### Why electrolytic treatment of stricture does not succeed in all hands / by G.C.H. Meier.

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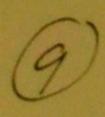
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ELECTROLYTIC \* TREATMENT

OF

# STRICTURE

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BY

G. C. H. MEIER, M.D.,

Member of the New York State Medical Association.

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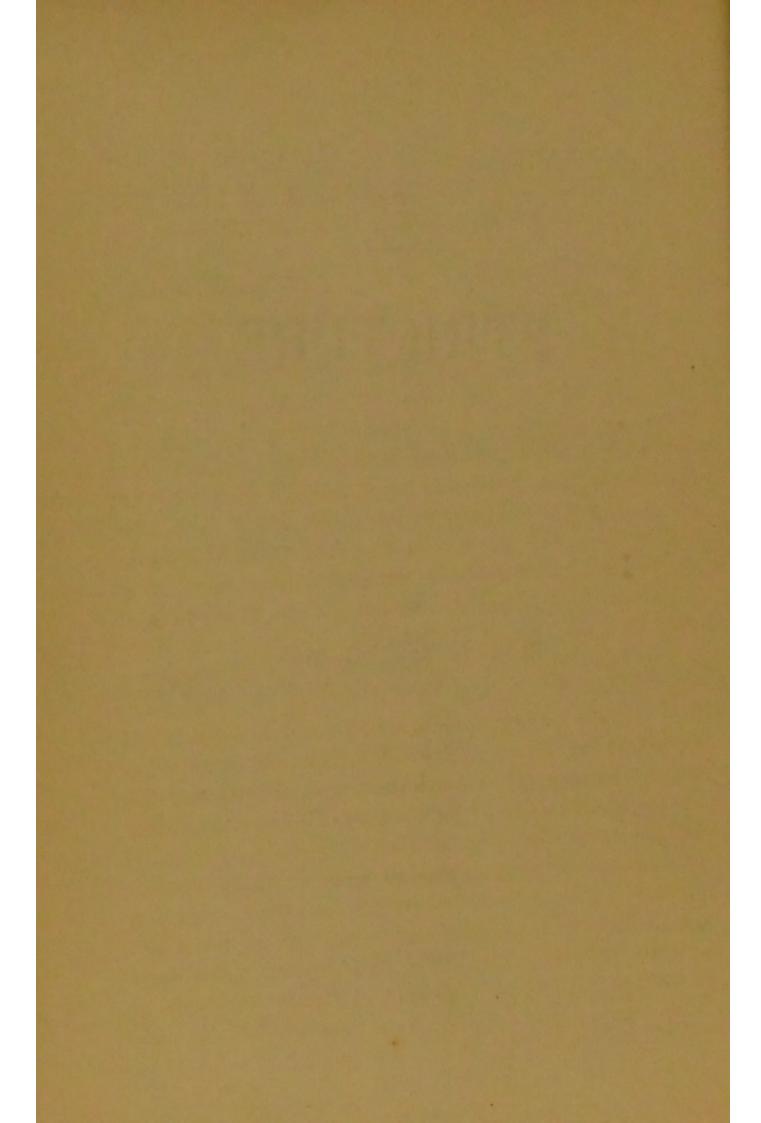
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## WHY ELECTROLYTIC TREATMENT OF STRICTURE DOES NOT SUCCEED IN ALL HANDS.

BY G. C. H. MEIER, M. D., OF NEW YORK, Member of the N. Y. State Medical Association.

Although the use of Electrolysis in the treatment of urethral stricture is at present an acknowledged fact, and its value recognized by many of the leading men in this country as well as in England, and has even found its way to Australia, it seems that New York, its birthplace and cradle, is the only place of all others where its recognition as a legitimate and safe surgical procedure has been most strenuously opposed and, strange to say, at the present day finds its greatest opponents.

Antagonism does not show itself as a rule by direct opposition, but rather, by a tendency to depreciate and belittle the operation, decrying it as a species of quackery, or else by persistently and entirely ignoring its existence. This latter mode of choking the operation has gone so far that an otherwise favorably disposed reviewer of a standard work, lately published by one of our most eminent specialists in genitourinary diseases,\* finds himself constrained to use the following language regarding the author's deliberate omission from even mentioning electrolysis as being used in the treatment of organic stricture.

<sup>\* &</sup>quot;The Surgical Diseases of the Genito-Urinary Organs, including Syphilis. By E. L. Keyes, A.M., M.D., etc.

