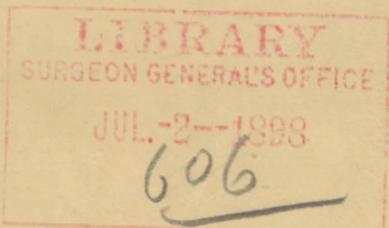


Rainear (A. R.)

The electro-therapeutics of
Therapeuticism —



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The Electro-Therapeutics of Rheumatism.

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The electro-therapeutics of rheumatism are referable more specially to the sub-acute and chronic forms. Indeed, the acute articular variety is retarded in its process of recovery, by using any form of electrical treatment.

Included under these two classes of the disease, (sub-acute and chronic), are the muscular and arthritic and gouty conditions.

However, in all rheumatic conditions, electricity as a means of treatment must be applied in two ways: First, constitutional; second, locally. In considering and selecting the proper form of therapeutical electrization, we have at our disposal really five different modifications or phases of current; each one, perhaps, showing special characteristic advantages and peculiarities of its own. Thus, we have Galvanism, Faradism, Static or Franklinic, Sinusoidal, and combining the first two, Galvano-Faradic. Having reported to these several styles of electrical applications, and in gathering the results of other specialists in electro-therapeutics, a complete and thorough test has induced me to depend upon the Galvanic, Faradic, Galvano-Faradic, and Static forms as the most

reliable and permanent in their actions on the rheumatic condition, whether it be exemplified in the muscles or joints.

Quite a number of medical electricians favor the static machine, saturating the patient on an insulated stool, and removing sparks up and down the spine.

Much good has undoubtedly resulted from his plan of treatment, but the results seem to be not as permanent: great relief being experienced at the time, and perhaps for a few days following the electrical seance, but I have carefully noted that often a relapse or return of the trouble after a month or two from the last application of the static current.

Regardless of theories involving the causes of rheumatism, two important facts must be remembered. First, *never* treat a case of acute articular rheumatism with any form of electricity. It being an acute febrile disease, accompanied with intense pain and suffering, will only be aggravated and intensified by any form of electricity coming in contact with the acutely inflamed parts. Secondly, *all* pains in the muscles and joints, and *all* paralyses or partial muscular paralyses

presented by the author

are not rheumatic or of rheumatic origin. Yet pain and stiffness of joints, and partial atrophy of the muscles are positive attendants and conditions coexisting with sub-acute and chronic rheumatism.

It will, therefore, aid the practitioner in his future prognosis for his patient, to be well able to diagnose his case as one of the sub-acute or chronic types of rheumatism, before referring him to the electro-therapeutist for treatment. There are some physicians too hasty to receive the diagnosis as made by the patient, where all pains are stated to be the evidences of previous rheumatic attacks.

As mentioned before, the constitutional and local methods are the only proper ways to use electricity. Previous to citing some cases it would be well to look into some of the reasons for such forms of treatment.

General or constitutional galvanization acts as a tonic to the entire system; but decidedly so on the nervous system. Galvanism is the most active stimulant of nutrition we have, and as mal-nutrition and mal-assimilation are present in all these cases, the organs of digestion and absorption are stimulated to the proper performance of their functions. Insomnia being present in a number of cases, the application of the galvanic current to the spine, and specially the upper dorsal and cervical regions, has a tendency to cause a quiet and normal sleep. Irritability of temper is often present, where a general treatment has a soothing and anodyne effect on the sympathetic and general nervous system.

The local treatment may be galvanic

or faradic, or the two combined, galvano-faradic. The slowly interrupted faradic current, when locally applied to an individual muscle, causes a contraction, and indirectly such contraction means more blood to the part and therefore increased nutrition. When pain is present in the muscle, a galvano-faradic current would cause a contraction and at the same time producing decreased pain and soreness of the parts. If there is fluid of a pathological nature, or even commencing deposits, absorption can be effected by the local application of the current to the joint, or even the inserting of metallic needles attached to the cathode may be resorted to where the deposits are of a commencing calcareous or urate of soda formation.

Some of the few prominent local phenomena are as follows:—

a. More or less pains in the various joints affected, and more severe on pressure.

b. Difficult movements in the joints, due probably to the pain and weakness of contiguous muscles.

c. Pains or soreness of the muscles, brought out by pressure.

d. Atrophy of the muscles and diminished contractility.

e. Hydrarthrosis.

