

FISCHER'S MAGAZINE



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344

MAY, 1923

Tongues in Trees,
Books in the Running
Brooks,
Sermons in Stones
And Good in Everything.

Fischer's Magazine

*Devoted to the advancement of the Science of Electro-Physio-
Therapy and to the interests of those earnest and enlightened
medical men who are practicing it.*

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Vol. I

MAY, 1923

No. 8

Editorial Comment



Home of Fischer's Magazine

Judging from the volume of correspondence received daily, by the friendly comment, the constructive criticism and the number of helpful suggestions offered, "*Fischer's Magazine*" is proving of exceptional interest.

This is our eighth issue—what do you think of it? Have we fulfilled our desire to make each succeeding issue of more therapeutic value than its predecessor?

We want more copy—we want to pass along every good idea that is submitted—we want to circulate original articles on the latest and best Physiotherapy technique.

Your success with your Fischer Apparatus has been directly dependent upon two things:

The technique you have developed from your own actual use of the equipment, and the limited amount of general information that was available when you purchased your machine.

There are hundreds of doctors who are in exactly your position. Don't you think that some mighty valuable information could be exchanged if you had an opportunity of talking to each of them? Certainly, time and expense would not permit this, but, without any cost to you we are attempting, through the medium of "*Fischer's Magazine*" to provide an excellent substitute.

Let us hear from you—everyone who reads this. Do not think that because you are achieving success along a certain line with Physiotherapy treatments that such technique is common knowledge. Many of your brother physicians might just be looking for a similar idea.

SEND ON YOUR CONTRIBUTION, NOW.

Diathermy Suggestions

Dr. Elnora C. Folkmar, Washington, D. C.



Dosage in Diathermy is a thing that can be learned only by experience. In treating small areas with local diathermy, the number of milliamperes of current should never exceed 100 to each square inch of the active electrode. In most cases the

comfort of the patient is the best guide.

The duration of a treatment will depend on the condition to be treated, as well as the patient. Treatments vary in duration from 5 minutes to 1 hour.

Frequency of treatment also depends on the condition to be treated and the ability of the patient to come for treatments. In most cases daily treatments are advisable at first, then thrice weekly, later twice, and then possibly once each week.

Diathermy is not a panacea for all diseases, yet its indications are many. It is a most excellent adjuvant to many other therapeutic measures, and in many cases it is the indicated therapeutic agent par excellence. For diathermy is heat, and heat only—and heat is necessary to life, to health, to function. Heat is necessary to repair in injury to the restorative processes when disease is present, and diathermy furnishes this needed heat where it is wanted, and when it is wanted, without taxing the heat regulating forces.

Electro-Coagulation of Tonsils

T. Howard Plank, M. D.



The reduction of hypertrophied tonsils as well as the destruction of badly diseased tonsils with high frequency currents is more and more demanding the attention of the general practitioner who first sees the vast majority of these cases. When one considers the growing antipathy toward their removal by surgical means there is increasing need of investigating other methods of treatment.

It is a bloodless operation that can be performed in one's office and requires but a few minutes. The pain occasioned by the treatment can be controlled by any good local anesthetic. The writer uses a two percent of all except Batyn which can be used as low as one-fifth of one percent and all without danger of toxic effects if cocaine is omitted from the list as it should be. The local anesthetic should be injected into the tonsil as well as the peritonsillar tissues.

All tonsils needing treatment can be taken care of with the high frequency currents. This includes everything from the simple hypertrophy, the repeatedly infected, inflamed tonsils, those badly diseased and abscessed, to the malignant tonsils, and it makes no difference whether the malignancy is of the sarcomatous or carcinomatous type providing the diseased tissues are electro-coagulated. It makes no difference whether the tonsils are acutely infected or long since chronically so. The high frequency treatment of badly infected tonsils need not be delayed until the infection can be abated by some other means as it is sometimes necessary to do before cutting operations.

Hospitalization of the patient is unnecessary as it is purely an office treatment excepting malignancies. Preoperative sterilization of the throat is wholly unnecessary as the current does that by the best method known to the world.

today—excessive heat. Post-operative sterilization is best accomplished by the use of actinic rays from a water-cooled, quartz-mercury lamp. All bacteria are killed by a temperature above 160 degrees F. and one has no trouble raising the temperature of the tonsil to 212 degrees F or higher.

The treatment by electro-coagulation with high frequency currents is bloodless, hence there is no need of hemostasis or hemostatics. The only articles needed besides the machine (which for this work should have a capacity of about 1000 milliamperes) will be a pair of good flexible conducting cords with sufficient insulation to prevent leakage of the current and of sufficient length to reach the patient easily, a good foot switch for the direct control of the current by the operator, a good hard-rubber handle of convenient size and length capable of holding a pliable needle of sufficient length to reach the tonsil without effort, and a wooden tongue depressor. If the tonsil is hidden behind the anterior pillar, a blunt hook or retractor will be needed so an assistant can hold the pillar out of the line of vision and away from the current. Any non-conduction material can be used for the depression of the tongue. If it is desirable to insulate the needle, it is easily accomplished by slipping small rubber tubing over it, covering all but the distal inch which should be as sharply pointed as it is convenient to handle.

The actual treatment is as follows: anesthetize the tonsil and peritonsillar tissues; set the high frequency machine to deliver about 300 milliamperes of D'Arsonval current which is sufficient for simple hypertrophies (use about 600 milliamperes if destruction is desired); have the patient sitting where a good light can be thrown into the throat; have the foot switch at a convenient distance; have one pole of the current going to the patient's hands (an auto-condensation handle is best for this). Now with your needle-holder and tongue depressor you are ready for action. If mere reduction in size is wanted, lay the needle on the tonsil and step on the foot-switch, watching carefully the action on the tissues, and as soon as the tissues commence to blanch stop and move

the needle to a new area and proceed as above until all areas are equally treated, at which time the patient is ready to go about his regular duties.

However, if you wish to destroy the tonsil, use the stronger current and insert the needle into the tonsil tissue about one-fourth inch, then proceed as before, again watching for the blanched appearance which will take a slightly longer time (a few seconds only), and will mean that the tissue around the point of the needle has been coagulated and destroyed. Now reinsert the needle into a new area and continue until the desired destruction has been accomplished and again your patient can go about his daily occupation.

The destroyed tissue will come away in about ten days, of its own accord. Do not attempt forcible removal or you will start bleeding. One treatment is usually sufficient; however, if not, another can be given a month later. The actual working time for both tonsils should not be over five minutes.

1612 Heyworth Building

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From 12 to 14 years have been added to the average human life in the last half century, due to the progress of medical science. But 600,000 persons still die in the United States annually from preventable diseases.

□ □ □

When the question of supplies and accessories comes up—just write FISCHER. Put your dependence where you know you may.

□ □ □

The denial of the employment of physical measures to those who suffer is sustenance to the quack. The adoption of these measures by the medical profession will do more than anything else toward driving the isms out of the practice of medicine.

Diathermy in Pneumonia—a Report of Ten Cases

By Harry Eaton Stewart, M. D., New Haven, Conn.
Consultant in Physiotherapy, U. S. Public Health Service



These cases are from my consulting service in the U. S. Marine Hospital, No. 21, New York, reported by permission of Col. George B. Young, Medical Officer in Charge. There have been reported heretofore a number of cases of pneumonia, treated by diathermy. In most, if not all, of these cases there was lacking the laboratory reports, clinical records, etc., which largely obviated these reports being accepted at their face value. You do not need to be reminded of the extreme caution that must be exercised in accepting any treatment as specific in this disease, which varies so greatly in type and mortality in different seasonal epidemics.

Diathermy is a form of conversive heat, generated deep in the tissues between the poles of the D'Arsonval type of high frequency current. The machine used was of the portable type, capable of delivering up to 2500 milliamperes of current.

The current was turned on slowly, the rheostat slowly advanced until a maximum of 2000 milliamperes was reached in about four minutes. This was continued for twenty minutes and slowly cut down in about two minutes.

There are at least eleven different and distinct techniques in the use of diathermy. The technique used in all of these cases is the through and through bipolar method, with flexible composition metal plates, about 4x7 inches, placed directly over the affected lobes anteriorly and posteriorly. A hot shaving soap lather was applied to the skin and electrodes. The patient lay on the posterior electrode, supported by a pillow, the anterior one was held gently, but

firmly, on the chest wall. The enthusiastic cooperation of the hospital staff aided greatly in carrying out this study. The physical findings in each case were made by the Ward Surgeons, Dr. Trimmer and Dr. Boland, and the Chief of the Medical Service, Major Bryan. The X-rays were taken in the hospital laboratory. The laboratory findings were made by the chief of that service, Dr. Taylor, and the only function of the Department of Physiotherapy was to give the treatments. The head aide, Miss Cargill, gave all the treatments personally. The cases selected were nearly all those, which in the opinion of the Medical Chief, were in an extremely critical condition. Complete physical and laboratory findings in each case I have here if any of you are interested in looking them over. A complete reading of them would extend the time far beyond that allowed for the paper. I will, however, read a brief summary of each case.

Case I. G. L., 39, white, merchant seaman. Family history: one brother died of tuberculosis. Past history: negative.

The patient was admitted to the hospital January 7, 1922, and had a chill that evening.

Physical findings showed congestion of entire left lung, a few scattered râles on the right, otherwise negative. Sputum showed streptococci, no pneumonocci.

X-ray examination: showed the entire left chest dense and heart displaced to the right, suggestive of fluid. Tapped twice, no fluid obtained.

Diagnosis: *Lobar pneumonia*. On the 5th day of the disease, patient's condition very bad, the relatives were notified. *Diathermy* was started in hope that it might help him. Temperature started down by lysis immediately after treatment. Treatment was continued twice a day for six days and then once a day. The most striking thing about this case was the immediate relief of pain and distress, and the improvement in the circulation. He apparently began to improve steadily from the first treatment and has made an uninterrupted recovery.

(Continued on page 12)

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By

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It will be concise, complete and profusely illustrated.

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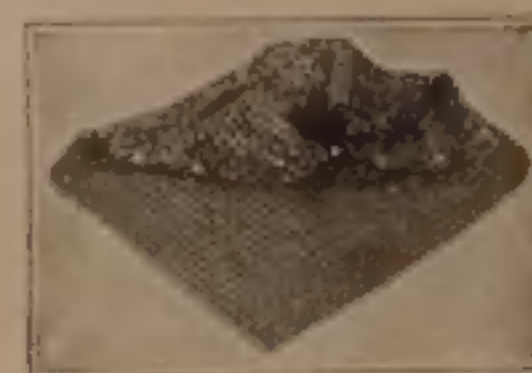
Flexible Mesh Diathermy Electrodes

(Patent applied for)

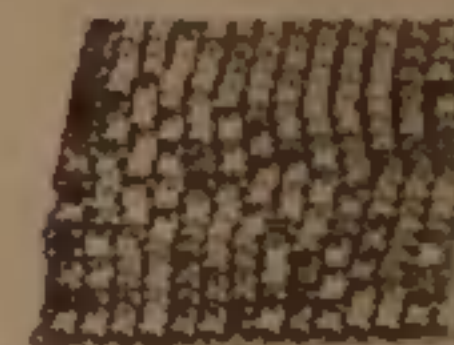
The most flexible *all-metal* electrode ever designed. Fits any part of the body like a glove. May be employed in connection with Diathermy, Electro-coagulation, D'Arsonval Auto-condensation, Sinusoidal, Galvanic or any electrical modality where perfect contact on the skin is necessary. Composed of a series of flat links of German silver. Especially recommended for use in Diathermy treatments. Use it on

The Knee and Elbow, over the Shoulder, On the Back, the Wrist and Hand, Wherever it is difficult to form a Perfect Electrical Contact with any Other Means.

Endorsed by the best known Physiotherapists everywhere. Try a piece on a difficult case and you will use it to the exclusion of all other methods. A heavy soap lather is employed as a conducting medium between the metal and the epidermis.



A Mesh Electrode



Section of Electrode showing exact size of links.

Furnished in Five Widths.		Price per
	Code	lineal inch
Cat. No. 844— 6 inches wide	SAFROL	\$0.30
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Cat. No. 872—12 inches wide	SAILER	.60
Cat. No. 873—15 inches wide	SARIEB	.75

(Advertisement)

Case II. C. M., 24, white, merchant seaman. History: entered hospital January 24th. Complained of headache, sore throat, and pain in extremities. Pain in right chest. Temperature 103°. Pulse 112°. Respiration 24.

Physical examination: tonsils slightly enlarged and red-dened. Heart normal. Lungs, to-and-fro friction rub at left base posteriorly. A few fine crepitant râles at angle of left scapula, otherwise negative. Sharp variations of temperature for two days, simulated malaria. Two blood smears negative. Wasserman *four plus*. Urine negative. *January 27th*, area over chest below right scapula over which the percussion note was dull. Broncho-vesicular breathing, with numerous fine crepitant râles. Diagnosis: Broncho pneumonia.

X-ray examination: January 28th. Increased density, lower lobe of right lung.

Diathermy began on the 28th and continued daily. Temperature dropped permanently on the 29th and he made an uninterrupted recovery. X-ray, January 31st, three days after the first one showed marked clearing in the involved area of the right lung. Marked relief varying from two to four hours followed each application of diathermy, noted by the nurse and the ward surgeon.

Case III. A. H., 37, white, merchant seaman. Family history: negative. Present illness: admitted hospital January 19th. Two days before entering had a severe chill, pain in extremities and back and headache. Extreme prostration and cough. On entering the hospital temperature was 101°, which rose to 104° within seven hours.

Physical examination: heart normal. Coarse bubbling râles over both bronchi, a dullness over base of the left lung. Breath sounds harsh through entire left lung. *January 21st*, patient's condition much worse, pulse 136, and thready, respiration 44 and labored. Chest showed well developed lobar pneumonia at right base and pleurisy with effusions at the left base, W. B. C. 46,000, 82% polys. *Diathermy* applied three times, twice during day and once at night on

the 21st. Patient showed temporary improvement that was marked. On the 22nd, the patient developed hemorrhagic rash on the back and upper extremities. General condition, critical. Patient died on the 22nd, 8 P. M. Blood culture 18 hrs. incubation showed streptococcus veridans septicemia.

Autopsy: lobar pneumonia on the right, central pneumonia on the left, pleurisy with effusions on the left, septicemia. In the pleura an exudate about 1-8th inch thick, which covered the pleura.

Case IV. W. S., 19, white, merchant seaman.

History: had a chill day before entering hospital. Admitted January 19th. Temperature 104°, pulse 105, respiration 36. Acutely ill.

Physical signs: percussion note dull over area below left scapula. Fremitus increased. Distinct broncho vesicular breathing with a few fine crepitant râles. *January 20th*. Examination showed clear-cut lobar pneumonia. Left lower lobe. Sputum examination. Pneumococci type 4. Wasserman negative. White cell count 28,600, 78% polys.

Diathermy began on the 22nd and repeated twice daily. Patient was delirious from the 21st to the 23rd. Temperature fell by lysis, recovery was uninterrupted.

Case V. E. R., 26, white, merchant seaman.

History: admitted February 3, 1922. Taken with frontal headache, weakness, severe pain in left chest the previous day. Pain on inspiration or coughing.

Examination: Throat negative, chest, left base posteriorly a loud friction rub. Harsh breathing over both bases. Given mustard plaster, aspirin gr. 10 q.4 h. and amon. carb. and cod. p.r.n.

The next day left base gave bronchial breathing whispered pectoriloquy and dullness almost flat.

Diagnosis: *Lobar pneumonia*. Type IV pneumococcus.

Diathermy started twice daily which lessened pain. On the 7th the right middle lobe became involved and real double

pneumonia developed. On this day condition reported desperate, patient "filling up." Greatly improved by two diathermy treatments three hours apart and temperature began to come down by lysis reaching, normal on the 10th.

Case VI. G. S., 32, white male, merchant seaman.

History: had chill and became ill two days ago. Admitted February 13th, 1922.

Examination: chest showed patch of consolidation below right scapula. Bronchial breathing.

Diagnosis: *Lobar Pneumonia*. Type IV (February 15th.)

Diathermy twice daily with improved symptoms and fall of temperature by lysis.

Lab. *Urine* negative for albumen or sugar.

X-ray of chest showed mottling and fibrosis of right lung suspicious of T. B.

Sputum negative for T. B. *Pneumococcus* Type IV.

Blood w.b.c. 21,200, 82% polys.

Temperature reached nearly to normal February 18th.

Diathermy discontinued.

March 3rd. Left lung became involved. Many râles in right base still.

Diathermy twice daily. Irrational two days with high fever which returned to normal on the 8th and 9th, followed by rapid recovery.

Case VII. J. R., 37, white male, merchant seaman.

History: very ill for several days. Admitted Feb. 16th, 1922.

Examination: right base flat, bronchial breathing. Patient cyanotic, pulse 120. Temperature 103.4. Prune juice sputum.

Diagnosis: Feb. 17. *Lobar pneumonia*: Sputum Type IV pneumococcus.

Diathermy twice daily begun at once.

Temperature started down immediately by lysis, with general improvement.

Urine Sp. Gr. 1027 Alb. trace pus present.

X-ray upper right lobe dense.

Sputum negative for T. B.

Made a slow uninterrupted recovery.

Case VIII. O. Y., 28, mongolian male, foreign seaman.

History: felt ill three days before admission on Feb. 22, 1922.

Examination: chest shows râles and harshness throughout. Cardiac mitral murmur. Left base harshness and bronchial breathing.

Diagnosis: *Lobar pneumonia*. Type undetermined. Diathermy twice daily. Lab. reports: blood hemoglobin 100%, white blood cor. 10,000. Wasserman, Neg.

Temperature started down by lysis after the first diathermy treatment. Recovery rapid.

Case IX. A. H. B., 31, white male, merchant seaman.

History: acutely ill four days before admission Feb. 23, 1922.

Examination: scattered râles and harsh respiration throughout chest. Pulse 96, Resp. 36, temperature 105. Dyspnoeic and cyanotic. Suspected influenza. Feb. 25 developed dullness in right base with bronchial breathing. Cyanosis more marked. Resp. 40 and shallow. Pulse 112.

Diagnosis: *Lobar pneumonia*. Diathermy twice daily. Lab. no virulent pneumococci. Blood hemoglobin 75%, w. b. c. 10,000.

Feb. 26: heart enlarged to left. Mitral systolic murmur. Patient irrational. Temperature came down by lysis after the first diathermy treatment. Recovery rapid and uneventful.

Case X. W. McD., 52 white, male, merchant seaman.

History: slightly ill for two days. Admitted March 4.

Examination: right chest anteriorly shows dullness, prolonged respiratory note. Friction rub posteriorly with a few râles.

March 6th: dullness increased at right base, vocal fremitus bronchial breathing.

Diagnosis: *Lobar pneumonia*. Diathermy started twice daily to March 13th with steady improvement in all symptoms and temperature drop by lysis. Lab: *Urine* Sp. gr. 1023. Sugar negative. Albumen trace. *Sputum*, unsatisfactory for typing.

March 15: much improved, diathermy once daily. Recovery rapid and uneventful.

