BRIGGS (W. A.)

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WALLACE A. BRIGGS, M.D.,

OF SACRAMENTO, CAL.

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ANTISEPTIC CATAPHORESIS IN THE TREATMENT OF DISEASES OF THE UTERUS AND ITS APPENDAGES.

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"MEDDLESOME gynecology" and "uterine tinkering" are getting to be set phrases with those who seek to envisage gynecology as a branch of operative surgery. Emerson I believe it was who said, in substance, that one truth cannot be stated strongly without doing injustice to some other truth. But the surgical exclusivists are not content with stating their truth strongly; they stoutly maintain that there is no other truth. The blind spot that Holmes says is normal to all of our brains no longer remains with them a spot merely, but invades whole convolutions, if not the entire anterior lobe of the cerebrum. For them the "sensitiveness" of the uterus exists as a reality instead of a myth, like "sensitiveness" of the peritoneum, dissipated by cleanliness and antisepsis. By their "damnable iteration" many of us have come to believe that the knife constitutes our entire gynecologic armamentarium. In consequence, abdominal surgeons, like the men of Roderic Dhu, spring from every cover, fully equipped to do the liveliest execution. I protest against this

opinion and this practice. I deny that it is the *summum bonum* of woman to be relieved of the intrinsic insignia of her sex. We are indeed too often reduced to the sad and humiliating necessity of such mutilation, and so are we to that of amputations of legs and arms; but the world believes that amputations are to be averted rather than courted, and so it will soon believe of celiotomies. It is no less the duty of the physician to obviate the necessity of sacrificial operations than to perform them when indicated.

Rational methods of treatment, then, that propose a *restitutio ad integrum* of diseased organs and a coincident prophylaxis of disease by extension to important adnexa may not be contemptuously dismissed as "uterine tinkering." Such a method is the antiseptic treatment of endometritis.

In the report of the Committee on Gynecology of the Medical Society of the State of California for the current year, of which an abstract appeared in the May number of the *Occidental Medical Times*, I described this method somewhat in detail, and it is my purpose here to invite attention to one element only of that method, viz.: antiseptic cataphoresis.

It need not be assumed, for it has been demonstrated by the history of gynecology, the record of therapeutic groping and wandering in a pathologic dark continent, that the uterus is tolerant of everything but infection. Against infection in the treatment of diseases of the uterus and its appendages antiseptic cataphoresis appears the most positive and efficient safeguard.

As quoted by Thomas, Scanzoni says that he does

not remember to have been able to cure a single case of abundant uterine leukorrhea of several years' standing. In the treatment of these cases, who has not exhausted every resource of the healing art, as well as the forbearance of his patients, who have at last departed for "fresh fields and pastures new," uncured and ungrateful?

How shall we explain the inveteracy of these cases? The investigations of Bumm have shown that the gonococcus is endowed with an "eminent invasive force." It penetrates both the epithelial and sub-epithelial tissues. In the case of a moribund paralytic, Bockhart has demonstrated that it invades the lymph-vessels and even the capillary bloodvessels, and, although his conclusions have been warmly controverted, I am inclined to accept them, not only because of their intrinsic probability (for we should expect less resistance from the tissues of a paralytic inoculated at death's door than from the tissues of those who acquire gonorrhea in the usual way), but also because they afford a rational explanation of the occasional development of so-called gonorrheal rheumatism. In cases of metritis Peraire found in the mucous tissues and in the tissue-cells the same microörganisms as in the uterine secretions.

We need seek no further, I think, for an explanation of the monotonous futility of the applicator and the comparative efficiency of the curette. The chronically inflamed uterus may be not inaptly likened to a chronic abscess communicating externally by a long and tortuous sinus. To effect a cure, the mucosa of the former, like the walls of the

latter, must be either disinfected or destroyed. Without in the least disparaging the curette, it may be said that the true spirit of medicine would incline us *ceteris paribus* to conservative rather than sacrificial procedures; to disinfection rather than destruction.

In the uterine cavity the applicator is a useless and dangerous instrument. While it does not disinfect either the walls or the cavity, it does produce abrasions that may be the point of departure of new and serious trouble. If thoroughly done, antiseptic cataphoresis obviates this danger absolutely. It disinfects not only the cavity, but also the mucosa of the uterus and produces important interpolar effects on the uterine and pelvic circulation and nutrition that are daily demonstrated clinically and yet are pronounced a figment of the imagination by those who, in electro-therapeutics, prefer intuition to experience.

Before proceeding to the consideration of the various conditions in which antiseptic cataphoresis is indicated, it may be well to describe the technique of the procedure itself. I have used several antiseptic solutions or electrolytes of which iodine in varying ratio, either in combination or in solution, is an essential constituent.

