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ORIGINAL ARTICLES.

EMMET'S OPERATION. WHEN SHALL IT, AND WHEN SHALL IT NOT BE PERFORMED?

BY GUSTAV ZINKE, M.D.,

OF CINCINNATI, OHIO.

MR. PRESIDENT:—Trachelorrhaphy, or Emmet's operation for the cure of laceration of the cervix uteri, and its consequences, is recognized by many, in this country at least, as a measure productive of much good, and a great advancement in gynecology. Though the English and the Germans are slow in accepting it, and although in France we find as yet not one who will openly endorse it, the operation seems to be, nevertheless, a legitimate and permanently fixed resource for the relief of some lacerations of the cervix and their results. And how could it be otherwise? The injury is readily diagnosed, and its mischievous influences easily appreciated and recognized as such by skilful men. What treatment could be more simple, more rational, and more effective? There should not be any doubt upon this question. Still there are some, even in this country, who are disposed to look with disfavor upon the operation. So much has been said and written on this point by the ablest gynecologists of this country, that no argument of mine is needed here. Experience and time will accomplish what argument has so far failed to do. With the knowledge I have upon this subject, in my judgment there is but one point left to be discussed, and that is: *When shall we, and when shall we not perform this operation?* Upon this there is great diversity of opinion. To aid in the removal of this dissension and establish greater harmony, is the object of this paper. For this purpose I have addressed to a large number of our most prominent gynecologists and surgeons of this country and abroad, a letter containing a number of questions, calculated to elicit their latest opinion regarding this subject. I sent it in printed form, with sufficient space after each question to allow a concise answer. I adopted this course to obtain an answer from all as nearly alike as possible, and to the point. I also took pains to send these questions to those known to be more or less opposed to the operation, or, if you please, "not much impressed with the importance of trachelorrhaphy."

The following is the letter which accompanied the questions as seen in the record:

CINCINNATI, O., February, 1885.

Dear Doctor:

Owing to the great diversity of opinion respecting the beneficial effects and proper sphere of usefulness of EMMET'S OPERATION, I have concluded to write an essay upon this subject, which is to be read before the American Medical Association, convening at New Orleans, La., the latter part of April next. In order to make the paper complete and valuable, I have deemed it wise to obtain the latest opinion of those men in the profession, in this country and abroad, who, by reason of their position and professional attainments, are best qualified to judge. I am well aware that this subject has been discussed and written upon from every aspect by many; but it must also be admitted that it has never been fairly decided, indeed, that to-day it is shrouded in greater uncertainty than ever. It is my desire to put on record the statements of all who will be kind enough to answer and present the same in concentrated form, from which those interested in the matter now, and hereafter, may draw their own conclusions, which, I hope, will harmonize more than at present. Hoping that you will consider the importance of the subject, and favor me with an early reply, by answering briefly the questions in the accompanying blank, I remain,

Yours fraternally,

GUSTAV ZINKE, M.D.,

413 Elm St., Cincinnati, O.

The letter, as well as the questions, will need explanation in so far as they refer to the beneficial effects and proper sphere of usefulness of Emmet's operation, and not directly to what the caption indicates. Anyone looking over the questions and answers, however, as given in the tabulated record, will be convinced that I could not have adopted any other way to arrive at conclusions at once unbiased and free from the suspicion of being one-sided. I could not have asked simply and solely: When do you and when do you not operate? The answers to the questions as propounded, put each one on record fully, by giving his reasons why he would in one case, and not in another, or, perhaps, never perform the operation.

Let us now consider these replies and see if from them we may gather sufficient evidence to decide when we should and when we should not operate.

DR. GUSTAV ZINKE:—I have the highest regard for Emmet, and have learned much from his works. But "Emmet's operation" I look upon as entirely unnecessary. I perform the same only when, by retroflexions, the laceration of the cervix interferes with orthopaedic treatment. I can furnish many cases in which women, in spite of extensive tears, were and remained perfectly well, that pregnancy was not interfered with, and that the rents caused absolutely no complaint. For this reason I do not perform this operation, and I am firmly convinced that in a few decades it will be forgotten.

With many respects,

FRITSCH.

Breslau, March 27, 1885.

¹Read in the Section on Obstetrics and Gynecology, at the Thirty-sixth Annual Meeting of the American Medical Association.

DR. GUSTAV ZINKE, Cincinnati, O.—*Dear Doctor*:—I have so recently gone over the whole subject of laceration of the cervix in the third edition of my book, just published, that I have nothing more to add. I have there answered all the objections that have been brought against the operation. Little more is to be said on the subject until the profession has carefully carried out my directions as based upon over twenty years of experience and close study. Where there has been failure to gain the results I have claimed, the burden must rest on the operator to show the cause.

The operation has long since passed out of my hands, and so fully endorsed that I have no fear for its future. The great point is to check the abuse, which is fearful. Everyone feels competent to perform it; it is done without the proper preparatory treatment, and with no special purpose. I believe in nine cases out of ten, where it is done, or attempted, the execution of the operation is defective and without any benefit to the patient. You have here a most fruitful field for your paper, but to discuss the merits of the operation within its proper range, is futile.

Yours truly,

T. A. EMMET.

89 Madison Ave., N. Y., March 5, 1885.

DR. GUSTAV ZINKE, Cincinnati, O.—*Dear Doctor*:—I have not as yet been impressed with the great importance of lacerations of the cervix—excepting where they are extensive. My operations have been confined to the latter class, and the results have been satisfactory.

Respectfully,

Rome, Ga., March 2, 1885.

ROBERT BATTEY.

DR. GUSTAV ZINKE, Cincinnati, O.—*Dear Sir*:—As I have had no occasion myself yet to perform Emmet's operation, I feel scarcely justified in giving an opinion, and am not in a position to answer the queries in the form which accompanies your letter. My experience is drawn only from a few cases in which I have seen Prof. Simpson operate, and would watch the progress of the cases.

There is no evidence that a lacerated cervix is in itself a condition of much importance; in its relation to cervical catarrh and cellulitis it is of importance. I fancy that the cellulitis we often see, especially in the left broad ligament, is due to slow septic absorption from the laceration; so also the ectropion will keep up, if not cause cervical catarrh. On the other hand, lacerations are so frequent that we must look on them almost as a physiological occurrence, just as we do a slight perineal laceration.

Yours faithfully,

A. H. FREELAND BARBOUR.

Edinburgh, March 17, 1885.

DR. ZINKE.—*Dear Sir*:—I regret that I have no statistics to aid you in your very valuable inquiry as to the merits of Emmet's "op." I have operated very little. My patients do not come to me from abroad, and consequently will not submit to ulterior measures, as those will who go to men of more reputation. I have seen some cases in which I thought it desirable—many where it would have been done by others, I think. I have too few data to feel satisfied in my own mind, but my impression is that there are cases of unhealed laceration (ectropion) demanding the operation, and for those cases it is a great improvement.

As to the cicatricial tissue doctrine, I feel very doubtful, and so expressed myself in review of 1st edition of Emmet's work (*Am. Jour. Med. Soc.*) Yet in last edition he brings many facts in support. I operated in a case week before last—repaired cervix and peritoneum at same time. I had exhausted local and general treatment in the case, and nearly two years ago advised the operation, which she then refused. Three days after operation, she was free of backache for the first time in months. Of course I am waiting with great interest the ultimate result, for the ache had returned somewhat when I last saw her.

