

Morton (W. J.)

Compliments of the Author

Electrostatic Currents and the Cure
of Locomotor Ataxia, Rheuma-
toid Arthritis, Neuritis, Migraine,
Incontinence of Urine, Sexual
Impotence, and Uterine Fibroids

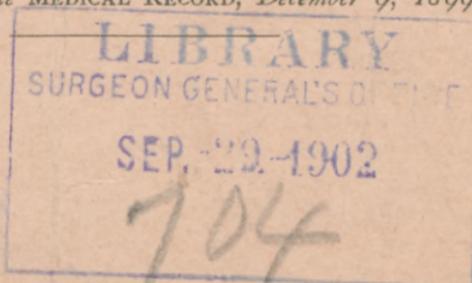
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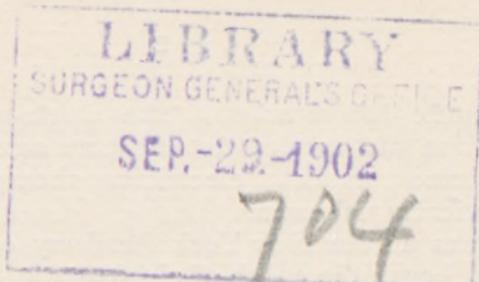


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**ELECTROSTATIC CURRENTS AND THE
CURE OF LOCOMOTOR ATAXIA, RHEUMA-
TOID ARTHRITIS, NEURITIS, MIGRAINE,
INCONTINENCE OF URINE, SEXUAL IM-
POTENCE, AND UTERINE FIBROIDS.¹**

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THE agreeable duty of reading in my turn a paper before this society, individually engaged in so many special directions of work, has led me to choose from my own branch a certain new line of investigation of my own in electrotherapeutics, which I cannot but believe marks a distinct advance, and which may, I trust, prove of interest.

In 1734 the Abbé Nollet, of France, administered the first spark to a human being with a therapeutic purpose in mind. Thence sprang up the treatment of various diseases with frictional or so-called static electricity, by the direct application of the spark to the patient's person. The practice had its phases of vogue and of disuse until, in 1879, Professor Charcot revived its use in his famous clinic of the Salpêtrière.

In 1880 I had the good fortune to be one of Professor Charcot's pupils. The electrostatic treatment took a strong hold upon my imagination and my judgment. I bought two influence machines and a complete outfit of electrodes, and brought them home to this country, and in March, 1881, read a lengthy paper and exhibited the machines and outfit before the New York Academy of Medicine. At that time there was not a single influence machine in existence in this country in medical circles, nor scarcely, if at all, in

¹ Read before the New York Harvard Medical Society, November 25, 1899.

scientific laboratories. The single-plate frictional machine did service for the pure scientist, while in medicine statical electricity therapeutically was practically unknown.

Thus at the New York Academy of Medicine, in 1881, began the epoch of electrostatic therapeutics in this country. To-day influence machines may be counted by the thousand in the land. Thousands of physicians' offices are equipped with them, and day by day not alone does their number increase, but also the scope of their application in the cure of disease. Is this folly? By no means. A great therapeutic truth lies in the electrostatic currents. The year's fashionable drugs come and fade like a line of spectres, but the electrostatic machine stays with us. It has come to stay.

I found in 1880 the statical electricity machine, a machine whose output was solely sparks, whether in its abstractly scientific uses or in its medical uses. I made it a machine whose output was also currents. In other words, I found it a machine whose output was a single electrical impulse; I made it a machine whose single electrical impulses and sparks could be employed in slow or rapid series as a potential variator to produce a current in any other part of the circuit. Hence to-day we have two epochs in the history and the uses of electrostatic apparatus and machines: (1) the period of the spark, from 1734 to 1880; (2) the period of the spark and of spark-gap currents, from 1880 to the present date.

I will ask your attention to-night, therefore, to (1) electrostatic treatment by sparks (Abbé Nollet); (2) electrostatic treatment by spark-gap currents (the writer).