Conclusions: The results in these cases are suggestive that diathermy may have an influence in hastening recovery in pneumonia. The evidence is not at all conclusive. In several of the cases the diathermy was not instituted until in favorable cases the temperature might be expected to start downward, but it is the opinion of the medical staff who selected these as test cases that diathermy helped in their recovery. When we have had many more cases to report on, we hope to be able to make a more definite statement, but this much we do know, that in *every single case* and in almost every single *treatment* the temporary effect upon the patients was remarkable. Cyanosis disappeared. The expiratory grunt when present was markedly lessened or stopped entirely. Respirations were less labored and the patient received from two to four hours of very marked relief, in many cases obtaining sound sleep. Now diathermy has been ordered as soon as the diagnosis is made in every case of pneumonia at the Marine Hospital.

It is not too much to assume that in many critical cases this marked relief of symptoms may be the turning point in disease. Under proper technique there is no danger of ill effects from two or even three diathermy treatments per day. The proper technique is of the greatest importance. The fall of temperature takes place by lysis where diathermy is used.

Pneumonia attacks all ages and the rugged as well as the weak. The death rate is so high that any method of treatment which will lessen it to any extent would be invaluable. The results of this work are sufficiently encouraging to justify the wider employment of diathermy in this disease.

420 TEMPLE STREET.

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He who slurs physiotherapy strikes a blow at the house in which he lives.

A New Surgical Diathermy Electrode

Suggested by Dr. T. Howard Plank for electro-coagulation operations—especially tonsillectomies. It is small, very light in weight and exceptionally handy for this work. The operator's hands are out of the line of his vision, entirely, when making the application.



A very flexible rubber covered cable is securely fastened directly into the polished hard rubber handle, and is sufficiently insulated that it may be wound around the hand and arm, or allowed to lay against the face of the patient with absolutely no danger of shocking.

There is no exposed metal anywhere with the exception of the active tip. Four tips of different lengths are furnished as illustrated.

Catalog No. 862—Code SALLY—Price, \$5.00

Fischer Improved Diathermy Clamp

An aluminum casting, smoothly polished and light in weight, arranged to support two disc electrodes—one on each side.

The electrodes proper are supported on hard rubber handles which are adjustable to fit any size part to be treated. The discs are mounted on swivel ball joints, making the entire assembly a very convenient and useful device.



Catalog No. 867—Code SALT. Price, complete, \$12.00

A PAGE OF FUN



Puzzle—Find the Frog

Absent-minded Professor: "I will now show you the internal structure of a frog—"

Same party, after opening a package disclosing a hamburger sandwich: "M-m-m I was sure I ate my lunch a few moments ago".

—Literary Digest.

□ □ □

She knows Him

Jack: "I think I have a cold or something in my head."

Genevieve: "Must be a cold".

□ □ □

The Inspired Compositor

There is one honest brokerage house. It advertises: "Let us place your name on our wailing list."

□ □ □

Sarcasm

Doctor: "You have been at death's door, and only your strong constitution has saved you."

Patient: "Remember that when you send in your bill,"

De Mortuis

"Took a walk through the cemetery today, and read the inscriptions on the tombstones."

"Well, what about it?"

"Was wondering where all the wicked people are buried."

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More Apropos

The notice in the rooms of hotels which reads, "Have you left anything?" should be changed to "Have you anything left?"

—Detroit Motorist.

And so let us be Cheerful,
Without Regret for the
Past,
With Contentment in the
Present,
And with Strong Hope for
the Future.

FISCHER'S MAGAZINE



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JUNE, 1923

What is a failure? It's only a spur
To a man who receives it right;
And it makes the spirit within him stir
To go in once more and fight.
If you never have failed, it's an even guess
You never have won a high success.

—Edmund Vance Cooke

Fischer's Magazine

*Devoted to the advancement of the Science of Electro-Physio-
Therapy and to the interests of those earnest and enlightened
medical men who are practicing it.*

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Vol. I

JUNE, 1923

No. 9

Progress

IT IS surprising what one can find when digging into past history. There are those even today who shun Electro-therapy as being "too new" and "untried," yet the editor has just come across an old set of patent papers, dated August 9th, 1859—64 years ago—taken out for Moses Marshall, of Lowell, Mass., calling for "An improved device for making Electro-Magnetic Currents" . . . "A new and useful machine for *curing* or ameliorating diseased persons, particularly those affected with nervous complaints."

What wonderful, progressive strides have been made in those 64 long years! Especially in Medical Electricity! Results that were undreamed of even 10 years ago are daily occurrences in the practice of Electro-physiotherapy today.

And, while on the subject of progress, are we sufficiently thankful—that we are permitted to live in this marvelous age; to see the constant development of worldly resources; in the midst of greater opportunities for doing good—than any generation heretofore? To see men fly through the air as birds, and go under the waters as fish; to take heat and power from the ground; and take electricity, the most potent factor of all, with incalculable power, from the air, and to be able to convert this wonderful element to the physical up-building of humanity?

Diathermy in Pneumonia The Technic of Application



Excellent results have been achieved, and much written recently on the treatment of Pneumonia by Diathermy. The following is a clear and concise technic which has been approved by well known physiotherapists:

Two German silver mesh electrodes, each connected to one of the diathermy outlets on your machine, are applied posteriorly and anteriorly over the affected lobe. Electrodes should be 5" by 6" in size. If both lobes are involved, either use larger electrodes or apply the anterior mesh on the left side and the posterior on the right.

Use sufficient warm soap lather on the skin and under the mesh to insure perfect contact.

Start the treatment with not over 200 Milliamperes; after a minute increase slowly, allowing 5 minutes to reach the maximum of from 1800 to 2000 M.A. After 20 minutes of this maximum current gradually cut the M.A. down again to zero before cutting off, consuming about 3 minutes in the reduction.

It is advisable to treat twice or even three times daily.

Spread a padding under the back or use a thin soft pillow on which the mesh electrode is placed. The patient lies on this electrode, and perfect contact is obtained. The assistant should hold the anterior electrode in place, with only sufficient pressure to insure contact, being careful not to restrict the movements of respiration. Handle the patient gently.

The only contra-indication to the use of medical diathermy is the presence of pus without drainage.

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From the mistakes of others a wise man corrects his own.

High Frequency Currents and Roentgenotherapy in Vesical Tumors

GUSTAV KOLISCHER, M.D. and HARRY KATZ, M.D., Chicago

The introduction by Beer of the high frequency spark in the treatment of vesical tumors was an impetus to the study of satisfactory methods for controlling such growths. Endovesical and transvesical application of the high frequency current was taken up with great enthusiasm by urologists, so that at present these forms of treatment are considered by a majority as the method of choice in tumors of the urinary bladder. Clinical experience, together with the teachings of modern biology and pathology, have helped to clear the field. In the application of high frequency currents one must distinguish between fulguration, the destruction of structures by the electric spark, and surgical diathermy, the killing of tissues without sparking by the heat produced through the resistance offered by the tissues to the current forced through them.

Fulguration may be applied by the endovesical route, the cystoscope with the attached carrying tube and active electrode being introduced through the urethra, while the inert electrode is placed on the back of the patient. The destruction of the tumor is accomplished without opening the viscus, the current used being of low voltage and amperage. This procedure is the method of choice in all presumably benign tumors whose location and size permit approach by the fulguration wire. Whether the spark is directed to the base or the crown of the growth will depend on the character of the papilloma. The quickest method of removing such an excrescence is to place the wire tip directly in the base of the

tumor. Thus the nourishing blood vessels are rapidly obliterated. In consequence, the growth shrivels immediately and the whole operation is finished in one step. This sort of fulguration is advantageously applicable only to the leaf shaped papillomas that have a constricted pedicle and are so transparent that the blood vessels running through them are easily seen.

However, in papillomas that carry a dendritic, bushy crown, the direct approach to the base may not only be difficult but also disadvantageous for other reasons. Even if one succeeds in placing the end of the wire into the base, the crown of the tumor is likely to drop over it, making it impossible to watch the effect of the spark. Then the pushing around of the crown may lead to the separation of intact particles, thus leading to multiple implantation of such fragments, whose inclination toward proliferation may eventually lead to a

papillomatosis of the entire bladder. In all such instances it is advisable to start the coagulation from the top of the growth, bringing the active electrode successively in contact with various sectors of the crown.

Even if particles of the tumor are dispersed throughout the cavity of the bladder, these fragments are readily devitalized by the spark and unable to form an implant. As a rule, in such cases it will be necessary to make several applications at various sittings; but this disadvantage is outweighed by the safety of the procedure.

Endovesical fulguration must not be attempted if circulatory changes are observed around the base of the papilloma, though in all other particulars this growth may show the clinical signs of benignancy. These changes may be edema,



Fig. 1.—Bladder exposed; transverse incision placed between the two suspension sutures.

submucous blood patches, engorged and numerous blood vessels, or simply thickening and rigidity of the adjacent mucosa, which in such a case, as a rule, has lost its normal gloss. Then the application of the spark may involve pronounced danger. It must be remembered that the fulguration spark not only burns but also produces a mechanical effect, divulsing and comminuting the tissue it is brought to bear upon.

These circulatory disturbances may be due to inflammation subsequent to infection, or to malignant degeneration in and around the base of the tumor. In either case fulguration may be followed by untoward results. Infectious matter may be forced into the surrounding tissues, and severe pericystitis and even peritonitis may develop; in the case of malignancy, forced dissemination of malignant cells may result, which quite often leads to an explosive luxuriation, so that in a short time the whole pelvis becomes filled with cancerous masses.

In all cases of the character mentioned and in all decidedly malignant instances, surgical diathermy, after the bladder has been opened, should be employed; that is, currents of higher tension and voltage are used. The details of administering the high frequency current will again be regulated by the features peculiar to the tumor under consideration. The leading requirements are simplification of the entire procedure, avoidance of implantation of tumor particles likely to luxuriate in the adjacent areas, and the delivery of a finished surgical product, thus making possible an early resumption of the natural functions and shortening the time of recovery, and at the same time satisfying the principal postulate, the avoidance of a relapse of malignancy.



Fig. 2.—Diathermy applied to the tumor tissue.



Fig. 3.—Elevation of tumor crown; severing of the pedicle by the galvanocautery.

Technic

We apply in vesical tumors solely the monopolar method. The inert electrode, a square of blocked tin, 20 by 10 cm., padded with gauze soaked in physiologic sodium chlorid solution, is placed under the hips of the patient, while the coagulation is carried out by a metallic electrode introduced into the opened bladder. Into the rectum a Barnes bag is inserted, and this is distended by 200 c.c. of water, raising the trigon and facilitating the clearance of the vesical base. The bladder is distended with 200 c.c. of a 2 per cent protargol solution. By the usual median abdominal incision, the anterior aspect

of the bladder is exposed, and the reduplication of the peritoneum is stripped off by gauze dissection, exposing freely the outer anterior bladder wall. Then in the upper and lower angle of the wound two tension sutures are inserted which penetrate the bladder wall. The ends of the suture are secured by metal clamps, the weight of which helps to elevate the bladder, which in later stages makes the vesical cavity better accessible. Now the bladder is opened between these guy ropes by a transverse incision (Fig. 1). The transverse incision, while permitting free exposure of the vesical interior, offers the advantage of facilitating the suturing of the bladder wound and at the same time prevents oozing of urine into the cavum retzii, in case the suture line should give. Then in the upper and lower angle of the vesical incision a fiber retractor is inserted. As a rule, pulling in an occipitocaudal direction will suffice to give sufficient clearance; in the case of very large tumors, one or two lateral retractors may have to be added. If one encounters an arboraceous bushy tumor, an electrode carrying three or four spikes is chosen (Fig. 2); and, by raining a shower of heavy sparks all over the crown of the tumor, a superficial coagulation or carbonization is accomplished. This deals successfully with any hemorrhage present, prevents bleeding during the following steps, and at the same time does away with the danger of implantation, because even if tumor particles are broken off during the necessary manipulations, these crumbs are already devitalized. If the tumor is pedunculated, its seared top is seized with forceps and gently pulled upward. The exposed pedicle is now severed with a galvanocautery closely to its implantation (Fig. 3). The resulting stump and the immediately adja-



Fig. 4.—Coagulation of tumor base and concomitant sealing of adjacent lymphatics with the stamp-shaped electrode.

cent area are now coagulated with a stamp-shaped electrode to the desired depth (Fig. 4). If the tumor is dendritic, but rather sessile without a well defined pedicle, then the initial act of sparking is executed by means of a single spiked electrode. The sparks of this cover a lesser area than the multispiked one, but produce deeper penetration, so that the whole tumor mass is quickly reduced to a hard crust (incineration). This procedure is more in the nature of the original sideration. Then, the stamp-shaped electrode is applied again for the coagulation of the base, care being taken to include the whole visible and palpable area of malignant infiltration in the coagulation. The sideration and coagulation are carried on until a thoroughly dry scab results and no punctate oozing is to be seen. The scab is as a rule white, unless the tumor is very rich in blood, when it is black. Under no condition is the spike pushed into the tumor mass, for reasons explained above. Sessile infiltrating tumors are coagulated immediately with the stamp electrode without any previous sparking.

COMMENT

The extent of the coagulation and to what depth it ought to be carried out deserve some discussion. At first it was deemed necessary to coagulate the entire tumor mass in dealing with malignant growths. But experience covering immediate and remote results in bladder tumors and uterine cancers led to restrictions which, if applied, apparently improve the results in a striking way. If, for instance, a tumor, whether an indigenous vesical growth or a prostatic cancer that perforated into the bladder, involves the vesicorectal septum, a complete coagulation of this mass will produce a cloaca after the sloughing is finished. In addition to the distress caused to the patient, such a condition will almost invariably lead to general sepsis or to death by the development of a septic pyonephrosis. Therefore, in cases of this type the coagulation should penetrate the tumor only to a limited depth, while the remainder of it is left to the influence of roentgenotherapy.



Fig. 5.—Area of tumor closed by a mattress suture.

Continued on Page 12

Elastic Bandage

We are always open to conviction - and when we were told that the Cotton Elastic (non-rubber) Bandage we advocated was not as good for Diathermy purposes as the more elastic material with the rubber, we investigated thoroughly.

As a result we must admit that the Rubber Elastic Bandage is much superior. It binds the electrodes more firmly in place with less tension and consequently less interference with the blood stream. We are prepared to supply any amount of the 3-inch width.

Catalog No. 854—Code ELBAND—per yard, \$1.35

New Diathermy Cords

Diathermy Cords are constantly getting wet and when covered with a mercerized or silk webbing they are usually a pretty sorry sight after using but a few days.



Here are some much improved Diathermy Cords covered only with pure gum rubber. They are very flexible, easily kept as clean as new, and constructed to last indefinitely.

Cat. No. 1130—Code NEGRO—
per 6 ft. pair..... \$2.50

Bifurcated Diathermy Cords

Made up in the same style and material as our No. 1330 cords, but with a 4 foot single length branching into two cords each 2 feet long.

Cat. No. 1332—Code SALIFY—each..... \$2.00

Leaders in any endeavor are just ordinary persons with extraordinary determination.

Physiotherapy with Fischer Apparatus



Style "FO"

High Power Diathermy and Auto Condensation Outfit

The finest and most powerful outfit of its type that can be made. Compact, simple in operation, capable of the finest kind of results—and is securing such results daily in the offices of hundreds of busy physicians and surgeons.

Peculiarly desirable because of its extreme usefulness in such a wide variety of conditions, for which it affords a modern, ethical, efficient and time-saving method of treatment. Furnishes practically every modality used in electro-therapeutic work.

Cat. No. 1220..... \$575.00



Advertisement

In case the latter should be successful, then the part of the tumor that replaced to a certain extent the septum will in course of time be replaced by fibrous tissue, thus avoiding the formation of a cloaca. This procedure, originally instituted as the choice of the lesser evil, became under the weight of further experience the routine method. It was observed that roentgenotherapy following partial electrocoagulation yielded curative results that, in our experience, surpassed those previously accomplished by the employment of one of these methods alone. After the necessary electrocoagulation is completed, the bladder is mopped clean, care being taken to do all the sponging by dabbing and not by wiping, thus avoiding traumatism to the vulnerable vesical mucosa. Then the incision in the bladder is closed by catgut sutures inserted in such a way as to guarantee a broad apposition and avoidance of impaction of the mucosa into the suture line (Fig. 5). Over this suture a simple running suture is whipped to insure water tightness. Then the tension sutures supporting the abdominal wall are placed. Underneath these sutures a fine drainage tube, preferably a silver one, is placed, parallel to the incision and protruding at each end of it (Fig. 6). In this way perfect drainage is insured, and even in case of infection, sloughing of the fascia is prevented. Then fascia and cutis are closed in the usual way, and the guy ropes are tied.

The patient either begins to urinate naturally shortly after the operation, or, if unable to do so, is catheterized at regular intervals until the natural function is resumed. As a rule, the whole wound heals by first intention, and even if a slight breaking down should occur, the repair sets in quickly.

The sloughing away of the diathermic scab takes from ten to sixteen days, according to the ex-



Fig. 6. Drainage of the incised area immediately after the operation. The drainage tube is placed parallel to the incision.

tent of the electrocoagulation obtained. On account of the varying intensity of the desiccation in the various sections of the area subjected to diathermy, and the timely difference in the subsequently developing demarcating inflammation, the sloughing proceeds in the various areas with varying velocity. Therefore there are never large chunks of scabs thrown off at once, and the loosened shreds are further softened by the urine, and the sloughed particles are voided with the urinary stream. Beginning at the end of the first week after the operation as a matter of extreme precaution the bladder is regularly flushed with an antiseptic solution.

THEORETICAL CONSIDERATION

In explanation, the following theory may be offered: It is shown that, subsequent to electrocoagulation around the necrosed area, there is created a zone of reaction, or aseptic inflammation: there is not only an invasion of highly active cells, as round cells and lymphocytes, but the fibrous tissue becomes abundantly vascularized and fibroblasts appear. It may be safely assumed that intact cancer cells existing within this zone also fall under this influence. All roentgenologists agree that the more hyperemic a structure is and the more it returns to the juvenile stage, the better is the prognosis for the curative effect of the therapeutic rays. It may be suggested that under the action of the rays these energized cells produce materials which, in turn, act systemically to reduce the excessive multiplication of malignant cells. It therefore became our routine to coagulate malignant tumors to a restricted depth only, and to leave the remainder to roentgenotherapy.

CLINICAL EXPERIENCE

Out of twenty-seven cases of malignancy treated in the manner described two patients died: A woman died three days after the operation, with the symptoms of protein poisoning, evidently due to insufficient sealing of the lym-

phatics, permitting rapid absorption of debris; a man succumbed to a gas-producing bacillus infection in the abdominal wound, which became evident on the fourth day after the operation.

All the other patients, the oldest one being operated on more than three years ago, do not show any relapse or malignancy at the present date.

The exposure, opening and closing of the bladder, may be done under local anesthesia; for the coagulation, general anesthesia is preferable; the short duration of this manipulation reduces materially the danger of general anesthesia.

SUMMARY

It should be mentioned that any extensive electrocoagulation is, as a rule, followed by the development of a more or less intensive edema of the vesical mucosa. If of a high degree, it may be and actually has been mistaken by the inexperienced for a relapse. Careful and repeated cystoscopic examinations will clear the issue. Roentgenotherapy in massive doses is administered forty-eight hours after the operation, thus taking advantage of the perithermic reaction. Preoperative irradiation interferes with the reconstructive potencies of the tissues and prevents primary re-union. We have not seen any favorable results from the employment of radium needles, but frequently infection following their use has been observed.