There has been a wonderful change of doctrine by Emmet as to the operation, to which I call attention in review of 3d edition, to appear in April No. *American Journal*.

If you use this, please use no name.

I am very truly yours,

March 1, 1885.

Question 1. Do you believe lacerations of the cervix uteri to be an important factor in uterine and pelvic disease?

Wm. Goodell, Ellwood Wilson and Charles Meigs Wilson, of Philadelphia, J. Taber Johnson, of Washington, David Prince, of Jacksonville, Ill., Willis P. King, of Sedalia, Mo., Wm. H. Taylor, of Cincinnati, W. H. Baker, of Boston, E. W. Jenks, of Detroit, T. B. Harvey, of Indianapolis, J. Byrne, of Brooklyn, Chrobak, of Vienna, and W. T. Howard, of Baltimore, answer "Yes," or "I do."

T. Gaillard Thomas says: Yes, decidedly so.

Geo. T. Engelmann: It is one of the conditions which facilitates and assists the development of certain diseases directly leading to other.

A. Reeves Jackson: When sufficiently extensive, yes.

W. H. Byford: I do when attended by chronic subinvolution or chronic congestion, not otherwise.

Herbert M. Nash, of Norfolk, Va.: My observations in the past twenty years force me to the confirmed opinion that laceration of the cervix uteri is frequently a most important factor in both.

G. H. Lyman, of Boston: I do most emphatically, especially if there be eversion.

R. S. Sutton, of Pittsburg: It is very frequently so. It is often the prime factor.

Paul F. Mundé, of New York: Most decidedly. None more so in certain selected cases.

Ely Van de Warker, of Syracuse: Only when of such extent as to become a persistent focus of irritation.

James B. Hunter, of New York: I do—one of the most important.

Chauncy D. Palmer, of Cincinnati: I most certainly do.

M. D. Mann, of Buffalo: Very important and common.

J. Mathews Duncan, London, Eng.: "No."

Thad. Reamy, of Cincinnati: Yes, without doubt.

P. J. Murphy, of Washington: The deeper lacerations owing to impeded circulation may be the cause of pelvic disease.

Wm. T. Lusk, of New York: In certain cases, Yes.

W. Gill Wylie, of New York: Yes, when the cervix torn is diseased—say cystic degeneration, etc., and it may become diseased after being torn, say in puerperal septicæmia, etc.

I. E. Taylor, of New York: Not necessarily. By removing the pathological condition of the cervix uteri, whatever that may be, by the treatment your own judgment and experience may dictate, the laceration will be either perfectly overcome, or so much so that the laceration will not sustain the pathological state previously existing, and the laceration, whether it is a deep unilateral one or not, will be restored, and the length of the os tinæ will be diminished so much as to present almost a natural appearance.

Q. 2. Do you believe fissures of the cervix uteri a cause of uterine and pelvic disease?

A. Reeves Jackson, Charles Meigs Wilson, David

Prince, C. D. Palmer, and E. W. Jenks, answer "Yes."

Engelmann answers: Rarely.

Gaillard Thomas: Yes, but to a less extent.

Ellwood Wilson says: "Sometimes."

Nash: May be a cause.

Lyman: I do, but to a less degree than the former.

Sutton answers: If deep.

Mundé: The smaller the rent or fissure the less, as a rule, its pathological significance.

Van de Warker: I have rarely seen mere fissures cause pelvic symptoms.

Johnson: I think the pathological and reflex disturbances are large in proportion to the extent of laceration, but not always.

Hunter: Not necessarily unless there is cicatricial tissue.

W. P. King: Not necessarily, but in some cases I have known a small fissure with granular erosion to cause severe reflex pains.

Goodell: Fissures, if skinned over, do but little harm, and I rarely touch them.

Mann: If by fissures you mean slight lacerations, I do not. May be only slight laceration, showing but much deep scar tissue which will do great harm.

Duncan, Lusk and Murphy say: "No."

Wm. H. Taylor: By "fissure" I understand less than "laceration," therefore less important.

Baker: If sufficiently extensive I do.

Reamy: Yes, to some extent.

Harvey: I do so far as pain and nervous disturbance are concerned, but not attended with so much displacement.

Byrne: Not invariably, but frequently.

Chrobak: Yes, but in a different way.

Howard: As distinct from lacerations, only exceptionally.

Wylie: May not degeneration of the mucous membrane resulting in atrophy, contraction, and hyperæsthesia, as in imperfect development may?

I. E. Taylor: "The same as above."

Question 3. State your theory in what manner a lacerated cervix will or may cause disease of the uterus, its surrounding tissues, and in parts remote.

Thomas: By creating local hypertrophy and glandular disease and by reflex influence.

Engelmann: Destruction of sphincter muscle leads to subinvolution—the open surface—exquisitely sensitive and irritable—leads to reflex symptoms by reason of friction—and inflammation by absorption.

Jackson: The exposure of the intra-cervical structures to the vaginal secretion excites inflammation, first of the endometrium, secondly of the parenchyma.

Byford: I believe it perpetuates subinvolution and its consequences.

E. Wilson: By allowing the uterus to sag downward in the pelvis and by the ectropion of the cervical mucous membrane it acts as a constant source of irritation, preventing involution. The general reflex symptoms are more marked than the local ones.

C. M. Wilson: By preventing involution, acting as a constant source of irritation, and causing dis-

turbances of general health, as manifested by the gravity of reflex symptoms.

Nash: In the majority of cases it seems to be the cause of irritation followed by both cervical and corporeal endometritis, erosions, profuse leucorrhœal discharge, and in my opinion these conditions fore-run or may distinctly cause cellulitis and even pelvic peritonitis. Displacements are common, and they are sometimes attended by numerous and annoying reflex symptoms.

Lyman: Local congestion of the body and mucous lining of the uterus, with neuralgic pains, hystero-neurosis, by reflex action on distant parts, etc. I believe all such should be repaired, if only as a safeguard against epithelioma.

Sutton: It arrests involution, causes catarrh of the canal, prolapse of the lining of the canal of the cervix, congestion of the entire cervix, prolapse of the uterus, retroversion, drag upon the round ligaments, congestion of the cellular pelvic tissue, constipation, nervous phenomena, vesical irritation, indigestion, backache, pains in the groins, etc.

Mundé: First, subinvolution of the uterus, then hyperæmia, then menorrhagia; or, first, subinvolution, then hyperplasia; or, attendant on subinvolution and hyperplasia, chronic eversion, hyperæmia and hyperplasia; or, immediate or remote pelvic cellulitis, peritonitis or lymphangitis. Finally, epithelioma of eroded lips.

Van de Warker: By acting as a persistent focus of local irritation, thus inducing a morbid degree of uterine and pelvic hyperæmia.

Johnson: It causes endometritis, chronic cellulitis, favors subinvolution and all its evil effects. Displacements on account of increased weight and size, and relaxed supports. Leucorrhœa, cervical and uterine catarrh. Increases quantity and frequency of menses. By irritation and congestion favors abortion; predisposes to epithelioma, and causes many reflex nervous disturbances.

Hunter: By impairing the circulation. By keeping up engorgement of uterus, and thus causing displacements, etc.

Prince: By constant irritation inducing local chronic inflammation, and by reflex action, hyperæmia and hyperæsthesia of near and sometimes distant parts through reflex action.

