority on the one side as they themselves occupy it, but I wish to have the authority of another and a far more influential and, I venture to say, generally useful person, the general practitioner, and upon his decision, I think the future practice of obstetrics upon this vexed question must depend, whether it should remain what it is or whether it should be altered for the better.

I have to point out that impacted labour may arise in one of two ways: first, that impaction may be due to causes intrinsic to the fetus, such conditions being very rare and for my purpose, they may be almost dismissed. Within this class is comprised hydrocephalus, a very rare condition; distension of various parts of the abdomen or of the body generally; anasarca—one of the very rarest—or perhaps distension of one kidney from obstruction of the ureter, resulting in enormous hydronephrosis. So rare are these cases that it is indeed hardly worth while speaking of them even as exceptional conditions. In the great majority of instances the impaction results from causes intrinsic to the mother. We have therefore to deal with two groups of cases, one infinitely small and exceptional, so small as to be practically undeserving of attention—and that group might be dismissed with a remark that if the diagnosis were made of the true cause of impaction, the destruction of the child is a matter of necessity, for no one would advocate surgical interference with the mother on account of a fetus subject to any of the diseases or deformities I have just alluded to. I therefore pass on to the consideration of impaction due to the defects of the mother, and I say it is necessary here to mark out into subdivisions all cases in which the line of practice would be distinctly divergent, possibly not so much in the course to be followed as in the reasons for the proceeding which would have to be adopted. Thus the impaction might be due to cancer of the cervix or vagina, conditions in which there could be no doubt as to the propriety of interference with the mother and not with the child, for the reason that the mother was suffering from a disease which had already doomed her to a certain death whilst the fetus was not in any way affected, and consequently it would be far graver to be concerned with it than with the mother, if there be any choice of opposing interests.

You know, of course, as a matter of history, that embryulcia in such a condition for the mother is a very risky and a very deadly operation.

Next we come to the most important class of cases of impaction, where the difficulty arises from pelvic deformity, tumours of the uterus, or of the ovaries; generally speaking, indeed, the most frequent cases of impactions due to conditions in the mother. Here, again, there is a qualification which almost subdivides the

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line of treatment to be followed, not as a matter of choice, but as one of necessity, and that is as to whether you know the exact condition of the mother before labour has advanced to the position of impaction. If you are a skilled obstetrician and can assign the precise condition which will be found, your gifts will undoubtedly be a great help; or, better still, if you have an accurate knowledge of the condition of the patient in a previous labour, you will be still better able to elect the line of treatment which will be most to her interests. If you know, for instance, from your own experience or from knowledge received from your patient or her medical attendant, that the first labour has been terribly protracted, and had to be terminated at last only by evisceration of the child, your desires would be certainly considerably lessened to have the conduct of the labour in any case, but such information would be very useful to enable you to make use of one alternative which, without that previous knowledge, would never enter into your mind—you would in fact have no alternative—I mean the induction of premature labour. The great majority of cases of this kind, however, that come under observation, have not this illumination thrown upon them, I mean that of the preliminary investigation or the information which previous experience of the case has secured. There is no knowledge of the exact condition of the pelvis, and as a rule the knowledge that there will be serious impaction is only derived by its actual occurrence. As a rule the men who practise midwifery in this country and are called to attend the patients in the labouring classes in their confinements, are not asked and are not permitted to make a preliminary examination, which would enable them to determine the condition of the pelvis, and they are frequently kept entirely in ignorance of the facts of a previous labour which would have put them on their guard, and they knew nothing of the possibilities of the serious impaction in the case where it does occur till they are face to face with it.

