Original Articles.

THE MANAGEMENT OF CASES OF RIGIDITY OF THE OS UTERI IN LABOR.¹

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A CORRECT appreciation of the condition implied by the term *rigid os uteri*, is a necessary preliminary to its proper management. Many practitioners, indeed some obstetric writers, failing to distinguish between cause and effect, have confounded different conditions of tedious labor where dilatation occurs with abnormal slowness. The os may be soft, yielding, *dilatable*, and yet it may dilate very slowly, or its dilatation may stop entirely, for a longer or a shorter period, from a variety of causes, but it is a misapplication of the term to say of these cases that rigidity of the os or cervix is present and obstructs labor. For instance, quoting from Bedford,² "it will occasionally happen that the os uteri does not respond to the efforts of the uterus, the contractions recur at intervals, but they have not sufficient force; the patient becomes wearied with the abortive efforts of nature; her strength gives way, and the nervous system is much disturbed. Here, then, is a condition of things which must not be misapprehended — do not mistake it for rigidity of the os." A similar caution might be enjoined with reference to many other complications of the first stage of labor, among which I may mention obliquity of the uterus, faulty positions and presentations of the fœtus, abnormalities of the fœtus and of the pelvis, hydramnios, constriction of the cervix from compression between the fœtal head and pelvic brim, constriction and hypertrophy of the anterior lip. In these cases, to be sure, rigidity may also occur as a coincident or secondary complication, but, in themselves, they are not usually a cause of this condition; they may, and commonly do occasion delay in dilatation, but they do so merely because they complicate the normal process of labor, but, as soon as the specific complication is overcome by the efforts of nature or by appropriate treatment, dilatation may go on without interruption. In other words, the imperfect dilatation, as a rule, is merely the negative result of these abnormal conditions to which we have referred.

True rigidity, on the contrary, should imply an *undilatable* condition of the os — and this is to be understood in a relative, and not an absolute sense — where dilatation does not ensue, or occurs with abnormal slowness, or is arrested, on account of certain accidental conditions arising at the time of labor — of congenital defects of formation, or acquired physiological or pathological deviations in the structure of the cervix. In these cases, only, the undilatable os is truly rigid, and becomes an efficient cause of delay to labor, and this obstruction may persist, under certain circumstances, so long as to endanger the mother or child, or both together.

The scope of my paper obliges me to omit the consideration of those cases where the dystocia is due to radical defects of development, to complete atresia, and to pathological changes incident to malignant and fibroid disease of the cervix, which often require special methods of treatment, perhaps peculiar to each individual case, and to restrict myself to the discussion

of the more common ones to which reference has been made, including spasmodic stenosis, the most usual form in primiparae, and rigidity from simple pathological changes which appertain to cicatricial, hyperplastic, or hypertrophic induration, and, as a rule, are met with only in multiparous women.

Actual labor, I need not remind you, is commonly divided into three stages, with the first of which only, the period of dilatation, have we to do at present. Strictly speaking, this comprises the entire period occupied in the expansion and retraction of the cervix, and the full dilation of the os uteri. For clinical convenience, however, it is customary to await until the cervix is "taken up," as it is termed now-a-days, before it is considered that labor is imminent. So that, other factors being normal, our attention, at first, is largely directed to the os in estimating the probable character and duration of the labor.

In what may be called normal labors, the length of this first stage varies considerably, according to different circumstances which it is unnecessary for me to enumerate at this time, and it is generally conceded that, so long as the os continues to dilate, however slowly, the membranes are intact, and no extraordinary accidents or emergencies threaten or occur, we are not called upon to abbreviate it in any manner, except indirectly in the way of husbanding the maternal strength by the various methods which are in common use for promoting rest and refreshment, furnishing adequate nourishment, and providing for the due performance of the various ordinary functions of the body.

In such labors this stage may continue for days, and yet with proper attention to these points, neither the mother nor her child may be exposed to any serious injury; the labor may become "tedious," but not "laborious," which latter term properly implies danger in a greater or less degree.