King: 1st. By causing septic poisoning when recent. 2d. By acting as a point of irritation, causing pelvic congestion. 3d. Granular erosions, by failure to heal. 4th. Laying the foundation for epithelioma by degeneration of granular tissue.

Palmer: By delaying and preventing complete involution, creating erosions, granular degeneration of the cervix, and eversion of the cervical lips; and finally, hyperplasia, cystic degeneration, uterine displacement, and it may be epithelioma.

Goodell: By its keeping up an irritation of the uterine organs, and by an afflux of blood to them; causing growth, hypertrophy, etc.

Mann: In several ways, by causing cellulitis, subinvolution, endometritis, hypertrophy of neck, reflex action on distant organs, displacement, etc. Believe it to be a common cause of cancer of cervix.

Duncan: It may be the seat of local irritation—so called ulceration.

Taylor (Cincinnati): Keeping up engorgement, irritation, or pressure upon nerves, exhausting discharges.

Baker: By occasioning pelvic cellulitis, subinvolution of the uterus, hyperplasia of cervix, and increasing the tendency to the development of cancer of the cervix uteri.

Jenks: Ectropion and attrition of the everted lips furnish a constant source of irritation, causing congestion, connective tissue growth, and retarding involution and reflex symptoms, immediate and remote. A laceration which has healed wholly or in part, may cause symptoms like the above on account of cicatricial tissue in which nerves are involved.

Reamy: Arrests involution by two or more processes, viz.: Disturbs normal nervous function. 2d, the processes of repair of the injury which nature has to set up demand so much blood in the tissues as to prevent the fatty degeneration essential to involution.

Harvey: Fissures and slight lacerations cause inflammation, with exacerbations at the menstrual epoch. More extensive lacerations cause cystic degeneration, hypertrophy, induration, displacements, and all kinds cause cellulitis, reflex irritation in remote parts, and predispose to epithelioma.

Murphy: A deep laceration of the cervix uteri interferes with the circulation of that organ, gives rise to hyperplasia, prevents involution, and by these means will induce hypertrophy, and may give rise to any one of the displacements frequently accompanying a lacerated cervix.

Byrne: Directly by its retarding involution, and more remotely as a cause (frequent) of abortion.

Lusk: By leading to disease of cervical and often corporeal mucous membrane. Hence catarrhs, hæmorrhages, uterine enlargement, etc. Many patients suffer from forms of remote reflex neuralgias, but these are not constant.

Chrobak: The effect of extensive laceration consists in the irritation as well as inflam. of the param.; perhaps, too, in the changes of the cervical mucous membranes resulting from the injured cervix and its exposure to the vaginal secretion.

Howard: When a laceration is accompanied by catarrhal ectropion of the cervical mucosa, this is increased by the attrition of the inflamed surfaces during respiration and locomotion; and this constant source of irritation creates reflex disturbance.

Wylie: If diseased when torn it will not heal, but evert, swell, and prevent involution, etc. Or if torn and infected by sepsis it may cause septicæmia, either local or general.

I. E. Taylor: Laceration of the cervix uteri, when treated by closure before attending to the treatment of the pathological condition, unless it is directly after the laceration, an acute laceration will not succeed; and even then I have my doubts whether it will not produce more trouble than when the operation is deferred till after convalescence. If the laceration is so severe as to produce a secondary hæmorrhage—which I should consider as exception-

ally rare, then a closure may be attempted. If not, then the operation should not be performed, for in very many cases, if there has been a slight laceration, the patients have perfectly recovered, especially if proper treatment is adopted.

The substance of these answers is about as follows:

1. Septic poisoning at the time of its occurrence.
2. It causes pelvic cellulitis.
3. " " peritonitis.
4. " prevents involution.
5. " acts as a point of irritation.
6. " causes pelvic congestion.
7. " " cervical and corporeal endometritis.
8. " " profuse leucorrhœal discharge.
9. " " displacements of the uterus.
10. " " erosions and eversion.
11. " " hyperæmia } of cervix as well as body.
12. " " hyperplasia }
13. " " cystic degeneration.
14. " " numerous reflex symptoms, especially from irritating cicatricial contraction.
15. " " menorrhagia.
16. " " sterility, by preventing conception, and by causing abortion.
17. " " lays the foundation of epithelioma.

No one present, familiar with this subject, will expect me to discuss the manner or the order in which one or all of these consequences may arise; every one of them seems to be conceded as being a natural result of laceration of the cervix uteri, and have been discussed at length in the latest text-books (especially by Emmet and Thomas), in the *American Journal of Obstetrics*, and in the reports of the American Gynecological Society; also numerous original articles (read before the various societies all over the country) can be found, together with the discussion that followed their reading. So profuse is the literature regarding the results of this accident, that it would be imposing upon good nature to cite the names of all the authors, and therefore I chose simply to refer to the books and journals in which most of the writings on this matter can be found.

4 Q. Do you believe laceration of cervix a cause of sterility?

Jackson, C. M. Wilson, Sutton, Van de Warker, King, Palmer, Goodell, Baker, Jenks, and Byrne, answer simply in the affirmative. Thomas says, "sometimes, unquestionably"; Engelmann, "frequently"; Byford, "only when attended with the morbid conditions mentioned before"; E. Wilson, "yes, if extensive."

Nash answers: I do, in some cases I have known abortions to occur from this cause. Lyman says: Not necessarily, but often so. Mundé: Yes, if there is cervical catarrh (as usual) or cicatricial contraction of cervical canal. Johnson: In many cases by producing conditions named in answer to 3d question. In some cases no effect seems to follow. Hunter thinks that it is "often a cause of miscarriage."

Prince answers, "sometimes"; Mann, "most certainly"; Duncan and Murphy answer, "no." Taylor says, "only if extensive." Reamy, "in many cases." Harvey, "I do, although many conceive." Lusk, Not as a rule. May lead to abortions. Chrobak: Yes, but mainly in consequence of complications. Howard: In some cases, certainly, but

not in all." Wylie: If diseased sufficiently to *at all times* cause acid or abnormal secretions.

I. E. Taylor: By no means. I have several cases at present in my private practice whom I have attended in several confinements, and who had partial laceration, and a few up to the vaginal junction have had children, and one of them every fifteen months. They were safely delivered, and no further laceration occurred. In some of the patients who became widows, and others not having any more children, the laceration has healed and the cervix presented a more natural appearance. In a few the cervix has become in form and appearance natural. This morning two cases were seen, and it would be a question with some whether the women had a child from the appearance of the cervix. The os tincæ has either assumed the round, small opening, or a small transverse slit.

Seventeen answer with "yes," and three with "no" simply, while the others qualify an affirmative reply by adding "if extensive," "sometimes," "if there is profuse catarrh or cicatricial contraction of the canal," etc. Sterility as an effect of laceration, has been violently assailed and ridiculed by some, but V. A. Hardon, *American Journal of Obstetrics*, 1881, in an excellent paper, describes in a striking manner how a lacerated cervix may be the cause of disease and sterility, and require sewing up for a cure, and how a cervix slit open by the knife to cure sterility, remains inert as a factor in disease and accomplishes the end desired. There is no doubt that we see instances, occasionally, of even extensive lacerations of the cervix in which pregnancy occurs and is continued to the end of gestation; but these are, seemingly, exceptional cases. I have seen such cases; they all had aborted before, however, and did abort again, though they used great care, during gestation.