1. Sparks.—Owing to its familiarity, I forbear detailed mention of the spark treatment. Briefly, a single long, "clean" spark is given with the ball electrode at its greatest practical working distance from the body, or a fine, prickling, "frictional" spark is administered by rubbing the electrode over the clothed skin. The long, clean spark is percussive; the percussion effect is produced not only upon the surface of the body, but within the tissue. I have termed the

effect within tissue as "perturbatory." This perturbation effect within tissue produces a temporary maladjustment of tissue particles, followed by a readjustment and a consequent reaction of tissue to its normal metabolic relations. We might term the effect molecular gymnastics. The frictional spark—its second form alluded to—is counter-irritative, and also produces ingoing peripheral nerve effects upon the respective nerve centres (Hodge and others).

2. **Currents, namely, Spark-Gap Currents.**—In my paper before the New York Academy of Medicine, in 1881, I demonstrated and described this class of currents. In a recent paper, read for me by Dr. Apostoli before the Société Française d'Electrothérapie, I augmented the scope of spark-gap currents by a description of a phase of them which has great practical value in electrotherapeutics. The first spark-gap current, that of 1880, I christened the "static induced current." It is now in universal use wherever static electricity is employed, and recognized in text-books, and therefore requires no further mention. The second current is as yet little known, but, to my mind, is the culmination of all that is best in statical electrotherapeutics, not alone because of its therapeutical qualities, but also because of the facility of its application. We will, for the present, term it the "electric wave current," for the reason that the patient's person is at the passage of each individual spark across the spark gap a source of departure of an electric or Hert-zian wave into space. We may, for simplicity, call both currents "spark-gap currents," since the existence of the spark gap and its employment is the essential feature of my discovery.

It is, indeed, a remarkable fact, when one recalls the immense amount of attention that was bestowed upon statical electricity up to 1880, a period of about one hundred and fifty years, that currents derivable from a static or frictional or influence machine, or charged Leyden jar, or any form of electrostatic apparatus, had escaped observation. But such is the fact. There is no record that any electrostatic apparatus, up to that date, had ever been employed to produce physiological tetanus in contradistinction to the single con-

traction produced by the spark directly or indirectly applied.

My desire to-night is to present to this society the actual working methods of producing this new current, to compare it to the static induced current and the spark, to show some of its modes of application and some of its effect upon living tissue, and to detail briefly cases and forms of disease in which electrostatic applications are useful.

For comparison, I first exhibit the static induced current by application to the persons of various members of the society. (Here followed a practical demonstration.)

It will be noticed that the patient is within the direct circuit of serially discharging armatures of oppositely charged condensers, and that two electrodes must be used as in ordinary electric administrations.

I next exhibit the electric wave current. (Demonstrations.) Here the patient forms no part of a metallic circuit. His tissue is charged and discharged with great rapidity—a rapidity equalling the rapidity of the discharge at the spark gap. Electrically, his situation is, that he forms a part of a “displacement circuit” of Maxwell in contact with a terminal metallic electrode (indeed, is a part of it so far as he is an ordinary conductor like a metal). The electric current now exists only in the dielectric air and in the dielectric portions of the patient, while his conducting portions, subjected to variations of potential, exhibit physiological reactions of an electrical type, but differing in wide degree from those exhibited by other and familiar forms of electrization. The patient’s entire person is now subjected to the electric waves at each impulse of the spark at the spark gap; say easily two hundred or three hundred waves per second.

Physiological Effects.—If we take any given muscle or neuro-muscular mechanism as a type of the effect produced, we find we have established a physiological tetanus of a character less painful for a given degree of muscular contraction or noticeable to the patient than by any known electrical current.

How, then, do electrostatic currents act and cure?

