

Engelmann (G.J.)

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MEDICUS

A NEW DEPARTURE IN UTERINE  
THERAPEUTICS.  
THE DRY TREATMENT.

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REPRINT FROM  
ST. LOUIS COURIER OF MEDICINE,  
*January, 1886.* 1886







A NEW DEPARTURE IN UTERINE THERAPEUTICS.  
THE DRY TREATMENT.<sup>1</sup>

BY GEO. J. ENGELMANN, M. D., ST. LOUIS.

I did not expect to be called upon so soon after my return, and the first notice of my being expected to read a paper before the society this evening, was received together with the card announcing the meeting, yesterday morning. Presuming that the society would expect the regular paper, that you might not be altogether disappointed, I have determined to address you upon a subject which I have had in mind for a good many years, in which I am deeply interested, but which I have felt was not yet quite ready for publication. Still, knowing that we would have but a short time for scientific discussion at this, our annual meeting, I will, at least, depict the subject in brief, and make what I might call a preparatory statement.

I will explain a method of uterine treatment which I consider new and original with myself. Though not yet perfected in all its details, the main features are sufficiently well defined to entitle them, as a method, to your consideration. Without elaborating I will give you these leading points, more especially as I deem it well to make a preparatory statement for the purpose of claiming precedence, as similar views are often ripe in several similar thinking minds at the same time, and various publications may appear spontaneously and independently at the same time. The method I claim is, if I may call it so, the dry method: it is decidedly a dry treatment, as compared to the methods of uterine treatment now practised in this country.

The methods of treatment in use in different countries present striking variations and contrasts; certain methods of practice which predominate in one country are almost unknown beyond its boundaries, science being by no means truly cosmopolitan; in Ger-

<sup>1</sup> Address before the St. Louis Obstetrical and Gynecological Society.

many, for instance, at one time the washing of cervix and vagina with strong solutions was an almost universal practice; in many clinics it was customary, whether other treatment was applied or not, to wash cervix and vagina with strong solutions of sulphate of copper or carbolic acid, through the Ferguson speculum. In France they use—I am only speaking of methods which are not used here—they use the cautery, and medicated supports to the uterus: the thermo-cautery also is a specialty in French gynecology: a common usage is to apply a remedy in a small semi-circular bag made of muslin or mosquito bar, which at the same time serves as a support for the uterus. This country is peculiar in its use of nitrate of silver and iodine; though in England it is used in a similar way, but by no means as freely and as commonly as here.

These are but a few of the many peculiarities; yet among all these often widely differing methods I find none, unless it be the gauze pouch of the French, which approximates to or resembles the dry treatment of which I shall speak. For this method I claim as the distinguishing features the treatment of the uterus through the vagina, and the use of the salts and cottons, either alone or in combination. The dry method, in my practice, developed mainly from the sad results and the injury which I have seen following the promiscuous use of strong fluids in the uterine cavity, iodine, and especially nitrate of silver. But there was a time when the practitioner was not even satisfied with that: the pure nitrate of silver, nitric acid, the strongest possible remedies were used, and very commonly used, when no relief followed the use of the ordinary applications: if the patient grew worse under the use of iodine or nitrate of silver, it was supposed to be due to the progress of the disease, the insufficiency of these remedies, and stronger ones were used, naturally with still more unsatisfactory results: if the uterus was displaced, a pessary was inserted without regard to the cause of the malposition or the condition of the organ. It was from the injury caused in the sensitive, inflamed parts both by pessaries and by these powerful applications that I was induced more and more to apply my remedies in a milder form, and in a manner less irritating, and one of the most important and characteristic features of this method is the avoidance of intrauterine applications except in case of unquestioned necessity, where the indication distinctly exists. I admit that in certain cases intra-uterine ap-