5 Q. Do you believe that Emmet's operation, if performed early and properly, will, to some extent or entirely, prevent uterine and pelvic disease?

Jackson, C. M. Wilson, Prince, Baker, Jenks, and Byrne answer, "Yes." Duncan answers, "No." Thomas says: In most cases. Engelmann: It will certainly prevent such diseases as are dependent on laceration. Byford: Yes. After its complications have to a great extent been cured by preparatory treatment. E. Wilson: Yes, usually. Nash: I do, hence advocate an early operation, though my cases have all been operated on for the relief of distressing results. Lyman says: I know it will prevent such diseases as would supervene if left untouched, and in consequence of the laceration itself. See answer 1. Sutton says: It may do immense good. Mundé answers, Without doubt, in well chosen and proper cases. Van de Warker: Where the operation is indicated, I believe it to be curable.

Jos. Taber Johnson says: I believe it will to some extent, or entirely prevent such uterine or pelvic diseases as are often sure to follow its occurrence. We see, however, all the above named and other uterine and pelvic diseases where no laceration exists. King: Yes, excepting when disease of the

pelvic organs immediately follows the laceration. Palmer: Yes, in properly selected cases. Goodell: I think it will, to a great extent, do so. Mann: Yes, unless cellulitis has occurred in childbed. Taylor: To some extent.

Reamy: In many cases prevent, in some cases cure. Will always do good in properly selected cases, properly done. But the most experienced gynecologist may now and then be deceived as to which are proper cases. Harvey: I do, where no other causes supervene, and I believe that slight laceration in time produce the so called "Cervical Metritis" ulceration and subinvolution and that the earlier the operation, the greater the success.

Murphy: I believe that uterine and pelvic disease always accompany a lacerated cervix, and ought to be relieved before the operation is performed. Lusk answers: Don't know. Many patients with lacerations have no disturbances resulting. I have only operated when symptoms made it necessary.

Chrobak: I regard Emmet's operation as one of the best and most certain for preventing disease of the uterus.

Howard: I do. But if done too early it is apt to fail, and may even increase the mischief; while if badly done, it had better not be done at all. No operation is more abused, or oftener badly done.

Wylie: In some cases, but preparatory treatment is nearly always needed, and it is by removal of diseased tissue rather than restoring continuity that a cure is effected.

I. E. Taylor, of New York: If it is in a recent case, I do not. If the laceration is *bilateral or tripod*, without overcoming the diseased condition of the cervix, to some extent, or completely, then the operation for closure I do not believe will prove as successful and as beneficial till the pathological condition is treated and restored. When this is accomplished, the laceration will be reduced in size, if it had been deep long, a more just estimate could be formed whether the bilateral should be treated by closure or not, and the tripod in the same manner. If the lacerations, bilateral or tripod, should have reached the vaginal junction, which is very rare, I believe, and the diseased condition of the mucous membrane not heal perfectly, and there is an eversion of the labia of the cervix, which is most generally the case, although eversion may occur from a positive or relaxed condition of the cervix, without laceration. In that class of cases I have preferred amputating the anterior and posterior labia, or the three points of the cervix (the tripod). Believing that this surgical method is far better, and more simple than the attempt at closure for the bilateral or tripod lacerations. After the removal of the parts the cervix heals up, and leaves a perfectly natural appearance of the cervix, cleanliness being only resorted to, and not covering the amputated stump as Syme has done. I will not enlarge on this point, but refer you to my monograph in Bellevue and Charity Hospital Reports for 1876, on "amputations of the cervix uteri in procidentia uteri, and complete eversion of the cervix uteri;" also, Vol. 1, Transactions of the American Gynecological Society, for remarks "on

Emmet's Paper on Flexions." Emmet himself was much opposed to amputation of the cervix, except in special pathological conditions, and adopted Syme's method of covering the stump by the mucous membrane. In a clinical lecture reported by Coe in the *American Journal of Obstetrics*, February number, 1885, page 174, he says, in reference to the treatment of lacerated cervix: "I desire to say here that I have been greatly misunderstood concerning amputation of the cervix. I find about twelve or fifteen cases of laceration every year, in which the injury has been so extensive that it would be bad surgery not to amputate. It should be only thought of in the case of women who are pretty well advanced in life." His objections have always been directed "against the removal of an apparently elongated cervix, when the real condition has been not an elongation, but a prolapse." Now, my friend Emmet has not considered the subject on this point—see my paper on Physiological Lengthening of the Cervix Uteri, etc. I have been present at operations for laceration of the cervix uteri which I must confess I should never have considered of this nature. Emmet himself does not perform the operation as often as he has done. The very proposition to repair a laceration for rent by delivery of the child, has won many and many a professional gentleman to consider that was the correct and true and proper treatment. My own experience with the views I entertain and from long experience and a large practice is that this is only justifiable in a few cases. The frequency of the operation is to be condemned. The operation will, I believe, in a few years, not be performed as many times as it has, and possibly in only a few cases. It will be relegated to the same tomb with the posterior division of the cervix, or the bilateral incision of the cervix uteri, for they are things of a day. Any new operation on the cervix uteri must run the gauntlet and be tested by time. But, alas! these important and vital organs have been cut and sewed up so much and in such great numbers, that it is, from the injury it has undergone, not to be considered an organ that conservatism is required, but must always be treated surgically; as one author has said, "It is only to be treated surgically."

These replies are sufficient to prove that the question could not have been put to greater advantage, for it simply forces one to the conclusion that they are nearly all agreed that when the operation is performed early and properly, in well selected cases, it will, and in many cases entirely, prevent such uterine and pelvic disease as usually arises therefrom.

Q. 6. Do you believe that Emmet's operation is absolutely necessary in certain cases? If so, specify the class of cases.

Duncan answers: "No." Thomas says: Yes, in all of great lacerations. Byford gives no answer.

Engelmann: It is necessary in all cases in which symptoms—which can not be allayed—depend upon the laceration.

Jackson: Yes. Cases in which the laceration extends beyond the crown of the cervix so as to permit eversion of the lining membrane. In laceration

of less extent after childbearing has ceased, in order to lessen danger of malignant disease.

E. Wilson: Yes, where the rent is more than a quarter of an inch in length and when hypertrophy of the cervix exists with ectropion. C. M. Wilson: Yes, if the rent is extensive, and if the symptoms, local or reflex, are of a serious nature.

Nash: Yes, especially those accompanied by eversion and endometritis, which if cured or improved invariably return unless the operation is made; those accompanied by menorrhagia, displacements, etc. It is especially useful in a hyperplastic condition of the organ, favoring complete involution.

Lyman: In case of reflex disorder, intense local congestion of womb and ovaries, leucorrhœa and general nervous derangement. Sutton: Yes, in cases where subinvolution and cervical disease exists.

Mundé: Yes, absolutely necessary in large gaping rents with everted and eroded lips, and freely secreting cervical canal; in subinvolution and areolar hyperplasia, with villous degeneration of endometrium and menorrhagia, dependent on the laceration; in habitual abortion and conditions given under question 3. Van de Warker: Yes, when it results in conditions stated in question 3, and when in advanced age it prevents senile involution. Prince: Yes, when the conditions in question 3 exist.

Johnson: I do. In cases where the above-named (question 3) and other pathological conditions follow its occurrence, and are not curable by other means. If local treatment would cure, don't operate.

Hunter: When there is much hypertrophied and cicatricial tissue.