There is a local effect upon the part affected,

whether nerve, muscle, brain, spinal cord, joint, or what not, and at the same time a general or constitutional effect. Both effects are capable of positive proof and have been fully proven. The constitutional building up and regeneration of the patient's health tend to secure permanency of the local cure. The local effect is undoubtedly due to the agitation or perturbation of the tissue; the constitutional effect consists of an acceleration of the combustion processes, in varying degrees. Professor d'Arsonval, of Paris, has shown by laboratory experiments on man and on the lower animals that the production of water, carbonic acid, and urea is increased from forty to fifty per cent. Professor Renzi¹ has shown that fifty per cent. more neutral sulphur, producing sulphuric acid, is oxidized, and that there is a decisive action upon the metabolism of the nuclein. The salient fact is that the metabolism of the patient is augmented, and, as a consequence, his nutrition is improved.

Methods.—If we consider the variety of electrostatic treatments outlined that have a distinct meaning and effect upon the patient, to say nothing of the other varieties of electrotherapeutics involved in so-called galvanism and faradism, we cannot wonder that an electrotherapist must stand aghast when the simple remark is made by the patient, "Oh, I have taken electricity." Indeed, many physicians entertain the same idea of unity of electricity in its medical applications. A parallel case would be of an electrical engineer who was told to apply it in his profession. He would reply: "Shall I use electricity to produce light and illuminate, or heat and warm things, or electrolysis and decompose things, or cataphoresis and cause things to merge one with the other, or to run motors and cause things to move, or what not?"

APPLICATIONS TO TREATMENT. CASES AND DISEASES.

Progressive Locomotor Ataxia.—By electrostatic treatment we may in the first and second stages of this disease confidently claim to make of progressive locomotor ataxia arrested locomotor ataxia. The pains cease, the girdle sensation disappears, the bladder

¹ *Revue Internationale d'Électrothérapie*, September, 1899.

troubles no longer exist, the gait improves, the sexual power returns—in short, the progress of the disease is arrested, leaving the patient with remaining defects due to the already destroyed tissue. This may clearly be termed a cure of locomotor ataxia. I cite a few cases, eight in number, cured or whose pains and other definite symptoms had ceased up to the time when last heard from. In all cases distinct improvement is noted from the time of beginning treatment.

CASE I.—J. H. McG——, aged thirty-one years; September 23, 1895. Symptoms: frequent attacks of lightning pains, absent knee jerk, girdle sensation, incontinence of urine, constipation. He cannot stand with the eyes closed. There is loss of sexual function. His gait is ataxic. He has pin-point pupils. Duration, nine months.

September 30th: He feels the floor or pavement and walks better.

October 28th: The incontinence of urine is much less, and he walks farther and better.

November 27th: No incontinence of urine is present.

November 29th: He had a slight attack of shooting pains, the first since treatment began.

January 3, 1896: There is no incontinence of urine.

October 26th: He resumed business and has no attacks of pain.

In November and December he had a slight attack of pain.

May 7, 1897: He has now had no pain attacks for five months, and none up to January, 1899, nearly two years later.

CASE II.—J. H——, aged thirty-one years, March 29, 1895. The disease began one year ago. He has shooting pains in the legs, which are numb from the knees down. There is the Argyll-Robertson symptom of the eyes; knee jerk is absent. He cannot stand with the eyes closed.

July 19th: He walks better and farther, and has no pains.

August 5th: He walks several miles.

January 3, 1896: There are no further pains. He considers himself well. He has sawed and split a

cord of wood, and promises to return if symptoms reappear.

CASE III.—P. B——, aged thirty-eight years, August 29, 1894. The disease began five years ago. He was in bed two months. There are lightning pains, Argyll-Robertson pupils, ataxic gait, Romberg symptoms, and numb areas. The knee jerk is absent.

November 14th: He walks better and has less pain.

March 1, 1895: He can walk five or six blocks, while previously he could not walk at all.

March 30th: He had a pain attack.

November 4th: Sexual functions returned.

April 21, 1897: He remains free from all symptoms.