Not infrequently, while all the other factors of normal labor in the first stage occur, delay ensues, which, upon examination, is found to be due alone to the condition of the os itself; it is unyielding and rigid — sometimes thick, hard, and muscular to the feel, at others thin, wiry, like cartilage or parchment, or swollen and oedematous. Even in these cases, except, perhaps, in some few instances of notable cicatricial degeneration, so long as the membranes are unbroken, and the os is pressed upon by the fluid sac during the continuance of the pains, which are intermittent in character, interference is rarely demanded, for the cushion or fluid can do no harm to the cervix, and the fœtus cannot be subjected to undue pressure at any part, for everywhere it is protected from insult by the fluid with which it is invested.

Sometimes, however, it will be observed that, during the pains, the head impinges directly upon the lowest segment of the cervix, so that no bag of waters is formed, and, if the os is rigid, the irritation to which it is subjected by the immediate pressure of the fœtal part, will tend to augment the rigidity, especially in a primipara. If such a condition of things be found, speedy relief may often be afforded by pressing up the presenting part and allowing a quantity of fluid to collect in front of it.

In either of these cases, whenever we meet with an unyielding os under the pressure of the fluid sac, and other factors are normal, it is the rule that the pains tend to become abnormal in character, irregular, short and cramplike, or continuously severe; the patient

¹ Read at the Annual Meeting of the Massachusetts Medical Society, June 8, 1886, and recommended for publication by the Society.

² Principles and Practice of Obstetrics, 5th Ed, p. 362.

soon exhibits symptoms of nervousness, perhaps anxiety and irritability, and, if not properly treated, her general and uterine strength will be wasted, to her detriment, probably, in the later stages. Anodynes administered to such patients usually will forestall or control these unfavorable symptoms, and a sleep, more or less prolonged, will be followed by a renewal of strength and courage, and, generally, by a more dilatable condition of the os.

In many cases, however, where the os early shows a disposition to rigidity, an accident occurs which most surely leads to an increase of the dystocia—namely, the premature rupture of the membranes. In other cases, this accident obviously is the prime cause of the rigidity, and, in either instance, we are quite sure to have to do with a laborious labor, which will be the source of much suffering, and even danger, to the mother, and of peril to the child, and, too, of annoyance and anxiety to the physician. Fortunately, with judicious care, and under ordinary methods of treatment, most of these patients ultimately do well, and the mother is safely delivered of a living child.

Probably reasoning from this fact the cardinal rule has been transmitted to successive generations, to abstain from manual or instrumental interference in these cases, and to content ourselves and endeavor to satisfy our patients simply with, what often are merely palliative measures, nauseants, emetics, depletion, general and local anodynes, and to await the favorable issue of this stage or the occurrence of dangerous symptoms in the mother or the death of the fetus. Until comparatively recent years every kind of interference was deprecated, so long as the foetal life persisted, and, indeed, craniotomy on the living child has been advised and practised by some in the interest of the mother, and this fact led to the scathing criticism by Lovati, of Pavia, who said, "in England they do not hesitate to kill the child, not only in order to save the mother from the danger of the Cæsarean section, but even to spare her the suffering of the simple application of the forceps." Some obstetricians, writing a century and more ago, advocated, while others of later date have sanctioned or timidly subscribed to, the practice of making longitudinal incisions or scarifications of the cervix in cases of rigidity, where threatening symptoms ensue which do not yield to the common methods of treatment. Indeed in more recent and even modern times, such eminent authorities as Velpeau, Kilian, Martin, Scanzoni, Simpson, Murphy and others have given their assent to this dangerous procedure. Concerning this operation Ramsbotham³ wisely observed, "I should consider it as one of those exceptional modes of treatment which surgeons are sometimes driven to undertake, in consequence of encountering some extraordinary difficulty, not provided for by the legitimate and established rules governing surgical science." Carl Braun⁴ states that the field for this operation is extremely limited, and the necessity cannot occur more frequently than once in fifteen thousand labors. The discussion of this method of practice Lusk,⁵ very properly in my opinion, dismisses in a very cursory manner with the following words:—"I have purposely avoided making mention of incisions through the vaginal portion of the cervix, as, in a large experience in difficult labors, I have never so

far seen the occasion for their employment," though in his chapter on the forceps he introduces this paragraph⁶:—"In cases where it is necessary to expedite delivery, the resistance of the incompletely dilated os may be overcome by a number of incisions about one-fourth of an inch in depth, made with a blunt-pointed bistoury passed between the cervix and the child's head," adding, "it is very rare, however, that this otherwise trivial operation is really called for."