plications are necessary and cannot be supplanted, precisely as the wet glycerine tampon has its place and cannot be altogether replaced, but I would not advocate either as a method. I would greatly prefer to rely upon the dry treatment as a method, using other remedies in individual cases when called for. It has long ago appeared to me as a correct principle in uterine therapeutics that we should act upon the tissues of the entire organ, even the vagina and other surrounding parts, the ligaments and cellular tissue, and not upon the mucous membrane only. The mucous membrane in some instances is the original site of disease: in others the mucous membrane is secondarily affected, diseased together with the mass of surrounding tissue. In all these cases the common practice is to make the application of iodine and nitrate of silver to the mucous membrane; this often secondarily affected part is made to bear the entire insult of the treatment, and it suffers in consequence. I have endeavored more and more to reach the surrounding tissue, to reach the muscular structure of the uterus, very frequently even the tissue surrounding the uterus, by treatment, and I was forced to seek another point of attack. The mucous membrane, the inner lining of the uterus, is, with the exception of the well guarded outer coating, the peritoneum, the most sensitive and delicate structure in all this tissue, and in treating the entire organ we have always attempted it through this most delicate part.

I have felt that other points of attack must be found, tissues which would bear treatment better; and, in fact, these tissues are frequently the site or centre of the existing pathological changes, and must then, of necessity, be the direct object of treatment. Experience has taught me that in disease not strictly localized, it is far better to directly reach these more resistant structures, at the same time the greater mass of tissue, than the more delicate mucous membrane: I consequently tried the German method of a cervical wash, using stronger fluids through a cylindrical speculum to wash cervix and vagina. This is an uncleanly method and unsatisfactory; in short, the use of fluids upon the cervix and cul-de-sac, though to a certain extent reaching the cellular tissue and ligaments, did not satisfy me, although less dangerous, and, in general, more correct than the constant mopping of the endometrium. I then used the salts, at times filling the cul-de-sac surrounding the cervix with such salt as might seem desirable; for instance, alum, bis-

moth, the zinc oxide or iodoform; the application of cotton saturated with the salt followed, and this led to the medicated cotton.

The prepared cottons I consider as the neatest and most satisfactory way of treatment, convenient and cleanly; even iodine in this form is not objectionable, as you see by this five per cent iodized cotton, preserved, well corked in an amber bottle: thus applied to the cervix, iodine does not burn or cauterize: it is gradually absorbed: it is packed at the point upon which it is to act, and it is then slowly absorbed. Such an application differs distinctly from those of all other methods; it differs from the painting of the surface, rather resembling the dressing with powders; it is not corrosive, it does not act with intensity all at once; it causes no discomfort, but acts continuously, as it is slowly absorbed. So the tannated, borated or salicylated cotton, and as a hemostatic, the iron cottons of various strengths, render admirable service. I have iron, iodine, borax, salicylic acid, tannin in this form, from Am Ende; alum and iodoform cotton I prepare myself.

Comfort of application, mild and prolonged action are prominent features of this method, and an advantage it undoubtedly possesses; yet there is another advantage, and upon this second point I lay equal stress—that is the support afforded the displaced organ, and the rectification of malposition as accomplished by this method. I frequently found ladies complaining of sufferings caused by pessaries, the pessary aggravating preexisting trouble, and yet in many of these chronic inflammations we have displacement; and this it is desirable to relieve as soon as possible; best during the progress of treatment. The pessary is then used, often to the detriment of the patient, exciting inflammation: here the cotton tampon is called for, the vehicle for the remedy therapeutically indicated now serves with equal advantage a mechanical purpose. There is no better remedy than a medicated cotton; whilst treating your patient for the existing inflammatory trouble you at the same time correctly place your tampons and support the uterus, thus giving her immediate and two-fold relief. The patient so treated does not suffer from the treatment: on the contrary, she leaves your office relieved. The remedy is gradually absorbed from the cotton, and when, after twenty-four hours, the patient removes the tampon, it is white: the iodine has been absorbed.