CASE IV.—W. R. C——, aged thirty-eight years; July 7, 1897. The disease followed a railroad accident nine months ago. He has shooting pains, ataxic gait, contracted pupils, but accommodation is preserved; failure of eyesight, much inco-ordination of legs, and Romberg symptom. The knee jerk is absent. He has girdle sensation, incontinence of urine, and constipation.

September 10th: The incontinence of urine ceased and all active symptoms were ameliorated in severity.

December 29th: Pains are occasional and slight. The patient was lost sight of at this point, and could not continue treatment.

CASE V.—F. G——, aged fifty-eight years, November 30, 1894. The disease began nine years ago, with prickling in the feet, then shooting pains; he now has ataxic gait, with absence of knee jerk; Argyll-Robertson pupils; he cannot stand with the eyes closed.

December 3d: Improvement.

December 12th: The pain attacks occurred only twice since treatment was begun; formerly they were very frequent.

March 12th: The patient could not come longer for treatment, but seldom had pain and resumed his occupation.

CASE VI.—J. F——, aged fifty-seven years; November 25, 1895; typical locomotor ataxia. The patient entered the office with an excruciating attack of lightning pains. After twenty minutes' treatment he was completely relieved, showing the immediate effect

of electricity. The patient took treatment only very seldom, and at last accounts was not cured, but was greatly relieved.

CASE VII.—C. M. H——, aged forty-eight years; March 28, 1895. The patient has shooting pains in both legs, ataxic gait, inco-ordination, abolished knee jerk, slowness of urination, constipation, loss of sexual power, and optic-nerve atrophy. Pains occur every night. He was under treatment two months; the pains ceased after the first ten days of treatment. One year later he reports that the pains have but seldom recurred, but I have no history of his entire recovery.

CASE VIII.—S. M. H——, aged seventy-seven years. The knee jerk was abolished. He has darting and shooting pains which he calls "cannon-ball pains," so great are the shock and terror of their invasion. He has frequent and distressing pain at brief intervals during the entire night, and every three or four minutes during the day. In addition to the further usual symptoms, a symptom most marked is a profound anæsthesia from the waist downward, within which sensations of contact, temperature, and pain are abolished. He takes opium to relieve pain. A very interesting observation may be recorded here: Upon beginning treatment with the friction spark (ordinarily painful and creating a burning sensation) anywhere from the knees downward or in the gluteal and sacral regions, no sensation whatever was perceived by the patient; then suddenly at the expiration of four minutes the patient would exclaim, "There, you've fetched it!" and now the sensations were quite restored. The sensation of contact returned first, then that of temperature, then that of pain. The sensations thus restored remained restored a few hours, but were more easily regained at the next and at each successive treatment, until finally after a few weeks the restoration was perfect and continuous, and the patient can now walk much better and otherwise get his bearings.

This effect I have noticed in all cases in which there are anæsthetic and analgesic areas. In a case not here reported this improvement of itself, as well as that of the lightning pains, was a great satisfaction to

the patient. The above-mentioned patient must be recorded as greatly improved, but it was probably impossible to cure him.

A patient, Mr. D——, was exhibited before the society, who had had locomotor ataxia for five years, and who on beginning treatment five weeks previously suffered from daily attacks of lightning pains. Answering a question of a member he stated that he had not had a single attack of pain since beginning treatment, could walk ten blocks where he couldn't walk one, and that he had reduced his morphine from six grains daily to none at all during the last three days.

Rheumatoid Arthritis.—This is commonly considered an incurable disease. But recently one of my instructors in the Post-Graduate Medical School and Hospital has collected from the records of the hospital and published¹ the results of the electrostatic treatment as pursued by me for many years, of upwards of thirty cases, in some of which a complete cure took place, and nearly all showed improvement to a point of an arrest of the morbid processes. Here also the active process may be arrested as in locomotor ataxia, leaving, of course, as in that disease, "remaining defects" due to prior tissue changes.

Since these thirty cases have been published I will not further refer to them here, but will add from my private notes two instances of complete cure of a severe and typical case of rheumatoid arthritis, and present one of the patients to you for your personal examination and questioning.

