WHAT IS THE PRESENT STATUS OF ELECTRICITY AS A THERAPEUTIC AGENT IN GYNECOLOGIC PRACTICE?

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Few, if any, agents in therapeutics have received more attention than has electricity. On several occasions in this Society has this subject been introduced and discussed by us. A remedy at once old, it is at the same time ever new. Its therapeutic power in practical medicine has been studied long and thoroughly enough, to enable us to honestly and reasonably determine its influence for good and for evil. No remedial agent has in its use witnessed more of the spirit of evolution and selection. Many things have happened to discredit electric methods of treatment, and prevent the general recognition of its power in rational therapeutics. The most learned authorities differ upon essentials in the treatment of many diseases, and successful results are claimed by means diametrically opposed. How bewildering this is to students of medicine! What we need above all things is a greater thoroughness, more accuracy, and reliability of observation, both in diagnosis and in treatment.

Will I, then, unfairly consume your time at this session, in the presentation of this topic, to ask you to endeavor to find out with me what is the proper field for the judicious use of electricity as a curative agent in our hands?

Electrophysiology is a too complex subject for research here. I therefore simply desire to present for your considera-

tion some practical suggestions, as they have appeared to me, in reference to the use of the faradic and the galvanic currents in gynecologic practice. When, and in what class of cases? No reference will be made as to the Roentgen ray for diagnosis, or to the *x*-ray for treatment.

It should ever be borne in mind what Tripier well said: "Electricity is the agent which allows us to influence at will those grand aspects of life—nutrition and function." The faradic currents do promote uterine contractions, do stimulate a sluggish pelvic circulation, and do strengthen the intrapelvic supports. The intrapelvic pole of a short wire wholly intravaginal stimulates best the uterosacral ligaments and the pelvic floor to contraction. Electricity used in this way is essentially a pelvic tonic.

Regard should ever be had in the selection of the pole of the current utilized—a matter too often indiscriminately done. It is enough to say that the lack of this is a serious error in practice, and without doubt it is one of the chief reasons for the absence of a uniformity of results. Each electric pole ought to have its definite place in practice, and with a distinct, definite purpose in view. Besides, there should be some exactness of measurement of the current employed in individual cases.

Amenorrhea, as a morbid condition, either absolute or relative, is a most frequent functional affection of the uterus. At times it taxes all our resources for its relief. No prudent physician would for a moment think of its early use in many cases of this disorder; but after a failure from our time-tried medicinal means, a better hygiene, and the removal of the apparent causative factors, then electricity is worthy of our consideration. That electricity is the most potent therapeutic means we possess to stimulate to normal activity the sexual functions has been well proven.

Amenorrhea is largely significant of a condition of atony of the uterus or ovaries, or is symptomatic of a constitutional depreciation of health. Very often is it the local or

pelvic manifestation of an absence, or a more or less undeveloped state, of these organs. Of course, no results are to be anticipated, if either of these organs is absent or very imperfectly developed. But as undeveloped internal genitalia—the uterus in particular—is far from uncommon, we are reasonably forced to recognize this remedy as the one of choice in such cases. The question now naturally arises: What degrees of non-development of the uterus are hopeless, either as to an establishment of menstruation in normal quantity and time, or as to a susceptibility to impregnation? In reference to this point of inquiry, experience gives us some quite reliable data. In fine, it may be said that all measurements of the uterus, below two inches in length, imply a size below what it is possible to enlarge to a capability of fertility. Above this figure there are no means at our command equal to the topical application of the direct primary faradic current to augment its growth. Sir James Y. Simpson and others have published some experiences favorable as to this method and means. My own certainly have been corroborative. For this purpose let the cathode of the direct faradic current, passed through a comparatively short, coarse wire, be applied to, or especially within, the uterine cavity, twice weekly, during the intermenstrual periods of several months. With much assurance may we expect the size of the uterus to be increased, and its fertility be favored.