No condition more trying can be placed upon the medical practitioner than the conduct of a case of serious impacted labour in an outlying district, far from the skilful aid of a skilled obstetrician; indeed, it may be far enough from the help or advice of his nearest medical neighbour. I have seen terrible instances of the results of prolonged efforts to overcome the impaction by the routine systems laid down in the books—first, the application of the forceps, then an attempt made to turn, then a prolonged, deadly, horrible operation for the evisceration of the child. I have seen cases in which the posterior wall of the bladder and the anterior wall of the rectum have been torn and destroyed by pressure, and the patient escaping, as the saying is, by the skin of the teeth after an operation in which one life has been lost, another nearly sacrificed, and the reputation of a third human being probably greatly injured. The whole thing is horrible, especially when we bear in mind that it is not the worst cases that survive in whom we see this terrible mutilation—in the worst cases, the mother shares the fate of her child—such cases are indeed deplorable. They are, however, by no means uncommon, for not a year passes in which I do not see cases of such damage to the maternal tissues resulting in dreadful fecal and urinary fistulas after long impacted labour, that I feel sure, in the interests of humanity, some reconsideration of our position is called for. I never get into conversation with a practitioner advanced in life, and with prolonged experience, from whom I do not gather in conversation that he has met with a number of such cases, the great majority of whom die.

On the other hand, I have been strongly impressed with the belief that the facility with which a perforator will relieve the head of a child of its contents, so that its diameter may be reduced half an inch to an inch, together with the reduced sense of the responsibility with which modern skill in obstetrics has induced us to regard the life of the child, has led to the perforator being more frequently used than it ought to be.

In conversation with a practitioner some forty or fifty miles from Birmingham, who had reached his three score years and ten, he told me that he had only twice had to eviscerate children to overcome impacted labour, in a practice which had extended over forty years in the one neighbourhood, whilst next day I heard from the lips of a general practitioner, who had not lived quite six years there, that he had, in that short experience, effectually employed the perforator no less than seven times. I cannot help thinking that in this instance—and my experience in this direction is not confined to it as unique—there was displayed a far too slight regard for the interests of the child.

In discussing the rules for our practice at this point we bring

in discussion the treatment of impaction at some point or other within the pelvis where the diameter is below three inches, perhaps below two and a half. In such a case, according to Simpson, the induction of premature labour would be indicated, but this would certainly not apply to the case of a primipara, for I assume that in the great majority of such, the practitioners are called in to women already well advanced in labour, or in whom at least labour has begun before they know anything at all of the complication which they are to overcome, where they find, in fact, the impaction already taken place in face of greatly reduced pelvic diameter.

It is clear, of course, that where a previous knowledge of the condition has existed, the choice of induction of premature labour is one which ought to be fairly discussed, and probably, in the majority of instances, accepted; but in those instances where this is not the case, the good regulation practice, according to the books and the teaching of the schools, leaves nothing but the adoption of an eviscerating operation for the destruction of the child; and it is possible also that doubt may be expressed even in cases where the notice has been given, and where the induction of premature labour may be adopted, for authorities differ upon the value to be placed upon this proceeding, even to the extent of a rendering of its mortality from 5 to 50 per cent. If the mortality be found not to exceed 5 per cent., I think there is nothing to be said against it, but if it approximate anything towards 50, or even 30, then I say most emphatically the proceeding is to be condemned, and now I am speaking of maternal mortality.

Of the mortality amongst the children thus prematurely removed, all authorities must admit that it is high; and then when we come to deal with cases in which the reduced pelvic diameter is still more a matter of distortion, the induction of premature labour must be so advanced as to come within range of the induction of abortion at the third or fourth month in order to remove all risks of the necessity for evisceration. Upon this point, therefore, we may with justice narrow down the theme which I wish to discuss, and that is when a practitioner is face to face with a case of impacted labour at the full time, in which he has had no previous knowledge of the possibility of complication, in which efforts at delivery by long forceps and podalic version are evidently unlikely to prove effectual, or actually have done so on trial, what is to be done?