"We can but think that the failure to even mention electrolysis was due to inadvertence, surely it could not have been intentional. Whatever may be the future estimate of the value of electrolysis in the treatment of certain cases of stricture of the urethra, the statistics now at hand show that the method is at least worthy of mention by the author of a work of this kind, whatever be his individual opinion on the subject. It is the duty of the author of a scientific work to present facts as they are, not as he wishes they were."

The Medical Record after having published some of Dr. Rob't Newman's articles with a report of cases some years later, takes occasion in a small editorial paragraph to ridicule the method, and places those who practice it under the heading of "Medical Charlatans," and pointedly says that it seems strange that only one man should be successful with this operation while everybody else failed with it.

In another editorial of January 28th, 1888, headed "The Modern Treatment of Urethral Stricture," the learned Editor says, "the three accepted methods of treating organic urethral stricture are by gradual (or rapid) dilatation, divulsion and urethrotomy," thus totally ignoring the really modern treatment by electrolysis.

A notable exception to these silent tactics comes to hand while writing the foregoing. In the Journal of Cutaneous and Genito-Urinary Diseases of July, 1888, is published a paper entitled The Limi-

<sup>+</sup> Journal of American Medical Association, June, 16th, 1888. p. 763.

tations of Electrolysis as an Agent in Organic and Spasmodic Stricture, with Cases, in which the author in the beginning of his paper shows his tendency and animus. He says, "If, before testing in practice I had reviewed the literature of the subject as carefully as since, I would have seen that no further evidence was needed to assure the incredulous of its narrow scope [italics mine] and equally well have recognized the futility of hoping to convince its advocates of any self-deception in the matter." Verily, de sun do move! Later on the Dr. says "Were others as critical of their work (referring to the preceding statement of a failure with electrolysis by Dr. Hayes), and had they as keen an appreciation of the truth, [italics mine] I believe many more just such statements would be made." Does this mean that only those men whom Dr. Brown has picked out are worthy of belief in their testimony? Other men have tried this treatment with success in hundreds of cases. Are they not competent to testify to its value? Are they not as worthy of belief as Dr. Brown and his company? The two hundred cases reported by the originator of the method, Dr. Rob't Newman, are quoted by Dr. Brown only to throw doubt on the "permanently cured;" and here again he impugnes either the veracity of the reporter, or else charges him with incompetence to distinguish a spasmodic from an organic stricture. Either charge against a man who has for over eighteen years been a well known physician and surgeon, familiar with urethral instruments and their practical use, is to say the very least an unpardonable impertinence. Think of it; that of

two hundred cases of stricture reported by a most competent observer, all should have been spasmodic, and all mistaken for organic strictures and treated as such. When we come to recollect that Dr. Newman continually insists upon the non-curability of spasmodic stricture by the galvanic current, but holds that it is made worse by it, what shall we think of Dr. Brown's insinuation?

If Dr. Brown had devoted himself sincerely to the discovery of the truth in this matter, following closely the rules and instructions laid down by the originator of this treatment, whom he derides, and who has worked long and arduously at establishing these rules, his knowledge would have been much broader and his opinion more just. I repeat distinctly, that it is necessary to follow Dr. Newman's rules closely to be able to attribute failure or success to the method advocated by him. No matter how skillful a surgeon or specialist in urinary diseases may be, unless he has fitted himself by proper study of the possibilities of electricity on human ailments, has taken pains to avoid all sources of error, and has investigated the subject thoroughly, uninfluenced and unbiassed by any preconceived impressions or personal motive, he is not a competent witness as to whether or no stricture can be cured; and he has no moral right to comment adversely on the method.

I quote again from this model of logical deduction, "One case carefully observed, if unfavorable ought to settle the matter." But how about one case favorably observed: that would certainly settle the matter for the successful operator, in spite of Dr.

Brown's leaning toward the unfavorable result. Ignoring, as he does, all the different causes of failure in unskilled hands, what can he prove by a dozen failures in the face of one demonstrated success? As far as the paper is published in this issue of the Journal, I find it filled mainly with the statements of different observers, from which have been picked out the imperfect or unsuccessful cases in their reports, leaving untouched the thousand of successful ones that could be gathered. The theory of how the stricture is removed seems also to be made a basis of argument against the success of the treatment. Because the greater number of operators have different opinions and theories as to the modus operands of the removal of the stricture tissue, Dr. Brown argues that, therefore, the possibility of a cure is adversely influenced. To my mind this is simply a proof that as yet we do not know the scientific or physiological action of the current on the stricture-deposit, and no more. At the same time he mixes up those who use the current to produce an eschar and a cauterizing effect with those who maintain as one of the main fundamental principles of success, that only the primary electrolytic action of the current must be used, which leaves behind no sign of its action except the softening and gradual absorption of the organic obstruction.