As shortened lengths of the uterine cavity imply corresponding diminution in the dimensions of the transverse and the anteroposterior diameters of this organ, and as the shortened uterus shows its imperfect congenital developments not only in the corpus uteri, but by the presence of a narrowed, conoid cervix, with a pin-hole os externum, so in all of these particulars will this electrical current be found beneficial. Nothing in my experience is so potent, to increase the calibre of the os externum and the cervical canal, as is the cathode of the galvanic current.

Cirrhosis or *sclerosis* of the uterus, the recognized third stage of the so-called metritic imflammation (a lesion of this organ of lessened blood supply, because of an increase and a thickening of its connective tissue), with an amenorrhea usually relative, presents conditions to be benefited by the faradic current. Herein the cathode is to be attached to the internal electrode.

Superinvolution or excessive involution of the uterus, indicated by an amenorrhea relative or absolute, after parturition, offers indications of a similar kind. In all of these circumstances no efforts are to be neglected to at first improve the general health by hygienic measures, to increase the quantity and to improve the quality of the blood supply, and to rectify any nervous disorder.

Of the different electric currents, the static, the galvanic, and the faradic, it is probable that the first named is the most prompt in its action for the restoration of this functional change. The patient holds in one hand one pole of the static machine, while the opposite pole is applied to the lumbar vertebræ. A few applications, used daily, usually suffices, provided the uterus is fully developed. The faradic or the galvanic may be applied to the front and rear of the pelvic organs, but more permanently successful results are obtainable by the intrapelvic method. For married women, not markedly anemic, especially if sterile, by the faradic current, direct in kind, with the cathode to, and, if necessary, within, the uterus, the best results are obtained. Twice weekly is full frequent for such application. It is hardly worth mentioning in this connection that the most strict attention must be observed in a thorough sterilization of the vagina, the cervix, and the electrode, if the application is to be intrauterine, on which account the whole procedure is not only more safely but more satisfactorily done in some modern hospital, and not in our own offices. It is unnecessary almost to refer to the dangers of unintentionally inducing an abortion in certain cases of this kind. We physicians

are too often intentionally misled. A rather larger field of usefulness is open to us for the relief and the cure of painful menstruation.

Dysmenorrhea is by no means an uncommon painful affection of females. The classification ordinarily made and generally accepted—viz., the neurotic, the inflammatory, the obstructive, and the membranous—seems reasonable, and is very practical. It is for several of these varieties, under certain circumstances, that we are to look to these currents, as therapeutic means, with more than ordinary confidence.

The neuralgic form of dysmenorrhea, probably the most frequent, is an affection in which no structural lesion of any kind or degree in the uterus can be detected, but it is one in which the endometrial cavity possesses an abnormal sensitiveness, an acute hyperesthesia, the result of temperament and constitutional conditions. It is, then, a purely functional neurosis in this form of the disease. But by virtue of these repeating periodical manifestations of pain in this disease, with its host of reflex and sympathetic phenomena, due to ovarian changes, the general health becomes more and more undermined.

Undeveloped uteri are very frequently coupled with anteflexion, in anemic, chlorotic, hyperesthetic young women. Here, again, efforts are always called for to remove contributory causes, local and general, and to fortify the system at large with the standard tonics. Experience tells us the reliance to be placed on such remedies as *pulsatilla*, *cimicifuga*, *guaiacum*, and *glonoin* (seldom on any of the coal-tar products, and never on any opiates), before any resort is had to the electrical currents.

Commencing with the simplest of all methods and means, let the intrapelvic electrode be placed in the vaginal canal, in its posterior cul-de-sac, against the uterus. By choice, let this be the positive pole of the primary coil, or either pole of the secondary coil. The latter is often preferable, because of its recognized analgesic powers; the longer and the

finer this coil of wire is the better. Without doubt there are cases of this disease which are relieved simply by the external method of application of both poles. How much of this is psychical it is difficult to estimate; but a long-continued and severe dysmenorrhea, which has resisted constitutional and well-selected medicinal treatment, calls not only for electricity as just mentioned, and then, if failure, for intra-uterine galvanization.