The routine treatment advised by authorities is that of evisceration. I propose to offer the alternative, which I think has greater and stronger arguments in its favour, and it is to test the validity of these arguments by the opinion of men who have the best means of discussing them and the best knowledge of the real state of the facts that I appeal to my professional brethren who are in general practice under such circumstances as to relieve them from the charge of being skilled obstetricians; for I do not think the skilled obstetrician ever has the experience or the knowledge which justifies a verdict upon the question. At any rate, it is perfectly certain that his verdict would be one that could not be applied to the general practice of obstetrics throughout the country.

Then passing on to discuss the operations at present in vogue, I have to enumerate evisceration, generally beginning with perforation of the head or one of the large cavities of the body, and removing the child piecemeal. As I have seen this operation performed, and had in one or two instances in my early life to perform it myself, I cannot imagine anything more repulsive and horrible. It is open to a great many objections, as in the first place it involves the investment of a considerable amount of money in an extensive and costly armamentarium, which usually lies rusting in a corner year after year, until the rare occasion presents itself for its use. Such an armamentarium must necessarily be possessed by comparatively few men, and there would be always a tendency, as I have already illustrated, for timid men to resort to the destructive operation under less severe conditions than altogether justified it. The operation is an extremely complicated and difficult one, occupying in the majority of instances a very long period of time for its accomplishment, necessitating, in those instances where it is most required, great bruising and injury to the maternal passages; it involves of necessity the death of the child, and, finally, it leaves the mother, if she recovers, exactly where she was, to undergo a similar risk again.

As an alternative to such an operation, I have to offer a modification of our old friend the Cæsarean section; but it must be borne in mind that there is great difficulty and no small danger by reason of the constant want of precision in modern nomenclature concerning operations. The operation as at present known by that term

consists in principle of the preparation of an artificial channel between the uterus of the living or dead mother and the outer world. The original meaning of the operation was restricted to the removal of a living child from a dead mother, and the conditions of the operation were stringently limited by the canons of the Catholic Church. It was the duty of the obstetrician to wait till the mother was dead before performing the operation. In the interests of the child being in eminent danger from any cause, it was imperative to have the child baptised as long as indications of life remained in it; and it is well known that the canons of the Catholic Church lay a far greater stress upon the duty attached to preserving the child than is recognised as part of the ethical code of modern obstetrics. Whether we have rightly or wrongly departed from this is a matter for individual opinion; but I am strongly disposed to believe that we have too little considered the cogent arguments of the fathers of the Church, through which have descended the Christian doctrines for many centuries uninterruptedly.

A large number of new operations have been suggested as modifications of the Cæsarean section to which the names of persons have become unfortunately attached, but in none of these, with one exception, is there any detail of a new kind of sufficient importance to be lifted into the position of a particular item of nomenclature. None of these details, with the exception of the one about which I am about to speak, have proved of sufficient importance in practice to justify us in believing that they are in any way essential to success. The great majority of proposals are simply encumbrances of needless details; and I dismiss them, therefore, as proceedings which are altogether unsuited and unsuitable for the daily practice of men who are neither scientific obstetricians nor practised abdominal surgeons.

The exception of which I desire to speak is that principle of amputation of the pregnant uterus introduced by Professor Porro, which in my experience and in my belief will revolutionise the art of obstetrics in those conditions in which the relations of mother and child are of the most serious kind.

In the old Cæsarean section, no matter whether applied to the living or the dead mother, the uterus was not removed. Professor Porro's proposal is to perform a Cæsarean section, and then to remove the uterus by a simple process of amputation, and this constitutes a most essential difference to all other proposals. The difference may best be expressed by figures, for it seems to me that in cases operated upon by the adoption of Professor Porro's principle, the mortality need not exceed 5 or 6 per cent., whilst we know that the Cæsarean section gives a mortality of no less than 90 or 95 per cent. Sydney Smith used to say that no one ought to perform the operation of Cæsarean section unless he were infallibly certain that he was infallible. It used to be a byword in Scotland that the operation was never successful unless it was performed by a cow, an allusion to the fact that in cases in which accidentally a cow had ripped open a pregnant uterus, several recoveries had taken place, whereas hardly a patient was known to have recovered even when the operation was performed by a special surgeon.

