INDICATIONS IN OBSTETRIC SURGERY.*

BY

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In a recent article, J. Whitridge Williams(1) sounds a warning against the "*furor operativus*" which seem to have overtaken the profession in the reckless and frequently inopportune performance of Cesarean section. He attributes it to defective medical training. This, I believe to be true and to be the crux of the whole situation. Not only does it apply to Cesarean section, but to all obstetric operations. Wherein is the fault in the medical, or rather obstetrical, training of our students and practitioners? Unfortunately, only a comparatively few favored ones are privileged to take a clinical hospital course under some of the masters of the obstetric art. The vast majority are dependent on their college teaching, supplemented by further reading in text-books and medical journals. The fault, I believe, is in the manner in which we teach and in which our text-books treat of indications, necessary conditions, and contraindications in operative obstetrics.

This criticism applies to Williams' text-book, no less than to all of the others. Our students are not trained to think obstetrically.

In reading over the indications for forceps, podalic version, Cesarean section and other operative means of delivery in something over a dozen different text-books in my library, my wonder grew, not that there is so much poor and ill-advised operating, but that there is not more. For, in these various books, whose authors are acknowledged authorities, the same conditions are named as "indications" for various extractive operations. Indeed, one could find authority for almost any operative attack in a given condition. For instance, as indications for forceps extraction are given, all conditions endangering the life of mother or babe, by almost all the authors(2), (3), (4), (5), (6), (7), (8), (9), (10), (11), (12), (13), (14). The same conditions are given as indications for podalic version and extraction by some(3), (5), (6), (7), (8), (11), (12), (13). Most of them qualify this class of indications for version by such statements as—"if the natural course of the head presentation is less

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favorable to mother or child than the artificially produced breech"(3), "where breech is more favorable for delivery"(4), "provided forceps delivery is not safe or practicable"(5), "where the head is floating or but slightly engaged"(7), all of which is equivalent to saying: "where forceps is contraindicated and version indicated." Several authors(6), (9), (11) give disproportion between head and pelvis, and malpositions or malpresentations as indications for forceps, conditions which, *per se*, should be considered contraindications to forceps.

The lack of proper obstetric thinking is accentuated in one text-book on operative obstetrics(9) in the statement "where the head is high up and reposition and *forceps have failed*, version is indicated." And, another(8) gives version as being indicated "where there is impaction of the fetus with great distention of the lower uterine segment and threatened uterine rupture." Again, we have obstetric indications made easy by one author(11) who gives as a good "rule of thumb" to guide the obstetrical practitioner the following: "Apply forceps in head presentations wherever the presenting part remains stationary for two hours in the second stage of labor." It appears to me that anyone who tries to draw his indications for forceps by any "rule of thumb" is a rather unsafe individual to entrust with an instrument of such dangerous possibilities as the obstetrical forceps. We can readily imagine the results were such a one to apply forceps to the head which had remained "stationary for two hours in the second stage" because of highly contracted pelvis, brow, posterior occiput, face, hydrocephalus, obstruction from tumor, etc. To be sure, there are discussions in the text of all of these books which would enable one to decide whether there were present "the necessary conditions" to really indicate the operation in question, or some other.

But, the "indications" for a given operation, especially, as they are usually emphasized in the text, are most likely to be impressed on the student's mind and the other conditions necessary to determine the particular operative procedure are not likely to be given the consideration which they deserve. In other words, the student is encouraged to memorize "indications" and base his operative judgment on them, rather than on proper obstetrical thinking and reasoning.

When we read in recent literature such articles as "The Rôle of Abdominal Cesarean Section in the Treatment of Eclampsia"(15), "A Consideration of Vaginal Cesarean Section in the Treatment of Eclampsia, etc."(16), it is small wonder that a "*furor operativus*"

has seized the profession and the result is illustrated in the case cited by Williams of the surgeon who did a Cesarean section on an eclamptic multipara whose os was more than half dilated.