The following has long been my method: By virtue of the anesthetic and decongestive effects of the positive pole of the galvanic current, it should, in these pronounced intractable cases, be applied to within the uterine cavity to its fundus, while the negative electrode of good size is adjusted over the lower abdominal wall. The intrauterine electrode is constructed of flexible copper wire, silver plated, the size of a sound; the negative electrode is made of copper plate, covered with a double layer of soft flannel. One, not more than two, seances each week, during the intermenstrual periods, with a strength of current from 10 to 25 milliampères, for from ten to fifteen minutes each, are all sufficient. It is desirable not to utilize very strong currents, nor too frequently. Each treatment should always be done with the most strict aseptic precautions. It is well to have the patient maintain, for a half hour or more following, the recumbent posture. All danger is minimized by care and skill. If the os externum and cervical canal are larger than natural, another special indication is had for the internal pole to be the anode, but should the uterine canal be congenitally or artificially contracted in its calibre, the cathode is the choice.

The good results thus following from one to two months of treatment, one application a week, for the three intervening weeks, of the intermenstrual periods of a prolonged time of years of painful menstruations, in virgins and in sterile married women—cases which have resisted other methods and means—are the highest awards we can offer for this valuable means at our bestowal.

The membranous variety of dysmenorrhea may be classed in the same category of management. Favorable results, of course, have been reported, resultant on repeated sharp curettements of the uterus, for this type of this disease, always stubborn, and by some regarded as incurable. But after the trials made by repeated sharp curettages, permit me to suggest a faithful administration of intrauterine galvanization. This form of electricity is an alternative to curettage for membranous dysmenorrhea, and will cure when repeated curettings have failed. The intrauterine pole should be cathode.

It has never been my misfortune to open the abdominal cavity, for the sake of curing painful menstruation, nor do I think it need ever be done. To me oöphorectomy for dysmenorrhea *per se* is unjustifiable under any circumstances. It is true that salpingo-oöphorectomy may be, and often is, clearly indicated, when there is more or less certain painfulness of the menstrual function, but then this disorder is associated with, or is dependent upon, active morbid lesions of the uterine adnexa, which in and of themselves may make necessary this surgical step.

For *chronic endometritis*, septic or specific, with or without parenchymatous metritis, we think electricity in any form is inferior to thorough sharp curettages of the uterus, followed by packings of the organ, and some local medication. Any local treatment should invariably be accompanied with an appropriate constitutional management.

For *subinvolution* of the uterus, the faradic electrical current is the remedy par excellence. The essential morbid conditions in this disease are: an enlarged, soft, flabby organ, with augmented blood supply of a passive kind, attended by such resulting symptoms as menorrhagia, metrorrhagia, leucorrhea, pelvic weight, and discomforts. A continued tonic contraction of the uterus in every way favors the local improvement. The internal administration of ergotine, quinine, and strychnine, three times a day, aided and much

intensified in effect by the intrauterine use of the faradic current, removes these conditions, favors normal involution, and prevents the oncoming of that quite frequent uterine disease—viz., chronic metritis and its accompanying hyperphasia, with, it may be, some displacement of this organ. The positive pole of the direct faradic current is inserted within the uterine canal, while the indifferent electrode is applied over the hypogastrium or lumbar regions; and a current, easily modified by an appropriate rheostat, never painful, is allowed to flow twice weekly. A current through a coarse, short wire, with slow interruptions, best induces contractions. Curettage may be needed, but this does not imply the non-use of the electric current. A few weeks of treatment is all which is generally required.

