FISCHER'S MAGAZINE

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353

FEBRUARY, 1924

SUCCESS IS ONE PART
INSPIRATION
AND NINE PARTS
PERSPIRATION

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.

H. G. Fischer & Co., Inc., 2333-43 Wabansia Ave., Chicago, Ill.

Vol. II FEBRUARY, 1924 No. 5

Physiotherapy

THE degree of success met with in the practice of physiotherapy depends upon the knowledge of themo dality used and the method of its application. Only study and experience can make the successful practitioner.

Neurotic patients are tremendously aided by physiotherapy. In neuropsychiatry the mere fact of treatment acts as a tonic and gives the patient courage to bear up until Nature gets a chance to do her work.

Fractures and dislocations are aided by the absorption of inflammatory products and the prevention of atrophy. Hastening of bony union and promotion of metabolic processes is brought about by physiotherapy and there is a more speedy restoration of function. Heliotherapy, diathermy, iodides, rest and proper food are advised. Many cases of adhesions yield readily to treatment.

In some cases of osteomylitis, copperization and ultraviolet rays with massage accomplish wonders. Tuberculosis of the bones will respond to ultraviolet treatment when all other means have failed. Ultraviolet in rickets need only be mentioned.

The different types of paralysis are more or less aided by physiotherapy. Only the most skilled operator can accomplish results here. Cerebral paralysis is the most difficult form to treat but even it is sometimes helped by rest,

massage and electrical stimulation. In spinal paralysis surgery is first called upon and physiotherapy used as an aid. Hemorrhage of the cord calls for the same treatment. Peripheral nerve paralysis can be aided to a greater degree than can any other form. In infantile paralysis the condition for regeneration is more favorable than in traumatic peripheral paralysis. Stretched muscles that have not functioned for many years but are not paralyzed may be restored by electrical stimulation.

Ulcers are much benefited by physiotherapy. In neuritis the cause must be removed by whatever means is necessary and physiotherapy then used. Sciatica, lumbago and all forms of myalgia yield readily to diathermy. Torticollis responds less readily. The progress of arthritis can sometimes be arrested though it cannot be cured. In neurocardio asthenia at least 60 per cent of patients are cured.

Dementia praecox is incurable but mental trouble of the praecox type clears up. Epilepsy *grand mal* cannot be cured but *petit mal* can be.

(*J. Indiana M. A. 335-338, October, 1923.*)

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Dr. Homer Dupuy

(In the New Orleans Medical Journal)

Dr. H. W. E. Walther demonstrated the new Fischer hospital diathermy unit and lauded its value in the treatment of certain urological conditions. Diathermy, the latest and unquestionably the most useful of the high frequency modalities, is employed in two forms—medical and surgical—both being generated in the same way, but applied differently. In medical diathermy we raise the temperature of tissues only within physiological limits; in surgical diathermy we far exceed this limit; destroying tissue. d'Arsonval current is used. Dr. Walther stated that much benefit to his patient had been noted in applying medical diathermy to cases of arthritis,

prostatitis, seminal vesiculitis and epididymitis. The pain usually disappears after the first treatment and the swelling and period of confinement to bed are most favorably influenced. Applications require twenty minutes.

In surgical diathermy (electro-coagulation), where high frequency current is applied for the destruction of tissue by heat, without sparking, we have a modality for destroying new growths that is bloodless, clean, producing little shock, and which seals all lymph channels in its wake. For treating tumors of the bladder, cervix, urethra and external genitals, it surpasses scalpel-surgery.

Dr. Walther stated that he first became interested in surgical diathermy after a visit to Dr. Gustav Kolischer at Michael Reese Hospital, Chicago, where Kolischer has done commendable work with diathermy and radium in cancer of the bladder and of the prostate. It is today conceded by all that the only scientific way of handling malignant neoplasms of the bladder or prostate is through the open bladder. Some few selected vesical papilloma, of small size, can be successfully treated by diathermy and radium through the cystoscope. But the majority of bladder growths, extending from trigone into the internal vesical spincter, are best treated through the cystotomy wound. Kolischer lays stress upon the point that, in treating tumors of the lower urinary tract by means of diathermy, one requires an apparatus that will deliver up to 4000 M. A. current. This can only be obtained in the newer type of machines.

The results obtained with diathermy in the Urological Service of the Hotel Dieu will be reported in detail later in a special article on the subject. Dr. Walther acknowledged indebtedness to his associate, Dr. C. L. Peacock, for his valuable assistance in this work.

Dr. Dimitry: Dr. Walther's demonstration carries a message of assistance to those who handle malignant cases, for by his Diathermy demonstration he enlightens us on a

procedure that may prove valuable in preventing metastasis i. e., if malignancy is accepted as a local and not a general condition. Surgery cares for the offending condition, but by removal it adds the possible danger of dissemination. The Deep X-ray is stated to be beneficial if administered a short while before operation for it is said to constrict surrounding lymphatics and vessels.

I have often desired, in my special line, to add still further precaution by the use of the hot iron, and I had hoped to have used this diathermy procedure, but lacked a working knowledge until this night, when the doctor has so well explained its use.

I would ask further enlightment of its use when the eye is to be removed for a malignancy. After the use of the diathermy needle, should we wait for a slough before proceeding with the knife and scissors to remove the eye?

Dr. Walther: It is best to wait several days to a week for each slough to come away before attempting removal of tumor mass.

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Enlarged Gland

From a California Contributor

Case C. M. came to my office with an enlarged gland, about the size of a hen's egg, with history of over exercised shankroid of about two weeks' duration, which had previously healed.

Treatment consisted of exposure to the rays of a Deep Therapy Lamp 30 minutes at a distance of 30 inches eight times. The gland was reduced to the size of a bean, and subsequently reduced to normal size with no further treatments. No recurrence of shankroid after two weeks, and then the patient was discharged.

Out of twenty-five cases treated by this method, only two went on to suturation.

Diathermy for Malignant Disease of the Mouth, Pharynx, and Nose

On the basis of the results observed in seventeen cases, Norman Patterson (*British Medical Journal*, July 14, 1923) asserts that in cancerous growths in the larynx and mouth the ultimate results are likely to be infinitely better when the primary growth is dealt with by diathermy, rather than by a cutting operation. Complete block dissection of the glands in the anterior and posterior triangles should be carried out even when these glands are not palpable. It is generally advisable to destroy the growth in the first instance and to remove the glands subsequently. Occasionally the two operations can be carried out at the same sitting. If there is any doubt as to the ability of a thorough clearance of the neck, then the gland operation should precede that on the primary growth.

If the glands cannot be dealt with it is little use applying diathermy to the primary tumor, except as a palliative measure. It is sometimes advisable to operate on the glands in the first instance, and to deal subsequently with the primary tumor, as consent for the neck operation may be difficult to obtain after the growth itself has been destroyed. Before commencing treatment, it is well to try and obtain consent for two or three operations, and to impress upon the patient the importance of the removal of the glands. If the diathermized area approaches or invades the fascial planes of the neck, a clear interval of a fortnight or three weeks should be allowed between the destruction of the primary growth and the neck operation.

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Cataract

By way of response to an inquiry from one of our readers, Dr. B. B. Grover offers the following opinion regarding possible results obtainable by Physiotherapeutic means in the treatment of cataract:

"As far as my experience and the knowledge of the experience of others go, there is little to be said that is new in the treatment of cataract. However, here and there much good has been accomplished in recent cases by Diathermy, followed by the application of the constant current.

"It is well known that bone is the last tissue to become heated by Diathermy, and when heated will hold the heat for hours; therefore it is logical to heat the surrounding wall of bone, which will slowly give up its heat to the adjacent tissues and maintain hyperemia for a considerable period of time. This may be accomplished by passing the current from temple to temple as well as its application by means of a non-vacuum high frequency electrode over the closed lids.

"This method should be alternated with 2 to 5 milliamperes of the constant current. The treatment should be continued for many weeks. These cases are usually accompanied with hypertension which should be corrected in order that the best of results may be obtained.

—Burton Baker Grover, M. D.

Diathermy in Gonorrhea in the Male

Serés is convinced that nothing is so effectual as diathermy in dislodging gonococci lurking in the tissues around the urethra, which may maintain the infection for years. His rectal electrode opens like a fan in the rectum, and thus acts on a large area, including the prostate and seminal vesicles. Even at the best, this treatment is not always successful, as some gonococci escape in the deeper tissues. But gonococcal epididymitis and gonococcal urethritis in women can always be cured with diathermy as the anatomic conditions allow a perfect electric bake. When technic is perfected to allow this throughout, gonorrhea will be conquered; it is merely a question of enough electrodes. With recent infection, the gonorrhea is cured in two or three sittings, but acute urethritis in the male once established has generally proved refractory. Only when it has subsided under the usual local measures, does diathermy help to eradicate the infection. With more and larger electrodes he is confident that every acute urethritis can be conquered.

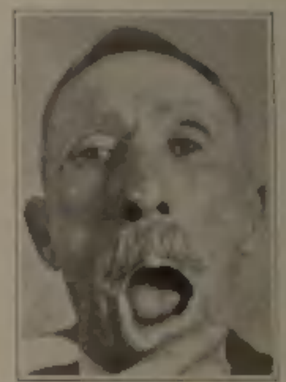
(abs. J. A. M. A.)

Endothermy

A Case Report of George A. Wyeth, M. D., of New York

CASE I. J. W., age 66, sailor, referred by Dr. W. B. Moodie of Valhalla, New York, reported that about 2 months previously a pimple had appeared under his tongue. He thought that the dental plate was irritating his mouth, but was assured by his dentist that this was not the case. He paid scant attention to the matter thereafter, but while he was at sea the pimple began to grow. On returning to New York he went to a hospital where "the doctor opened it and since then it has had a hole in it."

Before Treatment



After Treatment

Examination showed an indurated mass, about 3 centimeters by 2 centimeters in size, involving the right side of the floor of the mouth. It was foul and had a crater-like ulceration at right of the frenum. It was painful and tender, but no palpable, cervical glandular enlargement could be made out. On June 2, 1921, under ether narcosis the entire mass was completely surrounded or isolated by bipolar endothermy. To establish this definite wall of coagulation necrosis around the malignant area, it was necessary in this case to coagulate through the frenum, the under surface of tongue, and the inner surface of right jaw. A section for the microscope was then removed with impunity after which the whole mass was coagulated *in situ*. The dead tissue was next removed by scissors and the entire cavity seared over with the current to produce a further penetration of the heat. The lingual artery was not ligated.

Patient returned to room in good condition. Next day there was considerable swelling of tongue and a profuse flow of saliva, but he was free from pain and was able to take liquid nourish-

(Cont'd on page 10)

"Lobar Pneumonia is One of the Scourges of the Human Race

"LIKE Typhoid Fever it attacks the rugged as well as the weak. Unlike many diseases in which acquired immunity is developed, one attack is apt to increase the liability to subsequent seizures."

". . . Through permission received from Senior Surgeon George B. Young, then Medical Officer in Charge of U. S. Marine Hospital No. 21, N. Y., and with the co-operation of Dr. Bryan who was chief of the Medical Service, this work was undertaken by the author's department at that Hospital. It was agreed that when accepted means of treatment had proven unavailing, Diathermy should be tried in the first case in which there was otherwise apparently no hope of recovery.

"In January, 1922, such a case occurred and the treatment by direct Diathermy was started. The result in this first case was one of the most dramatic in the author's medical experience. The relief the patient received from severe pleuritic pain and dyspnea was immediate. His cyanosis disappeared in about seven minutes after the treatment was begun. The temperature began to fall immediately by lysis. He received from 2 to 4 hours of complete relief after this, and each succeeding treatment, and made an uninterrupted recovery.

"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."

—From Dr. Harry Eaton Stewart's "Diathermy in Pneumonia"

ment. He left the hospital on the third day in fairly good condition, although toxic absorption had rendered him very cachectic in appearance, with skin of a dark, yellowish hue, both of which conditions cleared up rapidly.

Sloughing of the remaining necrotic tissues began shortly afterward and was complete in the third week, although a piece of bone sequestrated from the inner surface of the jaw in the sixth week. Wound healed completely, and patient has remained free from pain. There was early return to normal diet and a gain of 15 pounds in weight within 3 months. Both sides of patient's neck were treated with deep penetrating X-ray as a postoperative prophylactic measure.

If we consider the technique of the treatment, we shall understand the particular advantages of endothermy. The first step in the procedure is to describe in the healthy tissue a protective ring of destruction around the malignant area. That is, before a malignant area is touched it is completely surrounded by a wall of coagulation necrosis, which shuts off and destroys the blood vessels and lymphatics to and from the affected part. After this the entire lesion is destroyed and removed. Just how much current shall be used and for how long, the operator must learn by experience. Dosage is, however, always under accurate control and conservatism demands that one overtreat rather than undertreat, for a stimulating dose is worse than no dose at all.

It is not difficult to understand that this line of destruction drawn about the malignant area to cut off blood vessels and lymphatics cuts off, also, the sensory nerves, and as the malignancy is removed the pain is alleviated. The value of the sterilizing effect of the heat upon a foul, discharging area is appreciated by the patient, for it renders his wound less offensive. One can scarcely overestimate the importance of these features of the method, particularly in the treatment of lesions in and about the mouth. In such cases, the small remaining slough comes away in from 2 to 3 weeks, and the area is completely healed within a few days thereafter. Patient can thus enjoy that early return to normal diet which is of the highest importance, since most of these cases are markedly cachectic, anaemic, and badly run down. Their chief postoperative need is nourishment.

(*From the New York Medical Journal*)

Albert C. Geyser, M. D.,

of Huntington, L. I.

in writing in the "American Physician" states in part,

"Diathermia is another measure which, acting in conjunction with the other two agents (the therapeutic bath and intravenous medication), is almost a specific in producing localized results in the chronic stage of disease.

"Diathermia, when applied to a joint or tissue, heats the same through and through. The local temperature of a joint or organ may be raised several degrees above the normal. When a given tissue is so heated there ensues an active arterial hyperemia.

"The capillaries become dilated, and increased leucocytosis with consequent diapedesis is a physiological result. While the effect is primarily of a local character, the general result is a far-reaching constitutional therapeutic measure. Such capillary dilatation increases the local effect of the intravenous medication, especially that of sodium iodide.

"When these three measures are employed at the same time, each one makes the other more effective; the bath and diathermia call for physiological functions, while the sodium iodide removes that which interferes with organic functions.

"After a short course of this treatment, the 'Chronic' is in a physiological condition for such specific treatment as his case may demand.

"The *anemic* requires the *intravenous use of iron and arsenic*, the *syphilitic*, *mercury* or *some form of arsenic*, the *paralytic* (peripheral) *diathermia* to the spinal segment and nerves involved. When it is of central origin the continuation of the iodides; for the pain sod. salicylate, etc., etc. Every therapeutic measure in chronic ailments especially, must aim to restore lost or perverted function according to

and in harmony with the laws of physiology. This concept seems to be understood by few, misunderstood by many and underestimated by almost everybody. *It is not the agent, but the specific reaction on the part of living cells that must be our constant aim in applied therapeutics.*"

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Electricity as a Diagnostic and Therapeutic Aid in Medicine

By ROBERT P. STURR, M. D., Philadelphia

Extract from American Physician, May, 1923

No field in medicine offers more encouragement for study and application than does electricity. Having risen from the ages of a mystic healing device, and having passed through the hands of every charlatan and "pathy" that has existed and cast itself upon the gullible public, electro-therapy has survived and established itself into modern medicine as one of its firmest foundations.

We are teaching it in our medical schools; every large hospital has its department of electrotherapy, and many large industrial organizations and rehabilitation clinics are adding this to their hospitalization departments. Our Veterans' Bureaus have this department as one of their chief aids in the restoration of the wounded soldier to his former state of health. The war played a great part in bringing physiotherapy to the front. The percentage of permanent disabilities would have been alarming had not this science been utilized in the after treatment of wounds and fractures. * * *

The physician who specializes in electrotherapy should be able to make application and have apparatus for the following currents: Static, Galvanic, Faradic, Sinusoidal, High Frequency and Ultra-violet * * *

The High Frequency current is one of high voltage which is interrupted thousands of times a second, making its voltage practically harmless. From this current we get * * * Electro-coagulation. This method has won its way by merits alone. No physician can help but marvel at the results obtained by Electro-coagulation especially in the destruction and diminution in size of benign and malignant growths.

This is not a Cautery as many think, but a coagulation of the tissue and a rupture of the cellular walls. To show that this is not a Cautery, we can pass the current through paper to tissue beneath and not burn the paper, yet coagulate the tissue. * * * Any part of the body will stand the application of this current, from a growth on the cornea to a massive tumor of the breast, or a tumor within the body such as the bladder.

This method has taken a gigantic place in surgical realms. Daily we are called upon to use this method as an aid to the surgeon.

THE TECHNIC

All parts are cleansed as in a surgical operation, and all precautions of asepsis are taken. Either local or general anesthesia may be used. The tumor mass is encircled, taking in some normal tissue, and then divided into areas and all parts destroyed, curetted and destroyed again, until sound and normal tissue is found.

Bleeding is controlled automatically by the application of the needle to the part, as it seals up the blood vessels. The part is left with a dry black coagulated surface, which remains so in most cases for a week; then this becomes moist and a slough forms with much exudate, which in the average case heals within two or three weeks by granulation, and the average final result is very little scar formation which is very pliable and non-contracting. In the majority of cases, this work is done at one operation, but where the area is too large or some has been left, it is perfectly correct

to repeat the procedure several times. But in malignancy it is best to destroy all affected tissue at once, as too little often acts as a stimulation to any remaining tumor cells.

PRECAUTIONS

How far one should go is a matter of great importance, as the current effect is beyond vision and extends down into the tissue; thus great caution must be used when working around the eye, etc., or in cartilage. I recall a case we did several years ago of a wart on a colored man's ear; we coagulated and removed the wart, but we also removed a nice round area of cartilage under the wart and left a perfect hole, which was an early lesson. Also, when working near a blood vessel, if one go too far the slough might involve it, and secondary hemorrhages result.

When ether is being given, it should always be taken away from the mouth as an explosion may result, but the ether in a patient's breath does not matter even when working in the throat. Secondary hemorrhage is apt to occur when the slough is interfered with or it is torn away too soon, or a blood vessel damaged.

ADVANTAGES OF THIS METHOD

The advantages of this method are many. There is little danger of infection, as the lymph spaces and blood vessels are sealed up, and the high heat kills all organisms. Each blood vessel is sealed while working. There is less danger of metastasis, as blood and lymph channels are sealed. Very little shock is present, as no blood is lost and the patient is not under ether long. Scar tissue, formed as a result of this treatment, does not contract, and therefore we can work around the eyelids without danger of entropion or ectropion following, or we may treat the flexor joint surfaces with no fear of the after-contraction which is usual in surgically treated cases. One hundred per cent cure is gotten from epithelioma of the face above the lower lip.

Those cancers of the prickle-cell type should be followed by radium and X-ray to the glands, and over the coagulated areas.