Nearly all the text-books name under indications for a given obstetrical operation, all conditions in which the given operation may eventually become indicated. Under "necessary conditions," they then give the conditions which really indicate the operation in question. This, to my mind, is illogical, and leads, I believe, to improper obstetrical thinking, which has as its results, premature and improper attempts at operative delivery. Certainly, the results which we see, hear and read of, in the way of operative work in obstetrics, would seem to bear out this statement.

Some years ago, in speaking to a fellow practitioner of a case of eclampsia in a multipara, eight months pregnant, I said I had done an instrumental dilatation of the os, podalic version and extraction. He immediately asked: "Why podalic version and extraction and not a forceps delivery?" The fact that the patient was a multipara, only eight months pregnant, evidently did not impress him, he merely had in mind the fact that "eclampsia is an indication for forceps." To-day, I presume the question would be: "Why not a Cesarean section?" This line of reasoning, or lack of reasoning, is, I believe, due to the method of handling the subject in teaching and in text-books, in short, herein lies, in great part, the defective obstetrical training to which Williams refers. So, for several years, I have endeavored to teach operative obstetrics to my students in an entirely different way; one which, I believe, trains them to think obstetrically. Thus, I hope they will learn to base their operative work on obstetrical reasoning, rather than to depend on memorized indications, frequently ignoring the "conditions necessary."

A brief outline of this plan, I would like to present for your consideration.

By indications, I understand and mean, conditions which require or make advisable a given operation. By contraindications, I understand, conditions which make an operation dangerous and inadvisable. By "necessary conditions," I understand and mean, local conditions which must be present and can be obtained before proceeding to the indicated operation; but, whose absence does not contraindicate the operation in question but rather indicates the necessity of some procedure to bring about the required condition before proceeding to the indicated operative extraction.

Indications, I divide into three classes:

1. Those conditions which determine the necessity of operative interference; which call for the termination of pregnancy or labor.

2. Those conditions which indicate the necessity of operative procedure to prepare the passage or passenger for the operative extraction.

3. Those conditions, which indicate the particular operative extraction which is to be performed.

The first class of indications is composed almost entirely of general conditions, indicating danger to mother or child. Such conditions of the mother as pulmonary tuberculosis, advanced heart disease, pulmonary edema, nephritis, exhaustion of the mother from prolonged labor, eclampsia, etc., and of the fetus, of increasing or decreasing heart rate, escape of meconium in head presentations, prolonged pressure on the fetal head, as evidenced by increasing caput succedaneum, etc., give indication for the termination of pregnancy or labor, rather than for the particular operation or operations by which it is to be accomplished. Yet, nearly all the authors give these conditions as indications for forceps, and then proceed to discuss whether forceps, version or some other method of delivery is really indicated in a given case.

In the second class of indications, those which indicate the necessity of some operative procedure to prepare the passage or passenger for delivery, we have:

(*a*) The indications for operation on the bony pelvis in case of moderate contraction, such as pubiotomy. In considering this class of indications, we have to deal with the question as to whether the pelvic deformity is of such degree as to contraindicate delivery *per vias naturales* and to indicate or make preferable delivery by Cesarean section. (The absolute and relative indications.)

(*b*) The indications furnished by the os, if it is not completely dilated, it must be dilated by operative means. If the case be one of terminating pregnancy, and time permits us to initiate normal labor, we may introduce bougies, bags, or pack the cervix, etc. If the urgency be great, however, as in the case of placenta previa or abruptio placentæ, or if the cervical conditions are too difficult to overcome, manual or instrumental dilatation, vaginal hysterotomy or Cesarean section may be indicated. If the case be already in labor and pathological conditions of the cervix render normal dilatation unusually difficult, or conditions arise which indicate the necessity of terminating labor before complete dilatation of the os, we have to decide between manual, instrumental or bag dilatation, deep cervical incisions and vaginal hysterotomy. Here, I would like to say a word

against the requirement, as laid down in most of the text-books, that "the os must be completely dilated *or dilatable*" before proceeding to an operative extraction. To my mind that requisite condition should read "the os must be completely dilated" to emphasize the necessity of having the os completely dilated before proceeding to the indicated extraction.

(*c*) The condition of vagina and perineum, indicating the possible necessity of thorough dilatation or a possible episiotomy.