A *stenosis* of the os and the uterine canal is almost always associated with, or accompanied by, sterility and dysmenorrhea. Dilatation of the constricted canal, by tents and by expanding metallic dilators, is unsatisfactory. The former is now discarded, because with it asepsis is very difficult, if not impossible; and the latter is not permanently good. The negative electrode of a weak galvanic current, 20 to 25 milliampères, for five minutes, gradually let on and off, twice weekly, for a few times, secures permanent and satisfactory dilatation.

The electric treatment for fibroids of the uterus has received an immense deal of attention and discussion. By this time it seems to me that we ought to be reasonably settled in our convictions, as to its exact place and power, in the therapeutics of this not uncommon disease. For all intrauterine fibroids it has no place. For all extrauterine or subperitoneal fibroids it is useless. For all fibroids of the submucous variety it is capable of doing as much or more harm than good. These limitations would then confine its use to interstitial growths—viz., a uniform fibroid infiltration in all of the walls of the uterus. With equal force can we say that all ligamentous and intraligamentous tumors of

this kind are, by virtue of their location and surroundings, wholly unadapted for and contraindicate the use of electricity in any form or strength. If, therefore, it seems to me, this therapeutic agent had been used with more knowledge and with greater discretion, and always with due aseptic precautions, the name of Apostoli would not have been condemned as it has been. In a few words, the special indications for the employment of galvanism for fibroids consist in utilizing it only for the interstitial variety, in which no degenerate change of cystic formations, of fatty infiltrations, or of calcareous depositions have taken place; cases, too, which are largely muscular in structure. Precisely the same change is sought from galvanism—viz., muscular contraction, as is obtained from the hypodermic administration of ergotine, after Hildebrandt, a method used so much years since A free curettage of the endometrium, in cases of this kind, is in no sense contraindicated or superseded; to the contrary, not a few cases, objecting to the more radical operation of myomectomy or hysteromyomectomy, may consent to, and be materially benefited by, a preliminary sharp curettage and intrauterine packing, supplemented by intrauterine galvanization. In a few instances so treated my experience warrants me in stating that practical cures do sometimes come; more often the results are symptomatic cures: an abatement of pelvic pain, a cessation of uterine hemorrhage, menstrual and intermenstrual, and some, though no material reduction, in the size of the tumor. Preference is given to the positive for the active pole. Treatments are once a week during the intermenstrual time; strength of current from 25 to 100 milliampères, slowly turned on and off; aseptic precautions; rest following.

Uterine displacements present special indications for the use of the faradic form of electricity. Recognizing the two most common and active causative factors in the etiology of these disorders of place, increased bulk and weight of the uterus, and bearing in mind that this means at our disposal

is most potent for aid in these directions, we plainly see that careful and persevering treatment in this direction will bring about a great improvement. After, of course, the utilizations of means, to abate as much as possible any antecedent or coexisting chronic inflammatory action within the pelvis, and after the surgical repair of traumatisms along the genital tract, then the topical use of appropriate electric currents will do much to conduce to the patient's comfort and usefulness. Uterine prolapse, however caused, is invariably associated with some change in the size of the organ, and some relaxation of those structures upon which its support depends. Success in management is contingent upon the judicious recognition of these antecedents.

The faradic current, from a short, thick wire of the primary coil, with slow interruptions, will assist in reducing the size and bulk and weight of the organ, as well as to develop the strength of the uterine ligaments. As slow interruptions, in short and frequent applications, the slower the better, improve the pelvic circulation, they also tone and strengthen the ligamentous muscular fibres, after the displaced organ has been replaced, by taxis and posture. The muscles of the abdominal wall, the thigh, as well as those of the pelvis, are thus stimulated and invigorated.

No electric current of any strength can be depended upon to replace a displaced uterus. We are asking enough of it to assist us in maintaining its position, already replaced.