The reasons for the want of success attending the performance of Cæsarean section are not far to find. In the first place, the operation has to be performed in the great bulk of instances by men who have had no kind of special training, not only in abdominal surgery, but in surgery generally. Most of the operations fall to the lot of men in outlying districts, and this was undoubtedly a factor of great importance in the consideration of the mortality. The cases were not operated upon in their earlier stages, but only, as a rule, after a tremendous amount of ineffectual effort had been exercised to effect delivery in other ways. In other words, the operation was only practised as a *dernier ressort* and in *articulo mortis*. The maternal parts were extensively lacerated or contused, and the mother was in the worst possible condition for such a serious undertaking. No wonder the mortality was high. Then a third and important factor in the mortality was the retention of the uterus, occupied by a large wound, through which probably the hæmorrhage was in a large number of cases fatal, and even when this objection was obviated an organ was left suffering from serious traumatism, the inflammation following which is one of the deadliest perils a woman has to undergo. You all know very well that there is no region in which the inflammatory process is so uncontrollable as in the parturient uterus. So strongly have I been impressed with this that I am prepared to undertake, in the treatment of the so-called puerperal fever, removal of the suppurating uterus as probably the only treatment which we shall apply of a really satisfactory kind.

When we open the bodies of women who have died after confinement from inflammation of the uterus, we find a suppurating peritonitis, which is only a feature of the case. The real trouble is that the enormous venous sinuses of the uterus are filled with decomposing and purulent blood. This would therefore of necessity constitute a large element in the mortality of the old Cæsarean section. Removal of the uterus would obviate it. Finally, the removal of the uterus would entirely relieve the patient from the risks of again being placed in a similarly dangerous position. This question, of course, is an ethical one upon which considerable difference of opinion may be expressed, but I, for one, have no hesitation in arguing for the view that if on the one hand we have a means of relieving a patient for the time, and on the other hand a means of permanent cure, we are bound to accept the method of permanent cure instead of one of mere temporary relief. My thesis is therefore contained in this question: Whether, when you have before you a case of impacted labour arising from causes which you have been unable to ascertain beforehand and in which neither the forceps nor turning are available for relief, it will not be better to put all eviscerating operations on one side, and proceed to remove the foetus through the abdominal walls of the mother?

Arguments for such a proposal must, of course, be largely statistical, and are apt to be made more or less misleading for the simple reason that mere statistical returns cannot comprise the whole history of the cases, and the most dissimilar cases are apt to be grouped together. Statistical investigations must therefore, to be of any value, comprise a very large number of instances in order that they may be qualified, or they must consist of a small number in which the conditions are most rigidly defined; in fact, the total record must be so comprised as practically to annihilate what may be called statistical display. It would thus be nonsense to consider in the same group cases in which impaction had been found beforehand, and those in which amputation of the pregnant uterus had to be performed upon patients only after a tedious suite of useless efforts of other kinds. In the former state, the patient would recover, and in the other there would be a risk of an immense mortality. In the latter series, it was the mauling previous to the surgical operation and not the operation which killed the patient.

We might, therefore, draw some conclusion from the material which is available. In this way all statistics of the kind are liable to mixed qualifications; but even qualified as they have to be, we may draw some conclusion from instances where statistics of a very extensive kind are obtainable. Thus, according to Ramsbotham, the simple application of the long forceps has a mortality of something like 15 per cent., and Simpson, with all his advocacy of podalic version, could not claim to be more successful.