King: Yes. In any case where disease of the pelvic organs or tissue is directly traceable to this as a cause.

Palmer: Absolutely necessary, in most cases of deep-seated, bilateral or stellate lacerations, even before secondary changes have taken place. Also, in less marked laceration, if these changes are present as results.

Goodell: Cases of ectropion; cases of tender and neuralgic cicatrix; cases of hypertrophy; cases in which cancer is hereditary in the family.

Mann: In cases where symptoms are serious enough to demand it, and where there is hereditary cancer.

W. H. Taylor: In extensive lacerations. Baker also says: Yes. In extensive laceration, with eversion and cystic degeneration.

Jenks: Yes. In cases where local and constitutional symptoms indicate uterine or pelvic disorder, and examination reveals the existence of cicatricial tissue, with more or less connecting tissue growth, the neck enlarged, and particularly if the nabothian glands are notably developed.

Reamy: Whenever the laceration has left marked deformity, as ectropion, or when hard cicatricial tissue is in the field of repair, whether the tissue causes pain or reflex irritation or not, I consider the removal of it necessary in order to guard against cancer.

Harvey: In all cases where uterine symptoms cause the woman to consult a physician.

Murphy: It is necessary in deep lacerations of

the cervix uteri, and ought to be performed for the reasons above stated.

Byrne: Only in cases where the injury has been considerable, and where eversion of the cervical membrane exists, or dense cicatricial tissue occupies the seat of injury.

Lusk: Yes. In prolonged cervical catarrh, in hæmorrhage from uterine cavity, and in reflex neuralgias, in constant backache, and where walking without unusual fatigue is impossible.

Chrobak: Absolutely necessary. In some cases of extensive ectropion and severe symptoms.

Howard: I have fully given my views under this head in the report I send you.

Wylie: Yes, when deep-seated glands and follicles are diseased to remove them operation is necessary, and I think Emmet's the best.

I. E. Taylor. This has been answered above.

The sum total to all replies received on this inquiry, is that the operation should be carefully and perfectly performed:

1. When pathological changes exist which depend upon the laceration, and which cannot be disposed of by other treatment.
2. When the laceration is deep, bilateral or stellate, with a history of cancer, even before secondary changes occur.
3. When in advanced age it prevents senile involution.
4. Where subinvolution and cervical disease exists.
5. Where there are large gaping rents.
6. When there is villous degeneration of endometrium.
7. In menorrhagia.
8. In habitual abortion.
9. To lessen the danger of cancer after child-bearing period.
10. Where there is cicatricial tissue in the rents, causing reflex symptoms.

Q. 7. Do you believe that every lacerated (not fissured) cervix will cause, eventually, uterine and pelvic disease?

Thomas, Engelmann, Johnson, Prince, King, Duncan, W. H. Taylor, Jenks, Byrne, Lusk and Howard give a simple and decided negative.

Jackson, Hunter, Palmer and Baker answer: Not necessarily.

Sutton and Harvey answer simply affirmatively. E. Wilson and C. M. Wilson: As a rule. Byford: Not always, but often.

Nash: The great majority. Some may escape by reason of unimpaired uterine ligaments, but very few. Lyman: Perhaps not universally, but in the great majority of cases.

Mundé: No. Many a case, even of large laceration, will heal over and never produce any symptom whatever. Van de Warker: Only when of the extent named in 3d question.

Goodell: I do not think that every tear will, but I think that the great majority do cause pelvic troubles of some kind.

Mann: No, by no means. Many cases seem to suffer very little from it, or not at all.

Reamy: No. Anterior laceration frequently heals without operation, leaving scarcely a trace, and in other forms of moderate degree no evil is manifest.

Murphy: No, because, as above stated, pelvic and uterine disease usually accompany a lacerated cervix.

Chrobak: Comparatively few lacerations produce symptoms so severe as to render the operation absolutely necessary.

Wylie: No. If healthy, even when extensive may do no harm.

I. E. Taylor: By no means. Too many cases have been seen to adopt that view.

This seems positive evidence that we have exceptions, and that all lacerations do not contribute to uterine and pelvic pathology. Those who have observed the greatest number of cases, and who have practiced longest and most skilfully in this department, are found among those who believe that not every laceration produces diseases of the uterus and its surroundings.

Q. 8. If not, state approximately how many such cases you have observed?

Byford, Hunter, Goodell, Lusk and Chrobak give no answer; and C. M. Wilson and Sutton answer "None." Duncan says: Never observed (except immediately—not eventually).

Thomas says: Impossible to do so. Lyman: Very doubtful, certainly a small number. Mann "cannot tell—quite a number." Wm. H. Taylor "cannot answer definitely." Baker: Cannot state number of such cases which have been observed. Jenks: Unable to say how many. I have seen hundreds. Reamy: Quite a number; cannot say how many. Howard: I can give no accurate idea of the number of cases I have seen not requiring operation; but they are not infrequent. Van de Warker: A very large number in which I did not believe the operation called for.

Engelmann says: I have seen quite a number of such cases, but by far the minority in cases of laceration. Byrne: Very many—perhaps hundreds. Jackson: In many cases could not believe the symptoms were dependent upon the laceration. Murphy: About 50. E. Wilson gives "six." Nash: About 40 cases. Wylie: About 600 times. Mundé: One hundred or more. I have no positive notes on this particular point, but have often declined to operate.

Johnson says: I have seen many cases where no symptoms were complained of. Prince: Have not kept statistics, but I have seen numerous lacerations unattended with inconvenience. King: Not many. I believe that 95 per cent. of real laceration will, ultimately, cause disease of some kind. Palmer: But such results (mentioned before) are so constant as to form the rule. The proportion upon results is very small and exceptional. Harvey: If upon examination of a case laceration is found, I know of no means of explaining it away as a factor in the etiology. J. E. Taylor: Answered above.

This is one of the most important questions, and yet one which has been replied to very unsatisfactorily. A certain degree of uncertainty is manifest;

most of my correspondents guess at it, only one or two make exact statements. Yet it must be considered that in the practice of nearly every one, numerous cases have occurred, in which a lacerated cervix excited none of the affections that usually are said to arise therefrom.

Q. 9. State approximately or exactly, if you can, how many times you have performed the operation?

To know about how many operations have been made by those who favored me with an answer, would give, I thought, weight and strength to their opinion. Unfortunately, some who have had a very large experience, and who are known to have operated hundreds of times, can not, even approximately, state the number of their operations. Dr. Emmet refers me to his last edition, and there I find that up to the time of its publication, he has apparently operated over 600 times. It is safe to presume that Dr. Gailard Thomas has probably performed the operation an equal number of times. Lyman, of Boston, simply states that he operated on a considerable number. Byford, of Chicago, and Taylor, of Cincinnati, do not respond to this question at all. Not willing to be accused of exaggeration, I have rated the combined experience (although I am satisfied it is too low an estimate) of—

Emmet,	} as comprising about 1500 Cases.	
Thomas,		
Lyman,		
Byford and		
W. H. Taylor, of Cincinnati,		
G. T. Engelmann	about (40-50)	45 Cases.
A. Reeves Jackson	"	200 "
Ellwood Wilson	exactly	128 "
C. M. Wilson	"	12 "
Herbert M. Nash	"	22 "
R. S. Sutton	"	100 "
Paul F. Munde	"	200 "
Ely Van DeWarker	"	120 "
Jos. Taber Johnson	"	30 "
James B. Hunter	at least	200 "
David Prince	" (6-8)	7 "
Willis P. King	exactly	7 "
C. D. Palmer	" (35-40)	37 "
Wm. Goodell	exactly	263 "
M. D. Mann	"	90 "
W. H. Baker	"	400 "
E. W. Jenks	"	200 "
Thad. Reamy	exactly	324 "
T. B. Harvey	"	200 "
P. J. Murphy	"	50 "
J. Byrne	"	200 "
W. T. Lusk	"	300 "
Chrobak	"	10 "
W. T. Howard	"	100 "
A. H. F. Barbour	"	0 "
J. Mathews Duncan	"	0 "
W. Gill Wylie	"	200 "
		4,945

Here we have then, in condensed form, the experience of 32 operators, nearly all of whom have a reputation throughout the country, some over the whole civilized world, men who are known to be conscientious, active and zealous workers in the profession; all of which, I think, will go far to substantiate the conclusions given at the end of this paper.

