

THE PROPER INDICATIONS FOR REPAIR OF PATHOLOGIC LACERATIONS OF THE CERVIX UTERI, AND THE PROPER OPERATIONS TO MEET THEM.

Read at the meeting of the Mississippi Valley Medical Association, at
Detroit, Sept. 5, 1895.

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The recognition of a distinct pathologic bearing of many parturient lacerations of the cervix uteri, and the devising of one of the operative procedures for repairing the injury, by Dr. T. A. Emmet, is probably one of the foremost improvements in minor gynecology in the last twenty-five years. And although the Emmet operation is essentially incompetent to meet all the indications in all properly selected and prepared operative cases of this nature; still its name might be fairer had its importance not been overestimated in the beginning; had it not in a large proportion of instances been ignorantly or carelessly pressed into service, where or when no operation whatever on the portio vaginalis was indicated; or if it had always been properly executed. But the Emmet operation is not the only one that has suffered such abuse. Most other procedures upon the cervix or its canal can make equal claims for redress and limitation to proper indications.

In this connection it is pertinent to note that to one who comes frequently in contact with general practitioners as in consultations or in post-graduate classes in gynecology, it becomes very evident that their views of pathology in the female pelvis are based altogether too much upon things they find in the gynecologic vestibule—the vagina—as seen through the speculum or felt with a finger or two, with one hand only. While these intelligent gentlemen, successful general practitioners, ambitious to be up with the times, are well aware of the fact that the most important portion of the generative organs is located higher up, they seem possessed of the idea that whatever exists up there, aside from marked tumefactions and displacements, must have had its origin below somewhere in the vaginal portion of the uterus or its canal; that something must first be repaired or straightened out there before any disorders above can get better; that when the former has been done, the latter will follow of their own accord “in time” and with “proper care;” that repairing the sheepfold at the place where the wolf entered will make good all the ravages that he committed within, is the delusion to which they are still led on by the original positive statements of the promoters of trachelorrhaphy in their text-books, who said that subinvolution, metritis, retroversion of uterus and tender ovaries would practically be done away with by removal of the “cicatricial plug” and overcoming the ectropion. Gynecologists generally know now from experience usually well paid for, that this is not so. They know that organic disorders of pelvic organs located above the vagino-abdominal diaphragm that have arisen as ulterior effects of cervix laceration, become separate entities and require treatment suited to themselves nearly the same as if no lacerated cervix figured in the case; and they know, moreover, that when such a policy of treatment is carried out the patient very frequently recovers enduring health with-

out any cervix operation. While such knowledge is in possession of able specialists who are familiar with the opinions and experiences of most of the world's authorities and greater operators, it has not penetrated through the general rank and file of honorable and efficient general practitioners, who naturally have not the time to thresh the great international stack of medical journals, society reports, etc., but are limited to the opinions of a few authorities briefly expressed in the text-books. The text-books are the principal guide to general practitioners in matters apart from general medicine, and oftentimes in the whole domain of medicine and surgery. I am constrained to attribute much of the defects and inconsistencies in gynecology as it is practiced by general practitioners and some self-styled specialists to the text-books; and chiefly to those of our own glorious country.

Thus while Emmet in the 3d edition (last) of his “Principles and Practice of Gynecology,” admits that he would not do trachelorrhaphy in a number of conditions where he had previously operated, he inconsistently retains a most unfortunate and unguarded statement from the previous editions. He opens the chapter on this subject by saying: “The importance of this injury can not be exaggerated;” (!) since at least one-half of all the ailments among those who have borne “children are to be attributed to laceration of the cervix.”

To say that one-half of all the gynecologic ailments, even of parous women are due to this cause, would be an exaggerated statement which the experience of the last twenty-five years has abundantly disproven. And to say that half of all the ailments—general, medical and surgical included—are due to this is so much greater an error. For the feminine body, minus its generative organs, does have ailments also, quite as well as that of the male minus its sexual organs. And if we, for the sake of generosity in argument will assume that half of all the ailments of parous women come from their reproductive organs, and the other half from all the rest of their bodies combined; then the logical conclusion would be that laceration of the cervix uteri causes all the gynecologic ailments in parous women, if Dr. Emmet's dictum were correct.