All the modern authorities on craniotomy are nearly agreed that this operation has a mortality of at least 20 per cent., and this would probably be very much emphasised if we could get hold of the return only of the cases in which the operation was really necessitated by a small pelvic diameter, and had to be carried out to the piecemeal removal of the child. Even the mortality of the induction of premature labour is said to approach nearly 15 per cent. for the mother, whilst for the child it is certain that not more than half a chance is given; but even these statistical statements are, I think, only one side of the question. In forceps application the mortality of the foetus is well known to be about 1 in 7 or 8, whilst in turning it is 1 in 3 or 4. In craniotomy, of course, the child dies practically to the extent of 100 per cent. On the other hand, in cases of amputation of the pregnant uterus, the mortality for the child is almost nothing, certainly not 5 per cent. as against premature labour, in which half the children are lost, and the question therefore narrows itself down to the diminution of the mortality for the mother.

I am perfectly well aware that the ethical view upon this question will be immensely modified by the accident of the particular school in which any particular writer has been brought up. Upon such a question every man is entitled to have his own individual opinion, but it is hardly right to extend this opinion into a pronouncement from a school unless there be a semblance of critical authority to back it. The old discussion between the application of the forceps and the operation of podalic version was an illustration of this. When it was discussed between the Dublin and the Edinburgh schools, many present must remember how fiercely this battle was fought, and upon the point chiefly of the right of the child to a consideration when the mother was in danger. The teaching of the Dublin school was, of course, strongly

tinctured with the teaching of the Catholic Church, whilst that in Edinburgh was not less strongly coloured by the school of Calvin.

Authorities dating from Rome hold very stringent views in respect to the propriety of saving the child if possible, and I have to urge that views promulgated by a church which was the only one that had given the matter a special and distinct consideration are entitled to respect from an ethical point of view. One result of the discussion that I am speaking of between Edinburgh and Dublin was an effort of compromise—which, like most compromises, was highly unsatisfactory—under which a rule was adopted that the obstetrician was to wait till the death of the child before proceeding to an eviscerating operation. The only result of this could be the certainty of destruction for the child and the enormous increase of the hazard for the mother. Personally, I am disposed to endorse the view that the child is eminently entitled to serious consideration, and I think that there has slipped into our training a lamentable tendency to disregard the rights of the child.

I would not go so far as to say that the child has equal rights with the mother, but certainly its life ought to be the subject of a far more serious consideration than is at present given to it. This is one of the reasons why I have taken upon myself to advocate an operation which involves vastly less risk to the mother and gives a thoroughly good chance of life to the child. My thesis is that eviscerating operations ought to be entirely discarded in favour of amputation of the pregnant uterus, except in the small and exceptionally insignificant group of cases in which the impaction is due to causes intrinsic to the child, and where the life of a deformed or diseased foetus is really a *quantité négligeable*. I believe that the operation which I advocate is simpler in its performance than the application of the long forceps, and that any man who could do the one could certainly do the other as I propose to lay it down before you.

Eviscerating operations are always of the most protracted and terrible kind, absolutely fatal to the child, largely destructive to the mother, and may possibly be fatal even to the operator himself, who runs no small risk of injuring himself in the removal of the sharp fragments of bone. In advocating the performance of abdominal section in such cases it becomes perfectly evident that simplicity must be the order of the day. We must have no rival incisions nor complicated kind of sutures, but a simple, straightforward method of proceeding which may be understood by anyone and practised by the least competent amongst us.

You must bear in mind that in the abdomen containing a pregnant uterus the conditions must always be alike, and that therefore this operation will always differ from all other instances of abdominal section, where, almost without exception, variety is the order of the day. Given an abdominal tumour, it is but seldom that its exact conditions and nature can be defined before the proceeding for its removal be undertaken. Complications of endless variety and extent are met with from case to case; but in the respect of a pregnant uterus the conditions and relations of parts are subject to variations of only infinitely little importance, and which, for the purpose of any large number of operations, may be entirely disregarded.