The benefit of this gradual treatment is that it causes her

no suffering: on the contrary it produces comfort, and at same time a second object is attained, the reposition of the uterus. In case of a relaxed vagina the iron cotton should be used, which whilst giving support, strengthens and contracts the tissues of the vagina: this is not distended as it would be by simple cotton; on the contrary contraction is produced, so that first from the use of a simple cotton tampon for the support of the uterus I again came to the addition of the salts and then to the use of these cottons. I found that it was advantageous, when using a stronger salt, to use it imbedded more or less deeply in the cotton tampon, the remedy, thus dissolved slowly, prolonging its action and obtaining the effect by degrees. The next step is apparent: I had cotton thus prepared in quantity, saturated with the remedy. Some eight years ago I commenced to use cotton saturated with carbolic acid, salicylic acid and perchloride of iron; alum I merely used as a powder in the cotton. This cotton, especially the powerfully styptic iron cotton, prepared for me by Habicht and Co., of St. Louis, rendered most excellent service until I discovered the preparations of Am Ende.

I had found a method of applying a remedy to the uterus with comfort to the patient, possessing moreover the great advantage of continued action. If I apply iodine with the pencil, the action is intense: the amount necessary for successful treatment is at once applied, and with suffering to the patient: if I use iodized cotton I can, with advantage and without pain, use a larger amount, which is slowly absorbed in the course of the next twelve hours, the action of the remedy being moderate and continuous. The treatment is clean, it is dry, it is comfortable; it does not give any pain, but, on the contrary, relieves. These cottons are, of course, limited in number, though we have borax, iron, salicylic acid, iodine, corrosive sublimate and jute in various forms, which is prepared for the purpose, cleansed and medicated, but the fibre is somewhat coarse and irritating, so that it can not well be used alone for tampons, notwithstanding its excellent qualifications. The cottons are thoroughly absorbent cottons, hence the tampons lose their elasticity: when saturated with discharge, they become doughy. The jute fibre is not soft and fine enough for use in most cases, but where they are borne, the best tampons are those made of jute; they are absorbent, light and elastic, but unfortunately rather harsh so that I frequently use a small jute tampon covered

with a medicated cotton, which unites the elasticity of the one with the delicacy of the other and adds the therapeutic effect: if not desirable to make the treatment severe, an almost transparent layer of the prepared cotton, is placed over the jute, the quantity used being in accord with the effect desired. This tampon is mechanically useful and at the same time medicates; it is elastic and not compressible; it does not absorb the fluid and shrink to a hard lump, as cotton alone would. The remedies I mainly use are alum, bismuth, tannin, salicylic acid, iodoform, and the oxide and sulphate of zinc; these I apply by means of powder blowers, from which a very fair jet can be obtained, though not fine enough for the cavity, very excellent for the vagina. I have repeatedly attempted the treatment of the cavity itself, but have never been able to bring the powder in proper contact with the lining membrane, and have not been able to evenly coat the cervical canal. Tannin and iron I have used in compressed form, baccilli made in accord with my directions by the druggist, which are excellent in extreme cases, but ordinarily too severe. The best form of medication I have been able to attain, next to the powder which I consider preferable, has been the pencil, made, according to my suggestions, in Philadelphia, by Mitchell, whose gelatine pencils have proven so successful in the treatment of other organs. I found the pencils originally made by him too dangerous, being too large and firm, perhaps one and a half line in thickness. The pencil he now makes is the one suggested by myself, more delicate and easily dissolving, flexible and soft, one-half to three-fourths line in thickness, so that it can readily be introduced into any uterine canal without completely obstructing it, and without giving trouble, although it is necessary to observe great caution in all cases, as some are extremely sensitive and respond as violently to the pencil as they would to an intra-uterine application; I am not at all satisfied with the result, and believe that a vehicle more soluble still must be found. However these are the best, so far. These pencils are elegantly prepared: this delicate cylinder for instance, contains one grain of sulphate of zinc, one grain of extract of opium, and a quarter grain of extract of belladonna. Smaller but more firm than these are the iodoform pencils of Parke, Davis & Co., and yet this clumsy pencil is one which I have found absolutely harmless. It seems strange that the delicate soft gelatine pencil, such as I have shown you, is more liable to act as an irritant than this

large heavy pencil which, in my practice, has never caused noticeable irritation or any injury whatever, even when used in the office.