The whole procedure is simple, practically bloodless, and of short duration. The primary mortality is considerably lower than that following resections or total extirpations of the bladder. The destruction of the tumor does not involve any reduction of the capacity of the bladder, which is one of the objectionable features of the cutting operation. The patient is not subjected to the dangers and misery of an abdominal drainage.

108 North State Street.

—*Abt. Jour. A. M. A.*

Physiotherapy in Acute Coryza

Leo C. Donnelly, M.D., Detroit

The following technic relieves the average case of acute Coryza:

Both anterior nares are first rayed with the Kromayer Lamp, using the nasal holder. Then the nostrils are blanched with a one to one thousand adrenalin solution containing two per cent cocaine. A short quartz rod and a curved nasal quartz rod are then used in turn in each nostril, sterilizing both nostrils.

The tonsils and naso pharynx in turn are rayed with the Kromayer Lamp, using a hollow tubular applicator, and while doing this local work the essentials of quartz and radiant therapy are explained. At the completion of the treatment the patient is given a general bodily Alpine treatment with a larger dose over the head and chest, to build up the general resistance.

Following the general Alpine treatment a Deep Therapy Radiant Lamp with a blue globe is used over the face and upper chest for thirty or more minutes, bringing the lamp as close to the patient as is consistent with comfort.

The couch on which the patient lies is equipped with a large, heavy auto-condensation pad over which are placed two woolen blankets and a clean sheet. A German silver mesh electrode, eight by ten inches, is placed over the patient's chest, which is held in place with a sandbag.

This mesh electrode and the auto-condensation pad are connected to the Fischer "FO" Machine. A general diathermy treatment is now given, lasting from fifteen to thirty minutes, using from 500 to 1000 Milliampères of current, according to the patient. Your patient is now receiving a general diathermy treatment.

A glass nasal vacuum electrode (Fischer No. 4) is held in the operator's right hand; the left hand is placed on the patient's

forehead; the vacuum tube is then passed gently into the nostril, the left hand is removed from the patient's forehead, allowing the high frequency current to short through this tube and ground through the operator's body. The electrode is gradually worked deep into the nostrils, and generally it will pass back to the pharynx. This application is then repeated in the other nostril.

This technic generally aborts or cures a Coryza. If the patient is constipated, the sine current from the Morse Wave Generator insures a good bowel movement; use cam 3 for a new patient and cam 4 for an old patient. Urge drinking a great deal of water or hot lemonade during the day to insure washing out the poison which is turned loose with these treatments.

This method is entirely drugless, but if your patient wishes drugs they may be prescribed. If necessary, the treatment may be repeated, but in the majority of cases once is sufficient.

□ □

Dr. L. C. Donnelly, also says, in speaking of the benefits of quartz light therapy in pelvic inflammation: "In pelvic inflammation, as in most diseases, the battle rages between the resistance of the patient and the virulence of the infecting organism. In either case, Quartz Light therapy is of proven value. . . . Improvement in general symptoms may be immediately noticed.

Material benefit, however, is noted week by week rather than day by day. With sick people, evolution is better than revolution. Slow, steady progress is better than rapid recovery with relapses. Quartz Light therapy brings about the recovery by sterilizing germs, breaking down toxins, increasing elimination, normalizing white blood cell count, increasing the amount of red blood cells and haemoglobin, in fact so aiding metabolism that a condition approaching normalcy is brought about."

Our Mailing Department



We don't want to toot our horn just to make a noise, but we feel that our Magazine which comes to you so regularly does not always carry with it the sense of importance that it bears when it leaves our mailing department.

The difficulty and magnitude of the work required to edit, publish and mail 13,000 FISCHER'S MAGAZINES every 30 days is rarely appreciated by the average physician receiving but a single copy.

Are you giving FISCHER'S MAGAZINE its proper place in your library?

Are you keeping the copies for future reference, and last, but not least, are you contributing YOUR share of "copy"?

A PAGE OF FUN



Thanks, Doc.

A farmer rushed up to the home of a doctor in the village late one night, and asked him to come at once to a distant farm house. The doctor hitched up his horse and they drove furiously to the farmer's home. On arrival the farmer asked "How much is your fee, doctor?"

"Three dollars," came the surprised answer.

"Here you are," handing over the money. "That blamed liveryman wanted five dollars to drive me home."

Sympathy?

Tommy was in the dentist's office, and the dentist had just finished extracting a tooth.

"Doctor," said Tommy, "The tooth next to that one aches, too."

"Yes," replied the doctor, "It aches in sympathy."

"Yank it out," commanded Tommy, "Darn such sympathy."

□ □ □

Pa and the Boy

"Willie, your master's report of your work is very bad. Do you know that when Warren G. Harding was your age he was head of the school?"

"Yes, Pa, and when he was your age he was President of the United States."

Page Dr. Coué

"Fred's been glum since he was arrested for autosuggestion."

"Autosuggestion?"

"Yes, he asked a girl to go riding."

Wisconsin Octopus.

□ □ □

Golfers —Warning!

She: "I'm just waiting for my husband to complain about my extravagance this month."

Her Neighbor: "Ready to give him an argument, eh?"

She: "You bet I am! By mistake his golf club checks came to the house, and I've got 'em."

□ □ □

Growing Fast

"How old are you, Marjorie?"

"I'm five, and mother says if I'm good and eat lots of oatmeal, I'll be six next birthday."

So, what signifies wishing
and hoping for better times?
We may make these times better
if we bestir ourselves.

—Benjamin Franklin

FISCHER'S MAGAZINE



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346

JULY, 1923

ALL THINGS COME TO
THE OTHER FELLOW
IF YOU
SIT DOWN AND WAIT.

Fischer's Magazine

*Devoted to the advancement of the Science of Electro-Physio-
Therapy and to the interests of those earnest and enlightened
medical men who are practicing it.*

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Vol. 1

JULY, 1923

No. 10

Confidence

ACCORDING to Webster: "Trust; state of feeling sure; belief; that in which faith is put or reliance had."

A much maligned word, truly—about on a par with "service." Yet one must have *confidence* in one's self and in the intimate surroundings of his own particular little world if he is to enjoy well founded satisfaction.

True thinkers certainly require conviction, and generally some amount of persuasion before forming definite conclusions, be the subject what it may.

There are others, and they form a lamentably large class, who prefer to ridicule and criticise instead of investigating who underestimate and minimize every new thought or departure from the conventional paths.

But what greater *confidence* can there be shown to compare with that exhibited by the modern investigating thinker, the up-to-the-minute physician or surgeon employing Fischer Physiotherapy Apparatus? Their *confidence* is many fold: first, in themselves; second, in the manufacturer; third, in the quality of the goods; fourth, in the efficiency of the apparatus; and last, but not least, in the almost guaranteed results to be derived; all of which *confidence* is indicated in the unprecedented sales of Fischer Diathermy Outfits.

We are adding many to our list of friends every day—more physicians are dealing with, and obtaining satisfaction from, the House of Fischer, "that in which faith is put, or reliance had."

Dysmenorrhoea

CHAS. L. MULLINS, M. D.

Most cases of dysmenorrhoea that I have seen during my thirty-two years of practice, have been in young girls and in young women. Most of these have impressed me as being mechanical in their causation, angulated cervixes, or defective development. Where the painful periods are due to angulation, I formerly tried all the various methods in use. Forcible dilatation under anesthesia usually afforded relief for from two to six periods, when the pain gradually returned, and upon re-examination I would find the angulation as before the dilatation.

Since I have been using some of the electrical modalities, I have tried out the method of using a dilator electrode, using different sizes—Galvanic current, negative pole attached to dilator and positive pole to large pad on lower abdomen. Not more than three to five milliamperes should be used, as it is desirable to avoid any caustic or burning effect, as scar tissue is the last thing we desire.

In some of these cases we have what appears like scar tissue at the point of angulation. I turn the current on gently after the tip of the electrode is introduced into the cervix and then make gentle but continuous pressure. The cervix will be felt to gradually yield as if either relaxing or softening. Some of the cases have required several attempts before I could get through the internal os with the smallest dilator.

By repeated treatments one can use the next larger size until finally the largest size goes through. In this class of cases painful periods are entirely relieved. There is a tendency for the condition to recur, and it is altogether advisable to tell the parents of this tendency and instruct them that even after the periods become painless and after the largest dilating electrode can be introduced, that these cases should have two or three treatments between periods for a few months.

No great force should be used, but continuous gentle force while the current is on. Cut off the current before removing the electrode. When the electrode goes through the internal os is easily determined by the loss of resistance. Getting the vagina dilated so as to use the speculum is really the most disagreeable part of this treatment in young girls. It is surprising to see how some of these cases, run down and worn, would build up after the treatment, gain flesh and strength and a good color.

In the class of cases due to defective development, we have a different problem. The negative current will soften tissues and determine a greater blood supply to the part upon which the negative pole acts. Hence the good prospect of success in these defective development cases if seen early and treated persistently; not expecting too much in a short time, not too frequent treatments and not too strong currents; but using dilating electrodes not only to convey the current to the uterus but to dilate and help develop the cervix uteri.

Of course the physician should not forget that *he is a physician*, and must use all other proper means of building up his patients, for these defective development cases are usually of poor general physique. This method sometimes replaces and often supplements other kinds of treatments.

□ □ □

From Dr. Grover's Column

The new metal mesh electrode fits all contours of surface and when held in place with a bandage, electrical contact is assured.

■ ■ ■

Physiotherapeutic measures which conducted us safely through the most critical stage of the late war should be remembered with approbation.

□ □ □

An autocondensation dose of 300-600 milliamperes should never be exceeded in cardiovascular disease.

Hypertension

Dr. N. M. Meals, Callensburg, Pa., writes: "With my physiotherapy apparatus I have materially aided many cases of rheumatism. Cases of Hypertension, and Hypotension, if the heart is reasonably good, can be greatly benefited and their lives prolonged. I will give you two case reports: "Case 1—Miss C., age 17, had scarlet fever in December, 1920. February 18th she came to my office, and on examination made diagnosis of Acute Bright's disease. The urine was at least 30 per cent albumin. Technic of treatment: patient was placed on the auto-condensation pad and given the D'Arsonval current for 20 minutes each day, for one week—600 to 1000 Milliamperes being employed.

"Then the treatments were given twice a week for two weeks longer, after which there was no albumin to be found. Patient was discharged as symptomatically cured. Two months later she was married, and I have not heard from her since.

"Case 2—A young man, about 28 years old, came to my office in 1921. After thorough examination I made diagnosis of Bright's disease. Treatment technic same as in case No. 1; about 800 milliamperes D'Arsonval current each day for a week; then twice a week for three weeks longer. Discharged as symptomatically cured.

"As you have said, Diathermy is a current that has been mis-used and much neglected. I believe in the standardization of Medicine, Serums, Surgery, Organotherapy and Zone-therapy. I use any one of these modes of therapeutics that is indicated in the treatment of disease. Some of our medical brethren throw cold water on Physiotherapy—and why? Because of downright ignorance, or a want of investigation as the case may be. I would not, and could not practice medicine without Electro-Physiotherapy."

□ □ □

Ask any doctor who uses Diathermy.

The Fischer Company Booths at Frisco



Voted one of the finest Exhibits at the A. M. A. Meeting,
June 25th to 29th, 1923

Exceptional interest was manifest around the splendid Fischer booths due to the new features which have been added to our apparatus. Everybody seemed intensely eager to know all about the latest Diathermy and Electro-coagulation methods.

Tonsil Coagulation easily led all other subjects in point of interest—in fact, the eagerness of the physicians to absorb as much information as possible kept six of our men constantly on the jump, and the 6 o'clock gong at closing time was welcome music each day.

We expect to have another splendid article on Tonsil Removal in our August number. Watch for it.

Electro-Coagulation Treatment of Hemorrhoids

W. McCABE, M. D., Chicago

Hemorrhoids may be successfully treated in the physician's office, and thus save the patient the usual hospital expense and loss of time. Most patients have a dread of the hospital, and especially any reference to an "operation."

Technic

Place your patient on a table on his left side, with the left leg stretched straight out and the right knee flexed and resting on a pillow.

Apply a strip of adhesive tape, about 2 inches wide and 7 inches long, on buttocks on line with and about an inch and one half from the anus on each limb. Fasten gauze bandage to ends of adhesive material with safety pin, pass around to front and tie opposite ends securely over lower pelvis, using as retractor.

In order to get the confidence of the patient that there will be little or no pain, it is well to use a non-vacuum electrode in the rectum for five minutes. This application will also have an analgesic effect. Where parts are very sensitive or where a prostatitis is present, use a soothing application prior to treatment.

When possible, follow this with vibration, using the Pennington Cone, for the purpose of thoroughly dilating the sphincter muscle.

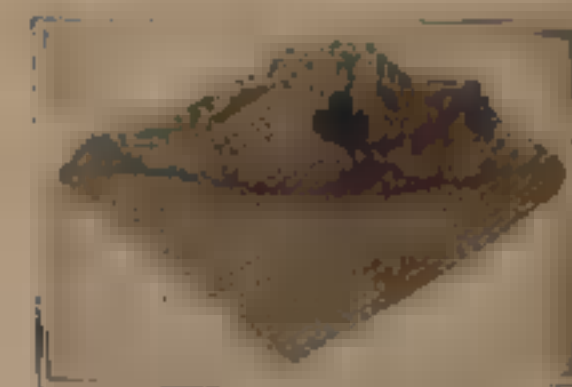
Use any good local anesthetic, and clamp down the hemorrhoids you wish to coagulate. Do not attack too many at one time. If an entire circle of tumors are present, work on only half—the patient will have no fear of the second operation, but will return readily to have the balance taken care of.

The indifferent electrode should consist of a piece of mesh 12 inches square. Cover thoroughly with warm soap lather and place under the patient, against the bare skin.

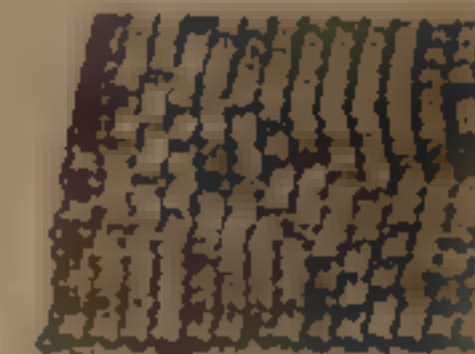
New Fischer Diathermy Accessories

Flexible Mesh Diathermy Electrodes

The most flexible *all-metal* electrode ever designed.



A Mesh Electrode



Section of Electrode showing exact size of links

Fits any part of the body like a glove, regardless of shape or contour.

May be employed in connection with Diathermy, Electro-coagulation, D'Arsonval Auto-condensation, Sinusoidal, Galvanism or any electrical modality where perfect contact on the skin is necessary.

Composed of a series of flat links of German silver, they are flexible, practically indestructible, easily sterilized, and forming an almost continual flat surface to be applied to the skin.

Endorsed by the best known physiotherapists everywhere.

Available in several widths and any desired lengths.



Application Mesh Electrode

Especially valuable for use on the knee, elbow, wrist, hand, spine, over the shoulder; in fact wherever it is difficult to make *perfect* contact with any other means.

This mesh material makes excellent cuffs for use on the limbs. Employ warm soap lather as a medium between the mesh and the epidermis, and hold the cuffs in place with elastic bandage.

When treating a patient with a so-called "hollow spine" place a pillow on your table, lay the mesh on top, and be assured of *good* contact on every square inch of surface.

Once tried, always used. There are none better!

Cat. No. 844—6 inches wide—code SAFRO1...per lin. inch...\$0.30

Cat. No. 870—8 inches wide—code SAGGER...per lin. inch... .40

Cat. No. 871—10 inches wide—code SAGUMS...per lin. inch... .50

Cat. No. 872—12 inches wide—code SAILER...per lin. inch... .60

Cat. No. 873—15 inches wide—code SAKTEH...per lin. inch... .75

Will be cut to any lengths, on order.

FISHER DIATHERMY ELECTRODE CONNECTOR



Catalog No. 851

A simple device to fit the No. 1330 Diathermy Cord tip. Made of spring brass, nickel-plated.

The contact surface is flat, with small sharp protuberances to prevent slipping from the electrode. Designed for use with the Mesh Electrodes and Elastic Bandage.

Cat. No. 851—Flat Connector—
code MESCON—each...\$0.30

THE FAHNSTOCK CLIP

A spring clip which is quite satisfactory for use in connection with Mesh or Block Tin Electrodes, which will hold equally well with any size cord tip or wire.

Cat. No. 852—Spring Clip—code FACONN—each...\$0.15

ELASTIC BANDAGE

Many methods have been advanced for holding Diathermy Electrodes in place, especially on the limbs, but nothing excels Elastic Bandage for the purpose. The Mesh material, or block tin, may be bound securely in place in a moment's time, and the electrodes thus bound will remain in position as long as desired.



Catalog No. 854

Employing Elastic Bandage is the only known method of binding Diathermy Electrodes to the limbs, which will permit the patient to move if necessary for the sake of comfort, without the electrodes shifting.

These Bandages may be washed, and always kept sanitary.

Cat. No. 854—3 inch width—code ELBAND—yard...\$0.35

NEW FISCHER DIATHERMY CORDS

Diathermy Cords are constantly getting wet, and when covered with a mercerized or silk webbing they are usually stained and discolored after but a few days' use.



Catalog No. 1330

Cat. No. 1330—code NEGRO—6 foot pair...\$2.50

Here are our much improved Diathermy Cords, covered only with pure gum rubber. They are very flexible, easily kept as clean as when new, and constructed to last indefinitely.

BIFURGATED DIATHERMY CORDS

Made up in the same style and of same material as our No. 1330 Cords, but with a 4-foot single length branching into two cords, each 2 feet long.

Cat. No. 1332—code SALIFY—each..... \$2.00

FISCHER MULTIPLE CORD CONNECTOR

Often three or even four cord connections are desirable from one terminal and the ordinary Bifurcated Cord has not sufficient capacity or usefulness.

Here is what we have to offer to fill that void. The small end tip is fastened into the proper binding post on your machine, and you may carry as many cords from it as desired.



Catalog No. 865

Cat. No. 865—Multiple Connector—code SABLE..... \$0.65

SAND BAGS

Just a few words on the subject of Sandbags. After the Diathermy Electrode is placed on your patient, as for example on the chest when about to administer a treatment for Pneumonia, the very best way to keep it there is with a properly designed Sandbag.

Not the heavy, bulky, thick variety, that will slide off at the first move of the patient, but one carefully designed for the purpose. Take a strip of heavy cloth or light canvas about 10 inches wide by 20 inches long, and fold it over lengthwise to form a bag 20 inches by 5 inches. Sew cross seams 5 inches from each end to form two pockets each 5 inches square. These pockets, only, are to be filled with sand, leaving the long 10-inch center strip flat.

When this bag is placed over your patient, the flat part only bears on the electrode; the weights hang down at the sides. Try it.

The Fischer Electro-Coagulation Foot Switch

As illustrated, this Foot Switch lays close on the floor. A touch of the toe makes and breaks the contact.

Sufficient insulation has been used to make it shock proof. It is light in weight, easily moved about, yet keeps an upright position on the floor.