Thus, we have a praiseworthy subject crippled at its introduction by an unfortunate exaggeration of its importance by its own author; and is it surprising then if thousands of practitioners and scores of improvised specialists, who justly bow to the fruitful views, valuable suggestions in treatment and authority of Dr. T. A. Emmet on nearly every other gynecologic subject, have looked to the cervix uteri and no further, for the source of nearly all gynecologic disorders, and have operated for imaginary sources of irritation more frequently than for real ones? They can not all know that six years later (1890) in an excellent paper at Toronto, Canada¹, he trimmed the indications for his operation down to “relief of certain reflex symptoms accompanied by more or less impaired nutrition, and to guard against the occurrence or epithelioma,” after ample previous treatment; and that, to escape the need of trachelorrhaphy, he advised a potent course of treatment of the parts during the puerperal state consisting of hot water vaginal douches, weak sublimate intra-uterine irrigations, Churchill's tincture to the cervix and vaginal vault, three to four weeks recumbency, ending in efficient tamponade of vagina when

¹ Canadian Practitioner, vol. xv., p. 343.

indurations above or descent of the uterus exist.

And while the other more recent text-books have taken a fairly reasonable view of trachelorrhaphy, they state merely the "Emmet pathology and treatment of this subject" and fail,—

1. To proclaim and to reiterate, with emphasis, the important principle or rule of action, that a complete diagnosis of the woman and of her pelvis must be made before any operation whatever on the gynecologic uterus is permissible; that by skillful and well disciplined bimanual palpation, almost wholly, in anesthesia when required, the position, mobility, size, shape, consistence and tenderness of the entire uterus, the location, mobility, size and tenderness at least of usually both ovaries, and any material departure from health in the tubes, ligaments and pelvic peritoneum must first be secured before the question of indication for cervix operation of any kind can be decided.

2. The text-books fail to impress upon their readers as irrevocable common law, that aside from some reflex neuroses, all organic pathologic conditions above the vagina that follow by infection and otherwise, in the retinue of cervix laceration, become separate objects for treatment, independent of the cervix, and should receive such treatment previous to the repair on the cervix, or in the same narcosis with that operation.

The substance of such rules and principles prefaced to each of the principle minor operations in the text-books, would soon eliminate the frequent instances where pathologic conditions of a minor grade, receive an impetus in the wrong direction which lands them where major operations only can avail; when a correct understanding of the whole case and supporting of nature's processes would have secured more nearly a normal woman by minor means.

As to the Emmet operation, time forbids that I should quote the numerous derogatory statements in the literature by thorough gynecologists as to its poor, bad and positively harmful results. Such are known to all men in extensive general and special practice. And, alas! among the laity they have too often been stumbling blocks that have induced women who needed other very important operations, to while away their day of grace.

There are many who eulogize trachelorrhaphy. But their number is constantly decreasing and they are usually young aspirants who, with broader knowledge and more experience, will become more reserved in their statements. The critics of this operation usually ascribe its negative results to its being done defectively or out of place. But I hope to show by touching upon the several views of the pathology, and a brief review of the morbid processes in childbed that the operation is itself unable to cover the whole ground.

A view that is entertained by many, chiefly Europeans, and expressed by Wm. R. Pryor,² is, no doubt, correct in many cases; viz., the cervix that tears is usually one that was hypertrophied or hardened previous to pregnancy; that it was then in a state of fibrosis or connective tissue hyperplasia, viz., a diseased cervix, and therefore tore; that the erosion is caused by the outflow of purulent discharge from the associated endometritis, so that if any operation at all is indicated it is curettement and amputation of the cervix; that sewing such lips together is worse than nothing.

2. The view of Schroeder is, no doubt, also often nearest the truth: that lacerations of the cervix being so frequent that they may almost be looked upon as physiologic, in themselves tend to heal spontaneously unless something gets into them and prevents coaptation of the torn surfaces. And this obstacle is presented by the previously diseased catarrhal mucous membrane lining the canal. And as the canal is flat and has acute angles laterally it prevents the healing of those tears mostly that occur on the sides. And therefore extirpation of this diseased lining of the canal with its degenerated mucous glands is indicated, with reunion of the severed lips when necessary.

3. The view of Emmet assumes the deeper muscular and fibrous tissues of torn cervixes to have been healthy previous to pregnancy and labor, and regards the laceration as the original evil, causing disease of columnar mucous membrane by its exposure. He assumes that involution in the cervix is arrested, because its lymph and vascular channels are laterally obstructed by cicatricial formations in the angles of the tears. This does not seem rational when, as he assumes, these channels are in action in the interior—the greater portion of the cervical lips.