At the Polyclinic Hospital we are following each electro-coagulation with a two-third erythema dose of X-ray, heavily filtered—no matter what the type of malignancy.

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Diathermy in Surgery

Bianchini extols the advantages of diathermy in certain surgical cases, the absence of hemorrhage, the brief time required for the electro coagulation, in comparison with operative measures, and the ease with which the procedure can be repeated in inoperable cases. The drawbacks are the danger of secondary hemorrhage as the eschar drops off, and the danger of injury of bone, with sequestrum formation. A complete cure was realized in nearly all the twenty cases of tumors, angiomas, keloids or adenoids he describes, but he emphasizes that diathermy is merely an aid to surgery, and cannot take its place.

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A PAGE OF FUN

"Ma, can I go out to play?"
"What, Willie? With those holes in your trousers?"
"Naw, with the kids across the street."

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Teacher: "What is the shape of the earth"?
Willie: "Pop says it's in a helluva shape."

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A class of boys had been studying physiology, and one day the teacher told them to write a composition on "The Spine."
Among the many papers sent in was the following:
"The spine is a bunch of bones that runs up and down the back and holds the ribs. The skull sits on one end, and I sit on the other."

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"Do you play Mah Jongg?"
"No. I haven't touched a piano in years."

Doctor: "You have appendicitis. I must operate."
She: "Oh, Doctor, will the scar show?"
Doctor: "Well, it shouldn't."

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Candid Hostess: "My dear, I should never have known you, from your photographs. Reggie told me you were so pretty."
Genevieve: "No, I'm not pretty, so I have to be nice, and it's such a bore. Did you ever try it?"

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"The boss offered me an interest in the business today."
"He did?"
"Yes. He said that if I didn't take an interest pretty soon he'd fire me."

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MARCH, 1924

THE MAN WHO KILLS TIME GENERALLY FINDS HIMSELF CHIEF MOURNER AT THE FUNERAL.

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Vol. II MARCH, 1921 No. 6

SERVICE

To Others

A certain magnate was once asked to what he most attributed his success. He replied "TO OTHERS." Ponder that it contains deep philosophy. This was long years ago that he noted "To serve is to successfully survive."

"Quality"—An Expression of Service

"TO OTHERS" and "SERVICE" have long been established laws and watch-words throughout the FISCHER organization and have readily found expression through quality and satisfaction of FISCHER equipment universally recognized to be the world's finest product.

Fischer's Magazine

It is your magazine—devoted to your interest and welfare. It is your convention hall—a common meeting ground where all can look for good and wise counsel, discuss subjects of mutual interest and exchange ever welcome ideas. If you have an idea—an instructive talk—send it in, maybe your neighbor can use it. Be of service to him.

The Treatment of Chronic Prostatitis by Electro-Therapy

W. B. CHAPMAN, M. D.
Carthage, Missouri

In the treatment of chronic inflammatory conditions of the prostate, certain factors must be taken into consideration, which, when properly considered, explain the futility of the time-honored methods employed by physicians in the treatment of such cases. It is a well-known fact, that sufferers from chronic prostatitis, usually drifted from one physician to another, then to the chiropractor or divine healer, finally becoming wholly discouraged and giving up to a life of semi-invalidism and patent medicines.

Chronic prostatitis is almost invariably the end-result of a gonorrheal infection. And in the majority of cases, is induced by the injudicious injecting of various remedies by the patient or by unwise instrumentation on the part of the attending physician.

The prostate gland almost encircles the deep urethra at the outlet of the bladder. It contains some thirty or more branched tubulo-alveolar glands, embedded in a mass of muscular tissues. These glands open through their ducts directly into the urethra.

On the introduction of infection into these glands, there is the usual acute inflammatory reaction, which is followed in the chronic stage by the formation of fibrous (scar) tissue. This may cause obliteration or obstruction of the gland ducts, thereby preventing the escape of bacteria and cellular debris, which lie bottled up and may cause trouble for many years. The physician has treated this condition by prostatic massage and deep urethral injections of weak solutions of silver salts with somewhat unsatisfactory results, and, urologists in general, while accepting this form of treatment as standard, frankly admit that few cases of chronic prostatitis leave their offices cured. The mechanical emptying of such glands, as have remained patent, by the prostatic massage is to be commended, but many prominent urologists have long maintained that the injection of antiseptics into the deep urethra merely irritates the urethral mucosa and tends to form more scar tissue, thereby doing more harm than good. These tubulo-alveolar glands are so formed that they effectually prevent the introduction of fluids from without inward, and it is highly improbable that even the minutest quantity of the antiseptic injected finds its way into the glands. I feel that we can discard the deep urethral injection as a procedure that is not only useless but harmful to the patient.

Now taking for granted that the accepted deep urethral injection is of no benefit, what other procedure can we resort to for the treatment of this condition? We know that massage alone will not cure the condition. We likewise know that medicines taken by mouth or hypodermically cannot reach the gland in sufficient concentration to be of much benefit, we must, therefore, search for some agent that will set up a healthy reaction within the gland, and that will not produce injury to adjacent organs and tissues. Fortunately, we now have such an agent in what is commonly termed diathermy. This merely means the application of currents of electricity of low tension and high amperage which produce heat within the deeper parts of the body.

It has been found that gonococci cease to multiply and cannot long exist when subjected to a temperature of 104 degrees Fahrenheit. Sampson claims that it is possible to produce a temperature within the tissues by the use of diathermia to as high as 138 degrees Fahr., without injury to the tissues. This being correct, one can easily see how effective this modality will be in the treatment of an old gonorrheal infection of the prostate. Furthermore, the application of heat within the gland causes a marked hyperemia, with increased vascularity and consequent increased activity of the secretory glands; the increased blood

supply aiding in the absorption of waste products and the secretory glands mechanically washing out accumulated concretions and cellular debris. There is also an attraction of leucocytes to the part with consequent destruction of bacteria. In other words, we simply induce within the old, stagnant, prostate, a healthy reaction which is identical with nature's method of combating infection. We have all of the factors found in a healthy inflammatory reaction except the pain, and diathermia is painless. Neither are we introducing some foreign substance, usually a poisonous mineral salt, into the system, which must be absorbed by the system with more or less damage to all vital organs.

As the prostate gland is easily accessible through the rectum, we have no difficulty in applying one electrode in contact with the gland. For this purpose the prostatic electrode designed and sold by H. G. Fischer & Company of Chicago, is the best. It is hollowed out on one side, can be easily introduced into the rectum, and, when in place, fits snugly over the prostate. The larger, indifferent, electrode should be placed on the abdomen so that its lower edge is about one inch above the symphysis pubis and at least that far from the hip bones. I have found that whenever possible the current will follow the bones in preference to the softer tissues. For this electrode, either wire mesh or block tin should be used. It should be about five inches in diameter and should be well soaped and in perfect contact with the skin. In introducing the prostatic electrode, I find a coating of glycerine quite effective.

While any standard High Frequency apparatus will prove effective for this work, I have been able to obtain the best results with the H. G. Fischer cabinet type of machine. I have used other machines, but with mediocre success. To be successful in this work, it is imperative that one uses a machine which has a capacity of at least three thousand milliamperes. While I never employ more than half that amount in treating, still I get better results with the larger machines than I obtain with the smaller types that must be pushed to capacity.

I have one of the smaller machines, but seldom employ it for diathermia treatments. There seems to be a difference in the rapidity of the oscillations, which probably explains the better results obtained by using the higher type machines.

While I have discussed the good effects produced by the internal heat, I have failed to mention another reaction which I consider of far more importance than the mere production of an internal hyperemia in the diseased area. With the rapid transmission of these electrical charges, there is set up within the tissues a certain amount of chemical action. We have all watched the experiment in the physical laboratory wherein electricity was allowed to flow through a U-tube containing water and saw the liquid transformed into its component gases, oxygen and hydrogen. We have likewise studied the reactions taking place in the wet cell batteries, and later on have seen how complex molecules may be broken up by electricity into simpler compounds or even into the elements. That such a reaction occurs during the transmission of the current through the tissues of the body is quite apparent. We mentioned above that the prostate lies at the outlet of the bladder. As is well known, with inflammatory conditions of the prostate there is more or less obstruction to the out-flow from the bladder with a consequent accumulation of salts and complex protein products along the walls and lower portions of the bladder. This is especially true in old men who have hypertrophied prostates with retention of urine. In the chronic prostate there are also crystals and an accumulation of protein substances, mainly cellular debris, which are affected by the passage of the current. That these substances are broken up into simpler compounds that are more readily absorbed by the blood stream can be demonstrated by the rapid decrease in shreds, etc., in the urine following a few of these treatments.

Another factor. We are also aware that most chemical reactions proceed only in a liquid medium, usually water. We have here the ideal location for chemical reaction, with the prostate and one electrode at the base of the bladder and

the other above; and in giving these treatments, I prefer to have the bladder partially filled as I depend on this chemical exchange of ions to aid as materially in the treatment as the mere production of heat within the gland. What changes of temperature take place within the bladder, I will not state here, but that there are changes, one can readily see. At the end of the treatment, I massage the gland to expel cellular debris and then have the patient void, thereby thoroughly cleansing the urethra, and expelling all foreign material discharged from the gland or stirred up in the bladder by the passage of the current. It would appear that to produce this effect, the galvanic current would prove the most effective, but clinically, I have failed to get better results where it was employed. Where there is retention of urine, I usually alternate treatments with the Morse Wave Generator, placing the electrodes exactly as I do for diathermia, except that I use the regulation Morse pad over the abdomen, giving ten milliamperes for ten minutes with the idea that I ionize the urine within the bladder and break up the complex salts that so quickly accumulate in a condition of this kind. I believe the treatment to be justifiable.

In giving the diathermia treatments, I advance the current slowly to about 1,200 milliamperes, allow it to run for twenty minutes and then turn it off gradually, I then massage the prostate, as mentioned above, and have the patient evacuate the bladder. The presence of material in the urine will act as a check on the progress of the patient. The shreds and cellular debris are usually excessive at first, but clear up as the treatments proceed. I give the treatments every other day in mild cases, and daily, where there is retention of urine in the bladder, washing out the bladder with a weak boric acid solution after the treatments if the patient's condition demands it. I have treated a number of cases of prostatitis by this method, and have yet to treat one that was not rapidly and materially benefitted. I consider this method a distinct advance over the older methods, and believe that it will soon supplant all other procedures.

Treatment of Gonococcal Infection by Diathermy.

—The reason for the selection of diathermy for the treatment of gonococcal infections by E. P. Cumberbach and C. A. Robinson (*British Medical Journal*, July 14, 1923) is because the gonococcus can be destroyed at a temperature which is not high enough to damage the living tissues and because the diathermy raises the temperature of the tissues *en masse*, whereas other methods of applying heat raise the temperature of the superficial parts only. In almost all of the cases of gonococcal arthritis treated the pain was abolished, the swelling was reduced, and the range of motion was increased within a comparatively short period of time. Cases of gonococcal orchitis and epididymitis without exception quickly were relieved of pain and swelling after diathermy, even if the symptoms were severe. Convincing proof of the therapeutic power of diathermy in gonococcal infection was furnished by the disappearance of pain and swelling from joints or scrotum after the application of the treatment to the site of the original infection. Cases of gonococcal arthritis were freed from pain after application of diathermy to the urethra and prostate, or urethra and cervix, without the inclusion of the joints in the treatment. There were also cases in which the application of diathermy to the joints did not procure much relief until the parts originally infected were included in the treatment. Diathermy was also applied to the urethra and cervix uteri in the female in cases in which these parts alone were infected. Such applications were followed by disappearance of the gonococci and cessation or diminution of the discharge. The effectiveness of the treatment was demonstrated by the failure to find gonococci in repeated attempts and the subsidence of arthritis after the application of diathermy, not to the joints but to the parts originally infected. Good results were also obtained in the treatment of prostatitis.

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A *gentleman* has never heard a story before.

□ □ □

That Monthly Physiotherapeutic Meeting!

We know that you will be very glad to hear that we have arranged to have with us on Monday, April 14th

HARRY THOMETZ, M. D., of Chicago, who will perform a Tonsil Operation with Electrocoagulation, and also to give a report on similar cases
10 to 11 A. M.

RAYMOND F. ELMER, M. D., of Chicago, who has successfully operated on over 125 cases of Tonsils with Electrocoagulation, and who will demonstrate the correct technic ——————11 to 12 Noon.

K. T. LAWLESS, M. D., also of Chicago, promises to give a talk on PHYSIOTHERAPEUTIC METHODS AS PRACTISED IN EUROPE, and we hope to have him on the floor at 1:00 P. M.

C. H. FREDERICKSON, M. D., who is connected with the Veterans' Bureau, at Chicago, will be with us from 3 to 4 P. M., and, although he does not tell us specifically just what his subject will be, he is such an experienced Electrotherapeutist that his hour will pass all too quickly.

We Will Have Ample Space for All of You

How to Get Here:

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BY ELEVATED—Take the Humboldt Park "L" to Western Avenue Station, walk one block north to Wabansia Avenue and a short block east to Claremont; or

BY SURFACE CAR—Western Avenue to Wabansia Avenue, and one block east to Claremont.

REMEMBER the DATE AND COME!!!
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Treatment of Myocardial Insufficiency

WILLIAM MARTIN, M. D.
Atlantic City, N. J.
Formerly Pres. Amer. Electrother. Assoc.

It has been the custom for generations to use "heart tonics" when a patient applies to the physician for treatment of "weak heart," which method still holds with the majority. The physician will feel the pulse and sometimes auscult the heart as he feels necessary and as a rule this completes the physical examination. Being expert in this type of case, he feels it unnecessary to do more, so the usual prescription of digitalis or strophantus is given and the case told to return at a suitable time for another prescription.

Recent years have brought the study of the heart and circulation as a necessity in practically all types of cases, since we have such constant evidences of some derangement of a part or all in many chronic diseases. Perhaps Mackenzie has done most toward establishing the weak heart muscle as a factor in so many disturbances of a vital nature, particularly in angina pectoris. A myocardial inefficiency from whatever cause, whether overstrain or toxemias, is recognized to be a menace to longevity, and may be a distinct menace to life itself under stress.

Given a circulatory stasis from a hepatic engorgement or other venous blocking, we will have stress against the right side of the heart, which will show itself as a simple strain with moderate symptoms, but as this increases later we will find an actue dilation develop with its dangers. Take the circulatory stress such as accompanies an active hypertension from any cause, functional or organic, we will find the ventricular walls endangered, but as they seem to have greater compensatory powers, the hypertrophy will be the first effect, but as this stress continues, we will have the evidences of failing compensation and loss of muscle strength.

What can we do for such cases? Shall we use the time honored doses of the heart tonics which must be given in increasing doses with their dangerous accumulative effects, or shall we use the more modern methods which some of us have learned to depend upon? In a practice covering thirty-five years the writer used the former methods during two-thirds of that time, but the remaining third with its more modern therapy has demonstrated the greater value of electrotherapy in these as well as other cases, and it is the modern method that he now wishes to place before the reader.

Granting the cause to be known and as much as possible having been done to eliminate it, we may proceed to treat the actual condition. If back of the myocardial weakness there is a hepatic engorgement, we must remove that by the use of diathermy as has been frequently mentioned in these pages. This will be the first step, which may be followed by diathermy of the heart. This must be done in a safe and sane way, so a more detailed statement will be given. We use two metal electrodes of the usual type approximately 4x5 inches, and when properly wet, they should be applied exactly opposite each other, the one directly over the heart and the other directly back, *not* allowing the current to flow in an oblique direction, but straight through. This is exceedingly important. Taking for granted that you have the proper machine with a good spark gap, the current is turned on with the minimum of current charge. The amount is slowly increased until in about five minutes you have reached the maximum, which should not be more than 300 to 500 ma. in the average case, and in some even lower. This is continued for from fifteen to twenty minutes altogether, counting the slowing up for the completion of the treatment. The ending may be done in about the same manner, although some take less time for this. Playing safe is the best method, so as the treatment is going on, the physician will note any effects upon the circulation and general condition of the patient, so that the treatment can be cut off at a minute's notice, if necessary. As the treat-

ments are given from time to time, somewhat larger doses may be given under the same watchful care, and in time the response will be noticed in a general betterment of the patient.

Vibration of the interspaces of the 7th cervical and 1st dorsal will add to the value of the diathermy, and this may be given for from 1 minute to 1½ minutes, following the other, as its effects upon the heart centre has great value, and the writer always uses it in this manner. The treatment just outlined will usually suffice, if persisted in, and the writer trusts that it may help others as much as it has him in the therapy of these cases.

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Diathermy of Facial Paralysis.—Bordier recommends diathermy in facial paralysis, especially in cases with a slight reaction of degeneration.

□ □ □

In response to an inquiry on the value of Diathermy in connection with fractures, we received the following short but clean-cut article, for which we are very grateful:

In diathermy on fractures, we permit knitting to take place in the normal way, without disturbance for a week or two, until the dressings can be handled without displacing the fragments. There is no rule about this; each case must be judged individually. Then we remove the dressings daily and apply diathermy. Lots of work; but results are worth it. Do not mount electrodes in casts; that is dangerous; ischemia may result from the swelling that the diathermy produces; and there is no way of checking burns. If a plaster cast cannot be made removable, we omit the diathermy.

Cordially,

Miles J. Breuer, M. D.
Lincoln, Neb.

Diathermy in High Blood Pressure and Other Conditions.
F. Howard Humphris, F. R. C. P., Brit. M. J.

Patients with high arterial tension may be treated by diathermy and kept in a state of safety thereby. If the hyperpiesia be recognized early, diathermic treatment will prevent an otherwise inevitable consequence. Even though arterio-sclerosis has become established the process may be stayed and the very serious sequelae avoided.

The effects are two-fold—one is general or constitutional, affecting metabolism, and the other is a local effect upon the vasomotor system. Clinically there ensues a general improvement in the health and the mental outlook, while chemically there results an increase of solids in the urine and in the perspiration. All these effects are perhaps due to the relaxation of the arteries and the better circulation resulting therefrom.

The use of medical diathermy in pneumonia has been proved of value and attention is called to this work in the United States Marine Hospital, which the author says has the best medical service of any country he has visited.

He also believes that medical diathermy is destined to play an important role in the treatment of pulmonary tuberculosis.

In the discussion of this paper Dr. Turrell said that the mode of action of diathermy and how it might apply to the case in hand should always be considered in arriving at a decision as to treatment; for example, in a case of spasmodic dysmenorrhea would relaxation of the spasm relieve the patient and would diathermy accomplish this? In an unresolved pneumonia would an increased blood supply help and would diathermy bring this about? He added that diathermy had been found of great benefit in non-surgical hemorrhoids, in dysmenorrhea and in coccygodynia of the simple congested type. It is useful, he said, for high blood pressure, but a hot bath is of equal value and is more simple

treatment whenever possible. It is useful in rheumatoid arthritis, but must be long continued. All discussants agreed upon its usefulness in relief of gonococcis infections.

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Stricture of the Urethra

BURTON B. GROVER, M. D.