(*d*) The presence of obstructing tumor, which may indicate the necessity of Cesarean section.

(*e*) The indications furnished by the fetus: Malpositions and presentations which may indicate the necessity of some form of version on the head or podalic version to favor the normal course of labor, or permit of rapid extraction by operative measures; or in case of fetal malformations or of neglected malpresentations or positions, which may necessitate a mutilating operation on the child.

The third class of indications comprise those conditions which indicate the particular operative extraction to be done. Here our conditions will indicate forceps, version, or perforation and craniotomy, where delivery *per vias naturales* is indicated.

In a given case, then, our consideration will take the following course: Are conditions present indicating the necessity of terminating pregnancy or labor? That being the case, is delivery *per vias naturales* possible or preferable? This indication is furnished by the relative size of passage and passenger, and the presence or absence of an obstructing tumor.

In case of imminent danger to mother or child, as by placenta previa or abruptio placentæ, conditions indicating a pelvic delivery may possibly be ignored and the case treated surgically by section as giving a better prognosis than by the slower obstetrical method with increased danger to both patients.

Here, too, come into consideration the so-called border-line cases, and an operation to enlarge the pelvic girdle, such as pubiotomy, may be indicated. However, it is not my purpose to enter into a discussion of all obstetric surgical problems in this paper.

Delivery *per vias naturales* being indicated, we have next to consider the condition of the os. Is there sufficient opening to permit of delivery, and if not, what operative procedure is indicated? The os being completely dilated, either naturally or artificially, we have finally to determine the method of extraction indicated.

Forceps and podalic version should not, at least theoretically, be

considered as competitive extractive operations in a given case. Conditions which indicate the one, contraindicate the other and *vicé versa*. Practically, however, our diagnostic ability is, at best, but humanly fallible, and it may be justifiable in what might be called a border-line case, to tentatively try forceps and in case of a mistake in judgment, based on an error in diagnosis, proceed to a properly indicated version. But, to make failure in a forcep attempt the indication for a version, as one text-book does, seems to me to be illogical and conducive to dangerous operative attempts. Forceps are indicated whenever it is necessary to terminate labor and the head is well engaged in the pelvis in proper position. Where the head is just engaging in the brim in a malposition, such as posterior occiput, face, brow, or parietal presentation, and the indications for terminating the labor are present, I believe podalic version and extraction are the indicated procedures. Where possible a version on the head to correct the malposition or presentation and then forcep extraction, may be the operation indicated. Podalic version has, however, served me best in these cases.

If the head is floating or but poorly engaged, forceps are contraindicated and podalic version indicated. Some authorities give forceps on the floating head, as one class of forceps operation. This, I believe, to be vicious teaching, and, where followed, I can readily see how forceps can become the "bloodiest of instruments," as one authority has characterized them.

We find in some text-books moderately contracted pelvis and malpositions and presentations of the head given as indications for forceps. These conditions should, *per se*, be classed as contraindications to forceps delivery. I believe they are most frequently indications to leave the patient alone and allow nature to overcome the difficulty. This, she can do far better than we can by forcible attempts at extraction which then become mere exhibitions of brute force to overcome the resistance, with consequent damage to the maternal soft and bony parts and to the fetal head.

It is true that in overcoming these difficulties, Nature may wear the woman out or the baby may be endangered and then termination of the labor is indicated. The malposition or malpresentation having been corrected by Nature's efforts, or the disproportion having been overcome by molding of the fetal head, forceps may be indicated to save a threatened maternal or fetal life. If urgent necessity for the termination of labor arises before Nature has had a chance to correct the difficulty, then we must correct it by the resources of the obstetric art, by version on the head, podalic version,

operative enlargement of the pelvic girdle or by a mutilating operation on the child to reduce the disproportion, before we proceed to the extraction. Or, in case of extreme urgency, we may be justified in cutting the Gordian knot of our obstetric difficulty by a Cesarean section, provided it is not contraindicated. But, this way out of our obstetric troubles should be reserved for the last resort, rather than be the first refuge, which, unfortunately, now seems to be too often the case. By that, I do not mean that we should wait until the patient is exhausted by prolonged labor and possibly other operative attempts have been made, thus contraindicating section, but rather that we should carefully consider the case in all its aspects and only resort to section, when it seems to offer the best chance, after all other methods have been carefully considered.