The foot-plate is of heavy sheet fibre. The cable is very flexible, and covered with pure gum rubber; it may be washed and kept as new always. Cable terminals will be furnished to fit any style apparatus.



Catalog No. 1205

Catalog No. 1205—Fischer Electro-coagulation Foot Switch, with 8-foot cable, code THALES..... \$12.00
Catalog No. 1206—Extra rubber covered cable, code TIBER1, foot..... .10

□ □ □

New Two Pole Morse Electrodes

Suggested by Dr. Frederick H. Morse, of Boston, for treating localized conditions in the rectum and vagina.



Catalog No. 1852—Rectal Electrode—MASREC..... \$5.50



Catalog No. 1853—Vaginal Electrode—MASVAG..... \$5.50

Helpful Suggestions

J. G. Putnam, M. D., of Everett, Wash., writes us a lot of pleasant information, among which we find:

It is often necessary to use talcum powder on patients to facilitate treatments with glass electrodes. The electrodes become rather foul, usually, and I have found that the easiest way to clean them is a bit of scouring with Old Dutch Cleanser and warm water. The dirt just fades away.

□ ■ □

My "service man" told me to put a bit of mineral oil in the leyden jars on top of the salt water. It prevents creeping and evaporation of the solution and does not impair the efficiency of the jar.

□ ■ □

If the oil seeps from the transformer box by way of the terminals, loosen the screw plug to allow an expansion and contraction of the oil and air within the tank.

□ ■ □

Dr. Greenough, of the Collis P. Huntington Hospital staff, stated recently: "The 'cure' of cancer by radium or the X-ray should not be over-emphasized. Radium alone, or X-ray, or Surgery—none has been an effective weapon against the disease. The best results are obtained from a proper combination of these methods in accordance with the nature and development of the growth."

□ ■ □

If you are not a Fischer Booster you are not acquainted with the service we render. May we explain?

□ ■ □

Remember it is always the busiest man who gets more business.

Epithelioma of Lower Lip

R. E. HOLMES, M. D., Windsor, Ont.

Male, age 56 years, had "this sore" on lip for 7 months. Had 12 X-ray treatments from the Doctor in the town where he lived, but the "ulceration" kept on spreading. When patient presented himself, three-fourths of the lower lip was involved and down to the level of the gums at one point.

Under local anesthetic (1% novocain) we electro-coagulated the entire field, using Fischer's "FO" Machine, 300 Milli-amperes, with pointed electrode. This patient has not had any pain, nor any odor from his lip since we operated on his cancer. Now, six weeks later, it is all healed over with healthy mucous membrane except at the deepest erosion which exposed the full length of his teeth, but at present time has filled in to about half way up his teeth.

We would advise general anesthesia, as the electro-coagulation is very painful when one is operating close to the roots of teeth.

□ ■ □

The Question

One of our readers asks:

"Can fulguration be used instead of the usual 'saw and scissors' to rid the nose of hypertrophied turbinates? If so, what is the technic?"

Answer, from Dr. T. Howard Plank:

"Coagulation can be used instead of saw and scissors for nasal hypertrophies. Use about 300 to 500 milliamperes through a non-conducting speculum, rubber preferred. Time sufficient to thoroughly destroy mucous membrane and the portion of the bone which is desired to destroy.

"The soft tissues slough out in about two days, dead bone can be removed in about a month or six weeks.

"The indifferent pole can be placed any place on the body. If the area is small and the patient controllable, local anesthetic is sufficient, otherwise hyocine morphine anesthesia."

The Question Box

First permit us to repeat—we are striving in each issue of "Fischer's Magazine" to provide a "missing link" between your electrical equipment and your patients in the way of original articles, carefully selected reprints and readers' comments.



Every unit in the entire Fischer Company organization is constantly on the alert for methods of producing better apparatus, with an eye to efficiency; to improve means of application; to create a better understanding among operators, generally, regarding not only the various electrical modalities but their methods of production, as well. Opinions are so diverse that we feel everything possible should be done to clear the atmosphere.

Charles A. Palmer, M. D., of Red Bank, N. J., asks a few pertinent questions, adding, "I will be pleased to see both sides discussed in your wonderful little Magazine." He heads his letter: "Heat and Heat Only?"

"I can hardly see an article any more on Diathermy where the writer does not insert 'Heat and Heat Only.' Now I wish to be convinced that that is so.

"If it is so, what causes the heat? You say 'oscillation'—'tissue resistance.' Very well, isn't that something to count on besides heat? You say Diathermy reduces hypertension and stimulates the general circulation; also the lymphatic circulation and stimulates the blood in several respects; causes elimination and reconstruction (metabolism), etc., etc. My, what a lot Diathermy will do when we read about it! But is it 'Heat and Heat Only?'"

"Now these are only a few things that Diathermy is supposed to do, and if Diathermy is so effective, where do any of the other electrical modalities deserve more credit? Do they leave a deposit of electricity that Diathermy does not?"

"When we apply the Sinusoidal current to each end of a particular muscle, and get contraction, do we get contraction only? Or when we use it to relieve pain do we get the 'dope' effect only?"

"I suppose when we apply the constant (Galvanic) current we get reduction of inflammation *only*, followed by the consequential results.

"I have also seen in print from (supposed) good authority that Auto-condensation and Diathermy are one and the same thing. Who believes that? Define the difference, please. Oh, well, along about 1930 these subjects will be brought up again and then several will pop up and say 'Why, I announced that way back in 1923!'"

Editor's Note: Undoubtedly these same questions run through the minds of a great many of our readers, and each has formulated a reply to suit his or her own opinion. We, also, have answers for these questions—but how would *you* answer them? Just send your response to The Editor, who will keep a careful record and publish the various viewpoints in our August or September numbers.



The congestive stage of pneumonia is amenable to diathermy. The passive hyperemia is displaced by active hyperemia and the formation of inflammatory exudates prevented, the disease is promptly robbed of its succeeding stages, the patient recovers, leaving the attending physician very doubtful of his diagnosis.

Actinic Therapy in Rickets and Malnutrition

NEWELL JONES, M. D.

It is stated in this paper that 65 per cent of the children under eighteen months of age who live in the middle western part of this country have rickets in some degree or other, and that this condition is found much more frequently among children of the well-to-do than among the poor.

Dr. Jones believes with Bifield and Dean that early rickets predisposes to later chronic upper respiratory infections. Rickets produces deformities which prevent sinus drainage, produces a hyperemia of the mucous membrane throughout the whole gastro-intestinal tract, and results in a general muscular relaxation. All these conditions make the child much more susceptible to colds.

Hess of New York who uses direct sunlight in the treatment of rickets has secured most happy results. Pure codliver oil and the actinic ray will accomplish the same results. Direct sunshine must be from outdoor exposure and the whole body must receive a good coat of tan from the treatment to be of any effect, therefore this is an unfeasible method in any but a warm climate as the sunshine must be unfiltered by glass. In his treatments Dr. Jones uses the air cooled lamp. Exposure at first is from one-half to three-quarters of a minute at a distance of from 20 to 24 inches, the child lying prone and the treatment being given both front and back. To avoid frightening the child it is taken into the treatment room but not given any treatment the first time, so that it may grow accustomed to its surroundings there.

Two treatments per week are given at first and the number is gradually increased until one is given every day. Distances must not be less than 10 to 18 inches. Some children can be worked up to a three and one-half minute exposure; one must be guided in this by the reaction. The whole body must be stripped, the eyes are protected by goggles or a bandage. The fair-skinned child as a rule can stand only about fifty per cent of what a dark-skinned child can receive.

In two or three weeks results will begin to show in better appetite, better functioning of the gastro-intestinal tract and a cessation of the sweating which is so characteristic in these cases. Later on the teeth will begin to hurry along, but bow legs, the doctor remarks, are not made over in a day. The hemoglobin percentage and the red blood cell count are greatly increased by the treatment.

Every case of rickets in a child, under eighteen months of age, treated by Dr. Jones has improved if given a fair trial. Two very extreme cases are reported as cured. After eighteen months of age treatment will accomplish nothing except to build up the general nutrition of the body.

From a paper read at Omaha, December, 1922

□ □ □

We are very often called on to recommend books on the subject of Physiotherapy, generally, and offer the following:

On Diathermy—

Sampson's "Physiotherapy Technique".....	\$6.50
Cumberbatch's "Diathermy".....	6.00
Selverton's "Diathermy".....	2.25
Grover's "High Frequency Practice".....	4.00

On Wave Currents—Morse's "Wave Therapeutics".....

2.50

On High Frequency—Grover's "High Frequency Practice".....

4.00

On Constant Currents—

Sampson's "Physiotherapy Technique".....	6.50
Grover's "Electro-therapy".....	4.00
Morse's "Wave Therapeutics".....	2.50

All of these books are carried in stock, and delivery made on receipt of orders.

□ □ □

Diathermy isn't theory—it is practical fact.

□ □ □

We suspect that many of the folks who have the reputation of being hard-boiled eggs got that way from being in hot water most of the time.

A PAGE OF FUN



Preparedness

Bang! went the rifles at the maneuvers. "OO-o!" screamed the pretty girl—a nice, decorous surprised little scream as she stepped backward into the arms of a young man.

"Oh!" she said blushing. "I was frightened by the rifles. I beg your pardon."

"Not at all," said the young man, "let's go over and watch the artillery."

Fact, Not Fancy.

"If you please, ma'am," said the servant from Finland, "the cat's had chickens."

"Nonsense, Gertrude!" returned the mistress of the house. "You mean kittens. Cats don't have chickens."

"Was them chickens or kittens that master brought home last night?"

"Chickens, of course."

"Well, ma'am, that's what the cat has had."—Youth's Companion.

Another Ford Story

Two gentlemen were uncertainly flivvering their way home from a party.

"Bill," said Henry, "I wancha to be very careful. Firs' thing y' know you'll have us in a ditch."

"Me?" said Bill in astonishment, "why, I thought you was drivin'."

□ □

Ouch!

Cholly: "You know, last year the doctor told me if I didn't stop smoking I'd be feeble-minded."

Grace: "Why didn't you stop?"—Cougar's Paw.

Diplomacy

She: "John, do you prefer blondes or brunettes?"

He: "Yes, dear!"

□ □

Motorist: "Madam, I am sorry that I killed your dog. May I replace him?"

Spinster: "This is so sudden!"

Extravagant

Small Boy: "Take me to the movies movver."

Mother: "Now then, haven't yer just had a haircut? Yer always craving after amusement."

P. D. O.

"The average woman has a vocabulary of only eight hundred words." It is a small stock, but think of the turnover.—Oakland Tribune.

THOUGHT TO BE
WORTH WHILE
MUST COMPLETE
ITSELF IN ACTION.

FISCHER'S MAGAZINE



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347

AUGUST, 1923

**Every Life is a Strife—With Temp-
tation or With Conscience.**

**Most of us Want to be Right, but
few of us like to be Put Right.**

Fischer's Magazine

*Dedicated to the advancement of the Science of Electro-Physical
Therapy and to the interests of those earnest and enlightened
medical men who are practicing it.*

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Vol. I

AUGUST, 1923

No. 11

Physiotherapy

The word physiotherapy is one of those high sounding forms of speech that cause the average person, professional or lay, to conjure up some mysterious medical means known only to the initiated. As a matter of fact we all use physiotherapy to a greater or lesser (usually lesser) extent. In putting a patient to bed we employ physical means of therapy of the greatest importance, for we change the mechanics of the circulation. In applying a surgical dressing we use physical treatment.

External applications of heat have long been employed in the form of hot water bags or poultices of various kinds. In this connection it is interesting and significant that the heat of the living body was formerly believed to be of an entirely different nature from that which emanated from any non-living source. A puppy dog was considered a more effective therapeutic agent than a hot water bag, and the heat from a young human body was sometimes prescribed for the treatment of the elderly invalid.

Massage and both passive and active motions have been used more or less from time immemorial, as has also hydrotherapy. The morning cold plunge, which has been recommended for every ailment to which flesh is heir, is but a simple form of physiotherapy. Electricity, in some form or other, has had its vogue, as have sunlight and colored lights. There have been elaborations in the applications of posture, movements, rubbing, heat, baths, electricity, and light, but

after all there is little that is new, and because they do not savor so much of the occult as does chemotherapy, if we may use the term for drug treatment, they have been neglected sadly by the profession, which has preferred to wield the prescription pen or the carving knife, to the neglect of means which are less mysterious and spectacular. As a consequence, practitioners with neither knowledge nor skill have been reaping a harvest by the hit or miss application of physical means. As we have said in these pages before, it is high time the profession was awakening to the importance of such therapy.

We have heard much more of physiotherapy since the war, in connection with injuries, and, indeed, its importation in this connection was one of the good things which we gained from the war. For a quarter of a century these means had been highly developed in Europe on account of the monetary importance of returning an injured workman to his job at the earliest possible date. The shortening of convalescence reduced the workman's compensation accordingly. When the war came the same machinery was ready prepared for application for the speedy return of the wounded man to his place in the ranks. There was nothing new about it except to American eyes. Since the war one hospital in this country, which deals to a large extent with the wounded from the ranks of labor and which has established an elaborate physiotherapy department, finds that, in its fracture cases, the saving in time of recovery, compared with their records under the older methods, is from ten to thirty per cent., according to the nature of the injury, while the recovery is, also, more complete.

But physical means are as useful in medical cases as in surgical, and even where they accomplish little directly, from a physical point of view, the very fact that *something is being done for the patient* produces an effect mindwards which reacts for speedy improvement or cure.

From an Editorial in the New York Medical Journal, July 1923

Diathermy in the Treatment of Diseases of the Bladder in the Female.

Iwan v. Buben (*Zentralblatt für Gynäkologie*, July 13, 1922) asserts that diathermy is a valuable adjunct in therapy, owing to the promotion of the healing power associated with the increased temperature and resulting hyperemia and the other physiological powers, especially in regard to its powers of relieving pain in the painful cystitides and in tenesmus. Diathermy is produced by means of an electric current of high tension and rapid alternation, which produces heat in the deeper tissues. The amount of heat developed depends upon the intensity of the current, the resistance of the perfused tissues, and the size and form of the electrodes. A large and a small electrode are used, the current being made to pass from the larger electrode to the smaller one, so that most of the current and heat are developed at the latter. If the electrode is too small, a coagulation of the tissues results with the use of strong currents; this is called a cold cautery and is used with good results for the extirpation of bladder tumors, chiefly papillomata.

The author treated with diathermy fifty cases, chiefly of cystitis, with incontinence and painful urination. The treatment may be extravescical or intravesical. The extravescical treatment is given with olive electrodes (with a thermometer embodied in the instrument) applied intravaginally; the external electrode, consisting of a lead plate as large as the palm of the hand, is applied over the bladder at the symphysis. The results with this form of treatment are not as good as those obtained with the intravesical form. For this form of application, the author devised an irrigating electrode, through which the bladder is first filled with one hundred to three hundred c. c. of physiological saline solution and the electric current is then applied in the same manner as in the extravescical treatment. This treatment is given three times weekly for ten to twenty minutes, with a current of 0.5 to 1.0 ampere. Marked improvement in the symptoms is noticed after ten treatments. The best results are obtained in the cases of painful urination and in catarrhis vesicæ.

—New York Medical Journal, July, 1922.

Tonsillectomy

Electro-Coagulation and Desiccation

By A. M. MacWhinnie, M. D., Seattle, Wash.



Theories regarding the function of the faucial tonsils are many and varied and so far but one is accepted clinically. There is no dissension, clinically, from the belief that the tonsils furnish a secretion for the lubrication of the pharynx and act as a support to hold out the pillars in their advanced position in the pharynx. The ablation of the tonsil and its capsule obliterates this function completely or partially and the arch atrophies, as well as the palatoglossus and palatopharyngeus muscles.

There is a widening of the faucial space and at the same time a loss of action of the soft palate, tongue and larynx. It is only on account of these functions being compensated by other tissues that the voice retains some of its quality. Even so, the throat tires more quickly than under normal conditions, and dryness is frequently complained of. * * *

In reviewing the literature, one is impressed with the various opinions of the different men as to what is an infected tonsil. One can only conclude that no precise and definite standards have been accepted.

* * * The treatment of tonsillitis seems today to be based upon infection. * * * There are no definite criteria for what constitutes the cardinal symptoms for finally determining the necessity for removing the tonsils; each individual physician uses his own judgment. * * *

When we have definitely established that the tonsils are the seat of infection, there is but one course to pursue—treatment of the blood chemistry and a complete eradication of the tonsils by some method that will leave the throat with as great or greater functioning power than existed previous to the operative procedure. The consensus of opinion is that

the operative procedure of choice is one in which the tonsillar capsule, so called, shall be left intact and thereby retain as near as possible the complete functioning power of the palatoglossal and palatopharyngeal muscles. Following the sharp cutting operations, we have all been chagrined to see the various deformities amounting almost to distortion, rapid tiring of the voice following speaking, as well as of the individual physically, so that many speakers, who previously had been able to speak for an hour at a time, found themselves completely prostrated after fifteen minutes' speaking.

Kenyon asserts that ninety-five per cent. of the patients who have been operated upon by the cutting method show a deformity of some kind. This must strike one as very strange, for of all operators upon the tonsils in this country surely more than five per cent. are first-class. Many of us have dissected out most beautifully the tonsil and its complete capsule, with apparently no injury to the palatoglossus and palatopharyngeus muscles or the superior constrictor, congratulating ourselves on the beautiful result, and then, at the end of say three months, are chagrined to see the fossa fill up level with the pillars, retarding their action. In the cases where this does not take place, a gradual thinning out, an atrophy of the palatoglossus and palatopharyngeus muscles takes place with loss of functioning power in the voice from lack of capsule support.

* * * In operative procedures upon the tonsil, one must never lose sight of the accidents which may occur. The anomaly of the arteries in elderly patients; the possibility of hemorrhage in proportion to the clotting time of the blood and blood pressure; pulmonary abscess; anterior dislocation of the atlas; pain in the tonsil region, neck, and larynx, said by Justus Matthews to be due to the larger branches of the glossopharyngeal nerve being injured.

What shall be the operation of choice? One in which the loss of blood and shock is reduced to a minimum and in which the patient will be better off physically and the voice equal to or better than before the operation. No cutting operation

that removes the entire capsule can give as good a result as one in which there is a complete removal of all the tonsillar tissue leaving the capsule intact.

* * * With the intimacy that exists between the capsule and the superior constrictor muscle, and the dangers that attend cutting operations, a procedure that will eliminate all tonsillar tissue and leave the capsule intact to act as a supporting membrane to the superior constrictor, glossopharyngeal and palatopharyngeal muscles is the ideal method for eradication, with the highest possible physiologically functioning throat. Makuen states that he believes leaving the capsule intact is perfect surgery. No cutting operation that involves the removal of this capsule can insure the operator, as well as the patient, that he will have a throat which will function physiologically.

In removing the tonsils we find that there is pus formation in or around the tonsils, with the result that a certain amount of absorption of pus into the system takes place, evident for a week or ten days, and sometimes longer. Any procedure that will eliminate this, it seems to me, is ideally perfect.

We must never forget that we are operating up into the cervical region, and it has happened that serious infection has resulted from opening this area. In reading over operative procedures, we find numerous instances where most operators make an anterior and posterior incision, cutting through into the intrapharyngeal aponeurosis, thus taking away one of the supports of the anterior and posterior pillars.