Q. 9a. How often for the restoration of the cervix simply?

To this question Thomas, Byford, Mundé, Goodell, Lusk, I. E. Taylor and Chrobak give no answer.

Engelmann, Nash, Sutton, Van de Warker, Prince, King and Duncan answer "Never".

Jackson answers: 20 or 30 times. E. Wilson: About 20 per cent. C. M. Wilson 1 time. Lyman: Often, as preventive of impending trouble. Johnson: Never for the sake of operating, only for the cure of symptoms.

Hunter: About 25 per cent. Palmer: To restore cervix before pathological changes have occurred—3 times.

Howard "cannot say." Mann "cannot separate causes." Wm. H. Taylor "cannot answer definitely."

Baker: Can not divide them without weeks of work in going over records of cases. Jenks: Can recall to mind but one, and that was a month after childbirth. In this instance there was almost constant hemorrhage from laceration of circular artery. Reamy: Never, because have always had in view this and its present and ultimate consequences. Harvey: In about one-fourth the cases. Byrne: Can not say, but not a majority. Wylie: Rarely, never lately.

This question I asked for the purpose of ascertaining how many there are who believe in restoring a lacerated os, before pathological changes have occurred, and about how many times the operation has been performed for that purpose alone.

Q. 9b. How often for the relief of pathological changes and reflex disturbances depending thereon?

Thomas, Byford, Goodell, Reamy, Murphy and Chrobak give no answer.

Engelmann, Sutton, Van de Warker, Prince and Lusk answer "always."

Jackson says: All the others (see 9a). E. Wilson says: About 80 per cent. C. M. Wilson: 11 times. Nash: Always. In five cases operation for lacerated perineum was done at same sitting. Lyman: More often for this class. Mundé: Much more often than for question 9a. Johnson: About 30 times. Hunter: About 75 per cent. King: Seven. Palmer: Some 35 times. Mann "cannot separate causes."

Duncan answers, "Never." Wm. H. Taylor "cannot answer definitely." Baker: Can not divide them without weeks of work in going over records of cases. Jenks: Have always operated on account of pathological changes in the uterus, or reflex disturbances depending thereon. Harvey: Probably one hundred and fifty. Byrne: In most cases operated upon. Howard "cannot say." Wylie: About 200. I. E. Taylor: Not by closure, but by amputation as above referred to.

This, of course, includes all the other operations, with the exception of those that may be contained among those who did not answer questions 9 and 9a.

Dr. Emmet and Dr. Thomas have confessed, on more than one occasion, that to-day they do not operate as frequently as formerly, because experience has taught them that oftentimes the operation had been performed unnecessarily (of Byford, and Lyman, and Taylor, Cincinnati, I have no knowledge

regarding this point); but whether by that they mean to say that they operated in cases of laceration without complication, as well as in cases in which the complications were looked upon as following a torn cervix, can only be conjectured. For this reason I wish they had answered at least question 9a. Since I have estimated the number of their operations so low already, I will permit them to stand, and count them with those cases in which the operation was performed only for the relief of pathological changes, local as well as general; and if afterwards it is discovered that some of them were performed in cases of uncomplicated lacerations, let them be counted with those for which they were not credited.

Q. 10. What have been your immediate results respecting union and relief?

Thomas says: Almost uniform success. Engelmann: First intention. Jackson: Only know of four cases of non-union. Relief of symptoms did not always follow the other cases. Byford gives no answer. E. Wilson says: Always good, non-union in only one case. Never have had serious results follow. C. M. Wilson: Good. Nash: They have all been successful in union, and were relieved of the symptoms for which the operation was done. One invalid eight years could not walk 200 yards, relief entire. Lyman: Have been very rarely obliged to repeat the operation. The relief has in every instance been satisfactory. Sutton answers: In my early cases I had union of both sides fail occasionally. In the last two years failure to make union has occurred only once. Mundé: About 92 per cent. union, certainly 75 per cent. relief from symptoms for which operation was done. Success depends on following proper rational indications. Van de Warker: Union has never failed. Sometimes have been disappointed in general results. Johnson: Good. I had one case of acute cellulitis follow, and in one case sutures all tore out. I operated again and cured the case so far as I know. Hunter says: Very satisfactory. Non-union rare exception. Relief comes later, six months to a year. Prince: Benefit. King: Had perfect union in all, and all gave relief. Palmer: In the great majority of cases the immediate results have been satisfactory as to union and local relief. Goodell: I have very rarely failed to secure union; but I have sometimes failed to get relief. Mann: Have only failed of union four times. None lately. Relief in at least 95 per cent. of cases. Duncan gives no answer. Wm. H. Taylor says: Cannot answer definitely. Baker: Almost universally good. Union by first intention in nearly every case, and no complication save pelvic cellulitis in one case, death by septo-pyæmia in one, and phlebitis in one. Jenks: Have usually had union, but not immediate relief: look for the latter in about three months. I have been unable to follow up all of my cases. Have failed to obtain union in five cases. I desire to add as a partial answer, that I deem it of great importance to secure union in plastic operation about the generative organs of women, that a condition of health must be attained. This is done in many cases only by local and constitutional treatment. Reamy says:

Union in almost every case. Harvey: Good as to union in most cases, failure in about 5 per cent. Good in most all where all cicatricial tissue was cut away. Not good when this was not done. Murphy: Union by first intention has followed in almost all cases. Byrne: Almost universally successful. Lusk: Failure to unite has occurred perhaps a half dozen times. Amount of relief variable—often complete, and always sufficient to repay for the operation. Chrobak: Absolute first intention in every case, and perfect success. Howard: After I gained experience almost always good. Wylie: Never failed to get union and almost always effected a cure.

From this we learn that, as a rule, good will follow the operation; not always immediately; yet oftentimes in the course of three to six months thereafter; that union but rarely fails, and that it is more apt to be obtained when the cicatricial tissue has been well taken out, or the parts have been effectually treated for the relief of certain diseased conditions prior to the operation. The answers to this question also furnish evidence that the operation is accompanied by some danger, since in one instance death occurred from septo-pyæmia, and in one from phlebitis.

Q. 11. What have been your remote results respecting union, relief and sterility?

Thomas answers: Very generally good; and Engelmann: Excellent; conception rapidly follows. Jackson says: In a few cases (perhaps 10) sterility lasting several years seem to have been cured by the operation.