CASE IX.—Miss J. B. F——, aged fifty years; September 4, 1895. The patient was engaged in severe literary occupation daily and subject to much anxiety. The disease began in January last, nine months ago. In February the metacarpo-phalangeal joints of both hands began to swell and were tender to the touch. This condition has steadily progressed to date. At the same time some of the corresponding joints in the feet swelled, and the disease soon extended to the wrists, shoulders, elbows, and knees. She took salicylic-acid treatment without benefit. She then went

¹ The Post-Graduate, November, 1899, "Rheumatoid Arthritis," by Dr. W. B. Snow.

to Paris for treatment, and took vapor baths; these "broke her up" very much. In Paris she took electro-static treatment with marked benefit, and her physician there, Dr. —, referred her to me in this country. Careful examination demonstrated that there could be no doubt of the diagnosis. The joints presented the usual rheumatoid arthritic contour with tenderness on pressure and restricted movements. They had never been hot or red. The patient wore large shoes and walked with difficulty. The disease was evidently in a stage prior to joint destruction, when the disease, as is frequently shown by an *x*-ray picture, is yet confined to the soft tissues. The patient was told that it might take a year to cure her. In September, 1896, one year from beginning treatment, she was quite recovered and has remained so ever since, in spite of most adverse circumstances of occupation and troubles. (This patient was exhibited to the members of the society, and the cure and diagnosis were confirmed.)

CASE X.—Mrs. R. S. T——, aged thirty years; September 2, 1881; this was a case of characteristic arthritis deformans, located mainly in the right knee for six months, also somewhat in the left knee and in the joints of the fingers, wrist, and elbow. The patient had become a cripple and came to the office in a rolling-chair. The right knee was rigidly flexed at about a right angle; the joint was ankylosed and admitted of movement corresponding merely to about two inches of a segment of an arc described by the foot.

October 27th: Daily treatments were given. The area of pain, soreness, and swelling is reduced to a single central region. She has voluntary flexion of eight inches at the foot; forced flexion is increasing.

November 3d: Swelling in the joint increased today.

November 11th: There is an extensive puffed area to the left of the patella, but the knee permits of much freer motions.

At the end of three months the patient returned home cured. Dr. Jones, of St. Paul, whom I met in 1895, tells me the trouble never returned and that the

lady danced at the Assembly balls with her daughters. Later the patient called at my office and presented no signs whatever of ever having had rheumatoid arthritis. This case emphasizes the advantages of early treatment.

Incontinence of Urine.—**CASE XI.**—The patient, a Hebrew pedler, aged twenty-nine years, reports that all his life he has had almost nightly an escape of urine while in bed. This incontinence had become more troublesome than ever, and caused him to apply for relief. Electrostatic treatment was applied three times a week to the perineum, with the result that each week the loss was less or more infrequent, and ceased entirely at the end of three weeks. Later reports show that the cure was permanent.

I could add many cases of incontinence of urine in children, all cured by the same method. The electric wave current causes no pain, and hence is available with children, who generally have a fear of electricity.

Sexual Impotence.—The results in this class of cases are positive. Objectionable as this class of cases may be to report, a single case is justified as typical of many.

CASE XII.—**J. S. C.**—, aged forty-six years; October 1st. His trouble began seven years ago with monthly emissions; these grew more frequent, until upon slight provocation they would occur many times a week and even in the daytime. He now has an average of four emissions a week. He then developed what he terms "internal emissions"; that is to say, complete erection without actual seminal emission, followed by profuse perspiration and exhaustion. (Probably the emission occurred backward.) He has severe pain in the back of the head and dull aches down his legs after such attacks. He wakes up exhausted in the morning, and now finds himself on any and all occasions completely impotent by reason of failure of erection.

November 4th: But one emission in three weeks; the "internal emission" ceased since the last four days. He sleeps well, eats well, and is gaining flesh; "head clearer" and is less nervous; the pains in the back of the head have ceased, and memory is improved.

December 15th: No more "internal emissions" occurred.