They are all efficient, but having observed two cases of severe frontal headache following the use of the stronger solutions of iodine, I have latterly used the weaker ones more frequently, although not exclusively. Either of the following solutions will be found satisfactory: beechwood creasote or camphor-creasote, 10; iodine, from 1 to 2; beechwood

creasote or camphor-creasote, 10 ; sodium iodide, 0.5 ; iodine, from 1 to 2.

The patient is put in the semi-prone position, which facilitates the introduction of the electrode and the escape of gases developed by electrolysis. A self-retaining speculum is introduced, the vagina and cervical canal are cleansed, and the direction and size of the latter ascertained. If the canal of the cervix be not large enough to permit the ready passage of the electrode and the simultaneous reflux of uterine secretions, redundant electrolyte and electrolytic gases, it should be sufficiently dilated either with Hegar's bougies or with a pair of strong dressing-forceps.

The active surface of the combined intra-uterine syringe, applicator, and electrode is then wrapped with a thin layer of absorbent cotton, into which a small but strong thread is wound and left loose about the shaft of the instrument, for the purpose of withdrawing the cotton should it slip from the electrode and remain in the uterus. The anterior lip of the cervix is then seized and fixed with a small tenaculum, the electrode dipped in the antiseptic electrolyte, passed through the cervix, gently turned either to right or left, and carried well into one cornu. The conductor is now attached, and the current is turned on and slowly carried to the maximum desired. The electrode is allowed to remain in the cornu from one to three minutes, while from three to six or eight minutes are occupied in sweeping it across the fundus to the opposite cornu, where it remains again from one to three minutes, when the current is turned off

and the electrode removed. During the passage of the current the electrolyte is injected, drop by drop, until from 5 to 10 minims have been introduced.

The applications of antiseptic cataphoresis in gynecology are numerous, and I shall now briefly consider those that I have found preferable to the treatment usually employed.

Chronic metritis, chronic endometritis, subinvolution, cervical endometritis, and cervical erosions are classed together because of the similarity of their origin, pathology, and treatment. It is probable that metritis and endometritis rarely exist as separate and distinct diseases, but that each ordinarily accompanies the other, and when predominating gives name and characteristics to the dual affection. Endometritis would seem to be the primary disease which by extension produces and by persistence maintains an inflammation of the uterine parenchyma. Subinvolution is the product of uterine infection engrafted on the puerperal condition. All of the affections here grouped together are of infectious origin, and in all of them the uterine cavity and the mucosa are the breeding-ground of the infectious organisms. Cure is to be effected by the removal, first, of the cause of the disease, and secondly, of the results. Disinfection, then, complete and permanent, constitutes the causal treatment. For this purpose, nothing in my experience compares with antiseptic cataphoresis, which may be used when perhaps any other form of local interference might not unjustly be termed "meddlesome," as the history of the following cases will indicate:

Mrs. S. came to my office April 23, 1892, complaining of profuse leukorrhea, of pain in the pelvis and back, and of supra-pubic tenderness. She was unable to be on her feet for any length of time, and had given up her position of housekeeper, because unable longer to perform its duties, and had spontaneously taken to bed, where she had remained most of the time for the previous week. Rest had given her little relief, and she was barely able to get to my office—just a square from her room.

The uterus was found swollen, tender, retroverted, and discharging a large quantity of muco-purulent secretion. A circular erosion of the cervix, about an inch in diameter, surrounded the os. The adnexa were tender, although no evidence of purulent accumulation could be discovered.

Positive antiseptic cataphoresis was practised every third day, and antiseptic packing every day from this date until May 24, 1892. Constant and rapid improvement was manifest from the first application, and on June 1st, while there was still a slight mucous discharge from the cervix, the subjective symptoms had disappeared entirely, and the patient went to work in a hotel, where she made sixty beds daily, besides doing much other chamber-work. She has reported twice since, looks and feels well, and continues at her work.

Mrs. P., housekeeper, sent for me May 10, 1892. She had been suffering for three or four months with profuse leukorrhea, menorrhagia, pain in the pelvis and sacral region radiating down the thighs, becoming so severe at the menstrual periods or on exertion as to keep her in bed. The uterus was sensitive, swollen, and retroverted. A profuse muco-purulent discharge was issuing from the cervix. The peri-uterine tissues were so tender as to give rise to the suspicion of perimetritis. Under phenacetin and

bromide, however, the pain subsided and the patient was able to ride to the office on May 16th. The uterus was tender and the discharge unabated. Positive antiseptic cataphoresis (40 m.a. 10 minutes) was employed and repeated every third day until June 15th. Immediate and rapid improvement was manifest, and on June 25th the metritis had wholly subsided, and the patient, although retaining the displacement, considered herself well, and was discharged.