Contenting myself with this brief reference to the ordinary and extraordinary traditional modes of treatment in these cases, permit me to state, in a few words, the prevailing methods, at least I believe among the most competent practitioners in this country, which, perhaps, are described by no writer more intelligently and tersely than by Lusk, while they are more extensively catalogued by Atkinson.⁷

Premising that the abnormal factor we have to deal with is the rigid os, a stenosis from spasmodic rigidity or due to what I have termed simple pathological changes in the structure of the lower segment of the cervix, in which cases, too, the spasmodic action becomes a prominent feature, the first endeavor is to annul the sense of pain and to restore the disorder of the nervous system, so as to induce relaxation of the spasm, and to foster the maternal strength. This end is sought in different ways, largely by the administration of opiates, but more generally by the use of anæsthetics or of chloral, alone or in succession. In some instances, with multiparous women, where the rigidity appears not to be extreme, external frictions of the uterus and oxytocics are admissible, and among the latter quinine, perhaps, is the safest and best. Ergot, on the other hand, is rightly considered a dangerous agent at this stage for many reasons, nor is Kristeller's method of expression applicable, except in rare cases, until a later period. Electricity has been warmly recommended again of late. Judiciously applied it is said to relieve spasmodic action, to promote dilatation and to increase the regularity and efficiency of the pains. Vaginal and rectal injections of simple hot water or medicated solutions are frequently employed, and apparently with benefit in some cases. Hip baths, also, are serviceable, but generally inconvenient. The local application of belladonna in the form of ointment, I think, is now rarely employed. Not unlikely cocaine will prove to be an important adjunct to our measures for the relief of these cases. Amyl nitrite and atropia, also, have lately been recommended, as efficient agents for relaxing a spasmodic condition of the os. Venesection is rarely employed in these days, and the same may be said of nauseants and emetics, though formerly, of course, much reliance was placed upon all of these. When the os is sufficiently dilated to admit the introduction of the forceps, it is the practice of some eminent obstetricians, notably of Dr. Johnston, of Dublin, to employ this instrument at an early period, and Dr. I. E. Taylor has devised a long, narrow bladed pair of forceps for this purpose, which is said to be capable of introduction through a cervix measuring hardly one and a half inches in diameter. Artificial dilatation of the os has been advised or suggested by many distinguished obstetricians, from the time of Smellie, if not before, while it has been condemned in unmeasured terms by contemporaneous authorities. Thus

³ *Obstet. Medicine and Surgery*, 5th Ed., 1867, p. 244.

⁴ *Lehrbuch der Geburtshilfe*, 1857, p. 768.

⁵ *The Science and Art of Midwifery*, 3d Ed., 1886, p. 454.

⁶ *Op. cit.* p. 369.

⁷ *Therapeutics of Gynecology and Obstetrics*, 1880, p. 239.