It may seem presumptuous on my part to offer a new method for tonsil eradication, leaving the capsule intact, when there have been so many tonsil operations recommended, but only after six years use is it offered.

With electro-desiccation or thermo-coagulation all the difficulties enumerated can be avoided. One must remember that the equipment should not consist of a box such as sold by some manufacturers. One must have a machine of ample power with a milliampere meter so that the current can be

measured accurately. Experience, alone, will give one the desired information as to the length of time the current should be applied and the number of milliamperes required for a thorough eradication of all tonsillar tissue. The variation in the amperage is from 100 to 1,000 milliamperes, depending on the consistency of the tonsillar tissue and its depth. Roughly speaking, 800 milliamperes suffice with the active electrode well inserted in the tonsil and the indirect electrode on any other part of the body * * * with the coagulation method the tonsillar tissue disappears in about ten to fourteen days following the application * * *. It can be stated that this method is absolutely painless.

Extracted, New York Medical Journal, June, 1923

■ ■ ■

Effect of Radiation with Mercury Vapor Quartz Lamp

From the experiments reported by Hume it is apparent that irradiation with the mercury vapor quartz lamp can prolong normal growth on a diet almost free, or free, from vitamin A. Whereas without irradiation growth ceased to be normal after from seven to ten days, with irradiation it continued to be normal for from thirty-five to fifty days. Symptoms of vitamin A deficiency then began to appear, and symptoms of xerophthalmia set in earlier than in control animals. Attempts to revive growth and to cure xerophthalmia by irradiation of animals which had long (over ninety days) been on a deficient diet failed completely; the animals seemed, if possible, to go to pieces more rapidly. Irradiation of rats which had been for shorter periods (from seventeen and thirty-five days) on a vitamin A deficient diet produced a growth response which appeared to be inversely proportional, in its duration and extent, to the length of the previous period of deficient diet. The general conclusion drawn is, that there is an interaction between vitamin A and light for the growth of rats, but that the action of the light is not to produce a photosynthesis of the vitamin.



Medical Diathermy — Cuffs of Mesh Material above and below the knee.

Splendidly adaptable to the latest technic of Medical Diathermy, Surgical Diathermy, Electro-Coagulation, Auto-Condensation and High Frequency.



Electro-Coagulation of Tonsils.



D'Arsonval Auto-Condensation.



The Fischer Portable Diathermy Apparatus
Catalog No. 1246—Price \$265.00 complete.

A complete descriptive pamphlet is yours for the asking.



High Frequency Application to Spine.

Let us tell you all about this latest development in the Physiotherapeutic field.



Pneumonia Treatment with Diathermy — Electrodes of mesh placed posteriorly and anteriorly.

Complete, efficient, reasonable in price, safe, light in weight, neat in appearance and small in size.



Indirect Fulguration.

Manufactured by H. G. FISCHER & COMPANY, Chicago, Illinois

5-22746-6

Advertisement

Treatment by Diathermy

W. J. TURRELL

The first effect of diathermy is an increase in the temperature of the part treated; the later effects are relaxation of the tissues and dilation of the blood vessels with a consequent increase in the blood supply to the part treated. The therapeutic effects of diathermy are therefore explained by the lowering of the blood pressure, the relaxation of spasm with the relief of pain, and the improved nutrition of parts whose blood supply has been deficient.

It is in the relief of spasm and pressure, and therefore of pain, that diathermy finds one of its important indications in clinical practice. Neuritis, deep-seated pain such as that associated with dysmenorrhoea, the spasm of a ureter excited by the passage of a calculus, the hypertonicity of the lumbar muscles in lumbago, or of the neck muscles in torticollis, the muscular rigidity of local tetanus, the pain of a recently sprained ankle, are usually markedly relieved and often cured by this treatment. Atrophic conditions improve very much because of the nutritional effects of the increased blood supply.

In surgical diathermy the heat is concentrated on one spot, while in the medical applications it is distributed over a large area. Surgical diathermy differs from the destruction of tissue by heated irons or the Paquelin cautery in that, when properly applied, it effects destruction by heat coagulation rather than by charring or incineration.

Intravesical growths, haemorrhoids, benign or malignant superficial growths, lupus, moles, enlarged tonsils, naevi, etc., are suitable for this treatment. Diathermy is also a delicate and efficient method for depilation.

From Brit. M. Jour.

X-ray keratoses are best treated by desiccation; X-ray ulceration by actinic rays. Diathermy materially assists in either case.

Blood Pressure Briefs

By Burton Baker Grover, M. D.

Hyperpiesia is a more common cause of retinitis than chronic nephritis. Treatment: Autocondensation for hyperpiesia and kidney diathermy for nephritis.

Heart force does not per se produce hypertension but the conditions prevailing in the blood vessels, chiefly in the arterioles and capillaries. Loss of elasticity calls for increased heart force to overcome the resistance.

Normal blood pressure is more or less maintained by the capillary network which acts as a suction pump. This function is easily disturbed by nervous excitement, worries, etc.

Systolic pressure may be as low as 90 during sleep and high as 180 during hard work. An occasional high reading does not constitute hypertension.

There are more diseased hearts in the normal blood pressures than in the low pressures.

Causative factors in HYPOTENSION, in order of frequency are: diseases of the digestive system, diseases of the vascular system, infections, psychoneuroses.

Ill-advised exercises "to keep fit" are frequent causes of hypertension and later on heart failure.

Use Diathermy next time.

Ask any doctor who uses Diathermy.

Diathermy isn't theory - it is practical fact.

Diathermy in the Treatment of Hypertension

By William Martin, M. D., Atlantic City, N. J.
Late President Amer. Electrother. Assoc.



The subject of hypertension is too large to enter into a discussion of it in more than a very condensed way in a paper short as this must necessarily be, therefore, it is the purpose to simply take up one phase of it, the hepatic engorgement, which is practically always present in all cases of high blood pressure.

We who are constantly treating these cardiovascular renal conditions in which hypertension plays an important part, realize the constancy of the hepatic turgescence and the general circulatory stasis of the various organs. That the liver contains normally one quarter of the body's blood, predisposes it to this stasis and it is the chief organ to so suffer. When we consider the important function of taking care of toxins, we can see how important it is that this function be kept up to the highest point of efficiency in order that the health of the body be maintained. With a circulatory stasis present to any extent, it can be readily seen how this function will be modified or entirely put out of commission.

We constantly see people who state that they are subject to "bilious attacks." These will in time naturally show a hypertension as the result of an over engorged liver, which is "laying down on its job," simply because the toxins cannot be eliminated, and the kidneys and other channels become overworked in the effort to do more than their duty.

It is important, therefore, in all cases of hypertension to examine carefully for an engorged liver, and even though it may not be markedly enlarged, treatment toward enhancing its functions should not be neglected. All cases of hypertension should receive some treatment of this organ, else the

work is not done. Whether this be by diathermy or the static wave, sinusoidal or other, matters little, so long as the result is secured. In the writer's opinion, diathermy should be used no matter whether one of the other two modalities is or is not used, but of course the use of the latter should be a matter of judgment. By this is meant, in cases of very marked hypertension, the diathermy is of importance, while the static or sinusoidal will be too stimulating during the period of the pressure height. Subsequent to a reduction to the point of safety, one or the other should be used in addition to the diathermy, as the result will be more quickly accomplished. In the writer's judgment, the static wave current is then the current of choice.

In order to be effective, diathermy must be given in sufficient dosage and for long enough periods to make a marked impression upon the circulation of the organ. This will mean large electrodes with current strength to meet the proper surface measurement, and for at least a half hour or longer, and treatments given daily at least for a time, when they can be given on alternate days.

In using diathermy, it is not to be understood that this displaces auto-condensation, for it does not. The latter is equally important and the two work together beautifully, and all cases should have this double team work for best results. With this goes all the care usually necessary along lines of diet and other attention, and of course this is understood.

While this short paper cannot do other than touch the high spots, the writer feels its real purpose is to press upon the minds of the readers the necessity of clearing up all hepatic stasis in all cases of hypertension, as this is perhaps the keynote of success in these usually intractable cases.

Maryland & Pacific Aves.

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We suspect that many of the folks who have the reputation of being hard-boiled eggs got that way from being in hot water most of the time.

More About Mesh Electrodes

"They are wonderfully adaptable"—

"Why did we not think of this idea before?"

"Duplicate my order of June 6th., please. Those Mesh Electrodes are the best ever!"

"We use the Mesh Electrodes for all of our electrical treatments; they work equally well with Galvanism, Diathermy and Sinusoidal!"—

Just a few of the nice things many of our customers and friends are telling us, daily. There seems to be no limit to the usefulness of Flexible Mesh Electrodes.

After receiving numerous suggestions that we make up this material in connection with a pad, we have constructed such a combination, which we now offer.



The Sponge Rubber padding may be washed and always kept clean. It is very soft, and conforms well to any uneven surface. The elastic bandage is entirely removable. Stocked in five sizes:

	Code	Price
Cat. No. 890—Sponge Mesh Electrode—2½"x3"	NEKTON	\$2.00
Cat. No. 891—Sponge Mesh Electrode—3x3½"	NEMEAN	\$2.30
Cat. No. 892—Sponge Mesh Electrode—3½x4"	NEBLEN	\$2.65
Cat. No. 893—Sponge Mesh Electrode—4x4½"	NEOGAE	\$3.00
Cat. No. 894—Sponge Mesh Electrode—4½x5"	NEOTGY	\$3.60

Cuff Method Diathermy Application

For employing the "Cuff Method" of applying diathermy to the limbs and joints, every physician should have at least one pair of Mesh Electrode Cuffs. These are strips of German Silver Mesh, 3 inches wide and from 12 to 24 inches long, with an arrangement fastened to one end for holding the elastic bandage. Very convenient and handy, and once used will be found indispensable.

	Code	Price
Cat. No. 900—Mesh Cuff and Clamp—3x12"	NEPHEW	\$2.55
Cat. No. 901—Mesh Cuff and Clamp—3x16"	NEPTUS	\$3.15
Cat. No. 902—Mesh Cuff and Clamp—3x20"	NEPHEO	\$3.75
Cat. No. 903—Mesh Cuff and Clamp—3x24"	NEPOT	\$4.35

Reserve the dates—October 15th to 19th

An important announcement, of vital interest to Physicians everywhere, will appear in the September issue of this Magazine.

Red Letter These Dates, and watch for particulars!

IN PREPARATION

Diathermy and its Application to Pneumonia

By HARRY EATON STEWART, M. D.

Attending Specialist in Physiotherapy, U. S. Marine Hospital, N. Y.
Consultant in Physiotherapy, U. S. A. Hospital, New Haven, Conn.
Director, New Haven School of Physiotherapy
Formerly Assistant Director, Section of Physiotherapy, U. S. Army, and Supervisor of Physiotherapy, Bureau of U. S. Public Health Service, Washington
Author "Physical Reconstruction and Orthopedics"

12MO. CLOTH—\$3.00 Net

Ready Soon—Order Now

H. G. FISCHER & CO., Inc.

2333-43 Wabansia Ave., Chicago, Ill.

A PAGE OF FUN



A party of holiday-makers were paying their first visit to New York, and for one of their number the endless row of buckets in a dredger at the docks seemed to possess a singular fascination.

While the others went off to enjoy themselves Archie would not budge an inch, but kept his eye firmly fixed on the dredger. Some hours later his friends found him still at the same spot.

"Archie," said one of them, "if you stay there much longer you'll miss the train."

"I don't care," was the reply, "I've counted 8,990 and I mean to see the last of those buckets if I stay here all night."

Experienced

"You must have been walking carelessly," said the lady whose car had run down a man. "I'm very careful. I've been driving seven years." "Lady, that's nothing. I've been walking for fifty-four years." *Eric Dispatch.*



As Good as Gold

"He says that he hasn't paid out a cent for repairs on his car in the two years that he has had it."

"Gee! I wish I had a credit like that!"



The Very Idea!

Teacher—"This time we are going to have a little talk on wading birds. Of these the familiar stork is one—what are you laughing at, Elsie?" Little Elsie—"Oh, but teacher—the idea of there being any storks!"

He Knew Her

Wife: "On your way home, will you ask that girl at the store to—"

Hubby: "The one with the blue eyes, blonde hair and dimples?"

Wife: "You needn't mind. I intended to go to town myself to-day."

Necessities Only

Winter Guest (in wilds of New Hampshire to keeper of country store): "Have you any tooth brushes?"

Storekeeper—"No, we don't keep any of them summer novelties."



Sweet Memories

"Twas at a wedding yesternight,

A young man sat sedately,

I asked him if he'd kissed the bride,

He answered me, "Not lately."

We grow more gentle in our judgments as we grow better acquainted with ourselves.

The most severe critics of others are those who have not learned their own weaknesses.

FISCHER'S MAGAZINE



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SEPTEMBER, 1923

THE SUCCESS FAMILY

The Father is Work—

The Mother is Ambition—

The Sons are

**Common Sense, Perseverance,
Honesty and Thoroughness—**

The Daughters are

Character, Loyalty,

Sincerity and Cheerfulness—

The Baby is Opportunity.

**Get acquainted with the "Old
Man" and you will be able
to get along with the rest of
the family.**

Fischer's Magazine

*Devoted to the advancement of the Science of Electro-Physio-
Therapy and to the interests of those earnest and enlightened
medical men who are practicing it.*

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Vol. 1

SEPTEMBER, 1923

No. 12

Anent Progress

It has been stated, and truly, that we must either advance or retreat—that we cannot remain stationary.

For many years it has been the avowed purpose of H. G. Fischer & Company to **advance** the science of Electro-physiotherapy among physicians, and the development has been very steady both apparatus and applied technic keeping a fairly even pace.

However, in the mails every day recently have come requests for information regarding some good school or central point where practical, first-hand instruction may be obtained bearing on the latest in physiotherapeutic technic, and it does seem that present-day equipment is just a few steps ahead of the average operator.

It is for this reason that we, **who desire at all times to hold the lead in such matters**, wish to pass on the benefit of our vast experience coupled with the technic as applied by aggressive and progressive physicians in the Electro-physiotherapeutic field, and are offering this opportunity in broader sense than has ever before been attempted.

Read our initial announcement on pages 8 and 9 of this issue, and see our October number, as well as the Journal A. M. A. and other leading medical papers for complete program and further information.

Diathermy in Diseases of the Circulatory System

By Elnora Cuddeback Folkmar, M. D., Washington, D. C.

Diathermy has a profound effect on the circulation. General diathermy tends to reduce hypertension and to raise hypotension to normal tension. Local diathermy causes a local dilation of the blood vessels of the part treated. Blood from the surrounding healthy tissues rushes into the dilated vessels. This influx of healthy blood replaces the stagnant poisonous blood, and increases cell metabolism and germ resistance.

Diathermy in Hypertension

Before treating a case of high blood pressure with diathermy, one should ascertain the cause of the hypertension. If it is a compensatory phenomenon, no attempt should be made to reduce it. In this case treatment should be directed to the renal, hepatic, cardiac, pelvic or other diseases of which it is a compensation. The author has reduced many cases of hypertension—190 to 240 mmHg.—by first treating the constipation and mucous colitis which was the source of the toxæmia.

In these cases, after the bowel is cleared of debris and enterotoxins, diathermy may be employed—general diathermy by means of the condenser pad or chair, or better still local diathermy through the abdomen. In general diathermy use 400 to 800 milliamperes of current during a period of 15 to 25 minutes. In local diathermy use large electrodes and pass a slowly increasing current of 500 to 2,000 milliamperes during a period of 20 to 30 minutes.

The blood pressure will usually be found to be reduced after this treatment from 10 to 30 mmHg. The skin will be warm and often bathed in perspiration, and the body temperature as indicated by a thermometer in the mouth, will be increased from one-half to one and one-half degrees. What takes place during the treatment? The peripheral vessels are dilated by

relaxation of muscular spasm. Relief of engorgement of internal organs is shown by profuse diaphoresis and diuresis with increase in the amount of solids in the urine. There is an increase in oxidation and elimination of toxic materials. The character of the pulse is changed. It is soft and more regular. Improved metabolism is soon shown by increase in physical and mental strength of the patient.

Dr. deKraft maintains that "moderate doses of high frequency current applied by the method of auto-conduction (general diathermy) will effect a reduction in blood pressure in all cases of simple hypertension."

This will be continued in our next issue under the heading "Diathermy in Hypotension."

□ □ □

Effect on Growth of Radiation with Mercury Vapor Quartz Lamp

It is shown by Goldblatt and Soames that young rats, if irradiated with the mercury vapor quartz lamp from the time they are put on a diet very deficient in fat soluble vitamin A grow more rapidly, reach a higher maximum weight, continue to grow for a longer period, and, finally, show a general condition better than that of control rats from the same litter receiving the same diet but no irradiation.

Similar differences between irradiated animals and controls were observed even in the case of a litter of rats brought up by a mother who was fed on the same deficient diet during the latter part of pregnancy and the entire period of lactation. It is apparent that irradiation with the mercury vapor quartz lamp cannot act as a substitute for the fat soluble growth promoting factor which is a necessary element of the diet.

Dr. T. Howard Plank, of Chicago, stated at Omaha recently—"Don't depend upon the Ultra-violet rays alone for every disease and case, because it will not 'cure' all your cases. I do not like that word 'cure.' If we arrest some of these things it is all that we can do. Many get well, and you may have a recurrence in six months or six years. Your patients get rid of their symptoms, their digestion is all right and they are happy.

Use everything else you know to be of any benefit to that particular type of case. There is no reason while using Ultra-violet rays to exclude any drugs you have ever used, because one does not interfere with the other."

He reports successful treatment of psoriasis, though every case will not yield to treatment. Abscess in osteomyelitis, mastoids refusing to heal after operation, erysipelas, old varicose ulcers, lupus and light tuberculous lesions are among the conditions and diseases that he has successfully treated with the ultra-violet rays. He also reports a case of stitch abscess following an appendectomy which was greatly helped by ultra-violet treatment.

He warns against using these rays upon boils until after drainage is established; after that they aid in the recovery. Pernicious anemia and hay fever while relieved to some extent, he does not regard as very amenable to ultra-violet treatment.

Drawing attention to the research work at Johns Hopkins which has proved that the ultra-violet rays are as efficacious in rickets as is codliver oil, Dr. Plank cites a case of anemia where the haemoglobin of 15% was brought up to 40% within thirty days, and the red cell count greatly increased, and he remarks that there is no doubt of the general systemic improvement under ultra-violet treatment.

—Abs. Jour. Radiology.

□ □ □

There is no doubt about the supremacy of Fischer apparatus.

Physiotherapy From a Surgeon's Standpoint

By F. J. Cotton, M. D., Boston, Mass.



The rise of physiotherapy into the position of a recognized and acclaimed specialty has been so phenomenally rapid that there has been time only to progress and expand in the way of practical utilization of this special therapeutic activity or group of activities.

Now perhaps the time has come for taking stock.

Many of those who believe most thoroughly in the possible development of the specialty have lately realized more and more certain dangerous tendencies.

To be brief: they are

- (1) The tendency to overclaim.
- (2) The tendency to routine.

Not many years ago the field, such as it was, was in the hands of a few workers—specialists as a rule in one or another somewhat narrow special field—enthusiasts (as it is only right for a specialist to be) over the possibilities of his special medium—whether that was electricity or hydrotherapy or Swedish or other exercises.