Forceps extraction should not be a difficult operation to perform. Whenever I hear of a difficult forceps extraction, taking one, two or more hours, and tiring out two or three men, I know that that operation was not properly indicated or was not skillfully performed. I say this even though I have had this experience in the past years on a few occasions. In each instance, I have been able to determine where my mistake in judgment lay, and, as my experience has grown, these errors in judgment are becoming rarer. A properly indicated and performed forceps operation, whether it be high, median, or low, should not take at the maximum more than one-half hour and the vast majority should be terminated in from ten to fifteen minutes. This should be accomplished without the exhibition of undue force and with intervals of rest between the tractions.

Since the advent of the obstetrical forceps, podalic version has been undeservedly relegated to a secondary place as an operation precedent to extraction. It has come to occupy the place of a sort of assistant to forceps, to be used only where the forceps is not available. This is due partly to the fact that, before the invention of forceps, podalic version offered the only possible way of accomplishing delivery of a living child in difficult cases, the only alternative being a destructive operation on the child, as Cesarean section was so dangerous as to have a prohibitive maternal mortality. As a result, it was often attempted in cases where it was contraindicated, and with disastrous results. But with the perfection of the forceps as an extractive instrument, podalic version has come to occupy a secondary position.

Such indications for version as the following: "In cases where

it is more favorable than forceps," "When forceps have failed," "Where conditions are not favorable to forceps," tend to make the student consider version as an operation only to be done when forceps are unavailable. The result is that if one speaks of an operative extraction, I venture to say fully 90 per cent. of doctors will immediately think of forceps and many of them will think of Cesarean section as the operation of election in difficult cases. Possibly 10 per cent. of doctors will want to know more of the obstetrical conditions and will give version its proper consideration. It seems to me that podalic version and extraction should be given their proper place as a means of delivery and should have their indications as sharply drawn as those for forceps.

Podalic version is indicated in transverse and oblique presentations and where there is prolapse of cord or small parts. In certain cases of placenta previa, podalic version is indicated, not as a precedent to extraction, but rather as a method of controlling hemorrhage and then allowing the labor to be spontaneously concluded. Where the termination of labor is indicated and the head is floating or but slightly engaged and especially in malpresentations and malpositions such as posterior occiput, brow, face, and parietal presentation, podalic version is the properly indicated procedure.

The mutilating operations on the child are only indicated in three classes of cases:

1. In neglected or maltreated cases, such as neglected shoulder and transverse presentations; or where the uterus has been allowed to become tetanically contracted in the presence of some disproportion between passage and passenger, either actual or relative.

2. In fetal malformations such as hydrocephalus, and

3. Where the fetus has died in the course of some difficult labor, a mutilating operation may offer the quickest and safest way to terminate the labor.

To recapitulate: I believe the "furor operativus" to which Williams calls attention, as well as the great amount of ill chosen and poorly executed operative attempts, are due to defective obstetrical training, as he points out. This, in turn, is due in great measure, I believe, to the manner in which practically all of our text-books treat operative indications. When our text-book authorities include among indications for an operation all conditions in which such procedure may eventually become indicated, but some of which in themselves, should be considered contraindications, I believe the young practitioner is not to be too severely censured if his

treatment evidences poor obstetrical judgment and is disastrous to his patients.

In teaching students, I believe we should give them the indications:

First, for terminating pregnancy or labor;

Second, for the operative preparation of passage and passenger for the extractive operation, and

Third, for the particular extractive operation to be performed.

The first class of indications are furnished almost entirely by general conditions endangering the life of mother or babe, the second and third classes, those determining the particular operation or operations to be done, are furnished by the local obstetrical conditions prevailing.

By following this plan, the student is trained to think obstetrically and this will result, I hope, in less operating and better planned and executed operations, where they are properly indicated.

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