Vacuum tube currents may be of service in removing spasmodic stricture, but I doubt very much their being of service in the organic form. Strictures resulting from gonorrhea may be removed by electrolysis. I have cured over 100 cases by this method.

Technic -First ascertain the size, the location of the stricture, then place a well-soaked pad on the abdomen and connect to the positive pole of a direct continuous current. Connect the negative pole to an olive-shaped urethral electrode, one size larger than the lumen of the stricture; pass the electrode down to the stricture and turn on the current gradually up to from 3 to 5 milliamperes; keep the electrode in contact with the stricture by gentle pressure until it passes, then withdraw the electrode through the stricture and turn off the current gradually to zero before removing the electrode from the urethra. Repeat the treatment every seven days, each time using a larger electrode until the normal calibre of the urethra is restored. There are a few old strictures that will not yield to this treatment. Strictures that have been operated upon are very rebellious and often incurable. For these cases the Neiswanger technic, 1% solution of thiosinamine cataphorically, is often successful.

□ □ □

In King Tut's tomb was found a tablet giving a recipe for the Elixer of Youth.

Hooray!! The recipe is *honey and wax, mixed with fourteen vegetables*. The vegetables, however, are not named in the inscription on the tablet.

Gall Bladder Infection

At the recent annual meeting of the Iowa Radiolological and Physiotherapy Society at Des Moines, Dr. A. B. Adams of Omaha, Nebraska, read a paper on "The Value of Sine Wave Current in Obstruction of the Hepatic Duct".

He reported a case which has passed through the usual operative procedure for drainage without satisfactory result —yet the Morse Wave Generator, by its selective surging action accomplished all that was desired.

Dr. B. B. Grover, of Colorado Springs, Colorado, in the February number of the "Bulletin of The New England Society of Physical Therapeutics" reports several cases successfully treated by the Sine Wave.

The infected Gall Bladder evidently loses its muscular tone necessary to expel into the duodenum its putrifactive contents, and just a little non-irritating mechanical help applied to this regien with the Gall Bladder Nerve Area in the circuit, is apparantly the one thing needed.

Treatment of Gonorrheal Affection by Diathermy.

C. A. Robinson, M. B., D. M. R. E., Brit. M. J.

The gonococcus is less resistant to rises of temperature when in culture than are most pathogenic organisms, though the temperature most suited to its growth in living tissues is not known. Whether the destruction of the germs by diathermy is due to direct or indirect effects of the current the author does not know, but he is sure of the results in gonorrheal infections of the joints, namely, that such cases are amenable to treatment by diathermy. The optimum temperature to secure these effects by diathermy is about 115 degrees F. Results in cervicitis prostatitis, epididymitis, etc., have been very gratifying.

A PAGE OF FUN

There were two negro buck privates discussing the relative values of their buglers during the recent war. You know, negroes are naturally musical, and they can certainly do great things with a bugle.

The first private stated, "Why, nigger, that bugler of mine am so good that when he plays 'Pay Day' it sounds jes 'xactly like the Boston Symphony Orchestra playing 'The Rosary.'"

The second negro replied, "Why, nigger, you aint got no bugler a-tall. When Snowball Jones, dat bugler of mine, wraps his lips roun' dat bugle and plays 'Mess Call,' I looks down at mah beans and says, 'Strawberries, behave; you're kickin' de whipped cream out of de plate.'"

□ □ □

"I don't like your heart action," said the medical examiner. "You've had some trouble with angina pectoris."

"You're partly right doctor," said the applicant, sheepishly, "only that ain't her name."—College Humor.

□ □ □

Little Ada—"Mother, shall I run out and post this letter?"

"No, child, certainly not. It's pouring in torrents, and not fit to turn a dog out of doors. Let your father go."

□ □ □

Biddie: "Suppose you have been in the navy so long you are accustomed to sea legs?"

Middie: "Lady, I wasn't even looking."

Yachtsman: "If this squall continues, I shall heave to."

Passenger (wanly): "What a horrid way to put it."

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On a farm in South Georgia is posted this sign:

"Trespaser's will be persekuted to the full extent of 2 mean mongrel dorgs which ain't never been ovarly soshibil with strangers and 1 dubbel barelt shot-gun which ain't loaded with no sofy pillers. Dam if I ain't tired of this hel raisin on my proputy."

□ □ □

There was a young person named Ned,
Who dined before going to bed
On lobster and ham,
And salad and jam,
And when he awoke he was dead.

GIVE THE MOSQUITO CREDIT—WHEN HE SEES AN OPENING HE DIGS IN.

FISCHER'S MAGAZINE

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355

APRIL, 1924

THE FELLOW WHO LIVES IN AN ATMOSPHERE OF CAN'T AND DOUBT EVENTUALLY SMOTHERS IN IT.

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.

H. G. FISCHER & Co., Inc., 2333-43 Wabansia Ave., Chicago, Ill.

Vol. II APRIL, 1924 No. 6

He Forgot the Service

We met the vice-president of a large importing company on the train recently. An interesting chap, because he's always full of enthusiasm about his business. This time he talked typewriters.

"I can get," he said, "a folding typewriter that goes into the overcoat pocket, weighs three and one-half pounds, and does the highest grade of work you ever saw. By placing my order in Berlin for ten thousand of these I can lay them down in Chicago for $3.85 each. This means I can sell them as low as $15.00, and make a good profit."

A few days after this conversation we saw our friend again. We asked him about the typewriter venture. He smiled ruefully:

"Everything was all right except the *service*," he told us. "We could get the machines at the price, but could make no deal on the repair parts. I almost had given my order when it occurred to me that repairs might be needed occasionally. When I found I couldn't service the machines after they were sold, I knew the deal was off."

Everything was all right, you see—*everything but the service*. And *service* is our greatest asset: service that we have rendered to the thousands of Fischer Equipment operators which will retain their friendship and co-operation for all time, and which is making us many new friends each day.

Diseases of the Blood Vessels

B. B. Grover, M. D., Colorado Springs

ARTERIOSCLEROSIS is a condition characterized by a degenerative process going on in the arterial walls. The process is very slow, usually requiring years in which to develop. Its etiology is more or less obscure, which gives rise to many theories and conjectures. This being true, permits the speaker to advance a theory of his own, which is: All cases of arteriosclerosis not caused by specific infection are primarily due to faulty alimentation. The improper slitting up of the protein molecule sets free or forms a toxic substance which enters the circulation and causes an irritation of the pressor nerve fibers, resulting in narrowing the caliber of the smaller vessels, which entails an increased heart force to overcome the resistance. After a long, continued hypertension, changes take place in the muscular walls of the larger vessels.

Arteriosclerosis is often prominent in the vessels of the brain coronary arteries and the aorta and may be present when it cannot be detected in the vessels of the extremities.

Regardless of all theories of its etiology, it is a clinical fact that hypertension precedes the arterial changes.

TREATMENT- During its development, or the hyperpietic stage, much may be accomplished by autocondensation, combined with proper dietetic and hygienic management; if treatment be instituted during the early stages of hypertension, pathological changes in the larger vessels may be prevented. After the disease is well developed and cardiovascular changes have taken place, there is no cure, but still much may be done to prevent further changes by keeping the arterial tension within the safety zone, and this is accomplished by close observation, and occasional treatment by autocondensation and the adoption of such hygienic and dietetic measures that common sense will suggest. Treat the patient how to live to avoid further changes in his vascular system that comfort may be enjoyed and his life prolonged.

The inroads of the disease can only be estimated by the symptoms present and they are not always a safe guide; therefore, it is always advisable to begin autocondensation treatment with a small dose or low amperage. The first treatment in any case should not exceed 300 m.a., for a period of 10 minutes. There is no advantage in heavy doses at any time.

While preparing this paper I read in some journal a description of technic employed by an operator who should know better. It was about as follows: A tinfoil electrode, 4x8 inches (well soaped for contact), is applied to the nape of the neck. Over this a piece of block tin is applied, attached to one terminal of d'Arsonval by a rheophore, the other terminal being attached to the condenser chair pad, a current of 1,000 to 1,500 ma. is passed for 30 minutes.

While this technic might do very well in early stages of hypertension, if applied to a case of advanced arteriosclerosis that chance taken would favor a coroner's inquest.

Of all conditions treated by autocondensation, I know of none which calls for more caution in its application than in arteriosclerosis.

Let it be remembered that small doses for a long period of time are more effectual than large doses for any period of time. In the treatment of this disease there is no benefit to be derived by pushing the dose to a point causing perspiration, and, furthermore, the excitation of dilatation of the vessels of the brain might lead to a cerebral accident.

Sufferers from this disease are often annoyed by crampy muscles of the extremities and it may be the only symptom suggesting the disease. This condition calls for local diathermy. Be it remembered that its local application often yields constitutional as well as local effects; therefore, it is advisable to place both electrodes on the same aspect of the limb, the object being to heat the superficial tissues and

relax the spasm; subsequent treatments should include the affected muscles with electrodes on opposite sides of the limb with one electrode somewhat nearer the body. If the blood pressure be taken before and after the treatment, a reduction in the systolic pressure in most cases will be observed. Let me leave this thought with you: While the high frequency current is useful in arteriosclerosis, it is a potent agent equally capable of doing harm.

—*Medical Herald.*

The Employment of Some Forms of Electricity in Cardiovascular Diseases

By: Edward C. Titus, M. D., New York

* * * The newer type of High Frequency Apparatus enables us to introduce heat even into the deepest structures, and this too in a definite dose. When Diathermy is applied in sufficient quantity to the heart and greater blood vessels in cases of hypertension, the first effect observed seems to be upon the vasomotor nerves, evidenced by relief of vascular spasm and an equalization of the circulation, with increased elimination of toxic gases and solids from the fluids of the body. This is shown by the emanations from the skin and mucous membranes and by the increase of toxic products found in the urine after each treatment. One can readily appreciate the advantages of this procedure even in cases where extensive changes have occurred in the blood vessels.

* * * Dr. DeKraft says "High Frequency Currents enable us to raise the blood pressure when too low, as well as to lower it when too high. We know that there exist both vasoconstrictor and vasodilator nerves. It appears certain that as the result of a variety of toxic products generated in the human body we may have either an irritation of the vasoconstrictor or of the vasodilator nerve.

"The first effect of the great rapidity of the succeeding groups of oscillations is an intense heating of the surface of the body and of the blood. This, in turn, stimulates the great system of vasomotor nerves resulting in peripheral dilitation of the blood vessels, and, at the same time, in stimulation of the sweat glands. It would appear that the sympathetic nervous system is stimulated in a most profound manner."

The effect of High Frequency Currents on the sympathetic nervous system is well illustrated by observations made by Sherbak. He employed Diathermy by means of two electrodes with a combined area of 57.5 square cm. The upper electrode was applied to the upper cervical vertebrae and the lower to the middle dorsal. From five hundred to seven hundred milliamperes were passed for five or six minutes. In a case of severe headache which accompanied right sided hemiparesis, hemianopsia with atrophic changes in the eye grounds and loss of hearing, twelve to fifteen applications relieved the headache. In another case of cerebral syphilis ten applications relieved the headache, hyperemia and the noises in the ears, and restored the patient to working capacity. It is interesting to note that the Argyll Robertson sign, which was present, disappeared after the treatment.

Equally good results were obtained in fifteen cases of functional disorders accompanied by circulatory disturbances in the head. In the majority of cases, the blood pressure, when above normal, was lowered after each treatment, and remained so after a number of applications. This author cautions against prolonged treatment in view of the marked circulatory changes produced in the cerebral circulation, which, he maintains, may cause anemia of the brain, low blood pressure and excitement. In my experience these symptoms do not occur if the Diathermy is applied directly through the brain. The value of Diathermy in arteriosclerosis of the brain is remarkable and permanent benefit has been noted.

Numerous observations enable us to assert that a normal blood pressure in an otherwise healthy person is never influenced by High Frequency Currents if employed in moderate doses. * * * * * *(Ext. N. Y. Med. Jour.)*

Diathermy in Surgery

Bianchini extols the advantages of diathermy in certain surgical cases, the absence of hemorrhage, the brief time required for the electrocoagulation, in comparison with operative measures, and the ease with which the procedure can be repeated in inoperable cases. The drawbacks are the danger of secondary hemorrhage as the eschar drops off, and the danger of injury of bone, with sequestrum formation. A complete cure was realized in nearly all the twenty cases of tumors, angiomas, keloids or adenoids he describes, but he emphasizes that diathermy is merely an aid to surgery, and cannot take its place.

—Policlinico, Rome. J. A. M. A., 1-19-'24.

Surgical Diathermy in the Treatment of Malignant Disease of the Throat

W. S. Syme, M. D.

During the last two years the author has used diathermy in treating malignancy of the throat and has found that it gives great relief.

More and more, surgical diathermy is being recognized as applicable and preferable to ordinary surgical procedures in malignancies of the mouth and especially in those of the pharynx.

The writer uses a flat plate wrapped in several layers of lint wrung out of saline solution and this is placed under the patient's buttocks. The active pole is in the form of a blunt knife (or a button for small growths), which is plunged into the tissues and the current closed. The blood vessels are coagulated, hence the operation is a bloodless one but when vessels the size of the carotid or the lingual artery are concerned it is better to use a temporary ligature. Complete removal is done at the time of the first operation. If glands are present they are removed later in the usual manner.

The author presented six patients whom he had treated by diathermy and in whom great improvement and relief had been wrought.

The advantages of diathermy are that it is practically bloodless and in disease involving the oropharynx no external operation is required to expose the growth. Absence of shock and pain is also a marked advantage and there is no risk at all of cell implantation as there is in operation.

Glasgow Med. J. April, 1923

Diathermy for Malignant Disease of the Mouth, Pharnyx and Throat

Norman Patterson, M. B., Ch. B.

Seventeen successful cases are reported. The author has been using diathermy in these conditions for more than eight years and the great majority of his cases were in an advanced state of disease. He has experienced no difficulty with severe hemorrhage in any case since he adopted the plan of ligating the main vessel supplying the part to be treated, when extensive treatment is to be given or when the patient has thickened arteries or high blood pressure.

If the primary growth is extensive, deeply rooted and in a locality unfavorable to its destruction, and especially if the secondary deposits in the neck are massive or fixed there is small likelihood of cure. An ulcer or an indurated area in the mouth or pharynx of a patient over middle age is more likely to be malignant than otherwise. Septic ulcer, cyst or gumma is often given as the diagnosis when the real trouble is epithelioma. It should be remembered that buccal or pharyngeal cancer will often give a positive Wassermann. If the glands cannot be dealt with it is of little use to apply diathermy to the primary growth except for palliation. If the area treated approaches or invades the fascial planes of the neck then there should be an interval of two or three

(Cont'd on page 10)

The New "Kolischer" Spark Gap

A Generous Offer

Physicians using the new "Kolischer" gap have been so delighted with its extreme adjustibility, absence of trouble or necessity of cleaning, as well as its ability to withstand indefinite severe usage, that it has entirely superseded the old types.

In spite of the fact that the demand for the old types is entirely extinct, making any allowance we may make for them an entire loss to us, we, as a matter of service and of building additional Fischer Good Will, are prepared to make a generous allowance on your old gap towards the purchase of a new one.

Just return the enclosed postal card, and we will surprise you with a very generous offer. Yes, the "KOLISHER" Gap will fit your present Style "E," "F-O," Type "L" or "Military" Model without any alterations.

Reprints of Fischer Physiotherapeutic Meeting Almost Ready

After seemingly endless delays, we finally have all of the copy of the lectures and clinics given at the Logan Square Masonic Auditorium, October, 1923.

The book will be a great deal more voluminous than we had anticipated, and there is a lot of expense attached to the printing thereof. We have calls for about two hundred copies, but will not send the book to press until we know more definitely just how many are desired, as the cost of each copy will decrease slightly as the quantity is increased. The price will be about $5.00 each.

IF YOU WISH ONE OF THESE COPIES, DOCTOR, IT WILL BE NECESSARY TO SEND YOUR ORDER IN BY RETURN MAIL. You will find it well worth while and the best possible buy at the price asked. Use the enclosed postal for your convenience.

Program for Our Physiotherapeutic Meeting

Monday, May 12, 1924

We will have with us:

D. FRANK KNOTTS, M. D., of Chicago
Physiotherapeutic Case Histories . . 9:00 to 10:00 A. M.

MILES J. BREWER, M. D., Lincoln, Neb.
Medical Diathermy in General Office Practice
10:00 to 11:00

GUSTAV KOLISCHER, M. D., of Chicago
Surgical Diathermy in Malignancies
11:00 to 12:00 Noon

The afternoon from 1.30 until 4:00 P. M. will be spent at the Cook County Hospital, Harrison and Wood Streets, Chicago.

DR. D. KOBAK, Physician-in-charge of the Physiotherapy Department, will exhibit cases, therapeutic measures and the various technics employed in the work of that institution. This is a wonderful opportunity, and we are sure that many of our good friends will take advantage.

How to Get Here:

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weeks between destruction of the primary growth by diathermy and the neck operation, otherwise fatal sepsis may occur. If the surgeon is in doubt whether he can make a thorough clearance from the neck then the gland operation should precede that upon the primary growth.

Brit. M. J., July, 1923

Physiotherapy With Special Reference to Diathermy

L. R. Gannet, M. D.

Electrocoagulation should be used only by the expert surgeon. Desiccation and fulguration are excellent for the removal of warts for carbuncles and polypi, but time and scrupulous cleanliness in the after care are necessary factors in securing results.

A case of Bell's palsy is cited in which the thermolite used for thirty minutes and followed by the ultraviolet for four minutes at a distance of 36 inches for two days in succession was followed by the electrode with a very short spark gap for ten minutes on the second day, until the time was gradually increased to twenty minutes. After the third or fourth treatment the pain ceased and after twelve treatments the patient was cured and has remained so for three months to date.

Deafness and tinnitus aurium are often helped by the static brush discharge, and it is beneficial in cases of sprain and bruise. Patients should not be given too long a treatment the first time, but a treatment of less than 20 minutes' duration will be disappointing in its results. Likewise if the machine is not kept clean, light, dry, well aired and well oiled, results will not be good.

For successful treatment a high frequency outfit producing from 1,000 to 4,000 ma. is necessary, with insulated rheophores and sheet metal for making electrodes.

The effect desired and the skin tolerance of the individual patient will determine the strength of the current to use. Technic is given for application and treating the head, trunk, thigh and upper arm.

Diathermy may be made either sedative or stimulative and if improper technic is used the patient will get only a condenser discharge which will increase rather than diminish the pain. Diathermy is useful in all forms of arthritis and neuritis, bronchitis, pleurisy and pneumonia and in joints and muscles rigid from disuse. It is also an aid in treating catarrh of the gall-bladder. It is not, however, a cure-all and calls for knowledge in its use, e. g., if used in pressure of encapsulated pus the wall will break and metastatic abscess will result. Ultraviolet in rickets and anemia and as a protection against X-ray burns is recommended. For the latter purpose it is used immediately after X-ray treatment and every two or three days in between.