Notwithstanding this stubborn opposition by some members of the profession, the treatment is rapidly gaining ground even here in New York; and the younger members of our profession are gradually freeing themselves from the trammel of traditions

kept up by teachers and authors, that nothing less than a cutting operation—for which an innumerable variety of complicated and expensive urethral cutters have been invented—can cure a man satisfactorily and permanently of a stricture. Besides the testimony of its originator, Dr. R. Newman, of New York, you will now find a host of eminent names testifying to its efficacy.

Amongst them could be mentioned the following well known gentlemen:

W.'E. Steavenson, of London, England; T. J. Hayes, M.D., Report to Academy of Ireland; Edwin Morton, M.D., of London; W. Bruce Clark, of London; F. Swinford Edwards, F.R.C.S.; Roberts Bartholow, M.D., of Philadelphia; W. F. Hutchinson, M.D., of Providence; David Prince, M.D., of Jacksonville, Ill.; C. A. Bryce, M.D., of Richmond, Va.; George E. Pitzer, M.D., of St. Louis; T. H. Burchard, M.D., etc.

Two papers I wish particularly to refer to, as they have emanated from men who were skeptical at first, and then personally convinced themselves of the truth and renounced their previously expressed condemnation.

The first paper by F. Swinford Edwards, F R.C.S., published in the Medical Press of April 11, 1888, is entitled Electrolysis in the Treatment of Resilient or Non-Dilatable Strictures of the Urethra. This gentleman being at one time an opponent to the method, set to work honestly and made a number of test cases, selected only from those who had been treated unsuccessfully by the usual methods by other

noted surgeons, or by himself. He comes to the conclusion that resilient and undilatable strictures are cured by the electric current.

The second paper by T. H. Burchard, M.D., Lecturer on Surgical Emergencies, Bellevue Hospital, will be found in the Medical Record of June 16, 1888, p. 655, under the title, The Treatment of Stricture of the Urethra by Electrolysis. Here is the opening sentence, "After an experience of sixteen years, embracing the care of nearly four hundred cases of stricture of the urethra, it seems somewhat surprising that at this late date the author should just have begun to appreciate the merits and foresee the possibilities of a method of treatment which hitherto he has looked upon with suspicion and distrust."

The temptation, to quote from an Australian report, † is so great, as the points brought forward are so apropos to the definition of electrolysis as understood by Dr. Newman and his followers, that I cannot resist quoting even should I subject myself to the charge of being profuse and given to repetition. Dr. Wilkin says: "What is required in electricity is careful observation, study, and practice, and relief both in medical and surgical cases may be afforded in many instances which have baffled the wisest surgeons and physicians. A little careful observation in electrolysis will plainly show its action is simply galvanic chemical absorption, mainly dependent on chemical decomposition caused by electrolytic action."

<sup>† &</sup>quot; Operation on the Penis by Electrolysis." J. Wilkins, F. R. C. S. — Australian Medic. Gazette, May 15, 1888.

Webster's definition of absorption is as follows . "The process or act of being made passively to disappear in some other substance, through molecular or other invisible means, as the absorption of light, heat and electricity," \* and such is the action in this case exactly. As the negative pole acts as a caustic alkali, if great tension is used it will destroy tissue, but mildly applied it acts as a chemical absorbent on tissue. The case reported was one of congenital malformation of the urethra, and a firm fibrous mass existed in place of tissue between the meatus and the urinary orifice, which latter was situated under and one inch from the tip of the penis. The case was thoroughly successful, the fibrous tissue being absorbed through the action of a mild current-no cauterization in the slightest degree being done. There was no possibility of spasmodic stricture in this case.

Besides the minority, who, for reasons best known to themselves, wilfully close their eyes to the success of the operation, there are a number of men who have given the method one or two trials, and because of their non-success have thrown it aside, and sincerely believe in its worthlessness not knowing how to overcome its difficulties.

To those who wish to arrive at a full understanding of the treatment, I would like to point out some of the reasons which occur to me, why, probably, they have failed to become successful operators.

