THE ABUSE OF CÆSAREAN SECTION[1]

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TO my way of thinking, one of the chief advantages of such gatherings as the Clinical Congress is the opportunity they afford for the standardization of surgical thought and practice, thereby enabling one to establish a rational mean between the extreme views of the enthusiast and of the ultraconservative.

Unfortunately, history shows that advances in the practice of medicine and surgery are rarely attained in a thoroughly rational manner, but that a period of undue enthusiasm, or even of almost reckless abuse, usually precedes the establishment of the actual value of a given procedure.

From my personal experience and reading, as well as from my intercourse with other medical men, I believe that we are at present going through such a stage in connection with cæsarean section, and I propose to utilize the short time at my disposal in giving my reasons for this conviction. Generally speaking, I consider that the operation is being abused in two ways: first, that it is frequently employed unnecessarily; and secondly, that, even when strictly indicated, it is not always performed at the time of election, with the result that its mortality becomes needlessly high.

The prime factor concerned in bringing about this abuse is defective medical training, with consequent ignorance of the wonderful adaptability of Nature, and of the resources of obstetrical art. Subsidiary factors are to be found in the technical ease of the operation, and in the glamor which still surrounds it in the professional and lay mind, as well as in an underestimation of its mortality. That the abuse is primarily due to defective obstetrical training will be developed during the course of my remarks, so that for the moment I shall consider only the subsidiary factors.

It must be admitted that conservative cæsarean section is technically a simple operation, which can readily be performed by anyone possessing rudimentary operative ability; and, furthermore, when followed by the complete removal of the uterus, or by its low amputation, it is simpler than the corresponding procedure in the treatment of uterine myomata. Such being the case, cæsarean section would seem to offer an uncomparably easier method of dealing with complicated labor, than more or less expectant treatment with eventual delivery by the unaided efforts of Nature, or after a typical obstetrical procedure. The former requires only a few minutes of time and a modicum of operative experience; while the latter often implies active mental exertion, many hours of patient observation, and frequently very considerable technical dexterity. Thus far the argument seems to be so entirely in favor of cæsarean section that the uninitiated can scarcely be blamed for assuming that there is no justification for protesting against its abuse, or for concluding that the ideal to be striven for should be its greatest possible utilization, so that eventually only two types of obstetrical cases would need to be differentiated; namely,

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those ending in easy spontaneous labor or requiring some simple operation, which could be performed by a midwife, and those which bid fair to present a serious complication, which should be promptly ended by the surgeon. Could such a differentiation lead to increased safety for the patient, nothing could be said against it, even though it resulted in the eventual disappearance of the trained obstetrician, the glorification of the midwife, and the exaltation of the skilful but unthinking cutter. It must, however, be admitted that such a conclusion is a *reductio ad absurdum*, and is contrary to the trend of enlightened medical thought.

It is currently believed that the mortality of conservative cæsarean section should not exceed that of other simple abdominal operations, and probably most of those here present, who have not had a large personal experience with the operation, would place it at 2 per cent. Such results, however, are obtainable only under exceptional conditions, and I feel safe in stating that the average mortality throughout the country approaches 10 per cent. In other words, the operation is much more dangerous than is generally believed.

How can this discrepancy be explained? The answer is very simple; namely, that ideal results are obtained only when the operation is performed at an appointed time at the end of pregnancy, or shortly after the onset of labor, upon uninfected women amid suitable surroundings. On the other hand, the mortality of conservative cæsarean section increases with every hour the patient has been in labor, and approaches 10 per cent when performed after the second stage has become well established, and goes still higher when the operation is undertaken upon frankly infected or exhausted women. The truth of this statement has been conclusively established by the studies of Edward Reynolds and Armand Routh, and has been borne out by my own experience. Thus, while the total mortality in my series has been 8 per cent, only a single patient was lost when the operation was done at the time of election.

This rapid increase in mortality is due to intrapartum infection, as is clearly shown by the following considerations. In the first place, my experience has taught me that the convalescence is less satisfactory after the conservative operation than when the uterus has been removed. This becomes more significant when it is remembered that I do the former operation upon uninfected women early in labor while the latter is usually performed late in the second stage upon women who were already infected, or who had been subjected to vaginal examinations by those whose technique was not above reproach. Such observations are analogous to the general experience in the treatment of uterine myomata; the convalescence being much smoother when the entire uterus is amputated than when the tumors are enucleated and the uterus is retained. They point clearly to the conclusion that the involuting uterus offers a lessened resistance to infection, and that a larval infection, which would probably have done little harm had labor terminated spontaneously, may lead to death if it progresses in an incised, involuting uterus.