The general treatment is about as follows: Where there is much muscular involvement, a primary and secondary current from the faradic coil, of about three to five minutes duration, applied directly to the muscles. At first, use currents of modern strength, the electrodes well moistened with a saline solution, and the current in-

creased to the maximum power of endurance. This to be followed by weak interrupted faradic primary currents. If excessive pain be present, use galvanic An. of fifteen to thirty milliamperes. Where the joints are affected, galvano-faradic currents applied immediately over the joints from ten to fifteen minutes' duration. Labile currents following stabile applications are usually productive of much good. Also, galvanism to the spine, An. over the origin of the nerve from spine, and labile applications of Ca. over the joint or muscles. Spinal galvanism with An. over the cervical vertebrae, and Ca. on upper section of sacrum, using twenty to thirty-five milliamperes, stabile applications from ten to twelve minutes.

In the following cases reported, I have copied from my record book of treatment, and each case in its history will demonstrate the condition of the patient, and the general plan of electrotherapy as applied thereto. In almost all cases of subacute rheumatism, at least two sittings per week are necessary, while the chronic cases require daily or not less than three treatments weekly, and continued for some time. Avoid informing the chronic rheumatic of a month's electrical treatment as an infallible cure; three to six months will be the nearest solution.

In March, 1895, Mr. I. D. was referred to me by Dr. R. of this city, with the following history. Two years ago he was in bed for six weeks with inflammatory rheumatism. At that time all of the smaller joints in the body seemed to be swollen and painful. After getting about and working, the

muscles at times were painful to the touch and aggravated by movement during contractions. Mr. D. says "that a long continued treatment with iron and iodide of potassium got him in pretty good condition." His greatest annoyance now is the enlargement of the wrist joints, which comes on during the late winter and early spring, when the air is damp and cold. The joints are very painful on pressure and in the movements of the hands the wrists are exceedingly sensitive and tender. Some of the extensor muscles of the right forearm were atrophied, and as he expressed himself, "full of neuralgic pains."

The patient was placed upon the galvanic treatment, with an occasional recourse to a slowly interrupted primary faradic current to the muscles. Twenty milliamperes were passed into these joints every day for three weeks, and then increased to thirty milliamperes three times a week, about fifteen minutes at each sitting. Labile currents of galvanism were used to the extensors and flexors of both forearms. This treatment was continued for two months, with slight changes in the diet, no medicine or drugs of any kind being used. He has reported to me several times. There is no return of the previous trouble and an absence of deposits in the joints or any deformity.

In December, 1894, Mr. W. J., aetat, 41, merchant, consulted me for a severe "ache" and pain in the lower part of the back and upper portions of thighs. Had two previous attacks of rheumatism, this region of the back being the most troublesome; so bad in fact that he was compelled to remain

in bed for some time. During the winter he went to Florida, where he got comparative relief and comfort, but upon his return in the spring, the muscles of the lower back would become sore on pressure, and at times interfered with proper locomotion. Walking aggravated the trouble. There was no disease of the spine or kidneys. Great pain was experienced before or upon attempted rising from the bed in the morning. He was compelled to neglect his business, in fact gave it up until through with electrical treatment.

Galvanism was applied to the back, the An. to the upper dorsal and cervical regions, and the Ca. over the lumbar regions. Eighteen to twenty-five milliamperes were used daily, duration of twelve minutes. Later on, the slowly interrupted secondary faradic current was used over each muscle. When the pains had disappeared, gymnastic exercise of these muscles was ordered, and at the end of three months' treatment, no tender spots or pains were present, and no return has occurred. Both stabile and labile currents were used on the back and thighs.

Mrs. O., aetate 34, consulted me in February, 1896, complaining of loss of power in the left leg, following an attack of rheumatism. The history plainly shows a former attack of acute rheumatism. Upon examination I found the muscles of the calf of the leg and also of the thigh, very much wasted, somewhat cold and moist to the touch. Sensation was very much impaired. She experienced pain at all times in these atrophied muscles, but more intense when in bed and sitting

erect for any length of time. The opposite limb seemed to be in a normal condition, rather over-developed. She dragged the left leg when walking, necessitating the use of a cane. I may add, that the other muscles of the body were in good condition, and unattended with pain. This woman was referred to me as a case of "ruptured blood vessel in the spinal cord." There were no De. R. The wasted muscles responded to both galvanic and faradic currents. Galvanism to the entire limb was used every day more as a tonic to the parts, followed during the same sitting with mild, slowly interrupted secondary faradic currents. At the end of two weeks the pain had ceased entirely; the atrophied muscles had increased in size and contractile power, and then the applications were made on alternate days for three weeks longer, when the limb reached its normal condition, and has remained so up to the present time. Labile galvanic currents of twelve to twenty milliamperes were applied during the early treatment, using large electrodes covered with cotton. When the muscles showed improvement, small electrodes were used in order to select the individual muscles; an interrupted current being used.

Other cases can be quoted, showing the effects of electro-therapeusis in this apparently intractable yet annoying complaint; but I think that the above statements, together with a practical demonstration as shown in the cases mentioned, will serve toward a better understanding of the electro-therapeutics of rheumatism.