At the present time one of the great obstacles to progress in physiotherapy is the lack of any facilities for learning the principles and practice thereof.

—Med. Woman's Jour. 30:355-358, Dec., 1923

Arthritis Deformans

One of our readers has asked for an opinion regarding the application of Diathermy in cases of Arthritis Deformans. We are indebted to D. Frank Knotts, M. D., of Chicago, for the very concise, pleasant communication which follows:

"I make it an invariable rule to give every patient a thorough examination before starting him or her on diathermy or auto condensation treatment, paying especial attention to elimination and the condition of the heart, kidneys liver and colon.

In arthritis deformans the elimination is always poor. When you liberate an excessive amount of toxins in the body with diathermy you must take the necessary pre-

cautions to eliminate them by the free use of laxatives and the drinking of several glasses of hot water daily, starting the day with two glasses one hour before breakfast.

In this condition diathermy should be given in sedative doses, starting your machine with 100 milliamperes, increasing the current 100 milliamperes at a time until you reach the amount you wish to give, and taking five minutes to bring up your current to this point.

The first treatment should be 300 milliamperes for 20 minutes, then gradually turn off your current. Increase the amount of current slightly with each treatment until you reach 500 to 700 milliamperes, which should not be exceeded in a patient of this type, and the duration of the treatment should not exceed 30 minutes.

I have observed in two patients a tendency to extreme nervousness and collapse after they had taken several diathermy treatments. Both were past 60 years of age, and of the debiliated type with a history of long standing toxemia. They complained of a feeling of profound prostration and had to be kept in bed several days, recovery being slow (in one case, about two weeks).

Hoping that you will find something in this letter that will be helpful to Dr. D....., I am,"

Yours sincerely,

Dr. Frank Knotts.

P. S. I wish to emphasize that during the entire course of treatment with diathermy the kidneys should be watched closely.

□ □ □

Did you read about the lady taking a bath who was nearly asphyxiated by a leaking gas heater? "But," says a newspaper account, "she was saved by the watchfulness of the elevator man."

Cancer of the Oral Cavity, Jaws and Throat

By William L. Clark, M. D., Phila.

Electrothermic methods are peculiarly adapted to the treatment of Cancer within the mouth. Malignant tissue (including bone) occurring in any part of the oral cavity, comprising the lips, buccal surface, tongue, floor of the mouth, alveolus hard palate, antrum, tonsils, pharynx, epiglottis, larynx, and proximal end of the oesophagus, may be destroyed with one electrothermic operation.

It is not necessary to split the cheek surgically to render a growth assessible to treatment, since the exposure secured by the use of a mouth gag, cheek retractors, traction on tongue by means of a suture or tongue forceps, or by the use of an endoscope is sufficient to permit the destruction of a growth. A tongue may be coagulated to the base and then excised without hemorrhage.

In addition to the desiccation or coagulation of tissues and the sealing of blood and lymph channels, the heat penetrates beyond the area totally destroyed and devitalizes malignant cells without impairing the healthy tissue, thus lessening the likelihood of local recurrence or metastasis and conserving the maximal amount of normal tissue.

Blood vessels encountered in the oral cavity are blocked by the current, and secondary hemorrhage rarely occurs. The efficiency of Electrothermic methods is increased in some cases by the judicious use of Operative Surgery, the Roentgen Ray and Radium. * * * *

Two hundred cases were treated by one or both of the Electrothermic methods or in combination with surgery, the Roentgen ray and radium. Surgery was used where the lesions were inaccessible to the current, when it required the incision of healthy tissue to expose the growth, or when it was necessary to excise the glands. In the majority of these cases the Roentgen ray, radium, or both had been used before without success, in which case these agents were not used again. When the Roentgen ray or radium had not been employed before, one or both measures were used in combination with electrothermic methods, when judgment indicated the wisdom of so doing.

—*J.A.M.A., Vol. 71, No. 17.*

□ □ □

WE WISH to express our appreciation to our many friends for the scores of most pleasant letters received, commenting on "Fischer's Magazine." Space permitting, we would like to reprint all of them; here are a few esteemed samples:

"Your Magazine is surely a supply of 'Helpful Hints' from cover to cover, and is greatly appreciated by me."

Geo. E. Black, M. D., Akron Ohio.

"Your Magazine is very interesting, and I enjoy reading it. In fact would miss it very much if it should cease to come."

J. D. Palm, M. D., Brockton, Mass.

"I am receiving Fischer's Magazine regularly, and appreciate it very much." *E. O. Harrold, M. D., Marion, Ind.*

"Your February issue of Fischer's Magazine at hand • • • I am indeed glad to be able to turn to this publication for enlightenment." *Chas. Phillips, M. D., Wake Forest, N. C.*

"Many thanks for your courtesy in sending me your Magazine, which I value." *E. F. Larkin, M. D., Bellingham, Wash.*

"Keep up the good work. Fischer's Magazine certainly fills a long felt want, and is much esteemed by the writer."

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The result of combined knowledge and experience of eminent physicians and our engineering department.

This is something entirely new in sheet electrode material, composed of a body of very flexible alloy with a sheet of *pure tin* on each side. Electrotherapeutists will appreciate the fact that *pure tin* is placed in contact with the skin in preference to the lead generally supplied.

Each order of Sheet Block Tin will be shipped on a wooden roller, and packed in an individual container. This roller is to be retained, and used to remove the kinks and wrinkles from the electrode between treatments.

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Epitome on Blood Pressure

By Burton Baker Grover, M. D.

JUST OFF THE PRESS! This book is invaluable to the physician in general practice, indicating where to look for the **cause** of high blood pressure and pulse rate variations. Price $3.00, postpaid, including the "Key to Diagnosis."

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A PAGE OF FUN

A prominent figure in national life was walking down a street in Washington with his wife.

They passed a lady, very much younger than the wife and an ardent student of cosmetics. The stranger called to the statesman. He excused himself from his wife, stepped some distance away and had quite a long conversation with the young lady.

When he returned, his wife, very indignant, said, "John, who was that *woman?*"

He replied, "Sh! that's *exactly* what *she* wanted to know about *you*."

□

He: "Tough luck! Ten miles from town with a blowout and no jack."

She: "Didn't you bring your check book?" *Whirlwind.*

□ □ □

Lady: "We saw the advertisement about this house being for sale and we've come to see it."

Owner: "Yes, madam; but after reading the ad writer's description of it we have decided not to sell."

—*Passing Show.*

"They call that girl Spearmint."

"Why; is she Wrigley?"

"No, but she's always after meals." *Bison*

He: "We are now coming to a tunnel. Are you not scared?"

She: "Not a bit; take the cigar out of your mouth."

Mother (looking through the magazine): "Darling I see from statistics given here that every third baby born in the world is a Chinese."

Father (fondling his first-born): "Then thank goodness this is our first!"

□

Short-sighted Lady (*in grocery*): "Is that the head cheese over there?"

Salesman: "No, ma'm; that's one of his assistants."

PUT YOUR SOUL INTO YOUR WORK AND YOU PUT YOUR WORK INTO YOUR SOUL.

FISCHER'S MAGAZINE

Fischer
CHICAGO, ILL.

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MAY, 1924

SUCCESS CONSISTS NOT SO MUCH IN SITTING UP AT NIGHT, AS BEING AWAKE IN THE DAYTIME.

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.

H. G. FISCHER & Co., Inc., 2333-43 Wabansia Ave., Chicago, Ill.

Vol. II | MAY, 1924 | No. 7

A Few Pointed Paragraphs

"**Stanford Medical College of California** announces a course in **Physical Therapeutics** to occupy a part of the third year curriculum of undergraduate work. A six months' course is now available at the same University Hospital to any graduate in medicine who has completed at least one year's hospital work in medicine and surgery."

"**Columbia University** is contemplating extensive laboratory equipment and apparatus for their Medical School. The **Harvard School of Medicine** has announced a graduate course in Physiotherapy."

"A course of lectures on **Physical Therapeutics** has been for some years a part of the undergraduate work at the **University of Pennsylvania** and **Jefferson Medical College of Philadelphia.**"

"Instruction in these modalities is being given in **McGill University** in **Canada.** The **Army** is running classes in **Physical Therapeutics** for the proper education of physiotherapy aides for the **Government Hospitals.**"

"The **Lane Medical Library** at San Francisco is arranging a collection of reprints on **Physical Therapeutics** readily available to physicians and medical students, as a stimulation to acquire the best knowledge of this essential adjunct to medical therapeutics."

"A course in **Physical Therapeutics** has been organized in the **Medical School** in the **University of Brussels.**"

"The day when Physiotherapy was looked upon as of doubtful propriety has passed away. It has come 'into its own' as a recognized classic branch of the art of healing."

"WISE MEN PROFIT BY THE HANDWRITING ON THE WALL."

Treatment of Hemorrhoids by Electrolysis

By H. W. SIGMOND, M. D.
Crawfordville, Ind.

At one time there was confusion as to the true nature of this affection. It is now generally recognized as a pathologic condition involving, primarily, the blood vessels about the termination of the bowel. When Bodenhamer employed the term "hemorrhoidal disease," he adopted the most appropriate designation the affection has ever received. The simplest and best clinical definition that we can give and correctly state what we mean would be: "Hemorrhoids or piles are tumors originating in a pathologic condition of the hemorrhoidal blood vessels."

The cause of hemorrhoids are predisposing and exciting. The predisposing causes are: the upright carriage of man. He maintains the erect attitude for about two-thirds of the twenty-four hours. Climate and season are also factors, occurring as it does least frequent in mild or temperate climates, because the torrid climate has a tendency to diarrheal affections and in very cold regions the act of defecation is postponed or unduly hastened, thus leading to constipation and straining. Diet and habit are also causes. Overeating, particularly of rich and highly seasoned foods and the use of alcoholic beverages are conducive to hepatic engorgement, constipation and intestinal toxemia. The middle

period of life is the age most affected. As for sex, they are generally more prevalent in the males, owing to their heavy lifting and hard work.

Exciting causes are constipation and the act of defecation. In constipation the stools always require strong muscular effort to expel the contents in a direction opposite to the return blood current. Straining at stool, purgatives and other drugs, certain articles of diet, pregnancy, parturition and tight lacing are all exciting causes.

In this paper we will use the classification of external and internal hemorrhoids:

By external hemorrhoids we mean all of those situated below or upon the distal side of the muco-cutaneous line. They are either covered by the skin or skin and muco-cutaneous tissue of the anus and are fixed in their position outside of the external sphincter muscle.

Of the external pile we have the varicose pile, the thrombatic pile and the connective tissue pile or tab. For the external piles some have recommended positive galvanism. My experience has not been very satisfactory with it. Under local anesthesia I find that one can remove the clot or cut off the cutaneous tabs without much pain or discomfort. In fact, I can do it quicker surgically than by electrolysis.

Internal hemorrhoids are located above or upon the proximal side of the muco-cutaneous line and invested wholly by mucous membrane. It is dealing with these that our electrical treatment is the treatment of choice.

If the operator has a good galvanic outfit and understands the polarity effect he can get excellent results, does not confine his patient to bed, does not run the chance of an infection and does not expose his patient to the dangers of an anesthetic.

In order to secure the desired results the action of the two poles must ever be borne in mind. Electricity is a dependable

agent, acting in its various forms according to well known laws which must govern its uses. The special properties of each pole are physical and therapeutic. Each is the opposite of the other. Thus at the positive, oxygen is produced; at the negative, hydrogen. The positive produces an acid condition; the negative, an alkaline. Positive is a vaso-constrictor and stops bleeding, while the negative is a vaso-dilator and favors it. The positive is a dryer of tissue and hardens it while the negative produces moisture and softens it. The positive exerts a sedative influence while negative irritates it. The positive coagulates the albumin of the blood while the negative liquifies and disintegrates organized structures.

There are several methods of treating hemorrhoids electrically, and all of them have their advocates. On the other hand, all methods are condemned by those whose experience with them has not been satisfactory. I have tried several methods, but prefer the positive pole, using the needle. The preparation of the needle is as follows: (1) Take an ordinary cambric needle and insulate it by winding silk thread around it from one-fourth inch from the eye to within one-fourth inch of the point. (2) Stick the point of the needle into a cork for about one-eighth of an inch, thus leaving one-eighth of an inch above the cork. (3) Shellac the needle from the upper end of the thread down to the cork, thus leaving the part above the thread unshellacked and uninsulated to fit into the needle holder. The part in the cork is also uninsulated. After the shellac has thoroughly dried, remove the needle from the cork and it is ready for use.

For local anesthesia use quinine and urea hydrochloride or novocain. Inject the pile and wait a few minutes for the anesthesia to take effect. The negative pole is attached to a large moist pad and strapped to the abdomen so as to make and keep good contact, thus assuring one of a steady current, because if the current breaks it is uncomfortable to the patient. Attach the positive pole to the needle and insert the needle in the pile. Insert it into the top of the pile

carrying it up to the thread; thus your uninsulated point is in the pile. The idea of the thread is to make a shoulder to prevent your inserting the needle too deep and by using the thread for a guide you can always know that you are just in deep enough and not beyond where you want to stop. The shellacked insulation is in the wall of the pile and your current then goes into the pile. Use about ten or fifteen milliamperes until the pile gets a decided blanching or ashy appearance. Puncture the pile as near the top as possible, because if you get too close to the base, you get more after-pain.

For about two days you will notice no decided change in your patient, but on about the third day you will see a smile of satisfaction. Always warn your patient that it will be a day or so before you expect much of a change and he will not be disappointed at not getting immediate relief.

Treat each pile separately, using a new needle for each pile, because the positive pole causes the needle to roughen, deteriorate and thus it will break off when used the second time. A good way is to treat one pile at a sitting; however, some treat all of the piles at one time. This I believe causes too much strain on the patient; whereas by treating one pile at a visit he notices no inconvenience.

It is necessary to have an assistant as you need some one to hold the speculum while you guide the needle with one hand and turn on the current with the other.

There are various specula on the market that can be used to bring the pile into view so one can use the instrument to which he is most accustomed.

It must be remembered that this treatment is not a panacea for all rectal troubles, but for all internal piles that are not of the fibrous variety you can assure your patient of a cure.

*Read at the Thirtieth Annual Meeting of the American Electrotherapeutic Association.

Endothermy in the Treatment of Accessible Neoplastic Diseases.— WYETH (*Ann. Surg.*, 1924, 79, 8) says that desiccation was devised and has been so brilliantly developed by Clark of Philadelphia. The desiccation spark is not hot enough to carbonize, but is of sufficient heat to cause rapid dehydration of the tissue, rupturing the cell capsule and converting the area treated into a dry mass. Moreover this method destroys tissue without opening blood or lymph channels and will act as a styptic when there is oozing of blood. It is impossible to over-estimate the importance of the fact that with endothermy the growth is removed as a necrotic mass instead of as a group of viable cells. An important difference between endothermy and all other methods of cauterization by heat is that in endothermy the active electrode is cold when applied. Heat comes from within by the resistance of the tissues to the current. The three most important neoplastic tissues, tuberculosis, benign and malignant neoplasms, and syphilis all yield to this treatment. Cases are cited in full through article.

Fig. 1

Fig. 2

Fig. 3

Fig. 4

Figures 1 and 2—Basal cell epithelomia of nose. Given single treatment by monopolar endothermy under local anaesthesia. Figure 2 shows same case fourteen days later; lesion completely healed.

Figures 3 and 4—Large basal cell epithelomia of left ear, involving cartilage. Figure 4 shows good cosmetic result after treatment by monopolar endothermy, under ½ per cent novocaine.

Endocervicitis

By W. D. CHAPMAN, M. D.

Dear Mr. Fischer:—

I have your inquiry enclosing letter from Dr. W. F. Stanton of Washington, D. C. I will give you the technic for treating the condition very briefly and if the doctor wishes more detail, I will be very glad to furnish it. I will not attempt to discuss the pathology of endocervicitis, as that can be obtained from any text-book and is already understood by Dr. Stanton, but will say that in this, as in all other inflammatory conditions, the acute cases are more amenable to treatment than the chronic, and require less variation in the technic employed. I have experimented widely in the treatment of such conditions, and recommend the following procedure:

Take a Morse Wave vaginal electrode, lubricate it with glycerine and insert within the vagina. The Morse Wave sigmoidal or prostatic electrodes will do, but are not as effective as the larger vaginal electrode. This electrode is attached to the D'Arsonval connection. For the larger indifferent electrode, either block tin or wire mesh should be used. This electrode should be four or five inches in diameter and is placed on the abdomen with its lower edge about one inch above the symphysis pubis and midway between the anterior superior spines of the iliac bones. Both the skin and the electrode should be coated heavily with soap lather to insure a firm contact. This electrode is held in place by applying, first a towel, and then a light weight to prevent its slipping. The current is advanced slowly from 200 to 1000 or even 1200 milliamperes, is allowed to run for at least twenty minutes, and is then turned off gradually. If the smaller sigmoidal or prostatic electrode is used, the patient will complain of being uncomfortable when the current reaches about six hundred milliamperes.

In acute cases, these treatments should be given daily at first, but in chronic and sub-acute cases every other day is sufficient. It takes from three to eight weeks to cure a case of this kind.

Before coming for treatment the patient should take a hot cresol douche allowing the water to flow into the vagina for at least fifteen minutes. This not only cleanses, but has an important therapeutic effect. The uterus is at first engorged with blood, but soon becomes contracted down, much the same as the skin on a person's hands will do when held in water for some time. This helps to dislodge slugs and mucous and prepares the field for the diathermy treatment. This is a very important part of the treatment, and the patient should be instructed to carry it out religiously.

The above technic will prove effective in treating almost all inflammatory affections of the vagina, uterus or adnexa. There are a number of complications, however, that require special procedures. Chief of these are erosions of the cervix, and pus tubes.

1. I treat mild erosions of the cervix with the water-cooled lamp giving five to eight minutes at an eight-inch distance. If granulations or papillomatous tissue is present, it should be removed by fulguration. For this work, properly fitting glass speculae are essential. (See page 79, H. G. Fischer & Company Style "FO" Book of Instructions.)

2. A careful examination should be made for pus tubes. The high frequency current acts as a poultice on these and will flare up an old pyosalpinx that has lain dormant for years. The first symptom of this calamity is pain in the lower abdomen, followed in severe cases by chills, fever, and later peritonitis. I have had one or two emergency operations on account of this, but since coming to understand the condition, I even treat these pus tubes using the technic mentioned above, and have effected numerous cures. If this complication is recognized in time, it can be arrested by

(Cont'd. on page 10)

Program for Our Monthly Physiotherapy Meeting

Tuesday, June 10, 1924

These clinics and lectures that we have been putting on the calendar of late have created so much pleasant and favorable comment that their success and continuance is assured.

We will have here with us on June 10th some especially interesting lecturers, with mighty interesting talks:

L. C. Sammons, M. D., of Shelbyville, Indiana, will deliver an address on:
Physiotherapy in General Office Practice — 10 to 11 A. M.