E. Wilson says: Excellent, have delivered 12 women on whom I had previously operated, one twice. Recurrence of tear in two cases; and C. W. Wilson says: Good.

Nash: I am not able to report positively on this matter. 10 of my patients in the childbearing age are now under observation as to the bearing of the question. Lyman: Impossible to say, as a large number have been hospital cases. Sutton: I have not been able to follow many of the cases. Some have become pregnant.

Mundé: 25 per cent. of cases under my knowledge conceived after the operation; undoubtedly many more did so but were not reported.

Van de Warker: And large number of cases relieved of sterility; and Johnson: My remote results have been good. I believe it cures sterility instead of producing it.

Hunter says: Highly satisfactory; Prince, "can't say"; Palmer: Largely, very beneficial. Wm. H. Taylor "can not state definitely"; Jenks: I am unable to answer, except as above, as the patients have been from various parts of the country. Chrobak "cannot answer"; and Howard says: I have not followed up many cases, as they were generally from a distance, and I have long curtailed obstetric practice.

King says that: Two out of seven have borne children, one of them two since the operation.

Goodell: On the whole I think that operation does not cause unfruitfulness, as I used to think, and the remote results have been better than the immediate ones.

Mann: Sterility cured in small number, but have not been able to follow cases. Baker: Good in overcoming sterility. Reamy: Properly done does not cause but often cures sterility. Good in large per cent. of cases. Have had failures as to relief of reflex and other symptoms. It is not a "cure all." The lesion does not cause all, nor will the operation cure all pelvic disease nor yet all reflex nervous symptoms.

Harvey: Very encouraging and successful in recent cases, and where there has not been too great a degree of induration. Some failures where the opposite conditions exist.

Murphy: My observations have been few, theoretically I believe it causes sterility.

Byrne: In cases of sterility from this cause, conception has usually followed a successful operation.

Lusk: Good, so far as a check upon tendency to abort.

The answers to this question must of necessity be more or less indefinite, from the fact that most of my correspondents devote themselves entirely to gynecology, and receive many patients from different and very distant parts of the country. They know not what the remote results have been, in probably the majority of cases; on the other hand, one can easily observe that the answers from those whose practice is more limited, or rather local, are much more definite. In general, the replies are favorable respecting relief of symptoms, cure of sterility or unfruitfulness, as Dr. Wm. Goodell prefers to call it, and will aid considerably in permanently establishing Emmet's operation.

Q. 12. When, in your opinion, is Emmet's operation contra-indicated?

Thomas answers: In cases of subacute pelvic peritonitis and cellulitis which may be excited into acuity during pregnancy, and after the menopause if no eversion and hypertrophy exists.

Engelman says: Acute and subacute inflammation or exacerbation of chronic trouble. Jackson: When there are present evidences of pelvic inflammation.

E. Wilson: Where peri-uterine adhesions exist, and the general health of the patient militates against the operation. C. M. Wilson: In cases where other surgical procedures are contra-indicated, and where the uterus is immobile.

Nash: In active inflammation of the uterus and its surroundings. I have almost invariably used local treatment to relieve all active disease before operating.

I. yman: When there is neither eversion, local congestion or reflex disturbance. In such cases the only excuse for it would be the possibility of growth, and of this the patient should decide for herself.

Sutton: When the ovaries or tubes are diseased; when the uterus is very irritable; when the laceration is not accompanied by symptoms of uterine disease.

Mundé: When not indicated, *i. e.*, not the *rent eo ipso*, but the symptoms produced by the rent, call for the operation. Acute and chronic pelvic inflammation.

Van de Warker: In lymphadenitis in pelvic inflammation and its products, phlegmon and ulcers.

Johnson: When no symptoms exist which demand it, and where any cellulitis exists.

Hunter answers: Chiefly in cases of acute cellulitis; and Prince: Never, only it may not always be necessary.

King says: When reflex troubles are traceable to other causes, with manifest hydro or pyo salpinx, it should not be done. That is, Emmet's operation is contra-indicated, when Tait's operation is manifestly indicated.

Palmer: When there is co-existent or inter-current chronic peri or para-metritis. The granular condition may forbid, but the para-metritic complication is the chief contra-indication.

Goodell: In fissures of no great magnitude; and in all cases in which the ectropion is slight, and yields to local treatment.

Mann: When pelvic cellulitis and peritonitis are not well cured, or cancer is developed.

Duncan says: Almost always; and Wm. H. Taylor: Not needed in limited laceration.

Baker: When there is any acute or subacute inflammatory action of cellular tissue or peritoneum around the pelvis.

Jenks: Where there is no ectropion, few or no cicatrices, no particular enlargement of the uterus, no Nabothian bodies apparent. Also where there are no symptoms that can be considered of uterine origin.

Reamy: All cases where laceration is slight, and has been followed by no symptoms referable to it—during pregnancy, during presence of acute or subacute metritis, peritonitis or pelvic cellulitis, cancer of neck or body of uterus. When patient is suffering of pulmonary consumption, or any other fatal malady.

Harvey: I can not see why it should not be tried in all cases where laceration or fissures exist, provided epithelioma has not invaded the parts so deeply that we can not hope for union.

Murphy: It is contra-indicated when the lacerated cervix is accompanied by uterine and pelvic disease, and ought not to be performed unless in the graver lesions of the cervix.

Byrne: In chronic pelvic cellulitis anæmia or other depraved state of the system.

Chrobak says: The operation is more frequently performed than necessary; it is only indicated, with the exception of general indications, when acute inflammation exists.

Howard: You will find this answered in my report. (See his report.)

Wylie: When mucous membrane is healthy. Before any serious complications such as endometritis, parametritis and perimetritis are cured, when uterus is fixed and *not freely movable*.

I. E. Taylor: It is contra-indicated in a large number of cases, and only necessary in the class of cases I have referred to as above.

These answers may be summed up as follows:

- 1 In acute and sub-acute inflammations.
- 2 In pelvic cellulitis.
- 3 In pelvic peritonitis.
- 4 In lymphadenitis.
- 5 When ovaries and tubes are diseased.

- 6 When uterus is very irritable.
- 7 Never the rent, eo ipso.
- 8 Pregnancy.
- 9 After menopause, if no eversion or hypertrophy exist.
- 10 Manifest hydro or pyo salpinx.
- 11 Where there is no ectropion.
- 12 Where there are no Nabothian bodies apparent.
- 13 When there are no symptoms of uterine origin.
- 14 Not needed in limited lacerations, anemia or fissures.
- 15 When local treatment gives relief.
- 16 When peri-uterine adhesions exist.
- 17 When uterus is immobile.
- 18 When there is neither eversion, local congestion nor reflex disturbance.
- 19 When there is cancer of neck or body of the uterus.
- 20 When patient is suffering of pulmonary consumption or other fatal malady.

The summing up and condensing of all the answers to these questions has been a laborious yet interesting work. I might here abandon my inquiry and rest content with what can be learned from it, and leave my audience, as well as those who may chance to read it in the future, to draw their own inferences; but I feel that my effort to create more harmony will have been in vain, if, after studying the different views of the various operators, I should not attempt to answer the question that has called forth this essay. I do not flatter myself that my views of this subject, gained from the above, will agree with all of you, nor with all those who will read it hereafter, but I present them with the hope that they may aid to clear the way to a better understanding. The above inquiries certainly furnish abundant proof of a great difference of opinion among gynecologists as to when it would and when it would not be proper to perform the operation. They may be divided into three classes: those who advocate operative interference in every lacerated cervix; those who do not endorse the operation at all; and those who deem it a necessity in some "well selected cases" only.