The most frequent associates of a displaced uterus are corresponding flexions; nevertheless, they exist independently. *Flexions* of the uterus imply some serious interstitial alteration in the parenchyma of the uterine walls, as chronic softening, thinning and relaxation, sooner or later occurring, with also, it may be, some fatty degeneration. The mechanical effects of the flexion are to obstruct more or less the venous circulation, and in so doing to aggravate the structural lesions. Herein the usefulness of electricity is more manifest for flexions than for displacements. It becomes

necessary, in securing the best results for flexions, to place one pole at least within the uterus. In bipolar faradization of this organ both poles are so placed.

After a free curettage of the endometrium, generally indicated, because of a chronic catarrh, and menstrual changes in frequency, quantity and duration, the active pole of the primary faradic coil is adjusted within the uterus to the fundal wall, and the canal straightened. The indifferent pole is placed over the abdomen, if there is retroflexion, but over the lumbar vertebræ, if there is anteflexion. By so doing a current with slow interruptions, passed through a short, coarse wire, not unpleasantly strong, utilized twice a week, excites the uterus to contraction, its walls to strengthening, and its canal to straightening. Nothing is superior to this method of treatment in cases of this kind. Congenital non-developments, so frequently coupled with flexion, when of an *ante* variety; and chronic engorgements with atrophy, when of the *retro* variety, afford other indications for the same means. The faradic current, so used for flexions, is not only safer, but much more efficacious, than any intrauterine stem pessary.

One of the most annoying of all intrapelvic morbid conditions is the presence of retroflexion to the second degree, conjoined with an old chronic pelvic peritonitis. Then, there is some salpingitis, ovaritis, and peritoneal adhesions, fixing the uterus in its awkward position. There is always pelvic pain, menstrual aberrations, painful defecation, and an untold variety of reflex disturbances. Abdominal section and a salpingo-oöphorectomy have too often been the only hope in affording relief to such patients. At this very juncture it seems to me that intrapelvic galvanization offers us no uncertain alleviation.

We all know how pelvic exudates result from an old-standing parametritis and perimetritis. We know how very often these are the almost constant and inevitable penalties of a septic and specific endometritis. We have enjoined

rest, saline purgation, hot and prolonged sublimate vaginal irrigations, counterirritation, and topical applications of boroglyceride, ichthyol, iodine, and internal medication.

Our patient is bettered, but not made well. A return to her domestic duties, and a renewal of sexual intercourse are apt, with seeming trifling circumstances, to rekindle the latent inflammatory mischief, and the same painful experience must be gone through with again and again. Shall we now sacrifice the uterine appendages, or can we do aught else?

The active pole, wholly intravaginal, is placed against the inflammatory exudation, where the bulging mass, hard, dense, tender, is most detected in the vaginal roof. Well covered by a thick layer of gauze, thoroughly wet with a strong solution of potassium iodide, the positive pole is thus arranged. The negative electrode, much larger, covered with cotton or gauze, and wet also with the same solution, is lodged over the abdomen. The galvanic current, 10 to 25 milliampéres is gradually turned on. By the process of cataphoresis, accomplished by the electric transmission, through solutions of this chemical, a rapid dissolution of it is effected, and the iodine is quickly deposited at the pelvic roof; not unlikely some of the iodine of the solution about the negative electrode, in its movements toward the positive, is transmitted into and through the diseased structures. At any rate, local effects in melting down larger or smaller pronounced masses of exudates are obtained. Applications may be made daily. Puncture and vaginal section are needed, if pus to any amount is present, but many cases there are where there is no pus, simply some serum, fibrous exudates, and plenty of adhesions. The uterus is fixed in its position, and all locomotion with defecation is painful.

Perimetritic are more common than parametritic exudations, and more serious in effect. Some very noticeably good results are procured in these forms of chronic pelvis disease, through the processes of absorption, and the return to normal mobility of the parts, by this means and in this way referred

to. Not infrequently the pain is relieved, the mobility of structures returns, and the morbid mass disappears. Certainly these mentioned means and methods are worthy of further trial.