When lacerations occur in cervixes whose mucous lining and other tissues were perfectly healthy before pregnancy, the Emmet order of events is correct. But while each of these three views presents a part of the whole truth, we need to ascribe more importance to the element of infection, inflammatory action and its residua.

According to the investigations of Doederlein,³ Burguburu,⁴ Williams⁵ and Burkhardt,⁶ the vagina of every pregnant woman contains saprophytic germs and in nearly half of all cases, pathogenic germs are present in it. In recumbency the vagina of the puerperal female is almost never empty but is simply overflowing most of the time. This basin presents admirable conditions for bacterial culture and the fluid contained in it is never strictly aseptic, although it contains pathogenic germs in only about 40 per cent. and the dangerous streptococci in 4 per cent. of cases unmodified by douches, examinations, etc. It will arouse a variable degree of inflammation in the lacerated cervix that is either immersed or periodically dipped in this fluid, even when it can or does not induce puerperal fever. Such inflammation will not be limited superficially to the torn surfaces but it will engage the columnar mucous membrane and muscular and connective tissue substance of the bodies of the severed lips.

Involution is arrested by the inflammation which converts it from the state of subinvolution into that of fibrosis or connective tissue hyperplasia. Thus, if the cervix was not hard and diseased previous to pregnancy, it becomes so now. The hard tissue encountered by the needle in the Emmet operation is formed. It is studded with diseased submucous glands and is more of an irritating focus than are the much smaller cicatricial plugs removed by the Emmet procedure. And the enlarged Nabothian follicles that are distributed beneath the mucous membrane deeply in the diseased bodies of the cervical lips must be regarded, not merely as hypertrophied glands, but as a graver feature tending toward malignancy, in view of facts learned by extended histologic

³ Archiv f. Gynecologie, Bd. 40, pp. 99 and 306.

⁴ Archiv f. Experimentelle Pathologie u. Pharmacol.

⁵ Amer. Jour. Med. Sciences, July, 1893, Bd. xxx, p. 468.

⁶ Archiv f. Gynecologie, Bd. 45, Hft. 1.

² Amer. Jour. Med. Sciences, 1894, vol. 107, p. 669.

studies of the earliest malignant infiltrations here. Therefore, extirpation of all tissues containing such cystic follicles is needed, and not merely puncturing them and then hiding them, as is done in the Emmet régime.

Now in order to do away with the customary guesswork with which physicians have usually plied the question, whether a given case required operation or not; and on the principle that the laceration itself, *per se*, is innocent, that its evil results alone are pathologic and may need removal in cases where they have supervened,—I analyze these results under the following four points, which must be objectively demonstrated by touch, and can be guessed at only by sight. They are:

1. *Cervical Diastasis at the Vaginal Attachment*, produced only by very deep lacerations that extend above the vaginal insertion. Then traction of the anterior and posterior vaginal walls may draw the torn flaps of the cervix apart and will usually tilt the fundus backward. All tears that do not extend beyond the portio vaginalis uteri, and whose torn surfaces are covered by normal vaginal mucous membrane and that are bounded by normal elastic and flexible cervical tissues throughout the entire cervix, are not pathologic, no matter what be their depth.

2. *The Cicatricial Plug or Wedge* at the bottom or angle of each tear.

3. *The Columnar Mucous Membrane* lining the outer portion of the cervical canal and covering the inner side and tips of the everted cervical lips, which is diseased by hypertrophy and adenoid degeneration, and is commonly called "an erosion."

4. *The Indurated Body of each Lip*, meaning the entire stratum of hardened cervical tissues in each lip, which underlies the membrane last mentioned, and embraces most of the Nabothian follicles.

Two or more of these four features must be present in any given case before we can say that the cervix may possibly be a source of irritation, or is pathologic. But to say that it is such, that it is what makes the woman sick, is another question altogether; and before we can answer it we must make a general diagnosis of the entire woman and a detailed one of her pelvis, not merely of the vaginal vestibule. We need to be aware of every anatomic and functional derangement that may be present in any of the other principal organs or systems of the body, before we can possibly judge fairly how much of the patient's sickness is due to these, and how much to her pelvic conditions. And then, coming to the pelvis, we must not let our eyes and a speculum deceive us and be overawed by cosmetic infringements in the vagina. But when the intestines have been properly emptied of feces and gas and the bladder is empty, we must by simple digital palpation, and by vagino-abdominal (bimanual) or by recto-vagino-abdominal (trimanual) palpation search for the four pathologic features about the torn cervix; determine the position, mobility, size, shape, consistence and tenderness of the entire uterus; ascertain the location, mobility, size, tenderness and contour (as to cystic follicles) of usually both ovaries; and find out any material departure from health in the tubes, ligaments and pelvic peritoneum. Nor dare we overlook anything about the rectum, perineum or bladder. Not until we have thus surveyed the entire pelvis and have carefully weighed the pathologic bearing of every abnormal feature in it, can we possibly judge as to the harmfulness or inno-

cence of lesions about the cervix, be they ever so marked.