They were in unfortunate competition—the best of them with untrained men and with fakers and up to the time of the great war progress was uneven and not too rapid.

With the great needs of the war and especially with the unification into one major specialty of all physiotherapeutic procedures, swift advance was possible.

Today we have a specialty of treatment by physical means—not surgical—including electro-therapy, hydro-therapy, thermo-therapy, massage, mechano-therapy, general and special exercise, etc.

The field and the demand for service have broadened immeasurably.

Today everyone recognizes the need of aid from the physiotherapist in almost every field.

But one hears criticism and it comes particularly from what we may call the business side in relation to the care of injuries, only a part of our field, but no unimportant part.

Today all over the country the man or woman who gets hurt at work receives compensation, and in effect he usually gets it from an insurance company until he can work.

Therefore, the company is violently interested in the time of his return to work and in many places and instances willing to pay for treatment that will shorten his disability.

But it is in part a matter of business with them.

And while the war has taught them the importance of physiotherapeutic means to aid recovery—yet they have been "stung" a good deal by offers to cure incurable cases and by the piling up of charges for routine work not very productive. And they are growing a little skeptical in spots.

We can tell them that they had better have cases examined before treatment and that frequent reviews of cases under routine baking and massage is at least wise.

But, the trouble lies deeper. It is that the physiotherapist himself, doesn't know as he should what he can promise—even in this class of cases alone—is apt to hope for too much, and later is very apt to overestimate results.

Now this gets nowhere, for no result is any good to the insurance company that doesn't mean recovery and ability to work—and he knows what he gets.

Outside these insurance cases—for the moment—how definite an understanding can the average physiotherapist give me, ignorant of detail, of what I had better do, to whom I had better send a case of joint stiffness after luxation, of myositis ossificans, of delayed fracture union, of traumatic arthritis, of osteoarthritis, of neuritis, of keloid scar, of scar contraction, of local muscle atrophy, of obesity with high blood pressure, etc.?

Physiotherapy, without clear pathological conceptions and without clear vision as to how a given procedure will act on a given pathology, and with what chance of success, is headed for trouble.

Routine application according to symptoms will not do.

And what of cases, not a few, that are treated for months, sometimes years, to relieve joint stiffness due to bony thickening or to wood-hard cicatrices?

They constitute an indictment.

What is the remedy?

First, work closer with the clinicians—men who are not close specialists, but are trained to pathological diagnosis, to impartial judging of results and progress, even their own. Second, more important: find out where we stand.

Get together a "fact-finding" committee—they are fashionable just now—a committee of clinicians acting with the broadest physiotherapists—working in a big hospital, and have them go over the field, treat cases and check results. It would take not months, but several years, but if we could in the end give a definite view of what physiotherapy can offer in a wide group of diseases and injuries and what particular sub-department of the specialty—if we could know that in one case diathermy, in another baths, in another X-rays, in a fourth muscle-training has so much to offer—it would be worth it.

If you do this, *don't* get the *big* clinicians. Get good ones who still have some time—well-trained men just below the service heads in a big hospital, let's say, for this is a proposition to do work and work that I believe eminently worth while.

—From the *Journal of the New England Association for Physical Therapeutics*

Special Announcement

As a result of repeated requests, due directly to the difficulty experienced by physicians in obtaining practical information from reliable sources in the efficient application of Electro-therapeutic measures, there will be a series of lectures and clinics held in Chicago, on October 15th to 19th inclusive, at the Logan Square Masonic Auditorium.

The following Physicians will participate:

Gustav Kolischer, M. D., G. U. Surgeon at the Michael-Reese and Mount Sinai Hospitals, Chicago, Illinois.

R. W. Fouts, M. D., Roentgenologist, the Lord Lister Hospital, Omaha Nebraska.

T. Howard Plank, M. D., Physiotherapist, the American Hospital, Chicago, Illinois.

Frederick H. Morse, M. D., Boston, Massachusetts, Ex-President the American Electrotherapeutic Association.

Curran Pope, M. D., Louisville, Kentucky.

Emile Du Val, M. D., Chicago, Illinois.

Frank M. Barns, M. D., Albion, Nebraska.

Roswell T. Pettit, M. D., Physician-in-charge at the Illinois Valley Hospital, Ottawa, Illinois.

H. I. Smith, M. D., Chicago, Illinois.

Ward P. Burdick, M. D., President St. Anthony Hospital Staff, Rockford, Illinois.

A. L. Yocum, Jr., M. D., Chariton, Iowa.

A number of other physicians skilled in physiotherapy technique have tentatively promised to be present and to give one or more lectures.

These meetings will be open to all physicians on standing. There will be no admission charge, and no obligation imposed by attending. All practitioners are equally welcome regardless of the types of equipment they may be using.

The complete program, instructive and enjoyable, has been arranged with a view to promoting greater efficiency in this field. It will be strictly informal, allowing the greatest freedom for questions and answers.

The Dates—October 15th to 19th, Inclusive
The Place—The Logan Square Masonic Auditorium
at the terminus of the Logan Square Metropolitan Elevated Line
CHICAGO, ILLINOIS

It is earnestly requested that registration be made at once, as, although the Auditorium facilities are almost unlimited, certain preparations must depend upon the number in attendance.

To be held under the auspices of H. G. Fischer & Company

Treatment of Lupus by the Diathermy Condensor Spark.

A. E. Milner (*Lancet*, December, 23, 1922) is convinced that this form of treatment does not fail to cure lupus vulgaris simplex and as this is the first stage of the catarrhal form, the importance of treating these cases early is apparent. The ideal patch for treatment is the small one; more extensive patches can be cured, but the treatment is tedious. This treatment is superior to scraping owing to the fact that the diathermy spark actually destroys the tubercle bacillus, whereas curettage leaves behind many tubercle bacilli in the vicinity of the wound. The cases of lupus that persisted were those with tuberculous affection of the mucous membrane either of the nose, gums, or lacrymal apparatus. The latter parts should be examined carefully, as otherwise reinfections are bound to occur. In butterfly lupus of the face, where the nasal mucosa is also affected, the nose should be treated first and cured as much as possible before commencing diathermy treatment of the face.

□ □ □

J. G. Putnam, M. D., of Everett, Wash., offers:

To facilitate the opening and closing of the patient's circuit without the aid of a foot switch, and yet without using the hand switch on the cabinet, procure a "pull chain" socket and mount it near the right-hand side of the cabinet. Connect the socket by a double cord to the foot switch binding posts.

Screw a fuse plug into this socket. Tie a piece of twine to the chain (sufficiently long to be convenient to the patient) and the patient can shut off the current if ever necessary for him to do so. The operator will often use this socket switch in preference to the regular hand switch.

Physiotherapy in the Medical Department of the United States Navy

By Erik G. Håkansson, M. D., Washington, D. C.



In the naval medical service, physiotherapy now includes massage, medical gymnastics, hydrotherapy, radiant heat and light therapy, actinic ray therapy and electrotherapy. In the term medical gymnastics are included all the methods of systematic exercises of the motor apparatus for therapeutic purposes. Both the manual and the mechanical methods are used. Games and sport and occupational therapy are also utilized. In hydrotherapy, applications of practical nature and known effect are used, such as the ablution, the sheet-bath and the cold friction bath, the cold pack and the continuous bath, the circular douche, the jet and fan douche, whirlpool baths and fomentations. Radiant heat and light are applied by means of different types of incandescent lamps and by electric light bath cabinets. For actinic ray therapy, the mercury vapor quartz lamps and other arc lamps are utilized. Direct sunlight is also used. In electrotherapy use is made of the galvanic, faradic and sinusoidal currents and the various modalities of the high frequency current and static electricity.

In the latter part of 1919, a separate department for physiotherapy was established at the Naval Hospital, Brooklyn. A complete equipment was acquired. Navy nurses and hospital corpsmen were trained as operators and a high standard of skill was soon attained. The hospital staff found physiotherapy a valuable aid in the treatment of a great variety of injuries and diseases and utilized it to its full capacity. During the three years and a half that it now has been working, the change from wartime to peace time conditions has occurred and an entirely new set of officers and nurses has succeeded the staff under which the physio-

therapy department evolved. It is significant to note that the department still has practically the same extent of usefulness. This bears out the assumption heard from various sources nowadays that the utility of physiotherapy is not restricted to the functional restoration of maimed victims of war injuries, but that it should be regarded as a fundamental branch of medical and surgical treatment in time of peace as well.

The Bureau of Medicine and Surgery is now realizing a plan to place physiotherapy at the command of all naval hospitals. Three naval hospitals, besides the Naval Hospital, Brooklyn, have now physiotherapy departments in commission, and within the next six months five additional hospitals will be equipped and provided with trained personnel for this method of treatment.

The Navy does not employ reconstruction aides as operators in physiotherapy, but trains its own personnel, nurses and hospital corpsmen, for this purpose. This training is carried out at the Naval Hospital, Washington, D. C., where a physiotherapy department, with special advantages for training of personnel has been organized. The minimum time for the course of instruction is four months. The aim of this training of the nurses is to make them skillful technicians capable of intelligent application of physiotherapeutic measures, at the direction of medical officers. The hospital corpsmen are expected to meet these requirements only in hydrotherapy. Their training in the other methods of physiotherapy is considered satisfactory when they can work as reliable assistants to the nurses.

Physiotherapy has also been placed on the curriculum of the Naval Medical School. The course includes eight lectures with clinical demonstrations and eight hours of practical work. The training of the personnel and the instruction at the Naval Medical School are in charge of medical

officers who have had special experience in physiotherapy, and who have been afforded ample opportunities for study. Through this system of instruction, the peace time Navy will soon have most of its medical officers familiar with the principles and indications of physiotherapy and a number of medical officers will have special knowledge of the subject and considerable experience in the training of operators. Furthermore, there will be many nurses particularly skilled in the application of the various modalities of physiotherapy, and a considerable number of hospital corpsmen sufficiently trained to work satisfactorily under supervision. It is obvious that these conditions will permit of a quick and easily accomplished expansion in case of a war emergency. By merely placing the above mentioned medical officers in charge of the various physiotherapy departments, each naval hospital can be made a training unit capable of supplying its own needs in physiotherapy personnel. With trained personnel available, the problem of expansion is practically solved. Other necessities, such as additional space and more equipment would be less urgent, since, undoubtedly, the skillful human hand working intelligently is the most important instrument.

—*New York Medical Journal*, Aug. 1, 1923

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There is nothing in physical therapeutics that the regular physician need apologize for, but the most of us should apologize for being ignorant of the possibilities of measures other than drugs in favorably influencing the many distressing conditions which afflict mankind.

■ □

There is no other means at the command of the physician so potent in correcting deranged metabolism as the high-frequency current.

Thermotherapy.—B. S. Price (*American Journal of Electrotherapeutics and Radiology*, January, 1922) summarizes as follows:

1. The unnecessary confusion existing with regard to the recognized distinguishing features and indications of the different forms of thermotherapy should be corrected as much unnecessary harm results from it. At the same time many lives are being destroyed through the lack of fulfillment of the possibilities.
2. Careless nomenclature used in the expression of the various forms of thermotherapy indicates its haphazard use and in the minds of many a confused and unrecognized conception of the distinguishing features. Heat brings about opposite results under different conditions, therefore definition is necessary. Human bakes do not exist in civilized communities.
3. The present degree of knowledge with regard to thermotherapy largely limits its application in therapeutics to the effects produced from the accompanying qualities of the modality rather than from the production of heat within the tissues except in the case of diathermy. Heat obtained from such active sources as radiation and electrical currents is accompanied in its effects by those of molecular massage and under high temperature, the initial stimulation more rapidly passes into depression than in the case of convective heat of high degree.
4. The different forms of thermotherapy, largely dependent upon their associated features, fill wholly different indications. Further, the results obtained vary widely even to the degree of antagonism dependent upon sudden exposure to high temperature or prolonged exposure to a low temperature and upon the mental and physical condition under which the patient is placed.
5. The significance of catabolic elimination requires more conscientious study than is generally recognized.

6. The oven bath properly given is a cellular waste eliminant and as such fills an entirely different indication from any other form of heat. It would seem to act mainly through the adrenosympathetic system. Oven bath stimulation is distinctly chemical in its last analysis of elimination and in no sense one of perspiration. Whereas other forms of heat may have a more marked influence upon metabolism under certain conditions, never do they markedly influence elimination. The oven bath is indicated wherever there is subelimination of toxic matters from the tissues, whether in the course of protein metabolism, as in nephritis, certain types of neuritis, rheumatism, etc., or in acidosis or other toxic conditions. It is also a valuable circulatory stimulant in these cases.
7. Cardiac incompetency is not a contraindication to the oven bath properly given.
8. In the use of superheated dry air as with other methods of modifying the circulation, it is important to maintain the circulatory changes thus produced until restored by Nature. Hence, the horizontal position is essential, and air cooling, as well as water cooling under improper temperatures must be avoided. Air cooling is impossible of regulation. Water regulation is possible.
9. The state of abeyance under which the cardio-vascular control is placed for a few hours as a result of the oven bath is followed by marked improvement in its tone over that preceding the treatment. This is evidenced by functional hypotension cases.
10. There is necessity for discrimination and proper combination of measures in this as in all forms of therapy.

□ □ □

A man is not an electrotherapist just because he can replace a spark plug.

□ □ □

Quinine will often cure malaria; diathermy will just as often abort a pneumonia.

A PAGE OF FUN

A negro who had an injured head entered a doctor's office.

"Hello, Sam! Got cut again, I see."

"Yes, sah; I done got carved up with a razor, Doc."

"Why don't you keep out of bad company?" said the physician, after he had dressed the wound.

" 'Deed I'd like to, Doc, but I ain't got 'nuff money to git a divorce."



Another Ford Story.

Pa: "I've bought a new tin rattler for the baby."

Ma: "Why, John, it will be at least fifteen years before he will be able to drive a car!"

Literal Tom.

Tommie came to a word he couldn't pronounce during his reading lesson.

"Barque," said the teacher.

Tom looked sheepishly around the room.

"Barque, Tommie!" exclaimed the teacher sharply.

"Bow-wow-wow!" cried Tommy, completely dumbfounded.

Slow.

Jack: "Hahn't you better put something around you?"

Sylvia: "Hahn't you?"—Life.

You Can Believe This One.

An alligator known to have opened its mouth but once a month has just died in Scotland. The natives have already entered bids for purses to be made from its hide.

Needed Cheering Up.

"You sold me a car about two weeks ago."

"So I did," replied the automobile salesman. "How do you like it?"

"That's just the point. I want you to tell me everything you said about that car all over again. I'm getting discouraged."—Birmingham Age-Herald.

A Doctor With a Bay Window.

Says a small advertisement: "To let, four rooms and bath, complete housekeeping apart, suitable for physician with two large store-rooms." It might likewise appeal to some doctor with a bay window.—Judge.

THEY WRONG OPPORTUNITY
WHO SAY SHE KNOCKS
BUT ONCE.

FISCHER'S MAGAZINE



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OCTOBER, 1923

**THE MORE YOU KNOW,
THE MORE YOU KNOW
YOU OUGHT TO KNOW.**

Fischer's Magazine

*Devoted to the advancement of the Science of Electro-Physio-
Therapy and to the interests of those earnest and enlightened
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Vol. II

OCTOBER, 1923

No. 1



This is the First Anniversary of Fischer's Magazine

A fine, robust, healthy chap for only one year
of existence—don't you think so?

Well, just watch him grow!

He will continue to be fed on only the best,
his habits are quite regular, and we fully
intend that he be kept in the pink of con-
dition.

On just what kind of diet do you think he
would thrive best?

The Treatment of Calcified Subdeltoid (Subacromial) Bursitis by Diathermy

(Abstracted Journal A. M. A., July 14th, 1923)

Dr. Joseph F. Harris, M. D., Associate Physical Therapist, Mount Sinai Hospital, New York City, advises that in the majority of these cases the diagnosis is confirmed by the Roentgen ray, and that Diathermia is, without doubt, the most valuable treatment indicated * * *

* * * It is a proved fact that the maximum intensity of heat is always developed half way between the two plates, and it is due to this that deposits such as occur in Bursitis can be readily attacked. Diathermia really creates a noninflammatory reaction in the affected part, and it is due to this physiologic action that absorption of foreign substances takes place.

Dr. Harris advises that the electrical plates be placed anteriorly and posteriorly on the shoulder, and that care should be taken that the affected bursa lies directly between; that experience has shown that 500 to 700 milliamperes of current should be employed; that the first treatment should last 15 minutes, and increased daily until one-half hour's time can be given. He also advises that if the patient is suffering severely treatments should be given every day for a week, and then on alternate days. His case reports, which follow, are very interesting.

REPORT OF CASES

CASE 1.—Mrs. M. F., aged 43, for eight weeks had suffered continuous pain and was unable to raise her arm from her side. A roentgenogram showed a calcification, under the right subdeltoid bursa, which measured 1 inch in length and one-half inch at its greatest width. At the beginning of this trouble, all abscessed teeth had been removed. She received, in all, fourteen treatments, one every other day, and at the end of that period the pain had disappeared and the motion of the arm was normal. I have been able to keep track of this patient for two years, and at no time has she complained of shoulder disability.

CASE 2.—H. A. S., a man, aged 36, complained of occasional pain and slight disability only when doing certain acts, such as removing his hat or tying his tie. In this case roentgenograms confirmed the diagnosis by showing a small deposit in the right shoulder subacromially. This measured about one-fourth inch in length. At the end of fifteen treatments all the symptoms had entirely disappeared. Two months after, the patient returned for more treatment, having put excessive strain on his right arm. Owing to the irritated condition of his shoulder, it was necessary for me to give him twenty-five more treatments, but he has been free from all symptoms for over a year. In all fairness, I want to state, with reference to this case, that the average person would not pay much attention to the symptoms presented during his last course of treatment, but this man, being highly neurotic, was quite prone to exaggerate the slightest twinge.

CASE 3.—H. B., a man, aged 74, was unable to dress himself, owing to pain and inability to move his shoulder. The case presented the usual symptoms and roentgen-ray findings. Before the roentgenograms were taken, the patient had been treated for arthritis. He received a daily treatment for seven consecutive days, and then was able to go to his home in the South, with no pain and no shoulder disability.

CASE 4.—Mrs. M. S., aged 53, came for treatment after having been treated in the hospital for three days, with the arm in abduction. The roentgenograms revealed a deposit subacromially in the right shoulder. Pain was a constant symptom, as well as partial limitation in the shoulder joint. The patient required twenty treatments, but at the end of that time she had the full use of her shoulder joint and was free from pain.

CASE 5.—F. F. S., a man, aged 42, was carrying his right arm in a sling and was suffering so acutely that it was necessary to undress and dress him, when I first saw him. The findings were of the usual type. The patient received seven consecutive treatments. After the first three, he was able to sleep at night without the use of drugs, and at the end of seven treatments, all symptoms had disappeared.

CASE 6.—H. H., a man, aged 38, was found, by means of the roentgen rays, to have deposits in both shoulders nearly the size of a robin's egg, an unusual condition. Surgical intervention had been advised, since he was unable to raise either arm from the side. Owing to the stress of business affairs, he could not take

the time necessary for the operation. He received on each shoulder twenty-one treatments and, at the end of that period, he was able to raise both arms to the level of his shoulders. As his main purpose was to evade operative procedure, he discontinued treatment at this stage, evidently being satisfied with this improvement.