That this is not a mere theoretical deduction has been clearly shown by the histological study of a series of 45 uteri, which I have amputated at the time of labor. A large fraction of these showed acute inflammation of the decidua, which had clearly originated in the cervical region and was spreading upward, so that in extreme cases the entire interior of the uterus had become involved. The existence of histological evidence of infection was not surprising when the patients presented an elevated temperature before operation, but was very significant when observed in women who were free from fever, and in whom the indication for radical operation was afforded solely by the fact that they had been long in the second stage of labor, or had been frequently examined by persons with questionable technique, before coming into my hands.

As the result of these considerations, I think it fair to conclude that conservative cæsarean section is a safe procedure only when performed early in labor, and that the probability of larval infection makes the late

operation too dangerous to be undertaken except in unusual and exceptional circumstances. Accordingly, I hold that it is *an abuse* to perform conservative cæsarean section after the patient has been long in the second stage of labor, even though she presents no evident signs of infection. Under such conditions it is advisable to attempt to terminate labor by some other procedure; but if cæsarean section is imperatively necessary, it should be followed by amputation of the body of the uterus or by total hysterectomy.

I shall say nothing at this time concerning the employment of the several varieties of extraperitoneal cæsarean section in such circumstances, as I do not feel that we are as yet in a position to make positive statements concerning its merits; but I have no hesitation in stating that the strictly extraperitoneal operation, as advocated by Kuestner and others, is a difficult procedure which should not be undertaken casually.

Thus far I have considered the abuse only in so far as it is concerned with failure to operate at the proper time, and now I shall turn to a much more serious aspect of the subject; namely, laxity in determining the indications for the operation.

In the early days of the modern cæsarean section obstructed labor was almost the only indication—contracted pelvis and clogging of the birth canal by ovarian and uterine tumors. We can all recall the old distinction between the absolute and relative pelvic indication. These were retained for many years, but as the mortality gradually diminished, the upper limit for the absolute indication was extended to pelves presenting a conjugata vera of 7.5 centimeters, provided the child was alive and the mother in good condition. At the same time, the relative indication was so extended as to include any case in which such disproportion existed between the size of the head and the pelvis as to preclude the possibility of spontaneous labor. Naturally, this indication is extremely *variable*, and is dependent upon the size and consistency of the head and the character of the uterine contractions, rather than upon the actual size of the pelvis. Thus, it may happen that one of two women, having pelves of the same size and children presenting identical head measurements, will have an easy spontaneous labor, while the other will require a radical operation. The spontaneous outcome in the former being due to the fact that strong uterine contractions had so molded the malleable head as to adapt it to the contracted superior strait, while in the latter inefficient contractions or a less malleable head rendered such a termination impossible. Consequently, if manifest and serious disproportion does not exist, it is necessary to subject the patient to the test of labor in order to ascertain the outcome. In this event, one waits until the cervix has become fully dilated and then ascertains the effect of several hours of second stage pains. From what I have previously stated, it is evident that if the test of labor fails the time of election for a conservative cæsarean section has passed, and if it is then performed the mortality will have increased to such a point as to make it questionable whether one is justified in exposing the mother to so great a risk for the problematical existence of a newly-born child.

It is therefore apparent that in the presence of the absolute indication the decision to operate is perfectly clear, while it is often extremely difficult in what I have designated as borderline cases, and unfortunately for our peace of mind the latter are much more common. It is in the latter type of pelvic contraction that the greatest abuse of cæsarean section occurs, and I am convinced from my reading, as well as from my consulting work, that many unnecessary operations are performed. Each year I see patients from other cities who have been advised by presumably competent men that cæsarean section is essential to a successful delivery, and yet upon examination I find no evidence of excessive disproportion, and some weeks later I have the satisfaction of seeing the patient delivered spontaneously.

Indeed, I have been reluctantly forced to the conclusion that in many parts of the country the mere diagnosis of a contracted pelvis, irrespective of its degree, is considered

a satisfactory indication for operation. This indicates profound lack of obstetrical knowledge and ignorance of the fact that from 75 to 80 per cent of all women with contracted pelves will be delivered spontaneously if given the opportunity. In other instances, the abuse of the operation can be attributed only to an obsession by the *furor operativus*.