The arguments, therefore, for the proposal that I have to make are that Porro's principle of amputating the pregnant uterus has reduced the maternal mortality of these operations so enormously that we may well hope to see it reach the point at which ovariectomy has arrived, so that not more than 3 or 4 per cent. of the women subjected to it may die; but, even allowing a somewhat higher average for men less practised than those like myself in abdominal surgery, we may concede 5 or 6 per cent., and I ask, therefore, whether it would not be a brilliant result to save some sixty or seventy more of the mothers in every hundred than we do at present and 95 per cent. of the children. Then there is the strong ethical question that for the women who survive a cure has been effected, and the absolute prevention of the recurrence of the terrible position in which they have been once placed is secured; and this risk of recurrence is not a vain one, as everyone must know who has had in his practice instances where craniotomy or even premature labour has been necessitated time after time in the same patient. Far above all the demands for such an operation as this lies the demand for simplicity, and therefore I deprecate the introduction of any complicated detail into such an operation as this—indeed, I deprecate the introduction of any detail into any operation—which in the least degree tends to complicate its per-

formance, or renders more cumbersome and less intelligible the instruments required for its performance. The less elaborate and complicated the instruments are, and the less tedious and difficult the manœuvres, the greater the chance of any surgical proceeding becoming popular as well as successful.

It was practically impossible for every practitioner to be provided with all the numerous instruments which are wanted to make up the paraphernalia of the scientific obstetrician, while he would inevitably have at hand the few simple instruments required to perform the operation for which I am now arguing that it ought to be substituted for all the destructive and mutilating operations on the foetus in impacted labour. In enumerating what is required, let me first of all say that they are what you may carry in your pocket case: two or three pairs of catch forceps for arresting bleeding points, a small sharp scalpel, two or three bayonet pointed suture-needles, some silk, a piece of india-rubber drainage tube, and two needles of steel wire, and none better than the ordinary stocking knitting needle can be found. If you wish to be very scientific, you may add a *serre-nœud* such as was originally invented by Koeberlé, or as modified by Bantock or myself, but it is not in the least degree necessary.

The first step in the operation is the abdominal incision, four inches in length, involving first the skin and then the muscles down to the sheath of the rectus, all of which ought to be divided by a sharp knife at one blow; then the tendon of the one or other of the recti is opened, the muscular tendons fall aside, the posterior layer of the tendon is nipped up by two pairs of forceps and divided between them. The extraperitoneal fat is treated similarly, then the peritoneum raised again by two pairs of forceps, a slight notch being made between them; and the moment this is effected air enters, and all behind falls away. No director is required, nothing but an observant pair of eyes, lightly-applied forceps, and a delicately-applied, sharp-cutting knife. The finger is then introduced into the peritoneal cavity, and the relations of the uterus and bladder exactly ascertained. The peritoneum is then opened to the full extent of the four-inch incision, and the cut edges of the peritoneum are seized on each side by a pair of forceps and are pulled severally to the respective sides. No better retractors can be employed.

The piece of india-rubber drainage tube about eighteen inches or two feet long is now held as a loop between the fore and middle finger of the left hand, and is by that means slipped up over the uterus and pulled down over the cervix, passing the fingers behind the cervix to see that coils of intestine are not included in it. One hitch is then made on the tubing when it has been got as far down as possible, and it is pulled as tight as is consistent with safety. The second hitch may be made in it, but what is far better, an assistant keeps the tube on the strain, so that the one hitch will be quite enough to effect the most efficient clamping.

A small hole is then made in the uterus, just large enough to admit the finger; if it is possible, the position of the placenta may then be ascertained; if not, the right forefinger follows its colleague, and between the two, by gentle rendering, an aperture is made in the uterus, and the leg of the child is seized. The foetus is then carefully delivered feet first, and this, despite all the authorities to the contrary, is by far the best proceeding; less blood is lost, and it requires but very gentle manipulation to relieve the head.