Distinct extra-uterine swellings, aside from mere thickenings and retraction of ligaments, when they continue longer than six or eight weeks after a labor, miscarriage, or other occasion for inflection, are not cellulitis, as expressed by Emmet, but disease of appendages, and adjoining peritoneum, or the results of such disease; or they are neoplasms; and they will contra-indicate all cervix repair as long as they give pain locally, or are markedly tender on pressure, or are aggravated by the passage of a galvanic current of moderate amperage through them; unless in the judgment of a competent gynecologist they are amenable to minor means, and it is thought that their chances would be improved by eliminating a suspicious endometritis by a thorough curettement, packing, etc. Then the cervix operation may be done also incidently.

When, as is so frequently the case, a lacerated cervix is accompanied by a retroversion or flexion of the uterus, and is adherent or not normally movable, especially when one or both ovaries are also descended, operating on the cervix is contra-indicated until all adhesions and other hindrances to normal anteversion have been overcome by the usual means, supplemented by skillful pelvic massage. If this proves to be unavailing in competent hands, then curettement and intra-abdominal work will be needed, not to remove anything unless it is hopelessly diseased, but to liberate the organs and to secure them in their proper positions; and not merely a little whittling enterprise on the cervix; that would but aggravate the principal disorders. But in 95 per cent. of all such cases pelvic massage will achieve this liberation of the organs and will restore them to their proper realms, with nothing but their own weight to hinder them from remaining there.

When this preliminary victory has been gained, and not until then, the following series of operations is in order, which I do usually in one narcosis:

1. Curettement and packing, to take care of the co-existing endometritis and to make a surgically clean field.

2. Operation for lacerated cervix.

3. To hold the uterus in anterversion, shortening of the round ligaments is most serviceable and satisfactory in the great majority of well prepared cases. But ventro-fixation will have to be chosen for some, and vagino-fixation for others.

4. Posterior kolporrhaphy and perineorrhaphy are often required to meet all indications.

Endometritis is the regular accompaniment of all pathologic lacerations of the cervix; and any secondary operation for cervix repair, without a preceding careful, and intelligent curettement or without a narcosis, is botchwork.

PROPHYLACTIC TREATMENT.

Large tears that occur in hospitals and elsewhere, when a competent nurse and appointments for aseptic detail are at hand, should be sewed up primarily within a few hours after labor; as has been done and advised by Pallen, A. P. Dudley,⁷ Garrigues,⁸ C. Kollock,⁹ C. C. Barrows,¹⁰ H. T. Byford,¹¹ and many others. But whether they be sewed up or not, sur-

⁷ Amer. Jour. Obstetrics, February, 1895.

⁸ Amer. Jour. Obstetrics, 1891, vol. xxiv, p. 1329.

⁹ Tr. Amer. Gynecol. Soc., 1891, vol. xvi, p. 295.

¹⁰ New York Med. Jour., 1891, vol. lxi, p. 530.

¹¹ H. T. Byford, Tr. Ill. State Med. Society, 1894, p. 495.

gical cleanliness of the parts should be maintained by suitable douches. The evil results of a tear are alone pathologic; and these may be largely prevented by eliminating the element of infection and inflammation, by interfering with the developments of both pathogenic and saprophytic or fermentation germs. This declaration is testified to by: 1. Dr. T. A. Emmet, who says that in cases where the stitches are taken out on account of infection a few days after trachelorrhaphy has been done, and the cervix is not re-united, but the freshened surfaces are allowed to glaze over with a vaginal mucous membrane under efficient hot water douches and other guards against infection, the benefit to the patient's health is about the same as if it had all primarily united.

2. This declaration is testified to by the fact, which can frequently be observed, that lacerations in the cervix that have been protected from constant or frequent contact with fermenting or positively septic lochia by antiseptic, or aseptic vaginal, or vaginal and intra-uterine douches, skillfully administered, will afterward be found healed over with shining vaginal mucous membrane and not associated with the pathologic features which I have detailed. Therefore the vagina should be redeemed from being an undisturbed culture bed for germs.