Churchill⁸ said of it, "I do not deny that dilatation may thus be effected; but I believe it to be hazardous in skilful hands, positively dangerous in unpracticed ones, and unnecessary in all cases;" and Bedford⁹ remarked, "the abominable practice, commended by some of the older writers, of introducing the hand into the vagina for the purpose of distending it (the os uteri), is not for an instant to be tolerated. These rude manipulations can never receive the sanction of the scientific accoucheur." Sir James Simpson¹⁰ however, Dr. James Braithwaite in 1879¹¹ and a few others of later date, have revived, sanctioned and advised the resort to digital dilatation when the rigidity has persisted so long as to induce symptoms of danger. To Robert Barnes is due the credit of demonstrating the advantages of a *more early* resort to artificial dilatation, a practice which is now generally commended by accoucheurs of the largest experience, but he gives his preference without stint to the use of "Barnes' bags" for this purpose. Referring to digital dilatation in the form of dystocia under consideration, after describing with some minuteness the technique of the operation, he says¹² "in some cases in which the second stage of labor has advanced, the cervix may sometimes be dilated by the hand, but," he adds in the same paragraph, "what is called manual dilatation of the cervix should be abandoned, except in the case of spasmodic contraction after expulsion of the child—as, for example, when the placenta is retained or clots are filling and irritating the uterus." Lusk, too, gives his entire assent to the early employment of these dilating bags.

While we may not accept fully the specious arguments of Sir James Simpson,¹³ which were largely founded upon the dangerous deductions from statistics or be allured by the ponderous logic of Matthews Duncan,¹⁴ experience, if not common sense, seems to teach that the undue prolongation of the first stage, with the abnormal conditions of ruptured membranes and a rigid os, is attended with danger both to the mother and child, and the danger to both is progressive with the increasing duration of this stage. Therefore it is a matter of great importance for us to determine when this stage is becoming unduly protracted, and, for this purpose, we must have regard both for the mother and for her child. Neglect of this common regard has led to the unnecessary sacrifice of human life and to the opprobrium of the obstetric art. It has been too common to delay too long in order to see what nature can endure, rather than to endeavor to determine, as early as possible, how much she can accomplish. Taking this, then, as the theme for my concluding remarks, permit me, by way of introduction, to recite briefly the histories of two cases, which occurred during one of my terms of service as visiting physician at the Boston Lying-in Hospital.

CASE I. Addie S., single, twenty-five years of age, primipara, entered January 28th. From the first she was nervous and despondent. She continued to have pretty constant aching pain in the lower abdomen and sacral region, during the expansion and retraction of the cervix, which was not fully "taken up" until the morning of February 7th, when the os was the size of

a ten cent piece, thin and unyielding. The head was low down, at the inferior strait, and the pains were moderately severe, with slight intermissions, during that day. At 6.25, P.M., the membranes ruptured. As no progress ensued, chloral was administered at 7, 7.30 and 8, P.M., with no permanent effect upon the os. At 9, P.M., full surgical anæsthesia was induced and continued for several minutes. Chloral was again given at 11, 11.40 and 12.30, P.M., after which the pains became more severe and nearly constant. At 1, A.M., of the following day, the pains were rather more intermittent and moderately severe, but the os showed no change. At 4, A.M., full anæsthesia was induced for four minutes when the os acquired the size of a twenty-five-cent piece. At 6.30, A.M., it was rather larger than a half dollar; the maternal pulse increased from 100 to 125 and the foetal pulse from 140 to 160. Under this condition of things I was summoned. Learning from the house physician that under the immediate influence of the chloral or the ether the os each time became dilatable for a brief period, but soon recovered its rigidity, I administered two more doses of chloral, and taking advantage of the dilatability which I produced, I easily stretched the os with the fingers, slipped it over the head, applied the Vienna forceps and readily extracted the child, which was asphyxiated, but fortunately resuscitated. The mother, however, shortly after died, evidently from shock and collapse. There was no uterine rupture and no hæmorrhage.

Reviewing the record of this case, it will be observed that the woman presented unfavorable symptoms from the outset; that she was nervous and despondent; that she suffered, more or less, for more than a week, during the retraction of the cervix; that the os was rigid from the commencement of its dilatation; that the membranes ruptured early in the first stage; that the repeated employment of customary means had little effect in promoting dilatation; that twelve hours after the rupture of the membranes the os was only as large as half of a dollar, when symptoms indicating danger to both mother and child supervened; that the resort to manual dilatation, *while the os was made soft and yielding*, enabled me to deliver a living child in a few moments. Its asphyxiated condition, however, I think clearly showed that a little longer delay would have imperilled its life. As it was, I cannot but think that the fatal result to the mother must be attributed, in a measure at least, to the delay in interference, which was especially dangerous considering her protracted mental agony and the prolonged physical suffering which she experienced, though at no time was this notably severe.