Gustav Kolischer, M. D., of Chicago
Principles of Medical Diathermy — 11 to 12 Noon

L. A. Bolling, M. D., of LaFayette, Indiana
Physiotherapy in Orthopedics — 1:30 to 2:30 P. M.

Frederick H. Morse, M. D., of Boston, Mass.
The Comparative Value of Galvanism and Diathermy — 2:30 to 3:30 P. M.

Burton B. Grover, M. D., of Colorado Springs, Colo.
Blood Pressure — 3:30 to 4:30 P. M.

DRIVING -- Follow Washington Blvd. west to Oakley Blvd., north on Oakley to Wabansia Ave., and one block west, or

BY ELEVATED --Take the Humboldt Park "L" to Western Avenue Station, walk one block north to Wabansia Avenue and a short block east to Claremont; or

BY SURFACE CAR — Western Avenue to Wabansia Avenue, and one block east to Claremont.

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putting the patient to bed and applying the ice-bag to the lower abdomen. If the pain is severe, it can be controlled by a small dose of morphine.

Dr. Stanton mentioned using the urethral electrode with the thermometer attached. Such an electrode is illustrated and described on pages 112 and 113 of Dr. Sampson's "Physiotherapy Technic." A number of physicians have reported splendid results obtained by introducing high frequency electrodes inside the cervix, but, in my hands, all treatments requiring the introduction of instruments or medicines inside the uterine canal have been failures. I believe that the condition is invariably aggravated by such treatment, and I have abandoned it entirely.

There is a definite reason why such treatments are not successful. One of the fundamental laws of medicine is to place all inflamed parts at rest, and, the slightest irritation to the uterine mucosa will set up uterine contractions, produce an excess of secretion, and, in that way, off-set the very results that we hope to attain. I have lately tried out the bismuth paste injections advocated by Hollender for chronic endocervicitis, but with mediocre results. The introduction of electrodes into the cervical canal is a bad practice and should not be done except in a few rare conditions. In case of pregnancy, it invariably results in an abortion, and almost all inflammatory conditions are aggravated instead of benefited by the treatment.

I have attempted to give in a general way, the technic employed in this clinic in the treatment of endocervicitis. The same technic may also be employed in the treatment of vaginitis, endometritis, and in selected cases of salpingitis. It is impossible, of course, to cover the field entirely in a communication of this kind, but I will be glad to answer any further questions that Dr. Stanton may care to ask, and will favor you with a more elaborate discussion at a later date if you care for it.

Very sincerely,
(Signed) W. B. CHAPMAN, M. D.
Carthage, Mo.

Lloyd B. Foster, M. D., of Walters, Okla., writes at length in "The Medical Herald and Physiotherapist" on the treatment of stricture of the esophagus.

He mentions a case, woman of 28. "Under the fluoroscope, using an opaque meal, after one glass of the material had been taken, there was a slight bulging of the esophagus in the region of the diaphragm with an apparent stricture which was very smooth in outline and I was unable to detect any evidence of external pressure that would produce such a deformity. At this time I was unable to detect any Barium in the stomach, but after about five minutes saw the Barium making its way through the stricture on towards the stomach which was very low. The stomach was found to lie in the pelvis, that is the lesser curvature being slightly below the anterior superior of the ilium and the greater curvature seems to lie at the very lowest point in the pelvis that it could obtain. Patient was given atrophine sulphate hypo, but this did not relax the stricture. Pressure made upwards on the stomach and to our satisfaction found out that by this means the stricture relaxed and the Barium came through.

Diagnosis:

1. Gastro-optosis marked.
2. Functional stricture of the Esophagus.
3. Psycho-neurosis.

Treatment: Put the patient to bed, elevating the foot of the bed about 18 inches, put her on a liquid and semi-solid diet with forced feeding. Gave bromide sodium and tr. belladonnae; kept bowels open with enemas; after four weeks of this treatment I found that while she had not gained any in weight, she had not lost any, but I could see no improvement.

I began to use Diathermy, placing a five-inch electrode on the back at the fifth dorsal and a three-inch electrode over the lower end of the sternum and using between 900 and

1,000 M. A. for 15 to 20 minutes each day. The first treatment was given about 4 P. M. and the patient retained all her supper that evening and has been improving and gaining in weight with only an occasional regurgitation of food, and I believe that Diathermy accomplished more in this case in one week than any other treatment could possibly have done.

Try this same treatment in the next stubborn case of hiccoughs and you will be surprised how quickly it will stop them."

The Rational Treatment of Facial Paralysis

By William Martin, M. D., Atlantic City

* * * If we think of a Neuritis in the terms of an inflammation of a more or less active type, we can see how the inevitable inflammatory exudate or infiltrate must be deposited along the nerve within its sheath and contiguous tissues. If we also consider the bony canal through which the nerve passes and the parts of the head to which it is distributed, we can readily see just what even a small deposit of exudate at just the right spot will do by cutting off the nerve cell nutrition and impulses, and naturally the effects are felt at all or most of the areas of distribution.

One point of selection appears to be at its exit at the stylomastoid foramen, and here a small deposit of exudate will quickly produce the paralysis. As the bony canal does not yield to such deposits, and being so narrow, it would follow also that such infiltrate at any point within this canal would bring about the same effect. The amount of paralysis will largely depend upon the amount of infiltrate, although this cannot be considered as absolute.

Granting that we have an infection, tooth, tonsillar or whatever, we will find a circulatory stasis and nerve irritation

which becomes an inflammation with the tendency to deposits of exudate. This may be slight at first, not sufficient to cause pressure, but let the person be exposed to some sudden chill of the face as a cold draft, and the inflammation becomes at once active and the deposit will be rapidly increased with the sudden appearance of the paralysis. It just needed this "last straw" to bring this on, and naturally it would be presumed that the draft really did the work, when only it was a contributing factor. In some cases of sudden paralysis there may be simply a congestive condition, the result of a mild infection, and the paralysis in this case would be from the usual swelling of the tissues. These are the cases that restore spontaneously without treatment. A recurrence will probably cause the inflammatory type with less tendency toward restoration.

* * * Neglect of early attention may be the cause of contractures that will be difficult to overcome. If possible to institute the treatment the very day of its occurrence, the better off the patient will be. The writer recognizes that this is contrary to the accepted teaching of neurologists the world over from time immemorial, for it has been thought that the "do nothing" treatment was the only thing until at least two weeks had elapsed and then *electricity might be tried.*

Wait until degenerative changes have started and then try to stop them by electricity! Think of it! Allow degeneration to start instead of preventing such an occurrence, and yet prevention is absolutely possible if the proper care is used. Continuous pressure upon a nerve trunk sufficient to cause pressure paralysis will not be overcome by allowing it to continue, but rather the tendency is to increase through additional deposits and become steadily worse. With this increased pressure degeneration must ensue after a time and muscle atrophy be the result. Almost every physician has seen these cases which are the natural result of such teaching. The time has come to call a halt to this.

What is the reason for this lack of proper teaching of modern Electro-therapy? Is it prejudice or is it indifference to anything that does not savor of the old-time thought? Surely we must do everything within our power to relieve and restore suffering humanity—else we are not true physicians. If we are in earnest about giving our best, we must look into modern methods; * * *

What is the rational treatment of this condition? The answer is, early treatment, the earlier the better, by modern methods of application of electrical currents or other physical methods in combination with them. Hyperemia is one of Nature's methods of restoration, therefore we aim to produce it in these early cases, and this can be done by the use of several measures. This activity of the circulation will reduce congestion and absorb the soft exudate, and may be all that will be necessary in light cases.

For this purpose we may use radiant light and heat, the properly hooded high candle power lamp being placed over the face at a distance that will produce active hyperemia without burning, and this treatment may be given two or three times daily for a considerable length of time, this being a matter of judgment.

In some cases of longer standing in which a more accurate hyperemia of a deeper nature may be desired, we have Diathermy, with which most physicians are now familiar. One electrode should be applied to the area covering the exit and main part of the nerve distribution, with the other upon the opposite side of the face, using a moderate amount of current, and watching its effect. Properly used there need be no untoward effects.

(*Extract from The American Physician*)

□ □ □

"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."*

Gustav Kolischer, M. D.

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Doctor, how would you like to have a nice leather or leatherette cover for your collection of "Fischer's Magazines"?

We have had a great number of requests from our readers for just such an article—so many letters in fact that we have decided to ask all of you just what you think of the proposition.

An expensive cover is not necessary; yet any cover used must be good looking, durable and flexible—that is, flexible in that you may add each Magazine as received.

Just supposing we could have a nice cover made up that would not cost over a dollar and a half; would you want one, or not?

Please drop us a line—NOW—Don't procrastinate! Whether you want one of these covers, or not, let us have your opinion, anyway. Thanks.

A New Auto-Condensation Couch Pad

A well made, durable pad of black DuPont Fabrikoid material, measuring 22 inches wide by 62 inches long. The insulating material over the center electrode plate is of oiled silk and wool felt. The entire pad is about $\frac{3}{4}$ inch thick, and is designed for machines of medium voltage D'Arsonval output, as for example the Fischer Type "G" Diathermy unit.

Catalog No. 418—code CADOGG—price..... $30.00

A PAGE OF FUN

Grandmother: "My dear boy, you've grown to be the living image of your father. You have your father's eyes, you have his nose, you have his mouth, and ——"

Jimmy (gloomily): "Yes, and I have his trousers, too!"

□ □ □

"Daughter, doesn't that young man know how to say good night?"

"Oh! I'll say he does!"

□ □ □

"What did he die of, Mrs. Malone?"

"Gangrene, Mrs. Flannigan."

"Well, thank Hivin for the color, Mrs. Malone."

□ □ □

"Pa, where was Babe Ruth born?"

"Couldn't tell you, son."

"Where was Jack Dempsey born?"

"Don't know that, either."

"Pa will you buy me a history of the United States?"

□ □ □

Little Jane: "Mother, if baby was to swallow a goldfish would he be able to swim after one?"

Mother: "Oh, my heavens, no, child! It would kill him!"

Little Jane: "But it didn't."

□ □ □

Affable Clergyman (pinching a little boy's bare leg): "Who's got nice, round chubby legs?"

Little Boy: "Mama."

□ □ □

Professor: "Who was the greatest inventor?"

Student: "An Irishman named Pat Pending."

□ □ □

LUCK MEANS THE HARDSHIPS AND PRIVATIONS WHICH YOU HAVE NOT HESITATED TO ENDURE; THE FAITHFUL HOURS YOU HAVE DEVOTED TO WORK; THE APPOINTMENTS YOU HAVE NEVER FAILED TO KEEP AND THE TRAINS YOU HAVE NEVER FAILED TO CATCH.

FISCHER'S MAGAZINE

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H. G. FISCHER & CO., Inc.

357

JUNE, 1924

SMILE at your troubles today and you will laugh at them tomorrow.

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.

H. G. Fischer & Co., Inc., 2333-43 Wabansia Ave., Chicago, Ill.

Vol. II JUNE, 1924 No. 8

Physical Therapy in the Specialties

A month or two ago we drew attention to the growing tendency in ophthalmology and oto-laryngology to relinquish their character of surgical specialties and to assume their rightful role as specialties of medicine, in which surgery is to be regarded, as it is regarded in relation to medicine at large, as an emergency measure, a sort of *dernier ressort*. Ophthalmologists and oto-laryngologists are nowadays much more concerned with the functional conservation of the organs with which they deal, and with their systemic relationships than with the perfection of operative procedures; and palliative and ameliorative measures bulk much more largely in their treatment than it ever did before in the history of the specialties.

It is interesting and suggestive to note how increasingly important a part physical therapy is playing in this trend. We would not care to go so far as to assert that the recent rapid development of physical therapy is responsible for the departure, but there can be little doubt that the possibilities offered by these modes of treatment—now for the first time being developed in the capable hands of high-grade men—make the departure practicable. Under the older system of medicine the resources of the eye, ear, nose and throat specialist for curative treatment were exceedingly meager

and limited. Physical modalities have already added sensibly to these available resources, and the promise that they hold out for the future is many times greater.

One has but to glance over the contents of our own and other magazines devoted to the interests of ophthalmology and oto-laryngology to observe the steady increase of attention that is being paid to physical modes of therapy. The current literature of the specialties becomes more and more plentifully sprinkled with contributions on the subject, voicing a growing confidence in its clinical value. We would be the last to indulge in or to incite an over-enthusiastic attitude toward new and comparatively little-tried methods. Conservatism must always characterize the scientific man. But we cannot avoid the conviction that, in the hands of the men who are now developing it, physical therapy is destined to play a significant part in eye, ear, nose and throat work, and we shall watch with interest, and further as much as we consistently can, the sober discussion by which its claims must be established or disproved.

E. E. N. and T. Jour.

Physiotherapy in Orthopedics

By LOUIS A. BOLLING, M. D.
LaFayette, Ind.

In briefly sketching certain observations made under two government services—first two years in Orthopedics in the late war, and a year and a half recently in Physiotherapy in Washington and Baltimore for the Veterans Bureau, I am summarizing the work of other men more than my own. Furthermore, I wish to be understood as using both terms in the title in their broader significance.

With little limit to equipment and that, too, under direction of experienced officers, with trained aides, and with fair cooperation from ranking officers and staff in general, conditions were favorable for good work. The weak link being the subject, the patient—the ex-service man. In the first

service his cooperation was good. By the time the second service reached him numerous influences had broken down his morale, and had started him on a career of never-ending complaint, in short a patient for life. We have nothing in civilian practice analogous to this except State Compensation cases. More on this later.

In a broad sense Physiotherapy is ideal for most post operative and hospital cases, and so its range of usefulness here noted, applies in general civilian work.

As a follow-up for impaired muscles and nerves, ill-functioning joints—long confined in casts, splints or dressings, we had recourse to Hydrotherapy, Mechanotherapy, Diathermy, Massage, Bristow Coil, etc., to hasten reparative processes, break up fine, fibrous bands of *adhesions*, and stretch tendon, ligament and muscle back into normal relations.

Results in this immobilization type, without much tissue destruction, were uniformly good. Peripheral Nerve lesions, bone grafts and tendon transplants, when released from fixation and reparative processes, received frequent, gentle massage, active and passive exercises graduated under guidance. Later they were given increasing stimulation through various modalities—the Sine Wave, Bristow Coil, Morse Wave and others. Sensitive stumps from *Neuroma* or abrasions from artificial limb, Arthritis, Neuritis, Myositis and kindred affections fall within the range of Hydrotherapy, Heliotherapy, Diathermy, etc. Septic conditions of bones and soft parts, usually evidenced by discharging sinuses—once sequestrum is excluded by the X-Ray, are favorably met by Heliotherapy, both local and general.

All types of foot strain come within the range of possibilities for relief or improvement with various modalities in Physical Therapy; Diathermy, Whirlpool Bath, Mechanotherapy, Sine Wave, Massage and active exercises.

The temporary Orthopedic expedients for support are secondary to the measures above for restoration of weight

bearing balance, tone to muscle, tendon and ligament, with correction of gait, posture and footwear.

Sacro-iliacs, that nightmare of the physician! Once the X-Ray excludes Hypertrophic arthritis or some anomalous type of vertebral process, we may by combined Physiotherapy and Orthopedic means of support afford relief of symptoms and eventual discarding of support with cure.

This Neurosis was a pitfall in the Veterans Bureau Service. Some of the most rebellious cases were without history of trauma. Every recognized means of treatment and support were tried out on some, often to no avail. Among these were cases drawing liberal compensation and were doubtless frank "Gold brickers."

Scar tissue under ionization, whirlpool bath and massage almost uniformly improved. In using irradiation about scar tissue it is well to be mindful of its low vitality and readiness towards burns. Bursitis, both the simple form and that complicated by calcareous deposits often show brilliant results after Diathermy and graduated Mechanotherapy.

Neurasthenia, Psychasthenia and other unstable nervous conditions associated with any of the foregoing, can often be controlled or improved by judicious use of auto-condensation and "Tonic Hydro."

If we hope to gain a standing in Physiotherapy in referred industrial work, we will get it by two routes only—one corollary to the other. First, that it offers advantages and is superior to other means or methods in time and results, bearing in mind that the paramount consideration in the latter is *function*. Second, that it is profitable to the corporation or party paying to secure it.

If we shorten convalescence from a surgical trauma by two weeks with Physiotherapy and our charges balance or exceed two weeks more of compensation while patient is getting our treatment, I fear we are not destined for a big industrial clinic of referred stuff. The desideratum is to

make it profitable both to ourselves and the other fellow. Then business will come and our work become popularized to the end of being demanded. Can we attain this goal?

Finally, in any well regulated Physiotherapy Clinic today—private or hospital, I would insist on certain gymnasium features for developmental and corrective work. It need not be elaborate in apparatus. A small phonograph with a few good exercises under a little personal guidance may serve as your assistant in this oftentimes. Not all our clientele get out often to the links. Furthermore the stout adult or physical misfit of a youth who most need it recognizes his or her handicap and avoid public games. In our efforts to repair this human machine by simple, physical means let us not forget the lesson of the late war, namely our astounding high per cent of physically unfit. If we elect to help checkmate this evil by incorporating corrective measures as a logical part of our work we may give it a standing with other departments in medicine second only to that of Preventive Medicine and Hygiene.

Progress in Orthopedic Surgery

Diathermy in Acute Poliomyelitis

Picard[1] calls attention to Wickmann's pathologic report concerning the important role which the edema of the meningeal structures plays in the pathologic and anatomic picture of poliomyelitis. Wickmann and Preiser believe that it is to a great extent due to this edema that the ganglion cells are affected and destroyed. The selection of certain parts of the spinal cord, especially the cervical and lumbar enlargement, may thus be explained on mechanical grounds. Preiser has advised performing a laminectomy in such cases, but few surgeons are willing to follow this advice owing to its considerable danger and uncertain therapeutic value. Picard has become convinced of the value of diathermy in reducing this edema. He uses two forms of application, the transverse for local lesions and the longitudinal for diffuse processes. He reports ten cases, seven of them of three or

four weeks' duration, two of seven weeks' and one of four and one-half months'. The author thinks that the immediate improvement setting in after a few treatments can be explained only by the beneficial influence of the diathermia on the pathologic processes going on in the meningeal structures. Picard recommends the method warmly, but with all reservation in regard to its mode of action, and confesses he has no scientific explanation of the apparently beneficial effect.