Owing to the unusual incidence of contracted pelvis in the colored women of Baltimore and to the fact that they constitute nearly one-half of the clientele of my service, I have had an unusual opportunity to study the course of labor complicated by this abnormality. Excluding funnel pelves, I see each year 200 to 250 women presenting various degrees of contraction of the superior strait, upon whom I perform 10 to 12 cæsarean sections and one or two pubiotomies. With my present knowledge they are all that I feel justified in doing, and yet if I followed the indications adopted by some of my friends in other cities I should treble or quadruple that number. Naturally, they would contend that I am too conservative, but I should prefer to believe that they are too radical. Possibly, the truth lies between the two extremes; but, even so, it would seem that there must remain a considerable margin for abuse.

Such a degree of conservatism can give ideal results for mother and child only in the hands of those who possess an extensive knowledge of the course of labor in contracted pelves, and who study each patient intensively. It would lead too far afield to describe in detail the methods by which such patients are studied, and here it must suffice to state that I attempt to differentiate between those in whom such a degree of disproportion is present as will certainly preclude the possibility of spontaneous labor, and those in whom it is absent. The former are treated by cæsarean section at the time of election; while the latter are subjected to the test of labor, and are usually delivered spontaneously. In a certain proportion of cases the existence of excessive disproportion is readily established at the first examination, while in a large number its presence or absence can be determined only after repeated examinations at weekly intervals. With increasing experience the prognosis becomes more and more accurate, but I hope that no one will imagine that I wish to claim that one can become infallible; for it occasionally happens, as a result of deficient uterine contractions or of a non-malleable head, that the expected engagement does not occur after the test of labor, and one is then placed in the unpleasant predicament of having to chose between a conservative cæsarean section, after the time of election has passed, and some other expedient. It is in such circumstances that pubiotomy offers the possibility of saving both child and mother at a minimum risk; and it is probable that one of the several varieties of extraperitoneal section may prove to be of still greater availability.

It may reasonably be asked why one might not be a little more liberal with the indications and do a few more sections, instead of subjecting many patients to the test of labor. The answer is threefold: first, that it would lead to an increase in the maternal mortality; second, that it would result in slipshod mental processes, as the performance of any operation in the absence of a clear cut indication is a confession of obstetrical failure; and third, that the presence of the cicatrix in the anterior uterine wall constitutes a *locus minoris resistentiæ*, which may lead to rupture in subsequent pregnancies. Provided the uterine wound has healed by first intention, such a possibility is quite remote, but if convalescence has been disturbed, the cicatrix is frequently so thin that rupture may readily occur. To this extent I subscribe to the dictum: "Once a cæsarean, always a cæsarean."

I have dwelt at some length upon the abuse of cæsarean section in the treatment of contracted pelvis, for the reason that clear cut ideas upon the subject have not yet spread through the profession, and also because the abuse is more subtile than in the conditions which I am about to consider.

Following the advocacy of Lawson Tait, A. P. Dudley, and particularly of Kroenig, cæsarean section has recently come to play a prominent part in the treatment of placenta prævia. Kroenig recommended its employ-

ment from two points of view; first, on account of the appallingly poor results obtained in the Duchy of Baden following purely obstetrical treatment; and, second, from the theoretical consideration that the lower uterine segment, which forms part of the placental site, is so constituted that it is unable to contract satisfactorily, and thus predisposes to further hæmorrhage after the completion of labor. Koenig's suggestion has been followed by many, but thus far the results reported have been inferior to those obtained by less radical procedures, in the hands of masters of the obstetric art.

I am willing to admit that cæsarean section is occasionally the best method of dealing with the condition, more particularly in cases of complete placenta prævia associated with a rigid cervix, and complicated by profuse hæmorrhage. Such a combination, however, is extremely rare, as ordinarily the abnormal placental implantation early leads to softening and partial dilatation of the cervix. Consequently, the best general treatment consists in the introduction of a Champetier de Ribes balloon, which checks the hæmorrhage immediately and leads to complete dilatation of the cervix within a reasonable time, after which delivery is effected by version and extraction.

This recommendation is not based upon theoretical considerations, but is the result of nine years' experience in my service. During that period all cases of placenta prævia, with one exception, which required active interference, were treated by means of the bag, and but one woman was lost. Strange to say, that death occurred in the only patient upon whom I have as yet felt justified in performing cæsarean section for the relief of this complication, but it was in no way connected with the operation, as it was due to a chronic nephritis from which the patient had suffered for years.