CASE II. Ella P., nineteen years of age, single, primipara, entered January 22d, at 11.55, A.M., labor having begun at 1, A.M., of the same day, and the membranes had broken at 7, A.M. On entrance the cervix was "taken up" and the os admitted only the finger tip. Pains recurred quite regularly and with no unusual severity, but it was soon determined that there was delay on account of the condition of the os, which, on the following morning, was the size of a half dollar, thick and rigid. Chloral was twice repeated and snoring anæsthesia was induced, but with slight if any permanent effect. At 4, P.M., of this, the second day, thirty-three hours after the rupture of the membranes, the condition of both mother and fœtus before this having been good, the maternal pulse suddenly rose to 110 and the temperature to 102.8°, while the

⁸ System of Midwifery, Am. Ed., 1843, p. 235.

⁹ The Principles and Practice of Obstetrics, 5th Ed., 1871, p. 361.

¹⁰ Op. cit.

¹¹ Trans. Obstet. Soc. of London, Vol. XXI, p. 38.

¹² System of Obstetric Medicine and Surgery, Am. Ed., 1885, p. 744.

¹³ Selected Works of Sir J. Y. Simpson, Am. Ed., 1871.

¹⁴ Mortality of Childbed, etc., Am. Ed., 1871.

foetal pulse increased from 140 to 180. Shortly after this I was summoned, and, finding the threatening symptoms still present, I had the patient etherized, but did not administer chloral beforehand, partly to save time but more because I had in mind that in the previous case possibly the fatal result to the mother might have been promoted by the combined effect of the two agents. While under the influence of the ether, I did not obtain the general dilatable condition of the os which I did in the other case, but the left side dilated readily under the pressure of the fingers, and, having obtained sufficient space, I introduced the forceps,—the head had passed the brim,—and by the combined effects of traction with the instrument and, in the intervals, gradual stretching and pushing up the right side, the os finally slipped over the head, and then the child was quite readily extracted at 6.25, A.M., nearly thirty-six hours after the rupture of the membranes and forty-two after the onset of labor, but it was still-born. The mother made a good recovery.

In this instance, too, I believed I conformed essentially to the general rules of practice which prevail in these cases. The error, in delaying interference too long, or until threatening symptoms supervened, I believe, was the cause of the death of the child, as it was, if not the principal, at all events a contributing factor in occasioning the death of the mother in the first case.

That "meddlesome midwifery" is bad and to be avoided needs no argument at this day, but I submit that, while this expression and the doctrines evolved from it have served a very useful purpose in preventing the indiscriminate resort to manual or instrumental interference, when often it is uncalled for and even unsafe, yet increased experience, I think, rightly teaches me that, in many instances perhaps, we have been controlled too completely by the dictates of traditional practice that have been accepted by successive generations as matters of doctrine which ought not to be questioned, and, with this view, I have come to believe with others that the rule, to await the occurrence of alarming or dangerous symptoms, either in the mother or the foetus, in these cases where the dystocia is due primarily or essentially to the rigidity of the os, is an excess of conservatism which tends to disaster, as already observed, either from violence done to the mother, or from injury to the child in consequence of the great and direct pressure to which it is exposed for so long a period after the escape of the amniotic fluid or on account of its being deprived of proper and sufficient nourishment by the interference with the utero-placental circulation. Accepting this proposition it is our duty to abbreviate this stage, in these cases of dystocia, so far as we are able to do it.