Inversion of the uterus in its chronic form, coming as it does under the observation of the gynecologist, is first to be reduced; after which the faradic of the direct kind may well be utilized every few days (positive pole within the vagina), to secure a more firm contraction and involution of the relaxed and subinvoluted organ.

The ovarian regions, especially the left, are very frequently the seats of pain in many female pelvic diseases. Whether this pain is in the ovary itself, or whether it is neurotic or inflammatory in kind, it is not always easily determined. It can usually be inferred that it is the latter when the organ, by touch, is found to be changed in size, shape, and position. But many ovarian pains are purely reflex and neurotic in kind. Under such circumstances the topical and external applications of the galvanic current, with the positive over the lower abdominal wall and the negative to the back, are worthy of our use.

Almost all of the intrapelvic diseases of women are dependent upon, give rise to, or are in some manner or degree associated with, the various functional diseases of her nervous system. A female who has *hysteria*, *neurasthenia*, *spinal irritation*, *neuralgia*, *migraine*, *chorea*, *insomnia*, *mental derangements*, and *general nervousness* may have, often does have, some uterine or ovarian or tubal lesion, which will modify, intensify, or prolong, even if it does not actually produce, her nervous affection, whether reflex or not. The more rational treatment is to search for and directly improve, as best we can, the local gynecologic disease. Unfortunately, even then some of the reflexes may be perpetuated for an indefinite time. Under all circumstances these various morbid manifestations of the nervous system need attention; so electricity, especially in the form of the galvanic current,

appeals to most of us. General faradization, and particularly local faradization, with a very long, thin wire for the secondary current of tension, one pole being within the vagina or rectum, is an excellent remedy in cases associated with, or dependent upon, pelvic disease. Not only is there some mitigation of any existing pelvic pain, by an improvement of the pelvic circulation, and by an increased tonicity of any relaxed muscular fibres; and the very common attendant symptom of constipation is relieved, without laxative medication. Much improvement follows the use of the labile and the upward galvanic current. The positive pole is applied to and below the regions of the spinal tenderness, while the negative pole is at the sixth or seventh cervical vertebræ. The whole dorsal cord, mostly involved, is intercalated.

At the menopause, at that time of a women's life when flushings of the face, intense and unaccountable depression of spirits, and irritability of temper, with lack of vigor, efficiency, and endurance, there is a time and condition more amenable to the judicious applications of galvanism of the brain, the cervical and the central sympathetic, done frequently, of short duration, and of mild force, than from any medication.

In no class of diseases within the domain of the gynecologist and the neurologist is it more obvious than is this, that success in the management of the various neurasthenic conditions of women is largely in proportion to the degree in which we win the confidence and stimulate the faith of our patient. All intelligent co-operation will surely be rewarded.

In conclusion, permit me to refer to the valuable use of the electroangiotribe for vaginal hysterectomy, abdominal hysterectomy, myomectomy, salpingo-oöphorectomy, and ovariotomy, in the more thorough and safe removal of malignant neoplasms, diseased appendages, and cystic and fibroid tumors of the uterus and ovaries.

The possibilities of electricity as a therapeutic agent in

our hands are by no means limited. This paper is an effort to speak of electricity and place it on its proper therapeutic basis, not to magnify or to misrepresent its virtues, nor to depreciate its powers.

DISCUSSION.

DR. T. A. REAMY.—I wish to say a few words in commendation of Dr. Palmer's paper, as I shall not attempt to discuss it. I am one of those who have not the industry and perseverance to continue the use of electricity in order to obtain such results as I have been led to believe I can secure. I am familiar with Dr. Palmer's work, and I know that he has obtained excellent results in the treatment of some forms of dysmenorrhea and other conditions by electricity. I need not state here or elsewhere that his statements can be relied on. In one instance at least he legitimately got one of my patients who had suffered under my care for a long time unrelieved and he cured her by electricity.