January 2d: He has had nine weeks' freedom from any emission; then one occurred.

March 1st: He had a successful coitus; in splendid health and is perfectly cured. Later reports show no relapse.

Neuritis, Sciatic, Brachial, etc.—In this disease electrostatic treatment is in truth specific, for no case in my hands has yet failed to be cured when sufficient and reasonable time is given. I do not give details, for I have recently published¹ 80 cases of this disease, in which my results were summed up as follows: Sciatica, 39 cases; axillary and brachial neuritis, 41 cases; total, 80. Average duration of treatment: sciatica, 32 days; axillary and brachial cases, 22 days. There was immediate relief from pain in all cases. Of the 80 cases, 57 were known to be permanently cured; 23 were relieved, so far as my records go; their ultimate history was not easily obtainable, but they are believed to have been cured.

Migraine or "Sick Headache."—CASE XIII.—Mrs. A. W. T—, aged thirty-nine years; November 14, 1895. During the last fifteen years she has lost at least a week out of each month with one of the most intense attacks of migraine I have ever seen, and now, although her menstrual periods have long since ceased, the disease has progressed until the headaches occur almost daily. The usual attack begins by a precursory sensation of feeling cold "like a clod of ice," especially "down the spine," and no amount of bed-covering or increased heat in the room will cause her to feel warm; at the same time she has a sinking, tired feeling and a "perfect goneness all over"; then begins a sharp pain in the right temple, "just as if a nail were being driven in," until the entire region of the right eye is involved; the sense of chilliness, faintness, and nervousness increases, and finally intense nausea supervenes with flatulence. Often a "blur" comes over the right eye, and she is now reduced to a condition

¹ William J. Morton, M. D.: "Cases of Sciatic and Brachial Neuritis and Neuralgia, Treatment and Cure by Electrostatic Currents." *MEDICAL RECORD*, April 15, 1899.

in which she does not leave the house and is a continual sufferer. She "has tried everything" to get cured during her fifteen years of suffering, and is now discouraged, despondent, and so nervous that she starts at the slightest unexpected sound or movement, and does not trust herself to go out alone. The patient divides her attacks into "nail headaches" and ordinary sick headaches, the former being by far the most severe and most dreaded. She is much debilitated, with the usual symptoms of this condition. She began treatment.

November 16th: Severe headache.

November 26th: No headache to date, but nervous and prostrated.

November 28th: A slight attack.

December 4th: Headache to-day.

December 20th: No headache since last record, but experiences a dull feeling of "congestion in the head."

January 28, 1896: It is now two months since a "nail headache" has occurred. In this interval she has had several attempts at headache, which did not, however, culminate in an attack.

February 23d: It is now three months since she had a distinct attack. The patient has gained in weight, sleeps and eats well, and her chronic constipation has disappeared without other treatment than electricity. Her tongue, previously for the last three or four years "white-colored and lead-looking," is now red and normal.

May 18th: The patient's general appearance shows a remarkable change to health. She has gained weight. There is no further hemianopsia, nor "blurring sensations," before the eyes.

May 23d: She discontinued treatment, cured. I advised her to live out-doors all summer. She endured the fatigue of packing and departure without exhaustion.

Remarks: This patient was under treatment about six months. This I consider a short time to cure a migraine of fifteen years' standing. I may frankly say that the disease fought every step of the way, and that often both the patient and the doctor had reason

to feel discouraged. But perseverance on the part of both won.

Uterine Fibroid Tumor. Symptomatic Cure and One-Third Reduction of Mass.—Finally I append a case of fibroid tumor treated by the electric-wave current, the first as yet reported.