We have too long centred all efforts upon the mucous membrane, a very sensitive and yet a very small part of the organ and a change must be made; as a rule, it will be found better to attack this membrane indirectly. The hot douche strikingly demonstrates the advantages of this method; every one knows how decidedly the douche improves the uterine condition and benefits the membrane itself; so the remedies used in the vagina and against the cervix, though directly affecting the muscular tissue, act upon the mucosa; they invigorate the tissue, improve the circulation, and thus benefit the lining membrane, which in part even receives the astringent effect of the remedy, or whatever that may be. I have frequently proven this in cases of profuse discharge, acute, sub-acute, and chronic, in which no intra-uterine treatment whatsoever was administered, nothing but the dry treatment with the use of iodoform, iodine, zinc, bismuth or other salts.

We all appreciate the importance of replacing a uterus flexed or verted, but often to our chagrin, in the diseased conditions of the organ, the pessary is out of the question. By the method I have adopted, and which I now urge before you, it is possible for us to relieve such displacements at the same time that we are bettering the coexisting disease, and both, being attacked at the same time, yield more readily. The tampon improves the circulation in replacing and supporting the uterus, and thus facilitates the action of the remedy; if we add to this the effect of the remedy, with which the cotton is saturated, upon the vagina and the surrounding tissues, ligaments and ovaries, we will see how infinitely preferable reposition by this method is to the replacing and supporting of the diseased organ with a pessary as it is so often attempted.

I rely upon the salts and the cottons in treatment of uterine disease, and depend upon them, as my brethren depend upon fluid and applicator. I might almost say that I rely upon them altogether. My method of applying salts to the uterine cavity is still very imperfect, yet I am endeavoring to use the dry treatment to the mucosa wherever such direct application is called for; where powder is out of the question, pencils have proven the best method I have been able to find so far, though I must say that the large pencil which Mitchell has made, his old intra-uterine pencil, is dangerous when applied in the office, as I have repeatedly

seen slight inflammations following its use. The small new pencil, however, is a very satisfactory application; still I watch patients and warn them beforehand of possible pain, advising them what to do if trouble should occur. An instrument which would enable us to dust the mucous membrane judiciously would enable us to treat our patients to greater advantage, and this alone is wanting to perfect the dry method in uterine therapeutics.

The short, thick iodoform pencil, as I said before, is manufactured by Parke, Davis & Co., of Detroit, Michigan. I have never seen any harm from it, yet the very slender, pliable gelatine pencil will sometimes cause trouble, depending upon the irritation or non-solubility of the pencil itself—it is the mass of gelatine, not the remedy which it carries, which excites, as I have seen hyoscinum, opium and belladonna, cause precisely the same trouble which ergot or zinc would if used in the same pencil form. If the patient can lie down immediately after treatment, and rest until the mass dissolves, it can be used with safety. I have frequently introduced two of these large iodoform pencils at a time, one behind the other, because they are not made longer than one inch, and have never seen trouble following. The powder blower is a necessary adjunct to the dry treatment, and a good many of these instruments are called for, because it is very inconvenient to fill a single one with a different powder for each application of a different remedy; one of these instruments contains sufficient for, perhaps, a dozen applications, and I make it a practice to use one for each of the remedies. The glycerine tampon I have found extremely uncleanly, and, as a common application, at least not serviceable. In certain clearly defined cases it is of value, and I think that I have seen cases in which it did excellent service, as in the dry, hard, indurated cervix of old chronic cases. I still frequently use it, but I believe that the iodine is preferable to glycerine and will even replace it to advantage. I use both, and I can hardly say which seems to answer best, but I myself greatly prefer dry iodine cotton to the filthy glycerine tampon which, however, sometimes does excellent service.