SALPINGITIS.—Schroeder believes that salpingitis is always secondary to endometritis, and that the mucosa furnishes the only pathway of infection. That this rule is liable to exception is probable, but that it holds true in a great majority of cases is certain. As in the treatment of Eustachian inflammation we find it of the utmost importance to cure a coincident and predisposing pharyngitis, so it is of equal importance in the treatment of salpingitis to cure the predisposing endometritis. Negative antiseptic cataphoresis meets the indication in these cases better than any other means with which I am acquainted. Negative cataphoresis is to be perferred, because it promotes drainage and depletion, which, on the contrary, positive cataphoresis rather hinders. Antiseptic drainage and depletion of the uterus diminish the inflammatory swelling about the tubal orifices and thus facilitate drainage of the tubes and consequently their restoration to a healthy condition.

If carefully and thoroughly practised in appropriate cases I can conceive of no danger whatever attending negative antiseptic cataphoresis in tubal

inflammations after the subsidence of acute symptoms. In cystic salpingitis, whether purulent or not, one would naturally incline to extreme care, if not to absolute non-interference except *per abdominem*, but even here I believe that the dangers of the usual electric treatment have been greatly exaggerated by the surgical exclusivists. Antiseptic cataphoresis may be employed with less local disturbance, and consequently less danger of rupture of the distended tube or extrusion of pus, than attend defecation ; yet no one locks up the bowels to obviate this danger.

In the treatment of salpingitis, however, negative antiseptic cataphoresis possesses other advantages. By the cure or amelioration of the endometritis, the likelihood of reinfection of the tubes is diminished, and, in case surgical intervention prove necessary, the physician will not be humiliated and the patient disheartened by seeming failure of the operation due to a residual metritis. Moreover, it is frequently difficult and sometimes impossible to determine how much of the suffering is tubal and how much uterine. Cure of the metritis will solve this difficulty and not rarely save the patient from the well-meaning but intemperate celiotomist. By this method I have treated three cases of salpingitis, two of gonorrheal and one of unknown origin. Of these, one is objectively cured, although she still complains of occasional and slight pain in the region of the left tube ; one received but three treatments, declared herself better, and, against my protest, took a journey of a hundred miles by rail—with what result I have yet to learn ; the third, of unknown

origin and long standing, received four applications, without any noteworthy result, when the treatment was interrupted by my absence, and the patient has not yet returned. In none of these cases was there the slightest untoward symptom in consequence of the treatment.

Uterine Fibroids.—The brilliant results of electric treatment of intra-mural and submucous uterine fibroids have not exempted it from the reproach of an occasional catastrophe. Such catastrophes, however, were very infrequent even in the tentative period of Apostoli's work, and have all but disappeared under an improved technique. I believe that they may be reduced to an absolute minimum by the adoption of antiseptic cataphoresis in conjunction with the precautions usually observed. Why, it may be asked, are we, in these cases, to disinfect the vagina and cervix and not the uterine cavity itself? Such "disinfection" is ordinarily mere show without substance; for in the first place, microörganisms by prolonged residence in the vagina becomes "domesticated" and, in a large measure at least, innocuous; and in the second place, pathogenic microbes swarm not only in the uterine cavity, but also in the tubes, in many if not in most cases of advanced fibroid disease. One of the chief benefits of Apostoli's treatment of uterine fibroids is the cure or relief of a coincident metritis. This it would seem, in most cases, constitutes the so-called symptomatic cure. Antiseptic cataphoresis hastens this cure. In addition, it is not at all improbable that by its means remedies may be introduced that will have a regressive influence on the neoplastic tissue.

In practice I have used this method sufficiently to be convinced of its superiority, but not to enable me to speak with positiveness as to how much it may accomplish.

Dysmenorrhea.— Dysmenorrhea depends on a variety of conditions, foremost amongst which is the neuropathic diathesis. Many cases, I believe, are essentially reflex neuralgias akin to trigeminal neuralgia due to exposure of the dental nerve. Here we shall very often find a catarrhal condition of the endometrium and hyperesthesia, especially at the internal os. It is true, as I can testify from my own experience, that excellent results may be obtained by the usual electric treatment. This, however, is inferior to cataphoresis in two respects—the absolute immunity to infection and the speedier relief of the endometritis.

Conclusions: 1. In the inflammatory diseases of the uterus and its appendages and in uterine fibroids, antiseptic cataphoresis possesses all the advantages of the usual electric treatment, plus antisepsis not only of the uterine cavity but also of the endometrium itself, and, in uterine fibroids, the possible regressive influence of medicinal remedies on the neoplastic tissues. 2. In these diseases it should displace the applicator, injections, caustics, bougies, and all other forms of intra-uterine treatment, with the rare exception of curettage.