CASE XIV.—Mrs. C. A. S——, aged forty-five years; April, 1899. A sister had a fibroid tumor, and was operated upon and died; hence the patient dreads operation in her own case. She first noticed her present illness ten years ago. She had abdominal cramps and other symptoms. Five years ago she had a good deal of hemorrhage. Three years ago she first noticed the presence of a tumor. She consulted with her family doctor, Dr. S——, who sent her to Dr. F——. He advised the removal of the tumor by surgical operation, because of the severe hemorrhage and the consequent drain upon her health. Friends advised seeing Dr. E——, who at first favored operation, but finally advised some delay. Later on she saw Dr. S—— and Dr. S——; the latter advised operation and removal of the tumor. She saw also Dr. A——, who told her the tumor was the size of a seven-months' child.

Present symptoms. The tumor was fully of the size of a gravid uterus carrying a seventh-month child. Externally, through the abdominal walls, the mass was well-defined, round, and intensely hard; internally some parts of it pressed down deeply in the pelvic basin and were very hard to the touch. The patient experienced a distressing feeling of weight in her lower abdominal region, also at the same region "a burning feeling." She had much difficulty in urination; she could scarcely walk about, and in fact spent most of her time in bed. Her feet and ankles were often swollen. She felt a "pressure in her head," which she says made her feel as if she was going insane, and her eyesight became defective. But the most distressing symptom was the almost continuous hemorrhage. During the last three years, at the occurrence of each monthly period hemorrhage would continue from twelve days to three weeks out of each month,

and frequently she was so weak that she could not raise her head. She had also frequent fainting spells.

Coming to me as a last resort, since she could not make up her mind to undergo a surgical operation, I felt justified in trying upon her the new electrostatic current, and that, too, wholly externally, since I had lost confidence to some extent in galvanism for these cases, and because, reasoning from analogy, this current ought, *a priori*, to set up a normal in place of a faulty nutrition in the parts acted upon. The patient has received about three treatments a week with the exception of during the summer. Omitting details of varying conditions, the patient to-day, November 5th, makes the following report: The feeling of weight, burning, and oppression in the pelvis has long since disappeared. Her feet no longer swell; urination is undisturbed, and she walks about everywhere and for a long time without discomfort. She is in splendid health, and, most important of all, she has had no hemorrhage since the first few weeks of treatment. The tumor, from being a heavy, solid, hard mass, has been reduced fully one-third in size, and upon its left-hand side has become quite soft to the touch both externally and internally. It is also more movable. In short, the symptomatic cure is perfect, while the tumor as a physical mass is also undergoing retrogression. In the mean time her menstruation has resumed a perfectly normal character, so that the results reported cannot be attributed to a cessation of menstrual activity. No medicines, or any other treatment, were employed. The progress would certainly have been more rapid if the treatment had been daily rather than tri-weekly, and possibly had it been internal rather than external. The patient is still under treatment, and she as well as her physician confidently expects a complete cure.

Several members of the society desired to examine this patient, and she kindly consented to meet Dr. Egbert H. Grandin and Dr. Charles Schram.

Dr. Grandin writes: "Unfortunately she is menstruating and I cannot examine her. The history you gave me is similar to that which I obtain from her."

Dr. Schram, after a careful examination and report

upon the heart, writes: "In her present condition the insufficiency of the heart action would probably cause a laparotomy to be fatal."

I would here state that I have treated in the same manner and with immediate benefit other cases of menorrhagia than those associated with uterine fibroids, as well as cases of vaginitis, ovarian pain, ovarian tumor, etc.

To record cases further is impossible within the scope of this brief paper, whose primary object was to make a practical demonstration of a new method of treatment, namely, the electrostatic wave current, and this has led me naturally to include classes of cases in which the treatment is applicable.

Basing the statement upon a large clinical experience in my dispensary and private practice, I find the electrostatic-current treatment applicable with great efficacy, not only in the above-mentioned classes of cases of locomotor ataxia, rheumatoid arthritis, incontinence of urine, sexual impotence, neuritis and neuralgia, migraine and uterine fibroids, but also in ordinary rheumatism, acute, subacute, and chronic; in gout, in synovitis, in enlarged prostate, in anæmia and chlorosis, and especially also in neurasthenia and melancholia, and all conditions in which a state of general malnutrition exists.