Observations of results indicate that when employing this method of treating Subacromial Bursitis about 80 per cent of the patients recover, and that the remaining 20 per cent either discontinue treatment or are not helped. The treatment is not painful, and as in most instances the patients have been advised to have this calcification removed surgically, it is readily seen that Diathermy is to be tried first.

Diathermy in Hypotension

By Elnora C. Folkmar, M. D., Washington, D. C.

There is a class of cases that gives the physician even more trouble than the high blood pressure cases. These complain of chilly feelings, have cold hands and feet, no appetite, insomnia, mental depression, no energy, lack of physical strength. They have low blood pressure and subnormal temperature. For these cases diathermy is a very rational treatment, per se, or as an adjuvant to endocrine, diet, or drug therapy. Diathermy gives the thermogenic mechanism a rest, by supplying the heat which the body cannot produce, and thus permits it to resume normal functioning. Daily treatments of fifteen minutes to one-half hour should be given on the condenser chair or pad. Use 500 to 800 milliamperes of current. At first, special care must be taken not to give too vigorous a treatment or the patient may faint. The oral temperature should be taken before and again after treatment. There should be an increase of .5 to 1.5 degrees. When the patient retains the increase in temperature until the next day, treatments may be given on alternate days.

Some Uses for Diathermia

C. S. King, M. D., Washington, D. C.

The chief use of Diathermia is in deep-seated conditions as distinguished from superficial ones. These conditions are such as joint affections, bronchitis, pneumonia and tuberculosis (both pulmonary and laryngeal). It is also useful in absorbing scar tissue, such as over deposit of bone scar after a fracture. In such cases, however, it must be used with caution, as in one of my cases, in a delayed union, we over-treated and absorbed some needed scar tissue that had been deposited.

While we are on the subject of bone tissue it is well to suggest that a number of mild treatments, say of 10 minutes at 300 to 600 milliamperes, according to the thickness of the section of body treated, is stimulating to the formation of normal tissue; while a long, heavy treatment such as one hour at from 600 to 1500 milliamperes tends to absorb tissue and to sterilize, as is needed in pneumonia, bronchitis, tuberculosis, adhesions, etc.

If you will get firmly fixed in your mind that Diathermia is relaxing, deeply sterilizing and absorbent in effect, while the monopolar or Oudin is stimulating and superficially sterilizing and absorbent, you will have a clear-cut indication for each modality from your high frequency apparatus.

For instance, if you are treating a cold in the head, or a muscular lameness, or a recent injury, the monopolar (Oudin) current is the desirable one. It is wonderful how much it helps take out the soreness from a sprain as in the ankle or the knee, or the back, or an intercostal rheumatism; but, if you have a joint injury, or a congestion or inflammation deep within the body, in the intestines or in the pelvis, Diathermia is indicated.

The more severe and acute the condition, the longer should be the treatment—say one hour, as in bronchitis, pneumonia or in pelvic cellulitis. In tuberculosis, however, use about

a half hour's treatment daily or every other day, as the case improves. Cod Liver Oil should always be given with tubercular conditions as it supplies the greatest amount of fat-soluble vitamins available from any fat, and rebuilds lung tissue. I use Scott's Emulsion as the more agreeable form, but pure Norwegian Cod Liver Oil is better if it is tolerated by the patient.

If you have not the actinic rays available, as furnished by the air-cooled mercury vapor lamp, it is well to use a 1000 watt or 1500 watt lamp in connection with your tuberculosis cases. Follow the Diathermia with a gentle vibratory treatment over the same area lasting about 7 minutes—2 minutes over front of chest and 5 minutes over back of chest and on down the spine, avoiding the spinous processes. In acute cases treat two or three times daily. In chronic cases daily or every other day.

If there is persistent pricking under the pads in Diathermia, it means either that the metal plate has not been smoothly applied to the skin, or that there are breaks or poor connections in the cords or in the machine. Care should be taken that there are no sharp points, as on the edges, touching the patient, otherwise there will be a persistent pricking effect. There should be no sensation except that of a gentle warmth (and that more of a body warmth than surface) while taking Diathermia.

Patients are apt to drowse off, as the treatment is relaxing and comforting; also, as they usually perspire, they must be protected by covering and wiping off vigorously following the treatment.

I always tie a stout cord to the switch that breaks the current, and have my patient hold this string. If anything happens to cause a burning or biting sensation from the Diathermia, due to a broken contact somewhere, the patient can open the switch immediately and not wait for help. Otherwise there might be a skin burn that leaves an unpleasant memory. Diathermia is the most powerful treatment we

IN PREPARATION

DIATHERMY & ITS APPLICATION TO PNEUMONIA

BY

HARRY EATON STEWART, M.D.

Attending Specialist in Physiotherapy, U. S. Marine Hospital, N. Y.,
Consultant in Physiotherapy, U. S. V. B. Hospital, New Haven, Conn.;
Director, New Haven School of Physiotherapy; formerly Assistant
Director, Section of Physiotherapy, Office of the Surgeon
General, U. S. Army, and Supervisor of Physiotherapy,
Bureau of U. S. Public Health Service, Washington.
Author "Physical Reconstruction and Orthopedics"

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use in the office, and at the same time it gives the least trouble and sensation when properly applied.

Do not be misled by anyone telling you to employ *wet felt pads* for Diathermia. Never use anything but *bare metal material, preferably mesh*. I buy in ten-pound lots. The Flexible Mesh material and Pads as made by H. G. Fischer & Co. are excellent. The objection to the use of a wet felt pad is that the heat of the Diathermia treatment causes steam to form which is apt to burn your patient at the surface, which is in itself an entirely different treatment from the deep action of the Diathermia as has been described in the foregoing.

Also, if the treatment is long continued, these wet pads dry out in spots, which causes the current to concentrate in what wet areas remain, and burning will again result. It is extremely bad technic to use wet felt pads, and I have protested to the manufacturers against permitting their agents to recommend them. All experts in Diathermia will confirm this recommendation of the use of bare metal plates. The plates and the patient's skin must always be well moistened with warm soap lather.

Major C. M. Sampson, M. D., formerly of the U. S. Army and later of the U. S. Public Health Service, but recently resigned from government service, has written a splendid book on Electro-physiotherapy subjects. You should get one of these books, entitled "Physiotherapy Technic." Major Sampson has probably treated a larger number of patients by these methods than has any other person. As many as 50,000 to 60,000 each month were treated in his clinic at Fox Hills, Staten Island, N. Y., where he was stationed during the war and after in the reconstruction period.

IN PREPARATION
DIATHERMY
& ITS APPLICATION TO
PNEUMONIA

BY
HARRY EATON STEWART, M.D.
Attending Specialist in Physiotherapy, U. S. Marine Hospitals, N. Y.;
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PUBLISHER'S NOTE

The author has had two years' experience in the treatment of pneumonia with diathermy in U. S. Marine Hospital, No. 21 (Staten Island), where every case was checked up by the full clinical and laboratory findings of the staff. The results obtained were as startling as they were gratifying.

In the Introduction Dr. Stewart acknowledges that the results obtained by some of his co-workers have surpassed his own. This would seem to indicate that the profession in general should duplicate or better the results reported.

The author insists that "hit or miss methods will not obtain good results in this work any more than they will in any other therapy or surgery." He has therefore written an unusually clear, but at the same time condensed, description of the physics, physiological effects and therapeutic indications of both medical and surgical diathermy. Technique is described with unusual clarity.

Particular emphasis is laid on the fact that diathermy properly applied is harmless under all conditions and that it brings almost invariable symptomatic relief. Above all *it has apparently lowered the general average mortality*. This lessened death rate was particularly evident in a carefully worked out comparison with a group of controls under conditions identical in every respect, except in the use of diathermy.

A large number of detailed case reports giving all the clinical and laboratory findings—the most conclusive evidence that a scientist can offer—are given in this book.

Practically every aide, nurse and physician who has actually seen the treatment *properly* given has expressed faith in diathermy as a therapeutic adjunct of distinct value in pneumonia.

The book will be profusely illustrated, well printed and well bound.

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DR. HARRY EATON STEWART, of New Haven, Connecticut, says, in concluding a very interesting paper on the treatment of Pneumonia with the Diathermy Current in which he recounted a number of case reports:

"In several of the cases the Diathermy was not instituted until in favorable cases the temperature might be expected to start downward, but it is the opinion of the medical staff at the U. S. Marine Hospital No. 21, New York City, who selected these as test cases, that Diathermy helped in their recovery.

"When we have had many more cases to report on, we hope to be able to make a more definite statement, but this much we do know—that in *every single case* and in almost *every single treatment* the temporary effect upon the patients was remarkable. Cyanosis disappeared. The expiratory grunt when present was remarkably lessened or stopped entirely. Respirations were less labored and the patient received from two to four hours of very marked relief, in many cases obtaining some sleep.

"Now Diathermy has been ordered as soon as the diagnosis is made in every case of Pneumonia at the Marine Hospital. It is not too much to assume that in many critical cases this marked relief of symptoms may be the turning point in disease.

"Under proper technic there is no danger of ill effects from two or even three Diathermy treatments per day. The proper technic is of the greatest importance. The fall of temperature takes place by lysis where Diathermy is used. Pneumonia attacks all ages, and the rugged as well as the weak. The death rate is so high that any method of treatment which will lessen it to any extent is invaluable. *The results of this work are sufficiently encouraging to justify the wider employment of Diathermy in this disease.*"



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Correct Auto-Condensation Technic

In response to a question on the subject, our good friend Dr. Burton B. Grover, of Colorado Springs, advises:

"While many methods have been advocated for employing the D'Arsonval Auto-Condensation current for the reduction of high blood pressure, the correct procedure is: Patient on either couch or chair pad, reclining if possible; metal handle held firmly in both hands; pass from 300 to 500 milliamperes for 13 to 15 minutes.

"The dose should never exceed 700 millis at any time when given to reduce blood pressure. With metal handle in the hands the blood is heated gradually and the effects are more lasting. Just who introduced the method of placing a large electrode on the chest, abdomen, or both in Auto-condensation, I cannot say, but frankly I do not approve. The electrode in this position does not administer Auto-condensation at all; it is indirect Diathermy, and is advisable in cases of bronchitis, etc.

"When a kidney is to be treated, one electrode should be placed over the kidney, the other on the abdomen directly opposite. There is no excuse for treating a kidney by the indirect method; it should always be treated *directly*. The blood pressure reduction is one of the incidents to this method.

"High milliamperage is undesirable in Auto-condensation, but generally of extreme importance in Diathermy. I see no good reason for hands and feet being connected, with the auto pad as the other terminal. However, I see no objection. Hand-and-foot Diathermy is desirable in some cases for its effects upon general metabolism.

"Always advise the neophyte to never exceed 700 milliamperes in Auto-condensation treatments. Large doses will do more harm than good, and throw a monkey-wrench into a perfectly good therapeutic measure.

"I have administered thousands of Auto-condensation treatments, and have learned the advantages as well as the follies of this end of the High Frequency game."

Visceral Adhesions

Frederick M. Morse, M. D., Boston, Massachusetts

Visceral adhesions arise from so many different causes that the etiology must always be considered before any intelligent procedure should be undertaken for relief.

Adhesions following surgery about the duodenum, gall bladder, and appendix regions, where a purulent condition existed previously, is usually to be preceded and followed by post-inflammatory fixed areas where surgery perhaps offers the only solution.

Many apparent adhesive conditions that are diagnosed by tenderness, pain, and X-ray diagnosis at abnormal angles and distentions about the hepatic, splenic, and sigmoid flexures of the colon are often elusive.

In lieu of a Wasserman test, the iodides and mercurials are often given to establish a diagnosis. Likewise, mechanical gymnastics intelligently applied often changes an apparent surgical case into a non-surgical case, which might apply to the stomach, duodenum and colon more especially.

Adhesions following plastic peritonitis is a regenerative process and is often followed by the formation of firm adhesions which in time may disappear. Electrical and mechanical treatment in these cases usually hasten recovery.

The process that may be instituted with safety where there is no purulent area intervening is the application of diathermy directly through the part under consideration, or mild currents of galvanism followed by wave current effects with an alternating current. This latter procedure increases cell activity and favors elimination of retained infiltrations.

The reversing of the galvanic current as may be done by the sinusoidal apparatus would, in the opinion of the writer, often result in exhausting the vitality of the parts that we hoped to regenerate.

The Proper Application of Mesh Diathermy Electrodes

Questions received in our daily mails indicate, both from the quantity as well as the nature of the contents, that an article pertaining to the proper method of applying *Mesh* electrodes is quite in order.

There are two distinct methods of applying both the mesh and block tin electrodes when employing Diathermy—the *plate* method and the *cuff* method.

For all flat surfaces, as for example on the trunk, the plate method will be found most convenient and adaptable. Coat the skin and the under (smooth) side of the mesh with warm soap lather. Place the mesh perfectly flat on the skin, with no wrinkles or high spots, and retain in place with a flexible, half-filled sand-bag.

Do not use a sand-bag of the heavy, bulky, thick variety that will slide off at the first move of your patient, but one carefully designed for the purpose. This is made of a strip of heavy cloth or light canvas about 10 inches wide by 20 inches long, folded over lengthwise to form a bag 5 x 20 inches. Sew cross seams 5 inches from each end to form two pockets, each 5 inches square. Use only sufficient sand to half fill these two pockets, leaving the center strip flat. When this bag is placed over your patient the flat part only bears on the electrode—the weights hang down at the sides. The weight of the patient will hold the under electrode in place, and the half-filled sand-bag is laid over the upper electrode. Slip one of the small connectors on the tip at the end of the rubber covered cable, and place this connector between the mesh and the sand-bag. No fastening is required either underneath or on top.

The cuff method, however, should always be employed when treating a joint, such as the knee or elbow. Use two pieces of mesh 3 inches wide and sufficiently long to pass all around the limb with a slight overlap. Coat the skin and the

under (smooth) side of the mesh with warm soap lather. Place one cuff five inches below the joint and the other five inches above. Hold these cuffs in place with two turns of a good elastic bandage, tucking the end under the first layer to prevent unwinding.

Bind sufficiently tight to prevent slipping, but always make allowance for the natural swelling of the part under the Diathermy heating to prevent any restriction. Pass your finger between the mesh and the bandage and insert the connector which in turn is fastened to the end of the rubber covered cable. This makes perfect contact and will not slip.

Dr. Gustav Kolischer Again

Brief, But to the Point, as Usual

Diathermy is practicable in all instances in which heat produced within the tissues of the human body appears to be desirable as a therapeutic factor.

This item of generating the heat within the tissues is the paramount advantage of Diathermy over any other method. Heat applied to the surface of the body by means of a hot water bag or an electric pad penetrates to a very limited depth only, and cannot be regulated.

With the help of Diathermy we are in a position to administer heat wherever it is desirable, and to any area—superficially or to any desired depth. The degree of heat produced may be gauged and regulated within any limits desired.

To distinguish between Medical and Surgical Diathermy, the former term applies to any heating within physiological limits while the latter is applied to destructive heating, for desiccating structures—as tumors.

Medical Diathermy is used to advantage in all instances where absorption is intended, or where localized increase of the blood supply is desired. Therefore, Diathermy is used

for the treatment of all exudates; for instance, in arthritis, pleurisy, pneumonic infiltrations, indolent parametric exudates, and in chronic prostatitis and vesiculitis.

For destruction of superficial benign growths the Surgical Diathermy is used in the form of Fulguration; that is, using the Electric Spark.

More substantially, malignant tumors are desiccated (or coagulated) by the use of larger stamp-shaped electrodes that are brought in intimate contact with the growth. One may either catch the tumor between the two active metallic electrodes, sending the current directly through in various diameters, or apply an inert large electrode somewhere on the surface of the body and press the active electrode upon the growth to be coagulated. Here again the superiority of Diathermy, by virtue of the possibility of exactly gauging the extent of destruction, and by the orderly procedure of the whole manipulation; the degree of penetration being entirely under control.

Technic of Diathermy and Indication for Its Use

R. Grunbaum (Wiener klinische Wochenschrift, January 11, 1923) has improved his technic of diathermy therapy of chilblains to such an extent, that he uses this treatment even in the severest cases of frostbites. For example, have the patient place the tips of his toes in running water and apply the other electrode to both thighs, with the result that the current flows from the tips of the toes through the entire leg and thus affects a large vascular area. In addition to frostbites a suitable field of diathermy treatment are the diseases of the accessory nasal sinuses, cicatricial bands and abdominal adhesions; also chronic parametritis and perimetritis.

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A PAGE OF FUN



Young Bride (timidly): "Eh—I'm not joking—eh—I mean I really want to buy some—quite seriously—eh—might I ask if you have any bananas?"

□ □ □

Young Wife—The postoffices are very careless sometimes, don't you think?

Friend—Why do you think so?

Young Wife—Fred sent me a note yesterday from Philadelphia where he is stopping on business, and the silly postoffice people put an Atlantic City mark on the envelope.

□ □ □

The melancholy days are here,
And there's a darn good reason;
The overcoat I wore last year
Won't stand another season.

□ ■ □

"Ma, if the baby was to eat tadpoles, would it give him a big bass voice like a frog?"

"Good gracious, no! They'd kill him."

"Well, they didn't."

Little Sally—"When I get to be mamma, will I have a husband like papa?"

Mother—"Yes, dear."

Little Sally—"And if I do not get married, will I be an old maid like Aunt Kate?"

Mother—"Well, I guess so, honey."

Little Sally—"Well, I guess I am in a fix, mamma."

□ □ □

Young Brown, who had been married but a few days, sought out his friend, Jones, who was a family man of long experience, for a little advice.

"Jim," said Brown, "what did you call your mother-in-law after you got married?"

"Well, I'll tell you," replied Jones, "for the first year I addressed her as 'Say,' and after that we all called her 'Grandma'."—Judge.

THE PRACTICAL MAN KNOWS HOW—
THE SCIENTIFIC MAN KNOWS WHY—
THE SUCCESSFUL MAN KNOWS BOTH.

FISCHER'S MAGAZINE

DECEMBER
1923

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DOESN'T MEET CIRCUMSTANCES—
HE MAKES THEM.

Fischer's Magazine

*Dedicated to the advancement of the Science of Electro-Physio-
Therapy and to the interests of those earnest and enlightened
medical men who are practicing it.*

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Vol. II

DECEMBER, 1923

No. 3

Christmas emphasizes many
truths to all of us

True friendship is one of the world's
richest blessings. Kindness melts away
frowns, scowls, worries, hard feelings.
Real happiness comes through making
others happy.

It gives us great pleasure to extend to
you, doctor, our choicest good wishes
this Christmas period.

May every minute of the day fairly tingle
with good cheer.

H. G. Fischer & Co.

DOCTOR are you interested

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 In learning how to get the best of returns from your equipment?

? ? ? ? ? ? ?

The second Wednesday of each month hereafter will be set aside at the Fischer Plant for demonstration and clinic purposes.

This is being done as a result of numerous suggestions from our readers and we feel sure there will be a hearty response. You are welcome any day—every day—come when you can—but this one day each month is to be "Physician's Day." You will be assured of hearing at least one good talk, seeing several demonstrations, clinics when possible and advisable, and a program of interesting events throughout the day.