As soon as the foetus is removed, the placenta is sought for, and removed similarly; the uterus itself, being then completely contracted by this time, is pulled out of the wound, and the elastic ligature is tightened once more, and finally arranged round the cervix, and the second hitch is applied. The main details of the operation are now completed; all that is required is to pass the needles through the flattened tube and through the uterus, and out at the other side, forming a St. Anthony cross or two parallel bars to support the weight of the uterus and the stump, and to keep it outside the wound. A complete toilet of the peritoneum is then made, not forgetting the anterior vesical *cul-de-sac*; stitches are passed in the ordinary way to close the wound accurately round the uterine stump.

The uterus is now removed close down to the needles and strangulating rubber tube, so as to leave a little tissue above. It does not do to run any risk of the ligature slipping off, though this is hardly possible after the needles have been placed carefully through the structure of the tube. A little perchloride of iron is then rubbed gently over the surface of the stump; it is dressed with dry lint and some dry cotton gauze, an ordinary obstetric

wrapper is put on, and the operation is at an end. The operation really takes very much less time to perform than it takes to describe, and, as I have said before, because the details must always be the same it is an operation in which there never can arise any unforeseen or unexpected difficulty.

Only one other suggestion I am disposed to lay before my obstetric brethren for the further extension of this operation, that is, the case of placenta prævia, a condition which is one of the most fatal that can affect a parturient woman. My belief is that the fatality—and it is entirely confirmed by my experience—is of a twofold nature. First of all by the terrific hæmorrhage involved by laceration of the enlarged sinuses in the lower uterine zone at the time of labour, no matter how slowly that may be effected; and secondly by the suppurative of the same cavities and the consequent systemic infection. The foreign schools here again differ materially in their directions as to how the displacement is to be dealt with. Those who regard the safety of the child as of paramount importance, direct that the child should be delivered immediately upon complete separation of the placenta. Those who have less regard for the living child direct that the placenta should be removed and the delivery left to nature, so as to run as little risk for the mother as possible, and, from this point of view, there can be but little doubt that the second scheme of treatment is by far safer for the mother, but it involves almost certain death for the child, and even under this scheme the maternal mortality is terribly high. If I had to deal with a case of complete placenta prævia from the beginning of labour, and could carry out what I believe would be the ideal of surgical treatment of this condition, I should amputate the pregnant uterus. I should thereby save the child with certainty. I should relieve the mother with perfect safety from death by hæmorrhage; and, by removing all the tissues in which large suppurating venous sinuses were present, I believe I should relieve her with almost equal certainty from the secondary risks. There is, of course, here not an argument which obtains in the case of deformed pelvis that you relieve the patient from immediate risk, but the terrible nature of the disaster, and the fearful mortality involved in it, is, I think, justification enough for the careful consideration of any suggestion likely to reduce the mortality.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, ETC.

THE EMBOLIC ACTION OF PENNYROYAL.

FROM what Dr. Marshall states in the JOURNAL of March 8th it appears that the therapeutic action of pulegium as an emmenagogue is very imperfectly known. The drug is used very freely by many married women to hurry on delayed periods. One lady told me that she always kept a supply, and took large doses if the menses did not come on. She was much distressed to find that the drug failed to have the desired effect on the occasion I saw her, and added: "My sister-in-law takes it regularly when she passes her time, and invariably finds the period to come on in three days." I made some inquiry regarding the practice, and find that among many classes it is recognised as a tolerably certain abortifacient, and esteemed as less hurtful than aloes, savine, cantharides, ergot, elaterium, croton oil, black hellebore, squills, or even borax. At the same time it is very questionable if any of these drugs can be regarded as absolutely certain to interrupt gestation. Given a healthy embryo in a healthy and normally placed uterus, it is by no means easily injuriously affected. But if by causing irritation or congestion of the uterus an early abortion is once procured, it is very probable that the process may be repeated indefinitely. I cordially agree with Dr. Marshall's suggestion that greater precautions should be enforced regarding the sale of such drugs.

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ON MUMPS.