DR. GEORGE GELLHORN.—Considering the fact that operations are attended by so much risk, anxiety, and expense to patients, and that we do not always obtain the results which we anticipate, we should welcome any non-operative which promises good results, even though they be only of a symptomatic nature. A well-fitting pessary, for instance, which keeps the uterus in place is, in my opinion, far superior to any operation for retroflexion. From this standpoint electricity is worthy of our attention. If, however, we read Massey's book on *Electrotherapy in Gynecology*, we are led to believe that electricity will cure almost any gynecologic trouble. This, of course, is extreme. It has been proved that electricity, for instance, in the treatment of fibroid tumors is absolutely valueless in spite of all opposing assertions. But in subinvolution, in exudates whether parametric or peritoneal, and in various inflammatory conditions, the use of electricity may give good results.

I should like to call attention to a procedure which may conveniently be combined with electricity, namely, the application of heated air. There are several "hot-air" apparatuses on the market, but most of them are large and expensive,

cannot easily be removed from the office and look so much like coffins that I would hesitate to place a patient in them. Following the model of Kehrer, of Bonn, I have constructed for my personal use a simple, portable apparatus consisting of an arch of asbestos which bears inside a number of incandescent lamps. This arch, which is about two feet high and three feet wide, is placed over the abdomen of the patient while she is lying in bed. The outside air is shut off by woollen blankets which will permit the air moist with perspiration to get out. I usually employ four lamps of thirty-two candle power and obtain a temperature of about 220° within twenty minutes. This temperature being absolutely dry, is, as a rule, well stood by the patient. The first and most prominent effect of this "hot-air treatment" is the immediate disappearance of pain. The pain, of course, will return after the first treatment is finished, but generally in milder form. The number of treatments varies according with the indication, but, as a rule, five or six treatments suffice to relieve the patient definitely of pain. The absorption of exudates, in some cases, is very rapid. In other cases the subjective improvement is more rapid than the objective.

I have taken the liberty of speaking about this treatment because I believe that the combination of heated air with intravaginal electric treatment, as advocated by Dr. Palmer and other conservative methods at our disposal, will succeed to relieve a class of patients who frequently cannot be relieved by operative procedures. If, for instance, we perform laparotomy in order to break up adhesions they are likely to form again. The necessity of performing a second operation may have been experienced by many of us. The patient then has been put to the inconvenience of an operation without a lasting effect. On the other hand, these non-operative, conservative procedures may relieve the patients of their symptoms, and that is frequently the best we can hope for.

DR. PALMER.—The last speaker's remarks imply a misunderstanding of one thing I recommend the galvanic current for, namely, fibroid tumors. I tried to set forth my opinion as to the position galvanism occupies in the treatment of fibroid tumors according to the Apostoli method. I would not use electricity for the treatment of intrauterine fibroid tumors,

nor extrauterine fibroids, nor submucous fibroids; but it may, can, and is used with benefit in interstitial fibroids, in which there is a more or less uniform fibroid infiltration of all the uterine walls. It is not uncommon to use the positive or negative pole in these cases according to the conditions present. If there is a patulous condition of the uterine canal, the positive pole is much to be preferred, because of its contractile effect; but if the uterine canal should be narrow and tortuous, the negative pole is preferable. A surgical operation is the thing, of course, in fibroid tumors of the uterus; but there are patients who will not consent to any operation, and there are instances in which an operation may be contraindicated for other causes. In those cases, and particularly in those fibroids mentioned, intrauterine galvanization is of considerable value.

In flexions of the uterus it is of great value. Many cases of flexion of the uterus can be cured by the faradic current, one pole being placed inside the uterus. Intractable cases of dysmenorrhea that are not relieved by proper hygiene and by certain remedial measures may be greatly benefited by galvanic electricity. In fact many of them can be cured by proper intrauterine galvanization used not oftener than once a week and not oftener than three times during the intramenstrual period. If time permitted I could enumerate the cases of many women whom I have treated in this way with entire relief of the painfulness of menstruation.