Referring to the success which has resulted in other forms of dystocia from the practice of manual dilatation, notably with placenta prævia and eclampsia and in the induction of premature labor, as suggested many years ago, even by Hippocrates and Celsus, in some circumstances,¹⁵ but revived and popularized in this country, I think, at all events in this vicinity, by our esteemed associate, Dr. A. D. Sinclair, and also to the now well-recognized effect of chloral and deep anæsthesia for a brief period in bringing about a dilatable condition of the os,—not to mention some other agents which have been employed for a similar purpose,—I believe we not only have it in

our power, but that it is our duty, in these cases of tedious labor which promise to become laborious, to afford timely relief by early interference, as soon as we are satisfied that nature unaided directly by art is not likely to accomplish delivery with safety, by following up the temporary dilatable condition, which we can induce by the use of chloral and like agents, with manual dilatation, and the subsequent use of extracting means if they appear then to be required—that is to say, before dangerous symptoms occur.

If the head be above the brim or not far advanced, and the contractions are not too frequent and severe, the early introduction of the hydrostatic dilators of Barnes will, perhaps, accomplish everything that is required; but these are always open to the objection that, even in the most skilful hands, they are insensible and one is liable to effect dilatation with them too forcibly and too rapidly, and so start a laceration of the cervix which may end in extensive rupture. Fortunately, however, if we may rely upon recorded cases, this accident is not a common occurrence. My experience confirms that of many others, that, in a large number of these cases, the presenting part impinges so forcibly upon the os and is so firmly invested by the tissues below the "contraction ring," that the bag cannot be inserted within the os without the exercise of so much manipulation and force as to do violence to the tissues, and, furthermore, in many cases it is found impossible to keep the bag in position,—it will inevitably slip out before dilatation can be effected by it.

With manual dilatation, the principle is the same as with the hydrostatic bag, but employing the former we have the advantage of the tactile sense, which enables us to guide and control the process with the utmost precision and hence with due regard to the integrity of the maternal parts.

When the head has passed the brim and entered the excavation, the waters having escaped, I believe there can be no question as to the choice between these two methods of artificial dilatation, and we should resort without hesitation to the use of the fingers to accomplish the desired object.

I have already alluded to the practice of incising or scarifying the os for the purpose of expediting delivery in these cases under consideration, where no disproportion exists and the dystocia is dependent solely upon the rigid, unyielding condition of the os, whether this is a spasmodic stenosis alone, or associated with the cartilaginous condition which is the product of a cicatricial process, a hyperplasia or hypertrophic induration. All authorities agree that this necessity occurs with extreme rarity. My experience, to be sure, has not been very extensive, but I have never met with, nor have I known of, a case where this procedure became necessary. Indeed, I do not believe it is ever demanded, except in cases of absolute atresia or occlusion of the os, for employing anæsthesia, chloral, and like agents, and artificial dilatation *together*, I feel sure we have it in our power to accomplish delivery, even in the extreme cases of simple pathological degeneration of the cervix, without exposing the uterus to the imminent danger of extensive rupture.

With regard to the proper time when the interference of art is demanded, the essential point is to anticipate the period when dangerous symptoms will occur. As before remarked, while the membranes are intact, rarely will we be called upon to interfere, for,

¹⁵ Vide Braun, op. cit. p. 763.

in these cases, there is practically no danger—nature is equal to the emergency and the patient's endurance is not by any means put to the utmost test.

When, however, the membranes have broken prematurely and the amniotic fluid has escaped, and, I may add, this is the rule in the pathological states of the os to which I have just alluded, and we are satisfied that we have to do with a rigid os, recourse should be had, first of all, to the faithful trial of the ordinary means for promoting a continued dilatable condition. These having been fairly tried, but without success, we should at once resort to artificial dilatation, having first administered an opiate, or better, chloral, either alone or in conjunction with anæsthesia, in order to develop a temporary yielding condition. This latter procedure, I repeat, I offer as an important and essential factor to the easy and safe performance of the mechanical process which we seek to effect by the dilating efforts we decide to employ.

Following these methods of practice which, I have endeavored to show, are based upon sound common sense, regard for the well being of our patients and respect for the obstetric art, I believe we shall be more successful in avoiding unnecessary suffering and in saving human life.

A DISCUSSION OF THE STATISTICS OF OVARIO- TOMY.¹

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Of all the major surgical operations, ovariectomy has received the greatest attention with regard to its statistical results. The reason for this is very apparent when we recall its early history. It was an operation very bitterly condemned and assailed by the profession at large at the time of its first performance by McDowell, and for many years after.