As better maternal results could not have been obtained by any other method of treatment, our experience refutes the claims of those who postulate that cæsarean section is essential to a low mortality. Furthermore, the evidence becomes still more convincing when I mention the fact that our patients were treated by a succession of resident obstetricians, as well as by me. Consequently, it cannot be objected that exceptional operative skill is essential to satisfactory results. I am ready to admit that equally good results might follow the employment of cæsarean section by an expert, but I doubt very much whether they could have been obtained by my assistants, and I am sure that they could not had the sections been performed by casual surgeons. Moreover, it must be remembered that a certain proportion of hospital patients have become infected before admission, so that from what has already been said concerning the general mortality of cæsarean section, it is evident that a certain proportion of deaths must inevitably follow had that operation been performed.

In view of my experience, I can see only two arguments in favor of the frequent use of cæsarean section in this condition. The first is that it may save a number of children, which would be lost by the employment of more conservative methods. This must be granted, but when it is remembered that a large proportion of the children are premature, and others are already dead when the case comes into our hands, it must be confessed that the gain will not be very great, and it is questionable whether it is sufficient to counterbalance the greater maternal mortality incident to the operation. The second argument is that delivery by cæsarean section is much more expeditious, and will save the physician both time and mental anxiety. This also is true, but the training of the conscientious obstetrician is such that he lays little stress upon such considerations, and until it has been demonstrated that a distinct lowering of maternal mortality will follow the procedure, I hold that its frequent employment is subversive of sound obstetrical teaching, and represents an unjustifiable concession to the excessive surgical tendencies of the age.

A third abuse of cæsarean section consists in its increasing employment in the treatment of eclampsia. Naturally, even a semi-trained obstetrician would not think of employing it if the cervix were sufficiently dilated to permit delivery by forceps or by

version and extraction, or if the cervical canal were obliterated and the external os sufficiently softened to permit of safe manual dilatation. In this connection, I say semi-trained obstetrician advisedly; as I have recently heard of a surgeon who performed cæsarean section upon an eclamptic multipara whose cervix was more than half dilated.

On the other hand, I hold that the operation is occasionally indicated in primiparous women, who present an unobliterated and rigid cervix and a narrow birth canal, and who show no signs of improvement after copious venesection. In such circumstances, the operation is more conservative than forcible attempts at instrumental or manual dilatation of the cervix, and I have utilized it with great satisfaction upon several occasions. In multiparous eclamptic women, on the contrary, I do not believe that cæsarean section is indicated, no matter what the condition of the cervix, as in such cases the birth canal is sufficiently patulous to make vaginal hysterotomy a feasible procedure. After considerable experience with the latter operation, I consider it, when practicable, greatly superior to abdominal cæsarean section, on account of the simpler and more rapid convalescence and the avoidance of the abdominal and uterine cicatrix.

From my experience, I believe that once in approximately 15 or 20 cases of eclampsia, cæsarean section affords the most conservative method of emptying the uterus; so that what I wish to protest against is not its occasional employment, but the growing tendency on the part of many to regard it as an almost routine measure in the treatment of this disease.

A fourth type of abuse of cæsarean section consists in its employment in the treatment of certain abnormal presentations, such as transverse, breech, face, and brow presentations. Naturally, no objection can be raised against the procedure, if the abnormal presentation is associated with such a degree of pelvic contraction or excessive fœtal development as would give rise to serious disproportion; so that what I am about to say applies only when the operation is performed solely on account of the abnormal presentation. The enormity of the abuse can be best appreciated if each of the several varieties of malposition are briefly reviewed.

No properly trained person would consider for a moment the propriety of performing cæsarean section if the existence of the transverse presentation were diagnosticated sufficiently early to permit of a simple version and extraction. On the other hand, its feasibility is sometimes considered as an alternative to decapitation in neglected cases, in which the child is alive, but the shoulder is so firmly impacted that version is out of the question. It must be admitted that the desire to avoid sacrificing a live child is a laudable one, and should be encouraged, provided it can be effected without too great danger or damage to the mother.

The fact that the patient comes into our hands with an impacted transverse presentation means that she has been neglected by an ignorant doctor or midwife, and in all probability has already been infected by their ministrations. This, of course, precludes the employment of conservative cæsarean section, as the time of election has long since passed, and involves the necessity of total hysterotomy or low amputation of the uterus if a successful outcome is to be obtained.