CHOICE OF OPERATION.

In the rare instances where only gaping of the cervix at or above the vaginal attachment exists, or the cicatricial plug alone, or both of these together, *i. e.*, Nos. 1 and 2 of my pathologic features, with no diseased columnar mucous membrane and no indurations or cystic follicles in the body of the lips, the Emmet operation will fill the indications. This will be more likely in cases of early trachelorrhaphy, as it is named by J. J. Mulheron,¹² who advised sewing up tears in childbed about two weeks after labor.

But in some of these early cases even, and in nearly all cases that really need operation later on, the principal indication for removal is presented by points 3 and 4 of my description; viz., the diseased columnar mucous membrane covering the longer median portion of each lip, and the entire mass of indurated cervical tissues composing the body of each lip and containing most of the dangerous submucous cystic follicles.

These principal sources of irritation and of malignant developments the Emmet operation can not cope with, without doing more harm than good by impairing uterine drainage. In at least four-fifths of all secondary cases the entire indications are best fulfilled by a suitable adaptation of the operation devised by the lamented Schroeder of Berlin, for excision of catarrhal mucous membrane from the cervical canal. It was published by him in this country in 1882. It is as follows:

1. Exsection of the cicatricial wedge at the bottom of each tear by two suitable incisions which meet near the internal os, forming acute angle with each other. When there is only a unilateral tear and diseased cervical tissue and membrane are to be removed, then one simple temporary incision of equal depth is made in the cervix at a point opposite the tear. By holding the two cervical flaps thus made apart by bullet forceps, the entire cervical canal becomes accessible.

2. A cross-cut is then made on one lip extending in length to about one-eighth or one-fourth of an inch

from the lateral boundaries of the cervix, and of sufficient depth to pass through the mucous membrane and all indurated cervical tissue beneath it. This cut is made as high up in the cervical canal as is needed to remove all diseased parts and still admit of the subsequent suturing. From this incision downward to the end of the lip, the entire mucous membrane and with it all the adjacent hard cervical tissue, with all the diseased follicles in it, is removed in one piece, so that a hollowed-out flap of the soft and flexible outer vaginal portion of the portio vaginalis is left. This is then flexed inward upon itself, and its end sutured by four to six catgut sutures to the projecting shoulder above (and created by) the transverse incision.

3. The other lip is next treated in the same manner.

4. Finally, three or four silk-worm-gut sutures are introduced on each side similarly to the Emmet sutures.

Thus a short and broad cervix or portio vaginalis is made, whose external portion is lined by squamous epithelium that will never degenerate as the less resistant columnar mucous membrane does, from numerous local causes, and stenosis of the cervical canal is never invited, as it often is by the Emmet operation.

A CONSIDERATION OF THE VALUE OF THE ALEXANDER OPERATION COMPARED WITH THAT BY ANTERIOR FIXATION OF THE UTERUS.

Read before the Gynecological Society of Boston, Feb. 13, 1896.

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Alexander's operation seems from the most recent experiences to be indicated only in those cases of backward displacement that are not complicated with adhesions and pelvic contraction. When the displacement is due to morbid processes connected with the Fallopian tubes and ovaries the Alexander operation would be for the most part contraindicated. The operation can only be resorted to with advantage in cases of mere relaxation of tissue. In cases of adhesions it is plain that the contracted parts would draw upon the bladder. In uncomplicated cases the operation would insure the uterine fundus, being held over the bladder more in accordance with its normal relation than can be secured by a resort to the other surgical procedures. Speaking from my own experiences and observations I should say that the indications for Alexander's operation are extremely limited. The operation, though a delicate one, is often quite formidable and, unless its application is narrowed down to the cases in which it must be employed, the measure for relief will prove a failure. Most of the apparent cures following the Alexander operation result not so much from its adoption as from the measures employed to relieve many concomitant lesions. Metritis, endometritis, salpingitis and ovariitis are conditions that often accompany retro-position. Curettage and other surgical expedients employed for the relief of these affections are often most helpful in overcoming displacement. Some operators employ for some weeks after the operation as a precautionary treatment different forms of pessaries. Careful and judicious application of iodoform gauze tampons is sometimes preferable to the use of the regular pessaries. The employment of such means and the keeping of the patient in bed or at rest contribute no doubt to the relief experienced. The special features of treatment such as rest and the

¹² Canadian Practitioner, vol. xv, p. 346.