Those who believed in its promise of usefulness presented to its opponents their lists of lives saved from a disease otherwise hopeless, and usually soon fatal, as an unanswerable argument in its favor. Although these statistics have long since silenced all question as to the propriety of ovariectomy, still the prominence given them has continued and increased, so that, to-day, the ovariectomist, as a rule, simply presents to the profession his number of operations and the percentage of recoveries, as representing in an exact measure his skill in making the operation, and his wisdom in the details of after-treatment.

The various conditions that determine the result of an ovariectomy, and, at the same time, are beyond the control of the operator, are so much in the background, that the unsuccessful cases gives the profession and the surgeon as well, the feeling that there must have been some fault of omission or commission on his part. That is, such prime importance has been given to the bare statistics as almost to persuade one that the skill of the operator alone is the sole factor in determining the result, and that an ovariectomist of perfect skill and wisdom would save every case. The effect of this tendency to regard the operator as entirely responsible for every unfavorable result has been to stimulate him to the most careful study of every detail of the operation, and, in consequence of this care, the modes of operative procedure have become well-nigh perfect.

¹ Read before the Section of Obstetrics and Gynecology, Suffolk District Medical Society, May 19, 1886.

This weight of responsibility loaded upon the shoulders of the ovariectomist has contributed, therefore, to his success. It may also have had its effect, not quite so salutary, upon the statistics that have been recorded. It is not unreasonable that the specialist in abdominal surgery, where every failure, in a certain way, reflects upon his skill, and is charged up to his discredit, should present his statistics in the most favorable light that they can bear. Cases in which he may have avoided an operation can be omitted; also those cases of incomplete operation: that portion of his entire list which gives the best percentage of recovery may alone be published.

In other fields of surgery, and in medicine as well, the unreliability of statistics is conceded; but in ovariectomy, for the reason I have given, they are, perhaps, more at variance with the actual results than in the case of other operations. "Statistics alone seldom prove anything, certainly they never explain anything," says Lawson Tait. This, I believe, is not quite true, and, although I am criticising the statistics as not always representing the full proportion of deaths to the recoveries in abdominal surgery, yet I believe they are sufficiently affected by the real results to afford absolute proof of the rapidly-increasing success of ovariectomy.

At the present time, the statistics of ovariectomy in America, when compared with those of our English cousins, seem to show a very decided balance in their favor. One possible reason for this may be that comparatively fewer men operate there than here, and, consequently, that there is a much smaller proportion of operations by inexperienced surgeons, while those who do operate have a much larger experience than falls to the lot of any American. Another reason, and, I believe, the main one, is this, that every standard text-book, at least, so far as I know, except the last edition of Emmet's work, that has been published in America, and which treats at all of ovariectomy, advises postponement of surgical interference, except tapping—"with rare exceptions, a criminal procedure," says Stilling, and assents Thornton—until the failing health of the patient demands it. While in England, formerly, Dr. Clay, Mr. I. B. Brown, Bryant, Hutchinson and Wells advocated early operation before any failure of the patient's strength was apparent. Mr. Wells, however, in 1872, advised delay until considerable impairment of the general health had occurred. Yet in the last edition of his work upon ovariectomy, and in his later utterances upon this subject, he is in accord again with the prevailing English teaching, which favors early operations. In short, I believe that this difference between the English and American authors, in their recommendations given the general practitioner as to the proper time for ovariectomy, has, in great measure, determined the difference in the statistics of the operation in this country and England.

While admitting that in no other operation does so much depend upon the skill, experience, and care of the operator as in this, still it may be worth our while to consider briefly some of those conditions, independent of the surgeon, that may make a disastrous result inevitable. Taking the ovarian cases together, as they present themselves to the ovariectomist, in this country, at least, a certain proportion of them will be found to have in themselves an element of essential fatality. That is, the moment these cases are subjected to operation, they become necessarily fatal, and that,