In regard to intrauterine treatment I will say that I have almost entirely given up those remedies which have been so popular, iodine and nitrate of silver. Dilute carbolie acid, iodized phenol diluted with glycerine, pinus Canadensis, fluid ex-

tract of ergot, and dilute solution of perchloride of iron and of picric acid are the remedies I resort to when intra-uterine applications are called for. I must again most emphatically assert that serious injury has resulted from the use of strong applications which is so common. In cases in which the mucosa should be the site of treatment, mild applications are, as a rule, most advantageous—I say *as a rule*. Pure perchloride of iron, carbolic and even bromic acid give most admirable results as intrauterine applications in such cases as demand such active interference, but these are not numerous and afford distinct indications. Nitrate of silver I have not used for a great many years. Iodine I use sparingly.

It is impossible to follow throughout one method, but in the majority of cases I may say that better results are obtained by directing treatment to the greater mass of diseased tissue, and it is the safer course to rely for treatment of the mucosa upon the treatment of the entire uterus than vice versa. I much prefer to rely upon that one method in preference to any one other method; yet there are those cases in which the mucous membrane is diseased and the muscular tissue not affected, where, of course, nothing can supply the intra-uterine treatment. The method of intra-uterine treatment demands close attention; I myself have been extremely careful with it for fear of doing mischief. I look upon the applicator as well as the remedy used as an important consideration. The form of instrument as generally used I consider dangerous and inconvenient: consequently I have had applicators made which are smaller and more pliable than those commonly used. I find the best results from the mildest remedies sparingly applied, which are certainly preferable to the more severe remedies. Very frequently harm has been done by endeavoring to force a somewhat resistant applicator into the cavity; to remedy this and to facilitate medication, my applicators are made very soft and pliant. Of all remedies I much prefer the above mentioned, mild applications, sparingly used, and make a number of applications after first cleansing the cavity.

I trust that I have given you a satisfactory idea of the dry treatment and that you will share the preference which I give to this method as being more safe, more rapid, and more agreeable to the patient. My arguments are perhaps imperfect; I have by no means given them as I should like to give them, or in the shape I should like to make them, on account of lack of preparation.

I am treating a great many patients now throughout by this method, patients with profuse discharges who have been treated elsewhere for a long time by intrauterine applications; and records are carefully kept by others, gentlemen on the staff, who have observed the cases with me. Sometimes in three or four treatments the enlarged, inflamed organ has been markedly reduced, the discharge overcome, the engorgement diminished, the deep red color changed to a pale pink. Patients come to me with the stains of nitrate of silver or iodine upon their clothing, and these bear witness to the truth of their statement of their having been treated elsewhere by intrauterine applications. In certain of my clinical cases in which I should like to have made occasional intrauterine applications, I have deferred doing so, impelled by the wish to test the treatment, as I cannot test it in private practice, and I have found them yielding rapidly and surprisingly. In one case, for instance, of lacerated and eroded cervix with profuse discharge, a decided change was visible after the first treatment; after the second, the mucous membrane began to reform upon the erosion; and after the fourth, the large eroded surface was covered with mucous membrane, and the profuse discharge completely checked. In one such patient, a young girl with an acute or subacute inflammation of the uterine and the vaginal mucosa, with a discharge so profuse as to leave an erythema about the vulva of two fingers' breadth, caused by the acrid discharge, this was diminished after the very first treatment, and after four applications completely overcome: when she came for the fifth time this violent red erythema had so completely disappeared that even a discoloration of the skin was no longer visible. I merely mention these cases to prove the fact that the treatment will answer even where we might wish to add an occasional intrauterine application.

I wage no war against intrauterine applications as such, and freely admit their importance; they have their place and, under certain conditions, cannot be replaced. But I do deem it my duty to call a halt to their indiscriminate use; these applications should be limited and supplied by a safer method and one less painful to the patient.

I have probably spoken disconnectedly, but I trust that I have placed clearly before you the main features of this method, which has resulted from a combination and development of the meth-

ods I have depended upon in my practice during the past twelve years. I have been laboring in this direction constantly from the first attempts which I made following the precept of my revered instructor, Edward Martin, of Berlin, with tannin and powdered sulphate of iron internally applied to the uterus. So you will see that it is not from the flush of success in a few cases but after years of experience that I speak. The various cotton and jutes which I have been using are prepared by Am Ende, of Hoboken.