In the first place, there are many physicians who on

<sup>\*</sup> This same definition, credited to Dr. Newman, is ridiculed by Dr. Brown in his paper as a vague suggestion, etc.

first hearing of this treatment, take it for granted that no other measures are necessary in the different complications of stricture; but that, whenever a stricture is diagnosed, the negative electrode of a galvanic battery is to be introduced at once, the current turned on, and presto, all the symptoms will disappear, as if by magic. Now, these men do not take into consideration that all inflammation must first be subdued, the general health looked after, abrasions healed, cystitis and prostatitis allayed, etc., otherwise the ramming of a sound into the urethra, whether it is attached to a galvanic battery or not, will aggravate and intensify such a case. This is only common sense, and seemingly needs no further elucidation.

Secondly, the diagnosis must be fully made, that an organic stricture is present and that, if present, it is the cause of the complaint for which the patient consults you at the time. Many men have strictures, or, at least, some contraction of the calibre of their urethra at different points, who do not suffer from any bad symptoms. If such a man comes to you, complaining of frequent and painful micturition, perhaps retention, or small quantity and small stream of urine, be sure that man is suffering from the stricture and not from a prostatitis, cystitis, or stone. You examine the patient, and find a stricture (may be spasmodic); if you are satisfied with that and do not further investigate, but think this is a good case for electrolysis, and if you habitually make such imperfect diagnosis, you will soon become an opponent of the method, and your patients will look upon electricity with horror and discredit.

So also, if there are granulations in the urethra, they must be healed before you attempt to cure the stricture, or your patient will be made worse. The uncomplicated, uninflamed and quiescent organic strictures, where the only difficulty experienced is the dwindling of the stream of urine, without discharge, pain, or other discomfort, you are not very likely to get when you essay your first case with the galvanic current. These kind of strictures give the most brilliant results, for they need no other treatment than the passing of the proper current three or four times, and sometimes even once, and a cure is effected.

Another error which will always obviate the good results of the treatment, is the unnecessary and prolonged passing of instruments, whether from a mistaken idea that your patient will not be satisfied if you do not use a sound on him every time he visits you, or whether you are not competent to make a diagnosis to your satisfaction without a great deal of manipulation and sounding, or from whatever cause. Avoid putting any instrument into the urethra oftener than you can possibly help, and do not roughly handle any instrument when it is passed.

Under this head the physician may also be cautioned that the application of the electric current should never be repeated under ten days; better let an interval of two or three weeks intervene between each sitting—your results will be better and you are not as likely to produce inflammation by over stimulation. Under no consideration should two instruments, or the same instrument be passed twice in one sitting. Whatever good you can accomplish will have been

done when the bulb has passed the stricture, and then again worked its way out; any further meddling is injurious. This is an error which I know is very hard to overcome in some cases. The delight of the patient when he feels the sound slip over a bad stricture which has cost him much agony, repeated dilatations and cuttings at the hands of a number of specialists, is so great that your enthusiasm in the beginning will make it a task to abstain from putting in a little larger size at once, so little pain has been given and so easy has been the introduction-but beware! if you are led to commit such folly you will rue it bitterly. The next time that man comes to you for treatment, he will, perhaps, tell you that he had some slightly bloody urination for the day following, and some pain; and now you find that the sound that slipped in so easy, will not pass very readily. You put on a stronger current, become impatient, prolong the duration of the sitting to fifteen or twenty minutes, and at last succeed in pushing the sound through-now you are lost, for the probability is that you will never cure that case, and the patient will leave you in disgust after a few more trials. You don't know why you have failed, but make up your mind that electrolysis is a delusion and a snare, and vituperate against it to all your friends.

Occasionally, if you are not always careful in testing your poles, you may inadvertently pass the
positive pole down to the stricture—it has happened
to me and others—and then you wonder why the bulb
does not pass as well as it did during the last two or
three sittings. You may think that the bulb you

chose is a size too large and substitute a smaller one, but this serves you in the same way. Well, that patient will go home with a burning sensation in his urethra, like that produced by a strong acid, and there will be more cicatricial tissue formed, instead of reducing that originally present, and if he comes back, he will unmistakably let you know that something is wrong in your treatment of him. If you are experienced enough, you will know at once, after withdrawing the bulb, by its appearance, it being covered with a blackish film, that you have used the positive pole.

Should a stricture of large calibre occasion a spasmodic stricture lower down in the urethra and you fail to make out the condition, miss the large stricture and go to work tooth and nail with your battery at the spasmodic one, you will be disappointed more than at any other time, for here you will not be able to effect a passage even with force; the more you push, the less are your chances of success. It is amusing in face of this fact, to hear those who have had no practical experience, assert that any stricture reported as cured could only have been of the spasmodic variety.