That the operation is too often performed; that cases are operated upon in which no indications for it exist; that as a consequence the results looked for are not obtained; that the patients, so far from being relieved, are subjected unnecessarily to procedures not free from danger, and are occasionally even followed by unfavorable results, rendering the patient worse instead of better, is the opinion of many. *The abuse, not the use of the operation, has done the mischief.* In the heat of debate many will defend the grounds they have taken, and fortify their position by apparently plausible arguments. But the quiet looker on—the unprejudiced and diligent student of this question—will come to the conclusion that the charges made are only too true. The accompanying tabulated record, as well as Dr. Emmet's letter, will testify to this statement; and I do believe that many of the gentlemen who have performed this operation are willing to admit the same.

Like any other new remedy, this operation has been resorted to because of its evident utility, and too much has been expected from it. That, however, might have been looked for from its first announcement. The same fate has followed every newly invented operation. But while this is no reason that the operation should be abandoned, as some, especially from abroad, would have us to do,

there is certainly to-day no longer any excuse for performing this operation for every laceration we find. We all have heard the remark, and probably have made it ourselves, I know I have, that if a lacerated cervix is the cause of all the ills text-books and authors attribute to it, then every rent in that portion of the womb ought to be sewed up.

Here it is that we must pause and reflect upon the experience of others as well as our own; and when we do so, one is compelled to admit that *it is not true that every tear in the cervix is productive of evil, and that it is not good practice to stitch up every os, simply and solely because it sustains a slit; nor is it fair to assume that because of certain diseased conditions coexisting in, around, or near the cervix or uterus and its appendages, an operation is necessary to a cure.*

To be better understood, I have drawn two diagrams to illustrate the various degrees of lacerations as we observe them in practice. Figs. 1 and 2 almost explain themselves. Fissures are, indeed, lacerations—lacerations which, in my opinion, have been more or less extensive, but have failed to heal perfectly, leaving a depression or gutter in the cervical canal, to which the name fissure has been applied.

FIG. 1.

FIG. 2.

a (Fig. 1) represents my idea of a fissure. From *a* to *b* constitutes a laceration of the first; from *b* to *c* a laceration of the second; and *c* to *d* a laceration of the third degree. Lacerations extending through and beyond the cervico-vaginal junction, if not amounting to a rupture of the uterus, may be considered lacerations of the fourth degree.

The following are my conclusions, drawn from the above tabulated record, from text-books, from the numerous articles referred to, and my own clinical experience, extending over a period of seven years as assistant of Prof. C. D. Palmer's Clinic, at the Medical College of Ohio:

1. It is evident that *the operation has been performed unnecessarily for symptoms similar to but other than*

those arising from lacerations of the cervix. Further, that it has been done imperfectly, even without preliminary treatment, in many more; and the failure to give relief, as reported by several, is due to these two causes.

2. That from our present knowledge we cannot, at this time, arrive at any definite conclusion, from the fact that many of the so-called consequences of lacerations of the cervix uteri are not settled beyond doubt.

3. That every one engaged in this department should carefully select his cases, and try every known means to give relief before recourse is had to an operation.

4. The operation should never be performed *eo ipso* in cases of simple fissures or lacerations of first and second degree.

5. In cases of eversion and disease of the cervical or corporeal cavity, or both, although attended by hyperplasia and displacement, it has been observed that all the symptoms abated and the parts returned to their natural condition, and that no laceration was discoverable after alleviative measures were instituted first, which alone caused the parts to return to a normal condition.

6. That there are some cases of extensive lacerations of cervix that seldom give rise to any inconvenience, and that, therefore, an operation should be deferred until symptoms arise that will call for its performance.

7. The operation, although indicated, should never be performed until, by preparatory treatment, the parts have been brought into a healthy condition.

8. Near, and during, the climacteric period the operation should be postponed as long as possible, and the patient not exposed to any risks, since in many cases all the symptoms subside under proper treatment, and never return on account of senile involution.

9. The operation is justifiable in cases of lacerations of the third and fourth degree, without complications, if there is a history of malignant disease in the family.

10. The operation may be performed with perfect propriety in young women, as a preventive, if the laceration is bilateral and extends up to the cervico-vaginal junction, or beyond it, even though there are no pathological changes; indeed, it seems to be the duty of every one, who observes a lesion to that extent, to urge the operation.

11. The operation is justifiable in any degree of laceration, and in rare instances even in fissures, when there exists cicatricial tissues, productive of reflex disturbances, annoying in character, and not tractable to any other treatment.

12. The operation is absolutely indicated in all extensive tears of the os, in which the cervix is everted, its mucous membrane and Nabothian follicles diseased, and especially if there be granular or cystic degeneration present, provided the parts have been restored to a healthy condition by palliative treatment.

ON REPEATED DOSES OF CASTOR OIL, ESPECIALLY IN CERTAIN SKIN DISEASES IN CHILDREN.¹

BY L. DUNCAN BULKLEY, A.M., M.D.,

OF NEW YORK.

Castor oil is such a common and well-known remedy that it would seem that but little could be written with regard to its employment in medicine. Everyone is thoroughly acquainted with its characters, dosage and use, and even the laity appreciate its value and employ it freely without medical advice. But, as far as I can learn, its use is confined to the administration of single doses, now and again, as necessity demands to remove offending contents of the gastro-intestinal tract; with the single exception, perhaps, of the well-known mode of its employment in emulsion, in frequent doses, for the relief of diarrhoea and dysentery.

In the present communication, however, I wish to call attention to the value of castor oil in certain cases, in which frequent and repeated doses of some size, and continued even for a considerable period, will produce effects difficult to obtain by other means. I will first give in brief the notes of a case, that of a child, in whom its virtues were strikingly exhibited, and which especially confirmed me in the practice now advocated.

The child, aged six years and a half, was brought to me suffering from chronic urticaria, which had existed off and on for some little time, and had resisted good treatment at the hands of others. The child was fairly developed, but of an earthy complexion, was restless, peevish, and complained continually of great fatigue. She had previously taken as a tonic an iron mixture, and also mixture of rhubarb and soda, but without benefit to her health; she had recently been in the South, and had contracted malaria which quinine held in check with difficulty. She was found to be the subject of urticaria, the wheals developing rapidly at any time of the day, and from no especial cause. When seen there was not very much of urticarial element present, but there was more or less of the papillary eruption left after the disappearance of the former lesions, constituting the disease known as urticaria papulosa. Her pulse stood at 94, of fair strength, the tongue was moderately clean. For some time previously she had complained of pain in the right abdominal region, and would call attention to it frequently. On percussion of the abdomen the right iliac region was found to present very considerable dullness, extending well up to the liver, and somewhat into the transverse colon; there was no special dullness on the left side. She had complained of diarrhoea, the movements, however, were ineffective, and often more or less lumpy.

She was ordered to take a teaspoonful of castor oil every night, and was also given an emulsion of castor oil with gum arabic and sugar and a little opium, to check excessive action. Twelve days later she was brought to the office, having taken a teaspoonful of castor oil every night in the intervening time. This

¹Read in the Section on Diseases of Children at the Thirty-Sixth Annual Meeting of the American Medical Association.