DURING the present epidemic of influenza, I do not read in the medical journals that it has been associated with inflammation of the parotid glands (mumps). In my practice I have had numerous cases of Russian influenza, four of which at the end of a week

have terminated in parotiditis. In one case that I was called into in the latter stage of the disease, one gland suppurated; the others rapidly yielded to salicylate of quinine. I gave the salicylate of soda in a mixture, and the quinine in milk in alternate doses.

Some cases of Russian influenza that I have treated have left a persistent cough, with pain between the fourth and fifth ribs on the right side; the region of the pain could almost be covered with the tip of the finger: over the region I have applied a liquid blister, and the patients have found great relief in Burroughs and Wellcome's tablets of chloride of ammonium.

Hull.

THOMAS JACKSON, M.D.

FÆCAL EXTRAVASATION INTO THE PERITONEAL CAVITY.

BETWEEN two and three years ago a case of this nature occurred in my hospital practice. An elderly woman suffering from a large mass of rectal cancer was admitted into the London Hospital for obstruction. Her abdomen was much distended, her face pinched, and pulse thready. Operation being urgently needed, and as our house-surgeon, Mr. Haslip, was anxious to have one of these cases, I superintended while he operated. The sigmoid was pulled out as far as we could get it, the patient turned on her left side, and after packing sponges on either side of the gut, this was opened, the contents flowing into a porringer while the abdomen was gently massaged. By some accident the gut partially slipped, and liquid fæces ran freely into the peritoneal cavity. The opening in the bowel was then temporarily plugged, and the peritoneum well washed and cleansed, and the gut secured in the manner I usually adopt.

This *contretemps* to an otherwise excellently executed operation had no ill effect, as the patient made a rapid recovery, and left the hospital much relieved. This case shows that temporary contact of fæces with the peritoneum is not necessarily harmful, and Mr. H. Cripps's instructive case goes still further, as it demonstrates the tolerance of the peritoneum to the contact of fæces for some hours. The cases also teach another important practical lesson, and one which I have inculcated for several years, namely, that in inguinal colotomy, or sigmoidostomy, as I prefer to call it, the gut should be opened at once, as this can usually be done without risk of extravasation if the bowel be pulled out and the patient placed on the left side before opening the bowel. I have adopted this plan in several cases with entire success. The relief demanded in these extreme or late cases is so urgent that it is well to know how to avoid peritoneal extravasation, and also how to deal successfully with it should it occur.

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H. A. REEVES.

URETHRAL CALCULUS ATTACHED TO AN OLD LITHOTOMY SCAR.

R. G., a Mussulman boy, aged 13, had had lateral lithotomy performed on November 29th, 1881. He was admitted into the Bannu Dispensary on February 16th, 1890, with a recurrence of calculus. On passing a sound, a calculus could be detected in front and below the neck of the bladder, and on examining the perineum a large amount of cicatricial tissue was found to exist in connection with the old lithotomy scar, causing an enlargement of about the size of a pigeon's egg. At the deepest part of this tissue the calculus could be felt. A lithotrite was passed in the hope of pushing the stone into the bladder and crushing it there; but as only a portion of it was dislodged I performed lateral lithotomy; by this means I removed a portion from the bladder, the remaining fragment I had to dissect from the scar tissue in the perineum. For the sake of description, the stone may be said to consist of two portions, namely, one measuring half an inch, ascending from the scar tissue upwards and backwards, and joining the second or horizontal portion, which bears a mould of the urethra, and measures an inch and three-eighths in length, the vertical and lateral diameters being about one-third of an inch. The weight of the calculus is 26 grains.

Edwardesbad, Punjab.

L. J. PISANI, Surgeon, I.M.S.

THE Chair of Surgery in the University of Halle, left vacant by the death of R. von Voikmann, has at last been filled up by the appointment of Professor Mikulicz, of Königsberg. It is said that Professor Bramann will probably succeed Professor Mikulicz at Königsberg.