Strictures at the meatus are the only ones that I have found would not lightly yield to the current. There may be several reasons for this. Very often these so called strictures at the mouth of the penis are not at all composed of adventitious tissue, but are simply a normal (congenital) narrowing. Patients thus affected are often troubled with a gleety discharge long after their acute gonorrhœa has ceased

Now a man, if he does not contract a gonorrhœa, may not experience the slightest symptom or inconvenience from such a congenital contraction; but let him acquire a urethritis, and the little pouch formed behind the meatus, the fossa navicularis, will continually retain a little pus, and a chronic inflammation will be set up, for the simple reason that there is not sufficient drainage through the obstructed meatus. These cases cannot be cured by electrolysis, for the latter never can nor does produce absorption of normal tissue; there must be some abnormal deposit for its action. These cases are usually cured in a few days by no other treatment than simply enlarging the meatus, so that free drainage of the matter may take place.

Another form of obstruction in this situation, which is not readily absorbed by the electric current without additional internal medication, is that due to syphilitic deposits, either of the initial hard sore or of gummata. Here a judicious course of internal treatment will accomplish all that may be desired in a short time, if the nature of the lesion be recognized; while if a mistake is made and it is treated as an ordinary organic stricture by the current alone, some more enemies of urethral electrolysis will be added to the list.

As to cancerous deposits, arguing from cases of cancer of the rectum, although a cure may not be brought about, I have seen great amelioration of the obstructive symptoms by the softening influence and analgesic effects of the current.

Lastly, we come to the consideration of mistakes

made in the use of the electrodes, batteries and their fluids. The size and shape of the electrode will influence to a great extent your successes and failures. The study of these really belongs to a preliminary education in electro-physics and cannot be thoroughly discussed in an article purporting merely to show the application of the electrolytic current in stricture.

Truly, one of the greatest obstacles to the introduction and understanding of this treatment has been the deplorable ignorance in electro-physics, under which many otherwise liberally educated men labor. This much may be said, that for the positive electrode a large flat surface should be used, placed on any part of the patient's body that is not very susceptible to the current, while for the negative electrodes, the nickel-plated, egg-shaped bulbs on slender hard rubber rods of the proper length and curve, introduced by Dr. Newman, have no equal. A point very insignificant to those who neglect minor details, but the knowledge or ignorance of which will make them successful operators or failures is, that you must never oil your bougie, or coat it with a non-conducting material, before introducing it into the urethra, as we are in the habit of doing with all other instruments to facilitate their passage along the canal. Such an electrode would be insulated and the current not able to pass into the stricture either for good or for bad. Glycerine is a conductor and should always be used as a substitute.

All batteries are not equally good, and although an experienced man can make nearly any of the

forms of galvanic batteries do, still to a novice, many trifling irregularities and inconvenient arrangements make the road to success so much the rougher, and add greater obstacles to the full understanding of the merits claimed for electrolysis. The size of cells is also of very great importance, for if they are too large the electrolytic action of the current will be so intensified as to become cauterizing, and thus only harm can come to the patient's urethra. Small cells and many of them are needed. Cells holding three to four ounces of the fluid are large enough. They may be deep and narrow, so as to receive the zinc and carbon elements, which for this purpose may be rod-shaped. According to the shape and size of the electrodes, the size of cells and elements, the action of electrolysis can be regulated, so as to produce simply an absorption of a stricture, the action being the same as when a tumor becomes smaller and smaller by the repeated application of the galvanic current to the unbroken skin; or, when it is desired, by inserting needle-shaped electrodes and using strong currents and large cells a decomposition and destruction of the new growth with shrinkage can be produced. The latter action I repeat, is not the one we can use in the cases under discussion, though many of our antagonists refuse to make this distinction of the two actions of the same electrolytic current.

Battery fluids, according to my experience, is also of some importance. It is usually made too strong, and then, not only interferes with the proper regulation of the current, but also renders the cleaning of cells very difficult, and if they are of glass, rather

expensive. The bichromate fluid should be weakened down so far, that there is only very little deposit left in the cells on evaporation, and this will be soft and not hard and crystalline, as when stronger solutions are used. At the same time the zinc plates will not be so rapidly corroded, and will last much longer.

Those who have closely followed me thus far in pointing out some of the many causes of failure in unskilled hands, will readily see that to succeed, a great deal of tact, experience, and some common sense is required, and only those will succeed who bring all their accomplishments and intelligence to bear upon the subject with an earnest desire to faithfully follow the minutest details of the method, as laid down by successful operators.

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