Bergamini[2] states that during the 1921 epidemic of poliomyelitis at Modena, Bordier's method of treatment was applied on an extensive scale, with encouraging results. This method comprises roentgen-ray exposure and diathermy, applied to the paralyzed limb to stimulate the circulation and initiate repair by electrotherapy. Its purpose is also to combat the later atrophy of the paralyzed muscle. It has been established *that a chilled normal muscle may simulate the reaction of degeneration, the same muscle when warm reacting normally.* This combined treatment was employed as soon as the subacute phenomena has subsided. Sixteen cases are described in detail, the ages of the patients ranging from 5 months to 6 years. Four of the children were practically cured; eight were decidedly improved and two only moderately. The two others failed to complete the course. The benefit seemed in direct ratio to the promptness with which treatment was begun. The best effects were realized when the time that had elapsed since the onset of the paralysis was not more than twenty or thirty days. The roentgenotherapy consisted of three sittings on consecutive days each month, exposing the site of the spinal cord in the lumbar or cervical region, depending on whether the arms or legs were affected. The dose each time was about 6 X units. The diathermy was applied in four or five ten-minute sittings in each series, with a 500 or 600 milliampere current. A month generally sufficed to overcome the hypothermia and bring the limb to an approximately normal temperature. It was then ready for the third part of the treatment, namely, rhythmical galvanization, to the

paralyzed muscles. Twenty daily sittings of from fifteen to twenty minutes were followed by thirty or forty days of rest. The current should not be over 3 or 4 milliamperes, but this electrotherapy should be kept up perseveringly for months and years if necessary. Considerable improvement had been obtained even when the reaction of degeneration was complete. This Bordier method conflicts with the old doctrine of immobilizing the limb, but Bergamini says that its success is unquestionable in poliomyelitis, whatever the patient's age, when applied before lesions have become irreparable.

1 Pickard, H.: Deutsch. med. Wchnschr. **49**:13-15 (Jan. 5) 1923.
2 Bergamini, M.: Arch. de med. d. enf. **26**:521 (Sept.) 1923.

(Ann. of Surg.)

Diathermy in Joint Injuries

HYDE WEST, M. D., F. A. C. S.
Surgeon, C. & N. W., Woodstock, Ill.

In presenting this paper it is not done so much with the idea of bringing forth anything new or original as it is to call the attention of the profession to a most valuable adjunct in the treatment of joint injuries. First let me say that diathermy is a name given to a high frequency current produced by a transformer of high voltage and low amperage and has been recognized for a number of years by physiotherapeutists as a current of much benefit in various diseased conditions, but it has only been recently that the manufacturers have produced machines simple of operation yet powerful enough to stand up under hard usage and free from the objection of sparking either operator or patient. Electrodes also have been produced which greatly aid in the use of this current.

The machine used by the writer is a standard make operating off a 110-volt alternating commercial current, yet I believe a machine operating off a 220-volt current would be superior unless a stabilizer is installed to produce a steady flow of current.

By the use of diathermy heat is transmitted to the affected tissues without burning the cutaneous surface. This is accomplished by placing two electrodes made of zinc, nickel plate or block tin on opposite sides of the part to be treated and properly moulded to fit the surface. The effect produced is a non-inflammatory reaction stimulating the capillaries and lymph vessels, thereby producing absorption of tissue waste, blood clot and even the products of calcification.

The diseased conditions to which this form of treatment is especially adaptable are sprains, fractures near joints where damage is almost always sure to occur to the ligaments and soft structures, the various bursites, Harris, of New York, reporting 80% of cures of subacromial bursitis, many cases with calcareous deposits. Although I have not attempted to make use of this method in the treatment of fractures of long bones, I see no reason why it should not be successfully used as a relief of pain and to produce absorption of exudates, especially where there is much damage to the soft tissues. Care should be taken to see that the part to be treated lies directly between the two electrodes. The average treatment consists of 500 to 1,000 milliamperes for 15 to 20 minutes and given every day for the first few treatments and then two or three times a week.

I herewith report several cases showing its applicability:

Case I. I. B., a woman age 59 years, presented herself complaining of a swelling around right shoulder, associated with moderate pain, tenderness and inability to abduct the arm. She could not remember injuring the part. X-ray revealed a cloudy shadow over acromioclavicular articulation. Six treatments, at first every other day and then every third day, entirely produced mobility.

Case II.—J. B., age 38 years, dislocation of shoulder. Treated by reduction and immobilization for one week. Then passive motion with diathermy every third day. Perfect use of arm in four weeks.

(Continued on page 10)

Program for Our Physiotherapeutic Meeting

Monday, July 14th, 1924

We will have with us:

W. B. CHAPMAN, M. D., of Carthage, Mo.,
"Diathermy in the Treatment of Endometritis and Endocervicitis." 10:00 to 11:00 A. M.

MILES J. BREUER, M. D., of Lincoln, Nebr.,
"Medical Diathermy in General Office Practice". 11:00 to 12 noon.

The afternoon from 1:30 to 4:00 P. M. will again be spent at the Cook County Hospital, Harrison and Wood Streets, Chicago.

D. KOBAK, M. D., will exhibit cases, therapeutic measures and the various technics employed in the work of that institution. This is a wonderful opportunity, and as the last trip to this hospital was so very enjoyable, we hope you will take advantage this time.

How to Get Here:

DRIVING — Follow Washington Blvd. west to Oakley Blvd., north on Oakley to Wabansia Ave., and one block west, or

BY ELEVATED—Take the Humboldt Park "L" to Western Avenue Station, walk one block north to Wabansia Avenue and a short block east to Claremont; or

BY SURFACE CAR — Western Avenue to Wabansia Avenue, and one block east to Claremont.

We have ample space for all of you. Remember the date and come to our Lecture and Demonstrating Rooms at

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Case III.—J. K., age 63 years, carpenter, struck back of elbow joint, developing a severe inflammation of the olecranon bursa. Consulted me one week later. Bursa full, inflamed and very tender. Relief of pressure afforded by aspiration of 4 c.c. of serous fluid. Four treatments given daily reduced the swelling and inflammation, the bursa appearing almost normal. The man then returned to his home in nearby city.

Case IV.—A. P., age 60, farmer; subacromial bursitis of six months' standing. Massage and application of liniments with internal medication having proved of no avail. Six treatments twice weekly reduced pain so man could sleep and was able to dress himself, motility improved but far from normal when he stopped the treatments. This case was severe and should have received daily treatments for first week, then three and two weekly for four to six weeks, but could not afford the time to come daily, and as soon as he was able to do his work again he discontinued coming. In this case no definite injury could be found as a cause. The man had badly infected tonsils which he was advised to have removed.

Conclusion.—Diathermy offers a most useful means of combatting pain and is a wonderful aid in restoring function in disease or injury of joints. It is painless and easy of application. No surgeon or institution treating industrial cases can afford to be without the necessary apparatus for the production of this current.

Reference: Harris—Jour. A. M. A., July 13, 1923.

Diathermia in the Treatment of Sterility

C. A. CASTANO and J. F. M. GOMEZ
La Riforma Medica, August 13, 1923

Women affected with genital hypoplasia always give a history of irregular puberty, either precocious or delayed,

with profuse menstruation, periods of amenorrhea, menstrual pain, mucous leucorrhea, general malaise, headaches, gastric and intestinal disorders, various muscular pains and nervousness. Such girls are hysterical, neuropathic, sometimes hypersensitive, sometimes apathetic, subject to crises of pelvic, of uteroovarian congestion, to insomnia, and so on. A puberty so stormy is the forerunner of a genital life constantly disturbed by congestion epochs and general commotions of a nervous character.

Thorough examination of such girls, destined to be sterile women, discloses various stigmata of heredolues, such as congenital mitroaortitis, vascular and circulatory alterations, and skeletal dystrophy, while inspection of the genitals distinctly reveals the origin of all these changes in maternal syphilis. Recognition and early treatment of this condition of genital hypoplasia consequent of hereditary syphilis makes possible the avoidance of faulty sexual development and of the resulting sterility.

In order to remedy the uterine hypoplasia, the sclerosed ovaries, and the sclerocystic ovaritis produced by hereditary syphilis, antiluetic treatment must therefore be conjoined with local measures, among which diathermia stands first. Diathermia favors development of the infantile uterus by provoking active hyperemia and in this way stimulating the nutrition of the tissues and quickening intracellular chemical reaction. The application is made by means of two large plates of composition metal, serving as the indifferent electrode, upon the back and abdomen and connected together, and in the vagina a metallic stem electrode adapted to the size of the passage. The current strength should begin at one to one and a half amperes and may be raised to two and a half, seldom more, the duration of a sitting being from three to forty-five minutes. The authors usually allow a month's interval after twenty treatments, and these are always suspended during menstruation. They succeeded in all of the ten cases treated in increasing the size of the uterine cavity and in bringing about regular menstruation.

Electro-coagulation as a Destructive Agent

By T. HOWARD PLANK, M. D.
Chicago, Illinois

The high frequency currents are so well known to this body that it would be a waste of time to discuss them. Their use as a destructive agent in confined to the d'Arsonval current for the coagulation of large masses of soft tissue, and for the destruction of bones, and usually for cavities because of its greater adaptability and the ease with which it can be insulated.

Desiccation is confined almost entirely to the Oudin current and it is particularly adaptable to the treatment of small surface lesions where it is important not to leave large scars. This is especially true about the eyes, nose, and face. If desirable the epidermis may be removed without damage to the dermal layer of the integument which means without scarring. It is the current of choice for small growths as warts and moles (especially the brown moles of children), and for senile keratosis and caruncles.

The d'Arsonval current lends itself readily to the treatment of mouth, bladder, rectal, and vaginal diseases because of the ease with which it can be insulated provided the current is properly balanced in frequency, amperage, and voltage. Its use through the cystoscope is both reasonable and desirable for growths not larger than a fifty cent piece. For larger growths, it is best to work through suprapubic opening. For the vaginal and rectal cases, one should work through tipped, tubular glass specula of sufficient diameter and length to reach the growth easily. Aluminum needle applicators are most pliable, do not corrode, and are reasonable in price hence are used for this work.

A good hard rubber handle without metal surface, a light-weight flexible conducting cord, and a low quick-acting foot switch are all absolute necessities.

For mouth, throat, and tongue work, we use the d'Arsonval current with the same general equipment as for rectal and vaginal cases except that a Jennings' mouth gag is used in place of glass specula which with a catgut guy through the tongue, a wooden tongue depressor and the operator's fingers as retractors, complete the necessary outfit for doing thorough work. A good light is always essential. This may be a head-lamp, a reflected light, or direct lighting from a stand lamp. Each has its place and is desirable at times, therefore should be at hand.

For local anesthesia I use procaine or anesthane in 2 per cent solution or butyn in 0.5 to 1 per cent solution. The latter is of instantaneous action hence requires no waiting. For large growths where a general anesthetic is required, I use ¼ grain of morphine and 1 100 grain of hyosine hypodermatically one and one-half hours before operating repeating this same dose three-fourths of an hour later. This is for the average adult in average health. No bad results have come from its use. We have used this anesthetic on patients from sixteen to eighty-two years of age using only one dose in the age extremes and that one-half hour before operating.

For the destruction of soft tissues in the smaller lesions up to the size of a half dollar, we use about 700 milliamperes: for the larger rectal and in vaginal cases from 1,500 to 2,500 milliamperes. Where it is necessary to destroy bone tissue, I first destroy and remove the periosteum then place the point of the needle against the bone using about 1,500 milliamperes for a sufficient length of time to cause the bone to become incandescent. The destroyed bone is not removed at this time but is allowed to separate by natural processes which takes about three months. Soft tissue sloughs are loosened naturally in about two or three weeks.

Reasons for using the high-frequency currents: (1) When used, operations are bloodless. (2) Much less time is required. (3) There is very little shock. (4) There is a minimum of trauma. (5) The danger of metastasis is reduced

to a minimum. (6) Post-operatively there is very little pain, reaction, edema, or toxemia. (7) Resulting scars are soft and pliable. (8) There is perfect control to an area as small as a needle point. (9) Results are better than with cutting operations.

(Am. Jour. Elect. and Rad.)

□ □ □

Physiotherapeutic Lecture Course

By MEL R. WAGGONER, M. D.
Cedar Rapids, Iowa

To be given at

Cincinatti, Ohio — Gibson Hotel
June 23rd to 28th

Personally conducted course — Clinics — Lectures

This course will be repeated at Cleveland, Ohio, the week of July 21st and at Atlantic City, N. J., the week of July 28th

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Watch this space for other lecture announcements

A PAGE OF FUN

A Japanese Life Insurance Salesman at Los Angeles was asked to explain his splendid success.

"I go out into the country in my little car," he said.

"I see Japanese boy in field.

"I say, 'Come here.'

"I say, 'You carry life insurance policy?'

"He say, 'No.'

"I say, 'You damfool, sign here'."

□ □ □

Father: "How is it, young man, that I find you kissing my daughter? How is it, young man?"

The Lizard: "Great! Great!"

□ □ □

A window sign on Market Street, St. Louis -

Dr. Alexander
Treats all diseases
including children.

(Query: is Diathermy indicated?)

□ □ □

She: "What are you thinking about?"

He: "Same thing you are."

She: "Don't you dare move."

A little girl who is just learning to read short words takes great interest in the big letters she sees in the newspapers. The other evening after she had kept her mother awake half the night reading advertisements to her, she knelt down to say her prayers:

"Dear Lord," she lisped, "make me pure." Then she hesitated and went on with added fervor, "Make me absolutely pure like baking powder!"

□ □ □

She: "I can tell a lady by the way she dresses. Can't you?"

He: "I never watched one dress."

PESSIMISTS are always in the rear and never in the van in the march of progress. Your successful men and women are never chronic grumblers.

—Bishop Samuel Fallows

IMPORTANT ANNOUNCEMENT

Watch This Space

for word of the **greatest meeting of Physiotherapeutists of all time!**

Clinics, lectures, demonstrations of technic, by nationally known authorities.

Arrange immediately that dates OCTOBER 20th to 24th inclusive be set aside for this occasion.

More complete announcement, with complete program will follow in subsequent issues of this paper.

FISCHER'S MAGAZINE

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JULY, 1924

Loyalty—

If put to the pinch, an ounce of loyalty is worth a pound of cleverness.

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.

H. G. Fischer & Co., Inc., 2333-43 Wabansia Ave., Chicago, Ill.

Vol. II JULY, 1924 No. 9

The Precision of Physical Therapy

One of the specific reasons why surgery superseded therapeutics and almost elbowed it out of the arena was the superior accuracy of method and clean-cut results of the one as compared with the relatively uncertain, hit-or-miss character of the other. Medicine fired grape-shot from a blunderbuss; surgery performed accurate target-practice with a carefully-sighted rifle. Small wonder that profession and public turned impatiently from the vagueness of the one to the precision of the other.

This specific quality of precision and constancy, both in method and in result, has now passed again into the hands of medicine with the development of physical therapy. The electro-therapist knows, to the fraction of a degree, the strength of his current, and the path it will take; he can gauge its volume to the thousandth of an ampere; he can generate heat to or beyond the physiological limit; and in most instances he can know exactly what his treatment is accomplishing. Where, in other phases of medicine, or in surgery either for that matter, is such calculation possible? Compare the exactness of electro-therapeutic or radio-therapeutic applications to the uncertainty attending the average application of drugs.

This is but one of the qualities which gives to physical therapy the promise of a far-reaching usefulness in the medicine of the future. But it is a most important quality, and one which at once commends physical therapy to the modern

scientific physician, who, above all, demands accuracy and precision in the weapons that he employs.

While it is true that physical therapy, in its various modalities, constitutes, in a sense, a special form of treatment, and its technical development is necessarily in the hands of a specialized group of men, yet it is not, and must not be regarded as, a specialty of medicine in the sense that ophthalmology, or urology, or neurology, or similar branches of practice, are specialties. It is a mode of therapy for use in **every** department of medical practice in which, and to the extent to which, it is applicable. And from all appearances it promises to be applicable more widely and to a larger degree than almost any other mode of therapy.

There is not a physician in the entire profession from the general practitioner to the most exclusive specialist in the most specialized branch of medicine or surgery, but is interested in physical therapy, and will find it an invaluable (and ultimately an indispensable) aid in the cure and relief of his patients. This is, in fact, being universally recognized.

Amer. Journal of Physical Therapy

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Suggestions for the Treatment of Pulmonary Tuberculosis by the Ultra-Violet Ray

W. B. CHAPMAN, M. D., Carthage, Missouri

During the past few months I have been receiving an increasing number of inquiries relative to the use of the actinic or ultra-violet ray in the treatment of pulmonary tuberculosis. Most of these are from physicians who merely want to know how long and intensive the treatments should be, how often repeated, and how long continued. A few even ask what fee to charge. Many of these inquiries seem foolish, but I always answer them to the best of my ability.

During the past fourteen months I have treated some hundred cases of pulmonary tuberculosis in all stages, and must truthfully say that there is no prodecure that will apply in all cases. Some of these patients absorb huge quantities of the ray almost from the beginning, while others burn quite readily and must be built up gradually. Brunettes, as a rule, have a greater tolerance for the ray than blondes. Our rule is to expose the patient about ten minutes, front and back, to the deep therapy lamp before turning on the ultra-violet ray. This dilates the capillaries of the skin, causes the patient to perspire profusely, and, we believe, places the skin in a more receptive condition to receive the ultra-violet treatment. In the summer, when the patient is very warm already, this part of the treatment may be omitted. After using the deep therapy lamp, we dry the skin by a somewhat vigorous rub with a Turkish towel before using the ultra-violet. We believe this also helps by bringing still more blood to the surface.

In using the ultra-violet or actinic ray, we begin by raying the trunk and limbs at a thirty-inch distance, giving one minute for blondes and two for brunettes the first day, and increasing a minute each day until we reach ten minutes. We then decrease the distance of the arc from the patient about two inches each day until we reach fifteen inches. Sampson contends that the treatments should be extended to thirty minutes or more, but, where it is necessary to handle a large number of patients each day this is not practical. Furthermore, I have failed to secure better results from giving the long treatments. I have also read where it was considered an advantage to begin by raying, first the feet, then the legs below the knee, etc., gradually working over the entire body. I consider this technic impractical and without scientific foundation. It merely delays the results that one should hope to obtain. Whenever possible, these treatments should be given daily except in the presence of a a marked skin reaction, when the treatments should be discontinued until the erythema subsides. Patients that are

able to carry on their daily work, usually prefer to come about three times a week, and improve nicely when they come regularly. I have found from one to three months the average time necessary to arrest a case of pulmonary tuberculosis depending on the severity of the case.

Occasionally I receive a communication from some physician who does not feel that he is obtaining the results that he should expect. And on inquiry, I usually find that he is either careless in his technic or neglectful of his patients. These machines are constructed for one purpose only and that is to produce ultra-violet energy, and, beneficial as the ray has proved to be when used properly, it requires more than an inexperienced office girl to treat these patients and obtain satisfactory results. I am sorry to say that I have met a few physicians who think the only use of the machine is to extract a few dollars each day from some poor unfortunate, and turn the treatments over to the office girl with instructions to give them five or ten minutes under the actinic lamp and tell them to come back tomorrow for another treatment. I consider such a procedure criminal on the part of the physician. These patients should be examined daily, the proper medicines prescribed, the diet regulated, and minute instructions given relative to hours of rest, bathing, exercise, clothing, and everything that will tend to a successful issue.

Patients with advanced tuberculosis often become sick and cough and expectorate freely during the treatments. They also emit a disagreeable odor which is diagnostic of the condition and quite pronounced when the patient perspires freely. This odor is kept down only by scrupulous cleanliness on the part of the patient. It is undoubtedly caused by the throwing off of toxic material by the skin.