Help us—come in if you can, or send us some of those questions that come up so often and let's thrash them out at these meetings. The answers, when of sufficient import, will be published in these pages and all interested may benefit therefrom.

Individual subjects will be assigned to certain physicians and proper announcement made in these columns regarding the coming month's program.

Now Doctor—don't leave everything to the next fellow—let us have YOUR opinion. How does this suggestion strike YOU??

Instructive Successful Results in Fourteen Successive Cases of Pneumonia Treated with Diathermy

**Marked Relief from Cyanosis and Painful, Labored
Breathing Immediately Following Treatment**

Does Not Interfere with Other Lines of Treatment

By HENRY V. BROESER, M. D.
 105 Newark Street, Hoboken, N. J.

Decongesting the Congested Lung

In the treatment of pneumonia we aim to decongest the congested lung by counter irritation, cupping, application of heat to the chest and the like. There is no reason why diathermy should not accomplish as much as Dr. Broeser claims, and more. This is shown by the series of instructive cases presented in this interesting paper.—E.D.S.

DIATHERMY is a form of physical therapy in which the generation of so-called internal heat is utilized. When a rapidly alternating current of electricity (high frequency) is conducted through resisting tissues, heat is generated along the path of conduction in proportion to the strength of the current and the resistance of the tissues. The current of electricity changes its direction so rapidly that excitable tissues are not stimulated nor does ionization or electrolysis occur. This form of heat because it originates within the tissues and is not brought from without as in the application of heated objects or thermic lights is called internal heat or diathermy.

The rationale of the use of diathermy in disease depends upon the well-known fact that any measure which supplies heat to a part or raises the temperature en masse will cause

a dilatation of the capillaries with resulting hyperæmia; increased cell nutrition and acceleration of the chemical reactions constituting the cell metabolism of the part and hence increase the "locales resistiones" which will also allow for a more rapid drainage from that part.

High Frequency Treatment in Medicine— Surgery Pneumonia

The use of high frequency currents in medicine was first suggested by "Nikola Tesla" in a paper in the *Electrical Engineer*, December, 1891. The physiologic properties of these currents were investigated in a series of researches by D'Arsonval in 1898. In Sept., 1907, Nagelschmidt, a Berlin physician in Dresden, stated that high frequency currents caused a "heating through" of the tissues and recommended their use in the treatment of joint and circulatory diseases. Since then there has appeared a considerable literature on the use of high frequency in medicine and surgery. Little attention was paid to the reports of its use in pneumonia, since for the most part they were deficient in laboratory, clinical and X-ray data to make the records convincing. In October, 1922, Dr. H. E. Stewart, of the U. S. Public Health Service, reported a series of ten cases of pneumonia occurring in the U. S. Marine Hosp. No. 21, New York, in which diathermy was employed. All the patients except one recovered by lysis. The single fatality was a case of bilateral pneumonia, empyema and streptococcic septicemia.

The writer does not wish to imply that in diathermy there is a specific for pneumonia, the following is merely a record of his experience with this therapeutic agent in fourteen successive cases of pneumonia. These cases were taken from his consulting practice as Roentgenologist and Physiotherapist to St. Mary's Hosp., Hoboken, N. J., St. Francis Hosp., Jersey City, and North Hudson Hosp., at Weehawken, N. J. The physical findings and diagnosis in each case was made by the physician in charge who prescribed medical treatment in conjunction with the diathermy which was

administered by the writer. Radiographs were taken in the beginning and in the course of the treatment to determine the influence if any, on the rate of resolution of the consolidated lung.

Summary of Procedure

Flexible electrodes, 4x7 inches composed of blocked tin gauge 22, are placed one anteriorly right, the other posteriorly left, over the part of the chest corresponding to the pneumonic lung. A hot shaving soap lather is applied to the electrodes and the skin. A bed sheet folded one foot wide placed around the chest supports the electrodes. Under the posterior one a small cushion is placed to allow more comfort to the patient. The machine used is of the portable type capable of registering 4,000 M.A. of current. The current is slowly turned on until the maximum M.A. is reached, allowing about four to five minutes for this procedure. By the maximum is meant the strongest current the patient will tolerate, usually between 1,500 and 2,000 M.A. For 20 minutes the current flows, then it is gradually reduced to zero, allowing three minutes for this procedure. *Best results are followed by the early morning treatment.*

Case Presentation

1. Case of Dr. Pyle and Dr. Kerdasha, St. Francis Hosp. C. B., male, white, 39 years, laborer.

Past History: Pneumonia at the ages of 20 and 32, no sequelæ.

Present Illness: On March 22, patient was seized with a pain in the left side, chill, sweats, headache, cough and shortness of breath.

Physical Exam.: Nutrition of patient very poor, marked cyanosis, lower left chest shows dullness, increased tactile and vocal fremitus, rales and bronchial breathing with pectoriloquy. Temp., 104; pulse, 120; resp., 40; blood pressure, 106-40.

Lab.: W. B. C. 14,000 Type Pneumonia IV.

X-Ray: Lower left lobe is dense and cloudy. On the fourth day of the disease diathermy was started. The patient received four treatments and made an uneventful recovery by lysis.

2. Case of *Dr. Klein, Middlesex General Hospital, New Brunswick.* F. K., female, white, 29 years, housewife.

Past History: Measles, scarlet fever and diphtheria as a child, no sequelæ. Recurring attacks of tonsillitis, otitis media.

Present Illness: On March 25 patient complained of pain in the chest, cough and headache. Entered the hospital March 26.

Physical Exam.: Patient is delirious; there is cyanosis, marked dyspnea, involuntary passage of stools and urine. Temp., 104; pulse, 120; resp., 48. Dullness over the entire left lung, rales, bronchial breathing.

Lab.: W. B. C. 23,500, R. B. C. 4,000,000 Hb 70%, P. 77%, S. L. 18%, L. M. 2%, T. 1%, E. 2%. Type 2 as shown by mouse inoculation.

X-Ray: Entire left lung dense, obliteration of the left diaphragm and costo-phrenic angle. Diathermy was instituted March 28. Temperature started down by lysis immediately. Recovery was uninterrupted. Sequelæ: otitis media.

3. Case of *Dr. Spath, Hoboken, N. J.* V. G., male, white, 35 years, houseman.

Past History: Unimportant.

Present Illness: On March 28 there was chill, pain in the chest and cough.

Physical Exam.: Patient is delirious. Temp., 104; pulse, 140; resp., 40. Over the right lower lobe there is dullness, increased fremitus, rales, bronchial breathing and pectoriloquy.

Lab.: W. B. C. 26,400, R. B. C. 4,240,000 Hb 85%, P. 81%, S. L. 14%, L. M. 2%, T. 2%, E. 1%. Sputum negative for T. B. Type Pneumonia IV.

X-Ray: Lower right lobe is dense, there is an obliteration of the diaphragm and the costo-phrenic angle.

Diathermy was started on the sixth day of the disease. The patient received two treatments per day for the next five days. Following the first treatment the temperature began to go down by lysis. Subsequently empyema developed, for which patient was operated upon and recovered.

4. Case of *Dr. Spalding, North Hudson Hospital, Weehawken, N. J.* A. B., female, white, 33 years, nurse.

Past History: Unimportant.

Present Illness: On March 14 patient complained of chill, pain in the chest, cough and prostration.

Physical Exam.: Patient is obese and cyanotic. There is marked abdominal distention. Temp., 104; pulse is intermittent and 112; resp., 32.

Lab.: R. B. C. 3,900,000 Hb 60%, W. B. C. 6,000, P. 90%, S. L. 16%, L. M. 4%.

There is dullness, increased fremitus, rales and bronchial breathing over the upper and middle right chest anteriorly.

X-Ray: Clouding of the upper and middle right lobes.

On March 20, the sixth day of the disease, diathermy was begun. Patient made an uneventful recovery by lysis.

5. Case of *Dr. Opdyke, Jersey City, N. J.* P. W., male, white, 26 years, auto salesman.

Past History: Pneumonia, 1921.

Present Illness: Patient complained of chill, headache and cough.

Physical Exam.: Patient is delirious and cyanotic, abdomen is distended with gas. Temp., 104; pulse, 110; resp., 40. There is dullness, rales and bronchial breathing over the right lower chest.

X-Ray: Right lower lobe dense. Obliteration of costo-phrenic angle.

On the fifth day of the disease diathermy was started. Recovery by lysis complete.

6. Case of *Dr. Londrigen, Hoboken, N. J.* A. E., female, white, 42 years, housewife.

Past History: Negative.

Present Illness: Pain in the chest and labored breathing on March 12.

Physical Exam.: Temp., 103.8; pulse, 116; resp., 32. There is dullness, rales and bronchial breathing over upper and middle part of the right chest.

X-Ray: Clouding of the upper and middle part of the right lower lobe.

On the fourth day of the disease diathermy was instituted. Temperature immediately dropped by lysis.

7. Case of *Dr. Spath, Hoboken, N. J.* A. W., female, white, 24 years, housewife.

Past History: Pneumonia, 1918.

Present Illness: On March 31 patient complained of chills, headache and difficulty in breathing.

Physical Exam.: Temp., 104; pulse, 140; resp., 44. Patient is markedly cyanotic and restless. There is dullness, rales, bronchial breathing and pectoriloquy left lower chest.

Lab.: W. B. C. 19,200, P. 86%, S. L. 8%, L. M. 1%, T. 5%. Pneumococcus Type 4.

X-Ray: Clouding left lower lobe.

On the third day of the disease diathermy was started and temperature began to recede immediately by lysis. Recovery uneventful.

(We will mail you copy on the remaining seven case reports on request.)—H. G. Fischer & Co., Inc.

Comment

Following the use of diathermy in thirty cases, fourteen cases of lobar pneumonia are recorded, the temperature immediately fell by lysis within a few days. The ages of the patients treated ranged from 2½ to 72 years. Most of the cases presented poor prognosis as cyanosis, tympanitis, low blood pressure, incontinence of feces and urine, obesity and comparatively low leukocytic reaction. In all the cases

(Continued on page 12)

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immediately following the treatment there was noted a marked relief from *cyanosis and painful and labored breathing*. The patients rested well, the majority sleeping a few hours. The evidence at hand however is insufficient to draw any justifiable conclusions as to the influence of diathermy in pneumonia. The author hopes that this therapeutic agent will receive a more thorough scientific investigation as to its merits and a more *universal and early* use with a view of determining whether it has a place in the treatment of pneumonia.

Controversy as to priority of claim and use of machines can be regarded as inconsequential. My answer is, that the physician treating the most number of cases with the best results following scientific steps as to history, blood pressure, blood count and radiographic examination (without undue handling of the patient while taking the radiograph as a rule the anterior posterior position is the only one that can be taken) followed by diathermy every one, two or three times daily according to severity. *The earlier the case is started on the diathermy the better the results.* If animal experimentation can be carried out, so much the better. Urine and also the sputa should be obtained as soon as possible to ascertain the type of the pneumonia.

As to the high frequency machine it should be one capable of producing 2,000 M.A. at a short damp spark gap regardless of the manufacturer, and there are many machines on the market not capable of doing this, thus useless in this particular line of work. It is known that the larger the spark gap the more interruptions, thus more farridism and voltage with annoyance to the patient. What we want in the treatment of this disease is heat sent into the lung substance, a painless process.

I do not believe that diathermia is a specific in the treatment of pneumonia, but do believe and know that it is supportive in character, it does not interfere with any line of treatment. All I ask is that the profession prove its usefulness. The results in these cases were all good, ages ranging from two and a half years to seventy-two years of age.

Electrotherapeutics in Urology

Victor Cox Pederson, A. M., M. D., F. A. C. S., New York

(Abstracted from the New York Medical Journal)

* * * Lincoln said that the only people he did not like were those he did not know. Most physicians seem guilty of not liking any new method of treatment which they do not know. Conservatism, reserve and caution are sound when based on a willingness to study, try and then judge. But blind prejudice, radical denial and arrogant complacency with methods already in vogue are unsound, because they have again and again been the bases of cults which have in the end compromised the medical profession. * * *

Like Lincoln's new friends, most of us like new methods after we have learned them. A familiar example is that the medical departments of the United States actually ignored and refused to adopt physical methods of all kinds—until they knew them through the result among the European forces. The Government has learned the worth of a new friend—Physiotherapy * * *.

Electrotherapy, which is only one department of Physiotherapy, can no longer be repudiated. Those who deny its value will soon be like the professor of 1850 in his disregard of the atomic theory. Those who regard it as a quick cure-all will be like the dupes of the promoter whose financial bubble bankrupts them.

Diseases are processes, hence there can be no sudden and absolute reversal of the processes by any means whatever * * *

High Frequency and Alternating Current are synonymous terms, applied to rapidly oscillating current converted into heat by resistance overcome, and by molecular activity in living tissue. Local and general Diathermy are only manifestations, hence a definite quantity of heat may be developed

in a part such as the prostate. The heating is vascular, nutritional and relaxing.

The source is a standard transformer delivering high potential current * * *, the rheostat, the Multiple Spark Gap. * * * The electrodes are of the high vacuum glass type for the Oudin (mono-polar) current, in rectal or urethral prostatic work; or the insulated tip rectal electrode with the large metal pad on the tubes if Diathermy current be employed.

The current should produce only a mild warmth. The milliamperes meter registers from 200 to 1000, within tolerance. Treatments persist from ten to twenty minutes on alternate days, and decongest the gland remarkably.

In modern urology Diathermy is used to increase healthful hyperemia and nutrition whenever any other modality might be used. It therefore augments the action of any other modality if used first. General Diathermy or Auto-condensation in prostatic lesions promotes absorption and elimination. * * *

Electrotherapy is by no means a cure-all in urology. Improved appliances, better diagnosis, finer selections of cases, lead to better recognition of its value. * * * After about eight years of careful study I am of the opinion that Electrotherapy has a definite application in urology. * * * It possesses one unquestionable advantage, which is that it does not add to the destructive process of the disease unless inexcusable blunders are made.

Further, without doubt, it creates a healthy circulatory condition deep in the affected part, probably both through a local tissue and peripheral nervous influence. Unless the average local application it does not cause exfoliation of epithelium and thus add to a process already existing, as in gonococcal infection. In acute infections where the mucosa is so irritable that no instrument may be inserted only external forms as in X-ray, radiant light and Diathermy are possible.

* * * Where massage influence is called for, the positive pole of the static machine is in order, or the mild sinusoidal current combining faradism and galvanism. Where dilation is required, as in stenosis of the uterine os or in urethral stricture, the negative galvanic pole is very valuable. When stimulation and mild caustic action are sought for, then the galvanic pole is used cautiously.

For penetration of various medicaments—notably copper, zinc and iodine—ionization is the method. The copper and zinc must be attached to the positive pole and iodine to the negative pole. Too much caution can not be used with ionization until real skill is established.

Electrotherapy cannot be learned in a short time but it will reward all the time and energy employed both in learning and in applying it. With the caution and limitations indicated herein I recommend it highly.

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"—and some of the so-called 'little' things are extremely far reaching in effect."

Here is an excerpt from one of the Chicago papers of recent date:

Tick of Bishop's Watch Spoils Radio Lecture

A radio audience of 1,000,000 persons in Milwaukee, Minneapolis, Detroit, Cleveland, Indianapolis and other points in a radius of 500 miles of Chicago, which tuned in Sunday night to listen to a lecture by Bishop Fraser McDowell at Orchestra Hall, yesterday began deluging the Sunday Evening Club with complaints that it couldn't hear the lecture because of the ticking of his watch!

It developed that the Bishop had placed his watch too close to the transmitter while telling how small the world is!!

Treatment of Menorrhagia by Radium

B. Blacker (Lancet, March 3, 1923) says the results obtained by those who have employed radium in the treatment of uterine hemorrhage show that it is a valuable and efficient method in controlling excessive hemorrhage at the menopause, and that it can be employed safely for the same purpose in small uncomplicated fibroid tumors of the uterus, also in excessive menorrhagia in young women, which resist ordinary methods of treatment, can be brought under control.

Quartz Light Treatment of Leukoderma

Toomey has secured improvements in two cases of leukoderma by means of ultra-violet radiation. Complete pigmentation of some of the areas was obtained. More or less pigmentation was developed in all of the areas, the degree of pigmentation in some areas effecting a very acceptable cosmetic improvement. The Quartz light pigmentation of the achromic areas has persisted for more than six months with no apparent loss of the acquired pigment. The leukodermic areas that responded with complete or nearly complete pigmentation as a result of the use of the quartz light were the bones situated on the face. Achromic areas on covered surfaces of the body responded to the light with only a partial degree of pigmentation, the degree of pigmentation in an area being approximately in inverse ratio with the degree to which it had been habitually kept protected from the sun's rays.

When You Are Discouraged Read This

When a very young man, Abraham Lincoln ran for Legislator in Illinois. He was badly beaten.

Abe then turned his steps toward the business field. Failed. Spent about 17 years of his life paying up the debts of a no-good partner.

He fell in love with a very beautiful woman, became engaged and she died.

He entered politics again, ran for Congress and once more was swamped.

He then tried to get an appointment with the United States Land Office. Here again he fell down.

He became candidate for the United States Senate, and still another time he was beaten.

In 1856 he wanted to be Vice-President of the United States. Once more he succumbed to defeat.

Just one failure after another, bad failures, set-backs of the most trying kind. But in spite of all this, in spite of every beating he ever had, and all the little glooms that hovered over him, he eventually became the most beloved and greatest man this country ever knew and his name will go down through history—to time immemorial.

□ □ □

G O S H !

Where can a man buy a cap for his knee

Or a key for a lock of his hair?

Or can his eyes be an academy

Because there are pupils there?

In the crown of his head what gems are found?

Who travels the bridge of his nose?

Does the calf of his leg become hungry at times

And devour the corn on his toes?

Can the crook on his elbow be sent to jail?

Where's the shade from the palm of his hand?

How does he sharpen his shoulder blades?

—I'm hanged if I understand!

A PAGE OF FUN



Madge—So Charlie is teaching you how they play baseball?

Marjorie—Yes, and when I asked him what a squeeze play was I think he put one over on me.

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A little girl, visiting for the first time in the country, watched the farmer's wife plucking a hen. After a careful scrutiny of the tedious process, asked the young visitor: "Do you have to undress it every night?"

□ □ □

"You look fed up, old man."

"Yes, I've had a tiring day. That little beast of an office-boy of mine came to me with the old gag about getting off for his grandmother's funeral, so just to teach him a lesson I said I would accompany him."

"Ah, not so bad; was it a good game?"

"No, it was his grandmother's funeral!"

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"I'll be through in a minute," said the ice-cutter as he stepped onto the thin ice.

A lawyer earning about \$3,000 a year was insured for \$60,000. He was once reported dead, but it was a false alarm. He cabled to his partner: "I survived. Try and break it gently to my wife."

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"No, I shall marry only a brave man," said the maiden firmly.

"But you must admit that it takes bravery for a poor mutt like me to propose to such a beautiful and talented girl," countered the suitor. So they lived happily, etc.

□ □ □

"When are you going to pay for that X-ray machine I sold you?"

Doctor Drill: "Pay for it? Why, you said that in a short time it would pay for itself!"

**SOME MEN ARE CONTENT
TO ENVY SUCCESS IN OTHERS;
OTHERS ACHIEVE IT FOR THEMSELVES.**