Consequently, the question to be determined is whether one is justified in doing a Porro cæsarean section in order to avoid decapitating a child, which, while still alive, is already seriously compromised. To my mind, the answer depends upon the social status of the woman, her desire for a living child, and particularly upon whether she is the mother of several children or is pregnant for the first time. In the former event, I hold that low amputation of the uterus is a justifiable procedure, as the patient has already done her duty to the State, and the possibility of further childbearing may be regarded as a matter of relative indifference. In the latter event, on the other hand, I feel strongly that such interference is highly reprehensible, and that decapitation is preferable to forever abolishing the reproductive function of a young woman.

This question was brought acutely to my

attention by one of my assistants having elected in such circumstances to do a Porro cæsarean upon a young and illegitimately pregnant primipara. I would therefore state that I consider it a serious abuse to perform a conservative section in any case of neglected shoulder presentation, and that a Porro operation is no less reprehensible in the case of a primiparous woman.

Recently a considerable literature has accumulated upon the propriety of resorting to cæsarean section as a means of diminishing the fœtal mortality in breech presentations. I have no hesitation in stating as a general principle that I consider such a procedure little short of scandalous, provided the pelvis is approximately normal and the child not excessive in size. Experience teaches that in such cases the average fœtal mortality falls below 10 per cent, while that of the mother is not increased over that occurring in vertex presentations, so that it does not seem reasonable to diminish the mother's chances by several per cent for the sake of increasing those of the child by a corresponding amount.

I will admit, however, that the operation may be justifiable in the exceptional event of a first pregnancy occurring just prior to the expected onset of the menopause in a primipara with rigid soft parts, should she deliberately elect to expose herself to a somewhat greater risk in order to ensure the best possible chances to her first and last child.

Similar arguments have been advanced in favor of similar treatment in certain cases of brow and face presentations, and they deserve the same characterization as in the previous section.

In the absence of disproportion between the size of the head and pelvis, persistent brow presentations do not occur, and as the transient forms ultimately become converted into either vertex or face presentations, it is evidence of profound ignorance of rudimentary obstetrical principles to suggest the advisability of resorting to cæsarean section to overcome a transitory phenomenon, which will take care of itself if left alone. On the other hand, the discovery of a persistent brow presentation at the time of labor indicates that the existence of the causative disproportion had been overlooked at the preliminary examination, and such neglect or failure entails the unpleasant consequences, to which attention was directed in the section upon contracted pelvis.

To my way of thinking, uncomplicated face presentations offer a problem approximately identical with that involved in breech presentations, which needs no further elaboration.

Finally, in this connection, I would call attention to the preposterous proposition of a recent writer that occipitoposterior presentations are occasionally best treated by cæsarean section. Various American contributions to the treatment of this variety of vertex presentation have revealed such abysmal depths of ignorance concerning the mechanism of normal labor that one is not surprised at such a proposition, which can only be regarded as another manifestation of the defective facilities for teaching practical obstetrics which so generally prevail in this country.

The fifth and last abuse to which I shall refer consists in the exploitation of the teachings of Reynolds that cæsarean section is sometimes indicated as an elective procedure in women who are constitutionally unfitted for childbearing, but who present no evidence of mechanical disproportion. Doubtless, in the hands of Reynolds and a few other experts, indications of this character have been productive of excellent results. I know, however, from my own experience that they are difficult of precise application, and from my acquaintance with other men, I am confident that they are frequently abused.

No one appreciates more than I the beneficent results which have followed the lowering of the mortality and the consequent greater usefulness of cæsarean section; but I feel that the time has arrived when a halt should be called upon the indiscriminate employment of the operation by many who are ignorant of the fundamental conceptions of the obstetric art. We should always bear in mind that the decision to resort to cæsarean section is a confession

that Nature has failed to fulfill her obligations, and that it is the duty of the conservative obstetrician to limit his interference to the greatest extent consistent with the welfare of his patients, and not to be led astray by the glamour of an easy operation.

Each year in my ward classes, I take particular pleasure in demonstrating patients with "border line" contracted pelves, who have been delivered spontaneously, and I always say that any young assistant could have obtained a satisfactory result by means of cæsarean section, but that a much greater degree of skill and experience is required to obtain an equally satisfactory result without it. What we need in this country are more thoroughly competent obstetricians and fewer skillful, but indiscriminate, surgeons.