While I consider the ultra-violet lamp as nearly fool-proof as any modality that we employ in the laboratory, it requires more than merely turning it on for a few minutes and then turning it off to secure satisfactory results. Even where our instructions are explicit, I find that the improvement of the

patient is influenced quite markedly by the training and experience of the technician giving the treatments. Frequently patients drive the eighteen miles that separate our laboratories on days that I am at one or the other because they claim that they improve more rapidly when I give them my personal attention. I also notice that the old patients invariably request the services of the more experienced technicians. As stated above, it requires more than exposing the patients to the ultra-violet ray to obtain satisfactory results, and it is only where the physician studies his cases individually and checks his results carefully that the maximum of success will be acquired. (This same rule will apply to all other branches of medicine.) Ultra-violet energy is not a specific for tuberculosis, but is merely another asset to our armamentarium for carrying on the war against this dread disease. However, I consider it the most valuable contribution of late years, and hope to see it used universally within the near future.

This splendid article will be continued in the September issue.

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Massage and Indirect Diathermy in Fractures

We notice four very splendid paragraphs in the "P. T. Review" on the above, which we take pleasure in reprinting for you, herewith.

"When a bone is broken the surrounding structures are injured also. Rigid fixation by splints or plaster without physiotherapy withholds from these structures the treatment by which repair can be accomplished, and thus we have added to the original injury, adhesions and atrophy of disuse.

"Massage and indirect Diathermy in the first stage of a fracture hastens the absorption of the hemotoma and injured tissue cells, and improves the metabolism of the injured parts. Thus it diminishes the pain and

lessens the muscle contraction and consequently aids in the reduction and retention of the fragments. Fixation and rest diminish the blood supply, hence do not aid in the above.

"Joint motion in a limb where there is a fracture prevents joint stiffness and muscle atrophy. This mobilization does not tend to disturb the alignment of the fragments, unless the conditions are such that an open operation is necessary to restore the fragments to proper position.

"With massage, electrical muscle stimulation and joint motion, muscle atrophy and joint stiffness are prevented and the limb is ready for use when there is union. With complete immobilization there is marked muscle atrophy and joint stiffness and we get the result of a good union but a marked permanent disability from stiff joints."

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Treatment of Hypertrophy of the Prostate by X-Ray and Physiotherapy

By ORREN W. WYATT, M. D.
Manning, Iowa

The author describes symptoms, histories, examination and treatment very clearly, and says in part that the conditions found are so variable that it is difficult to describe the many types that may be found.

Where the involvement extends beyond the prostate, malignancy should be suspected. The differential diagnosis between benign and malignant prostatic disease is usually very easy in the latter stages in which the seminal vesicles, glands, perirectal and other pelvic structures are extensively involved. The early stages are more difficult to diagnose. Marked induration should always make one think of the possibility of cancer, and if this is of stony hardness, a positive diagnosis can usually be made.

In cases where a positive diagnosis cannot be made a roentgen ray cancer dose should be advised, and operative measures considered if it does not respond to the X-ray in a few weeks.

Cases of benign hypertrophy associated with marked chronic prostatitis, and especially with concretions and small calculi, are sometimes difficult to differentiate from cancer, and in such cases the method described above should be followed. The fact that about 20 percent of the cases of prostatic obstruction in elderly men are due to malignant disease, shows the great importance of early diagnosis, which is now seldom made. The presence of vague pains in the pelvis or lower extremities should always lead to an examination of the prostate, and if this were always done, many early cases of carcinoma would be recognized. Sarcoma of the prostate is extremely rare and has been characterized by a very large soft, smooth tumor, which occupied a large part of the pelvis. This should be treated by massive doses of roentgen ray.

Prostatic hypertrophy is nearly always due to the result of chronic infections causing chronic inflammatory changes. In this class of cases apply diathermia to the prostate, either direct or indirect, dose from five hundred to nine hundred milliamperes, time from 10 to 30 minutes, gradually increasing the dose. The prostatic electrode is placed in the rectum against the prostate, the other over the pubis. This is followed by an ionizing dose of Roentgen ray, and massage by the Morse sine wave, or slow sinusoidal, to squeeze out the debris from the prostate and establish better circulation in this organ. The prostatic electrode is placed in the rectum against the prostate, the other over the lumbo-sacral region. Also use the vultra violet ray, both local and general, for its antiseptic and general systemic tonic effect. The rapidity with which the acute symptoms subside often surprises even an experienced user of physical remedies.

Ext. from The Ur. & Cu. Review

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Cedar Rapids, Iowa

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Leather Binders for Fischer's Magazines

As a result of our announcement, in the May issue of this paper, we have had calls for something over a hundred binders for Fischer's Magazine, but will repeat our suggestion for those who missed the first notice.

Doctor, how would you like to have a nice leather or leatherette cover for your collection of "Fischer's Magazines"?

Just supposing we could have a nice cover made up that would not cost over a dollar and a half; would you want one, or not?

Please drop us a line NOW Don't procrastinate! Whether you want one of these covers, or not, let us have your opinion, anyway. Thanks.

A Physiotherapy Treatment for Anemia and Amenorrhea in Young Women

By LEO C. DONNELLY, M. D.
Detroit, Michigan

This paper is based upon the assumption that anemia and amenorrhea are present in young women because growth and development has been too rapid and that the production of blood and tissue has been insufficient to meet the demands of puberty. Such young women may be well supplied with adipose tissue but the underlying tissues are often of poor tone so that they are unfit to compete favorably in school or business.

The treatment consists of; (1) general ultraviolet irradiations with the air cooled lamp and ultraviolet to any point of focal infection directly accessible to the water cooled lamp; (2) diathermia through the epiphyses of both femurs; (3) the use of a slow mechanical wave current over the nerve centers to stimulate the flow of blood and lympth through the uterus, ovaries, and fallopian tubes; (4) hygienic and (5) dietetic and other supportive measures.

The growing girl needs a large supply of calcium phosphorus and iron to produce new bone, connective tissue, blood, etc. It is empirically advisable to administer 0.1 grain thyroid extract plus 0.1 grain parathyroid extract daily, 0.5 gram of calcium carbonate daily, 20 drops of 100 per cent cod liver oil three times weekly and large quantities of milk and leafy vegetables. However, one is not sure that this is absorbed and stabilized by the system unless general ultraviolet irradiations of 2804 to 3022 Angstrom units are used. These stimulate the parathyroid glands which directly or indirectly act in conserving the availability of blood calcium in an ionizable as well as a combined condition thus influencing muscle nerve and other organ metabolism. Increase in blood calcium is demonstrable by blood chemistry examinations; it leads to an increased deposit of calcium in the bone which is demonstrable by the x-ray. An increase in the inorganic phosphate in the blood is shown by laboratory methods. Increased calcium, phosphorus and iron can be demonstrated clinically.

Following a series of ultraviolet irradiations the blood calcium index is raised, which would lead one to deduce that general ultraviolet irradiations would benefit the following diseased conditions in which the blood calcium index is below normal; tuberculosis, precancerous conditions, varicose, gastric, duodenal or any slow healing ulcer, tetany, puerperal eclampsia, chronic rheumatism, hay fever, asthma, hyperesthetic rhinitis, mucous colitis and eczema. Thirteen of the above conditions have been treated by the author. Other clinicians report favorable results from ultraviolet treatment in these conditions.

The spectral band of 2967 Angstrom units is the specific line of greatest value in calcium metabolism, according to Pacini.

First degree ultraviolet erythema doses are given over the front, back and sides of the patient, and are repeated as soon as the resulting erythema begins to fade. A series of these treatments besides increasing the ionizable blood calcium, also increases the amount of hemoglobin and the number of red blood cells, and produces a physiologic skin which is efficient in protecting the patient against quick changes in temperature and exposure to dampness, making it practically impossible for skin infection to exist or occur. This physiologic skin is of great aid in eliminating toxic material from the blood.

Following the general irradiations the patient lies on her face under a therapeutic lamp which is placed at a height that sheds a comfortable warmth. Twenty-two B. & S. gauge sheet lead electrodes are applied over the lower outer portion of both thighs so as to cover the epiphyses of the femurs. A similar electrode connects the inner portion of the thighs. The d'Arsonval high frequency current is al-

lowed to pass through the epiphyses for thirty minutes or more. The intensity is gauged by the toleration of the patient, a comfortable heat is optimum. This diathermy current should not be compared to the current of a small so-called violet ray apparatus. The red and yellow marrow of the long bones produce the red blood cells. Diathermy produces a greatly increased flow of blood and lymph through the epiphysis of the long bone and their temperature is raised. This rise of temperature plus the increased blood supply increases the efficiency of the metabolism of the red and yellow marrow of the long bones and more red blood cells are thrown into the circulation. The results compare favorably with the transfusion of whole blood, thus obviating a surgical operation.

The body of the uterus is supplied by the tenth, eleventh, and twelfth dorsal segments, the cervix by the third and fourth lumbar and sometimes by the first and second sacral segments, the ovary by the tenth, and the fallopian tube by the eleventh, and twelfth dorsal and first lumbar segments (Behan). These nerves come off at the levels of the seventh dorsal to the twelfth dorsal spinous process (Cunningham). Two moist electrodes covered with chamois skin are so placed as to stimulate these nerves and a slow mechanical wave current is given for twenty minutes which causes the uterus and tubes to alternately contract and relax, this greatly increases the flow of blood through them It has been shown many, many times that this method of treatment can develop an infantile uterus to a normal sized uterus. This is especially valuable in overcoming sterility.

The results obtained from this treatment are gratifying both to the patient and the physician and much superior to the results formerly obtained.

Report of a case of anemia, amenorrhea and dysmenorrhea apparently cured by the above methods.

A doctor's daughter, age twenty-two, since the beginning of menstruation at the age of fourteen years would go

without menstruating for periods of three to eleven months. When the periods came they were associated with severe pain, cramps, passing of clots and mental depression. Although she was of good weight, her flesh was soft, she was anemic, easily tired and did not feel as well as she thought she should feel. Two of the treatments outlined above brought about a normal painless menstruation one week following the second treatment, and a second normal period occurred on time the following month; So far she has had four normal menstrual periods, and indications are that they will continue normal. Her general health and mental outlook have shown a corresponding great improvement.

Summary: 1. Stimulation of calcium, phosphorus, iron and endocrine metabolism are induced by ultraviolet rays.

2. Stimulation of red and yellow bone marrow metabolism is effected by diathermy.

3. Stimulation of the uterus, ovaries and tubes is produced by the sinusoidal current.

Those interested in calcium metabolism in relation to glands of internal secretions and ultravoilet would do well to read articles by Halverson, Mohler, Bergeim, Kramer, Tisdall, Brasch, Bach, Hess, Casharis, Howland, Huldschinsky, Pacini, Novak, Hollinder and many others.

While the author is not certain if any one else is using the same combination in treating this type of cases, he is certain that he did not originate any part of the treatment.

Am. Jour. Elect. and Radio.

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High Frequency Treatment of Internal Cicatricial Strictures

Klinische Wochenschrift, September 24, 1923, vol. 2, p. 1796

While surgical intervention in cicatricial strictures of the esophagus, the ileum, the rectum, or the urethra is often brilliantly successful, there are many instances in which it is

inapplicable or is ineffective because of cicatricial formation following the operation. In its stead the author has used the method of applying heat by means of high frequency in esophageal stricture with such satisfactory results that he regards it now as the method of choice in all cases because of its freedom from danger, its bloodlessness, and its ideal result.

The basis of the method is the fact that cicatricial tissue can be vitalized by diathermia. This almost bloodless, hard, unelastic substance can be brought by high frequency to such a condition as to have a free circulation, and consequently to be soft and elastic, a condition not obtainable by any other physical means of applying internal heat. The internal electrode consists of a flexible metal bougie and the indifferent electrode may be so placed externally as to direct the current to the thickest part of the stricture.

Sometimes the result is brilliant. In a child receiving nourishment through a Witzel fistula after twelve days the esophagus becomes so soft and flexible as to permit of swallowing all kinds of food. Results in the author's cases are permanent.

H. BIGARD

Laughs of Other Days

(From Benjamin P. Shillaber's "Partingtonian Patchwork.")

"Diseases is very various," said Mrs. Partington, as she returned from a street-door conversation with Dr. Bolus.

"The doctor tells me that poor old Mrs. Haze has got two buckles on her lungs! It is dreadful to think of, I declare. The diseases is so various! One way we hear of people's dying of hermitage of the lungs; another way, of the brown creatures; here they tell us of the elementary canal being out of order, and there about tonsors of the throat; here we hear of neurology in the head, there of an embargo; one side of us we hear of men being killed by getting a pound of tough beef in the sarcofagus, and there another kills himself by discovering his jocular vein. Things change so that I declare I don't know how to subscribe for any diseases nowadays. New names and new nostrils takes the place of the old, and I might as well throw my old herb-bag away."

Fifteen minutes afterward Isaac had that herb-bag for a target, and broke three panes of glass in the cellar window trying to hit it before the old lady knew what he was about. She hadn't meant exactly what she said.

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A PAGE OF FUN

Englishman (in poker game)—"Well, I'll wager a bally pound on this."
American Darky (holding four aces)—"Ah dunno too much 'bout yo' ol' English money, but I'll bump yo' a couple of tons."

□ □ □

First She: "Your husband has a clever-looking head. I suppose he knows practically everything."
Second She: "Sh-h—he doesn't even suspect anything!"

□ □ □

(From a story)—"She held out her hand and the young man took it and departed."

□ □ □

"Congressman, I want you to find a Government post for my boy."
"Is he intelligent?"
"If he were I shouldn't be worrying you for a Government job. I could use him in my own business."

□ □ □

"Why did you fire young Jones?"
"Spent too much time reading success stories."

"Look, papa, Abie's cold is cured and we still got left a box of cough-drops."
"Oo, vot extravagance. Tell Herman to go out and get his feet wet."

□ □ □

She: "I wonder if you remember me? Years ago you asked me to marry you.'
The Absent-Minded Professor: "Ah, yes, and did you?"

□ □ □

Englishman (watching an inter-collegiate dance): "I say, they get married afterwards, don't they?"

□ □ □

Salesman: "How many cigars do you smoke a day?"
Purchasing Agent: "Oh, any given number."

□ □ □

Big Bill Says:—
I recently read a book on Insanity but stopped in the middle of it because it became entirely too personal.

A man should never be ashamed to say he has been in the wrong, which is but saying in other words that he is wiser today than he was yesterday.

—Pope

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359

AUGUST, 1924

THE question for each man to settle is not what he would do if he had means, time, influence and educational advantages, but what he will do with the things he has.

—Hamilton Wright Mabie

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.

H. G. Fischer & Co., Inc., 2333-43 Wabansia Ave., Chicago, Ill.

Vol. II AUGUST, 1924 No. 9

Modern Alchemy

The alchemists of olden times carried on weird and mysterious experiments in the vain effort to transmute the baser metals into virgin gold. Such experiments came to naught and their dreams have never been realized. But how much more wonderful are our transmutations of today in the fields of human thought and scientific achievements.

Into the minds of men are forever and ever entering impressions and sensations which are changed in form and substance and transmuted into wonderful expressions. Into the mind of a Marconi enters the germ of an idea—with the wireless and the marvelous manifestations of the radio as a result. Can anyone visualize or grasp the sum total of human progress as represented by the names of Pasteur, Roentgen, Morse, Bell, Edison, Watt and the Wright Brothers?

A composer of music influenced by the grandeur of an ocean sunset, a lovely pastoral, or a momentary glimpse into the depths of a human heart, transmutes his impressions into music. The artist or the poet, hearing the music, transmutes its motif into a painting or a poem that contains heart throbs for millions of his fellows.

The alchemists of old, with all their lore, failed because their efforts were made with the baser metals. They failed to realize that in life the finest material with which to work is man—his progress and his welfare. One good deed, a word or a smile, which tends to make man stronger, more responsive to human tenderness and human sympathy, is worth more than the centuries wasted in the effort to change dross into gold.

The Treatment of Pulmonary Tuberculosis by the Ultra-Violet Ray

W. B. CHAPMAN, M. D.
Carthage, Mo.

(Continued from the July issue)

I will report two cases of advanced pulmonary tuberculosis that were treated by the ultra-violet ray, both of which undoubtedly owe their lives to the use of this modality.

E. G. Female, blonde, age 24 years. Development of fifteen-year-old girl. Very weak and anemic. Had undergone three unsuccessful operations for tuberculosis fistulae during the past fifteen months. Examination revealed marked involvement of both apices. The old tuberculosis abscess on her right hip was discharging pus through two fistulous openings and was causing her a great deal of pain. The B. C. was 15,000; R. B. C. 4,000,000 and Hb 40 per cent. Her temperature ranged from 99 to 103 degrees Fahrenheit.

She was taken to the hospital, the tuberculosis fistulae were incised, curetted, swabbed with pure carbolic acid and packed loosely with gauze. At end of six weeks, patient left the hospital with the abscess and tuberculosis fistulae apparently well, and was placed on the usual cod-liver oil, rest, and open air treatment prescribed for sufferers from tuberculosis. At the end of about three months she was back with another fistula that opened into the old scar. This was merely incised and swabbed with iodine. It soon healed. Seven months later I was notified that she was not expected to live. She had been bedfast for six weeks and the old trouble was no better. I had her treated symptomatically until she could be moved here. Examination showed advanced tuberculosis in both lungs. She was very emaciated, and was expectorating profusely with an occasional small hemorrhage. The old fistula had opened and was draining again. She looked like a hopeless case.

Ultra-violet treatments were begun, using the aircooled lamp at a thirty-inch distance. The treatments were given daily, beginning with one minute the first day and increasing the exposure a minute each day until she was receiving ten minutes, front and back, at each treatment. We then maintained the time of exposure constant and shortened the distance one or two inches each day until the burner stood about fifteen inches above the body. Like most of these "T. B." sufferers, she showed extreme tolerance for the ray, and although she quickly became bronzed, she never became sunburned to the point of discomfort. (I explain this extreme tolerance of these patients to the ray as being due to the roughened, dry condition of their skin. The patients that have soft, vascular skins are the ones that burn quickly.) The ultra-violet treatments were preceded in each instance by radiating the body with the deep therapy lamp for twenty minutes over the chest and back. The distance of the lamp from the body was regulated according to the comfort of the patient, but the heat was made intensive enough to produce a flushing of the skin and a profuse perspiration. After four weeks of treatment, the patient ceased to have afternoon temperature, had gained in weight, and the appetite had improved. She continued the treatments for another thirty days, and then was sent home with instructions to return in four weeks for further treatment. On her return she was treated daily for a period of three weeks and then was dismissed clinically well. After six months she writes that she is in perfect health, has gained seventeen pounds since leaving the clinic here and is very grateful for all that we did for her. One point worth mentioning, is the fact that the tuberculous fistula healed rapidly during the ultra-violet treatments and has given her no more trouble.

The other case that I wish to report is almost a parallel to the one just described. With this patient, however, the trouble was entirely pulmonary. When first presented for treatment, he was so sick that he had to be placed in the hospital for several weeks and treated symptomatically

before he could be brought to the clinic for ultra-violet treatments. Briefly, his case presented the following points of interest:

Before Treatment

W. D., boy, aged 15 years. Tall, anemic, hollow-chested. When presented for treatment, he was running a temperature of 104 degrees Fahrenheit, was coughing constantly and expectorating huge quantities of thick, creamy pus. He was too weak to stand and had to be placed in the hospital for several weeks before he could be brought to the clinic here for treatment. X-Ray examination showed almost complete involvement of the right lung with cavitation. There was also some involvement of the left upper. The patient was so toxic that we had difficulty in inducing him to take a little whiskey and other stimulants in sufficient quantity to maintain life. Operation for drainage of the rotten lung was suggested and abandoned as a hopeless procedure. His life was despaired of. At the end of two weeks, however, he began to take more nourishment, and we soon began bringing him to the clinic on warm days for ultra-violet treatments. Within less than a month he was able to make the trip himself on the street-car. His temperature was now normal most of the time, and the expectoration was not nearly so profuse. He continued the treatments for six weeks longer, during which time he gained rapidly in weight and strength. His father then took him to Arizona in the hope that the dry climate would prove more healthful than the changeable climate of

During Treatment

the Mississippi Valley. After four months he writes that the boy has continued to gain and is getting alone nicely. Since going to Arizona, I have continued to instruct them relative to sunshine, diet, rest, and general hygienic measures.

Case after 10 weeks

Sputum examinations of each of the above patients showed tubercle bacilli in abundance at the time of their entrance to the clinic. These decreased rapidly under the ultra-violet treatment.

I mention these cases simply because they illustrate what can be accomplished by the careful and persistent use of the ultra-violet ray. Both cases were considered hopeless by their attending physicians, and with the usual symptomatic treatment, would doubtless have died.

SUMMARY

1. The actinic or ultra-violet ray is not a specific for pulmonary tuberculosis, but is perhaps the most valuable contribution to the treatment of this dread disease that has been produced in recent years.

2. To treat this condition successfully, the physician must study each case separately, prescribe proper drugs, regulate the diet, assign certain hours for rest, instruct regarding exercise and general hygiene, and leave nothing undone that will help to restore the patient to health.

3. The treatments should not be given by an inexperienced technician, but by one that is trained in the use of the apparatus, in hygiene, and in the care of the sick.

4. When carefully and scientifically treated, as outlined above, we may confidently expect a clinical cure even in advanced cases of pulmonary tuberculosis.

Measured Wave Currents

By FREDERICK H. MORSE, M. D.

With an artist or a sculptor, work is successful according to the accuracy with which he reproduces or imitates Nature. Physiologists understand and biologists have accurately demonstrated that Nature provides in the vegetable and animal kingdom nourishment to maintain normal nutrition of the human body.

Enterprising pharmaceutical manipulators, as well as scientific pharmacists, attempt to arrange the seven essential elements that make up the structure of the body so that when one or more elements are deficient they can be supplied. There always has been and always will be discoveries of drugs and combinations of drugs to attempt to supply what may be needed to maintain normal nutrition or restore metabolism either general or local.

The more accurately the indications for determining what the insufficient element may be, the more definite and scientific is the medication that follows. And again, the more accurate the fruit or vegetable containing the necessary ingredient can be adapted to the requirements of the individual, the quicker will be the absorption of that essential element when taken from a vegetable instead of a medicinal source. In other words, from an organic origin versus an inorganic.

If the absorption of essential food ingredients is taken according to Nature's original plan sufficient to maintain and not over-strain the organism, and according to best physiological teachings, regular periods of ingestion, digestion, and absorption and a corresponding period of rest that Nature may recover itself from the possible exertion of the above metabolic process, other things being equal, man should live a hundred years.

Modern life, with its many deviations of maintaining existence all the way from unbalanced diet to ill-fitting garments and footwear, have so distorted the original plan that the old phrase of "three score and ten" too often closes the life performance with a practical cessation of mental and physical activity or actual demise with the majority.

The above summary of undisputable facts does not in any way help the sick, only as a warning that humans, like vegetation, are subject to decay and also that this degenerative process, barring accidents and acute diseases, comes sooner or later in some part of the body where something has happened to give it a start.

The disappointing effect of stimulants, the unreliability of medicine only as a palliative measure, behooves us to think seriously upon all means and methods to prolong existence by preventable measures. Life depends upon normal cell activity, and that cell activity varies greatly in different tissues and organs and should be recognized as the sine qua non in restoring functional activity; that point may be carried further by saying the underlying law of life itself originates and is perpetuated only through rhythmic impulses or vibrations.

The propriety of utilizing in medicine for restoring function by the use of many processes brought before the profession during the last twenty years should, if intelligently appreciated, be a means of prolonging existence and bringing more comfort to suffering individuals than the whole product of the century of discoveries previous.

Thermo-therapy and photo-therapy are dependent upon rays of varying magnitude. The X-ray for therapeutic applications because of its special virtues has deeper penetrating power. High frequency has in its vacuum and non-vacuum electrode applicators a localized form of heat, limited in its usefulness. Diathermy in its usual mode of application may be made to produce an immense amount of heat localized in diseased areas as desired. Static electricity with its most common and valuable form of application to and over diseased areas, under the usual name wave current, has a special virtue of its own because of its ability to liberate

near and distant toxaemia and other form of deleterious material. And last, but from a therapeutic point of view in the writer's opinion, the most important, the direct or commonly called galvanic current.

Wave current as may be applied from the different modalities mentioned may consist of any form of mechanism that will permit heat, light, electricity, or motion to manifest its beneficial action when applied to the body in a way that will synchronize as near as possible the well-known physiological action of that part.

If a galvanic current is applied through a portion of the body with moist surface electrodes, up to the point of easy toleration, in a short space of time the electrons and molecules will so arrange and re-arrange their positions that a current flow is actually established from the positive to the negative pole. If this current, for instance twenty-five milliamperes, is applied suddenly the skin resistance will be so great as to not only cause shock and pain but the contraction at first will actually retard the process of transmission as compared with the same amount of current having been allowed to be turned on gradually.

If the current is suddenly reversed unpleasant shock will follow, muscular spasm will ensue especially about the positive pole, and the process is much interfered with. This is specially demonstrated in the use of the so-called "sinusoidal" current, which is constantly reversing itself, and whether it is fast or slow, weak or strong, the same characteristic property is always present; and the one object to be looked for is frustrated by this current reversal.

The application of a powerful light, the thermo-penetration variety, brought suddenly to the body will have an unsalutary effect compared with its gradual approach. The same applies to high frequency applications, diathermy, static wave current, and even mechanical vibration.

(Cont'd on page 10)

Special Program for Our Monthly Physiotherapeutic Meeting

Monday, September 8, 1924

WM. E. HOWELL, M. D., associate of Dr. Plank, at the American Hospital, Chicago, will explain the "Ease and Effectiveness of Electro-coagulation Operations," *9:30 to 10:15 A.M.*

C. H. FREDERICKSON, M. D., of the Veteran's Bureau will talk on the "Advisability of Physiotherapy in General Practice," *10:15 to 11:00 A.M.*

R. F. ELMER, M. D., will conduct a very interesting clinic on the "Electro-coagulation of Tonsils." We will endeavor to have a number of cases on hand, that the actual work, as well as some results obtained, may be seen. *11:00 to 12 noon.*

The entire afternoon will be devoted to practical demonstrations on various pieces of Electrical apparatus.

How to Get Here:

DRIVING — Follow Washington Blvd. west to Oakley Blvd., north on Oakley to Wabansia Ave., and one block west, or

BY ELEVATED—Take the Humboldt Park "L" to Western Avenue Station, walk one block north to Wabansia Avenue and a short block east to Claremont; or

BY SURFACE CAR — Western Avenue to Wabansia Avenue, and one block east to Claremont.

We have ample space for all of you. Remember the date and come to our Lecture and Demonstrating Rooms at

2335 WABANSIA AVENUE

CHICAGO

We have heard from some physicians that Monday is a rather hard day to get away from the office, and that probably Wednesday or Thursday will be found more suitable. This is a vital matter, and we wish to obtain the opinions of a number that the best day of the month be selected. What is your opinion, doctor???

H. G. FISCHER & CO., Inc., Phone Armitage 0323

The writer has seen in various mechanism the above modalities adapted to surging devices but only in rare instances has the principle been adopted, only as applies to synchronizing the alternating and uni-directional surging methods as applies to the selective motion surging wave generator.

A well-known manufacturer of light treatment devices, along the line of my thoughts and suggestions, is already arranging mechanism for the rhythmic measured application instead of the persistent steady glow as is usually understood.

Let us hope that this surging principle as applied to all Nature's functions, having a period of rest and a period of activity, on defective functional areas with forced activity will be more generally adopted.

462 Boylston Street,
Boston, Massachusetts.

Read before the Central Society of Physical Therapeutists, June 17, 1924.

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X-Ray Treatment of Lesions of the Thyroid Gland.

John G. Williams, M. D., Long Island M. J.

Goiters are classified as (1) simple, cystic, colloidal; (2) adenoma; (3) exophthalmic; (4) malignant. Adenomata with hyperthyroid symptoms, exophthalmics and malignant goiters are suitable for x-ray therapy. Rest and freedom from worry and excitement, together with medical treatment are essential concomitants of x-ray therapy. Cases not completely cured are better surgical risks after this form of treatment. Surgery is indicated in malignant disease of the thyroid whenever complete removal of the growth is possible and if inoperable the case should be treated by x-ray as this will probably relieve the symptoms and may possibly cure the disease. If symptoms persist other surgery than x-ray therapy should be used.

Ultra-Violet Ray Therapy in Dermatology

JACK W. JONES
Southern, M. J., 16: 423

In dermatology the therapeutic value of the ultraviolet rays depends upon the bacteriologic and stimulative action. The action of the rays upon the skin is manifested symptomatically by an erythema of the part exposed. Thus, a stimulative erythema, a regenerative erythema or a destructive erythema can be obtained, depending upon the length of exposure. Scalp conditions, particularly seborrheic dermatitis or alopecia premature from seborrhea, alopecia areata and psoriasis, seems to react very favorably to ultraviolet rays. In lupus erythematosus, particularly of the chronic discoid type, the ultraviolet rays give promising results, but here again, as in alopecia areata, the primary focus (whether tuberculous or otherwise) must receive attention. In the treatment of adenom asebaceum the rays are about the only agent upon which much dependence can be placed, and the same might be said in regard to the chronic sluggish ulceration caused by trauma or infection, in which epithelium seemingly refuses to grow. The literature contains reports of successful results following ultraviolet-ray treatment of nevus flammens and parapsoriasis.

□ □ □

Suction Tonsillectomy

For those of our readers who have apparatus with Suction attachment we refer to a very interesting article on suction as aid to tonsillectomy by J. E. Braunstein, M. D. in the Eye, Ear, Nose and Throat Monthly for March, 1924. The various instruments illustrated are best used in connection with Fischer Cabinets equipped with the Motor with Vacuum and Pressure Pump. We will be glad to tell those who may be interested more about this technic.

Quartz Light Therapy

By LEO C. DONNELLY, M. D.
607 Kresge Building, Detroit, Michigan

Generally speaking, an infected, ingrown nail should be completely cured in four or five days when promptly treated by surgical measures and the proper use of ultra violet rays, both before and after such procedure.

Actual treatment begins by the removal of scabs and pus, followed by a first-degree reaction procured by a treatment of short duration with the Quartz lamp. This sterilizes surrounding tissue, causing at the same time a flushing of superficial blood-vessels, thereby warding off the spread of infection.

We then use a third-degree reaction on the area of infection where the nail is to be removed, with consequent sterilization of the field of operation and a material lessening of pain sensibility as well. After removal of the usual V-shaped portion of nail and infected tissue, a further second-degree Ultra Violet Ray reaction is given to the resulting wound, inducing haemotasis, insuring prompt healing without infection, and thereby giving much quicker and more satisfactory results than otherwise could be anticipated.

* * *

Where infection is evidenced between the toes, often at the base of soft corns, there, again, Quartz lamp treatment is indicated in order to secure the most favorable results. The attendant abscess is generally deeply seated - dorsum of foot swollen and sensitive.

The entire foot and lower leg is given a first-degree Ultra Violet Ray reaction with the Alpine Sun Lamp before making an incision into the abscess. After the incision is made and proper drainage secured, the Kromayer lamp is used, passing a suitable Quartz applicator into the incised opening, with the purpose of sterilizing all portions of the abscess base. Following this procedure, markedly reparative changes are manifest.

The Exhibit of H. G. Fischer & Co., Inc.

The Exhibit of Physiotherapeutic Apparatus at the American Medical Association Convention, on the Municipal Pier, Chicago, June 9th to 14th, 1924.

□ □ □

Electric Coagulation or Endothermy. We have for years used fulguration in attacking papillomata through our open air cystoscope with the patient in the knee-chest posture, but have always found that the chief difficulty was that we were able to make so little impression on a massive tumor at one sitting, even though we attacked the pedicle. Fulguration seems to yield its best results in sparking out superficial flat areas of disease where the papillary tumor is disseminated. In papillary carcinomata with infiltration, it is of course worse than useless. It is not our desire, however, to deprecate an agent which in a limited field has proven such an advance over previous ineffective methods.

The Fischer "Diathermo Indicator"

It is with extreme pleasure that we announce the perfection of a method whereby physicians may know exactly at what degree of temperature they are treating, when employing Diathermy.

Suggestions and requests have come in steadily, in reference to some device that would indicate with extreme exactness just what heat was being produced within the tissues, and so much importance was placed back of this apparent necessity, that we set our engineers to the task without delay.

The obstacles to be overcome were numerous; we were not to employ neither mercury nor glass; the instrument must be small enough that it could be passed through a cystoscope; it must be very sensitive, and record small temperature changes immediately; and above all it was absolutely necessary that the instrument be used in rooms of varying temperatures and still retain a reading that could be pronounced standard. And, furthermore the readings must not be affected in any way by any voltage or volume of High Frequency Current which may be applied to the patient.

We have produced a little instrument which is simplicity in the extreme, conforms to all the requirements, and combines exactness beyond our fondest expectations. The sensitive unit is enclosed in a silver tube of ⅛ inch diameter, and but the slightest change in warmth immediately causes a deflection of the galvanometer needle. By an ingenious method of combining a compensating lead wire, and by the adoption of the well known Wheatstone Zero Method, the dial of the instrument can be set at the desired temperature, and the physician, by

increasing or decreasing his Diathermy Current merely causes the needle to reach the Zero point—indicating that he has reached exactly the degree of heat desired.

Physicians are fast learning that they can reproduce results provided they can duplicate the amount of given heat for a certain length of time, and with this new instrument an assured fact we look forward to tremendous strides in Diathermy accomplishments in the near future. The little instrument, which we are calling the Fischer "Diathermo Indicator," and its use will prove an innovation in the art of applying Diathermy, and the problem is now passed directly back to the physician—it will be up to him to register his readings, and to prove beyond a shadow of doubt that duplication of results is easily possible.

Some of these instruments are already out in the field, and shortly many more will be placed in the hands of well known authorities throughout the country, and Fischer's Magazine will keep you in touch with progress made.

The Fischer "Diathermo Indicator," complete with two units will list at $100.00. Deliveries in about 30 days.

Physiotherapeutic Lecture Course

By MEL R. WAGGONER, M. D.
Cedar Rapids, Iowa

To be given at

DETROIT, MICHIGAN, HOTEL WOLVERINE

August 25th to 30th

PERSONALLY CONDUCTED COURSES—CLINICS—LECTURES

For Details, Fee, etc., write

MEL R. WAGGONER, M.D., Cedar Rapids, Iowa

Courses will also be given subsequently at Milwaukee, Wis., Chicago, Ill., and New York, N. Y.

A PAGE OF FUN

Magistrate: "Can't this case be settled out of court?"
Mulligan: "Sure, sure; that's what we were trying to do, your honor, when the police interfered with us."

□ □ □

"Did Charles kiss you last night, Penelope?" asked a Boston mother.

"There was a slight labial juxtaposition as Charles departed, mother dear; but I assure you it was only momentary and therefore innocuous."

□ □ □

They were motoring. The talk ran to a discussion on vaccination. He thought vaccination on the arm the proper thing; on the other hand, she stated most emphatically that she didn't let the doctor vaccinate her where the scar would always show. To prove his contention, he rolled up his sleeve and showed that the scar had almost become invisible.

She then inquired: "Would you like to see where I was vaccinated?"

He eagerly replied: "Yes, indeed."

"Well," said she, "keep your eyes open; we'll drive by there pretty soon."

□ □ □

She: "You know, dear, our guild has been trying to think of a way to help that poor Mrs. Smith, who is too proud to accept money?"

He: "Yes, darling."

She: "Well, today I thought of a lovely plan, and I mailed a check right out to her."

He: "How did you manage it?"

She: "Why, I simply wrote the poor woman a check and signed it 'Anonymous'."

□ □ □

Doctor: "And how is Mr. Sikes this morning? Has he had any lucid intervals?"

Mrs. Sikes: "No, doctor, he hasn't had a thing but what you ordered."

□ □ □

Student: "And poor Harry was killed by a revolving crane."

Englishwoman: "My word! What fierce birds you have in America."

IT is the quiet worker that succeeds. No one can do his best, or even do well, in the midst of badinage or worry or nagging. Therefore, if you work, work as cheerily as you can. If you do not work, do not put even a straw in the way of others. There are rocks and pebbles and holes and plenty of obstructions. It is the pleasant word, the hearty word, that helps.

See Pages
8 and 9

for further announcement
of the

Annual Fall
Physiotherapeutic
Convention

at

Chicago

FISCHER'S MAGAZINE

SEPTEMBER, 1924

BE PLEASANT.

YOU HAVE NOT FULFILLED EVERY DUTY UNLESS YOU HAVE FULFILLED THAT OF BEING PLEASANT.

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.

H. G. Fischer & Co., Inc., 2333-43 Wabansia Ave., Chicago, Ill.

Vol. II SEPTEMBER, 1924 No. 10

OUR MONTHLY "MONDAY" PHYSIOTHERAPY MEETING has been CANCELLED for the month of OCTOBER because of the close proximity of our **ANNUAL FALL CONVENTION**—the dates of which have been definitely set for the week of October 20th to 24th, 1924, and the place, the Logan Square Masonic Temple, at Logan Square, Chicago. **See page 8 and 9 this issue for further details.**

Just a brief comment on our meeting of Monday, August 11th—we had only one clinician, Mel R. Waggoner, M. D., of Cedar Rapids, Iowa—and over a hundred and fifty physicians to entertain—but our speaker of the day proved himself more than equal to the task!

YOU probably attended; but for those who did not have the opportunity, we must say that splendid enthusiasm was constantly in evidence. There were 32 patients to handle—Dr. Waggoner treated every one, and on direct questioning most of the patients were quite agreed that the methods employed were both painless and effective. Dr. Waggoner will be invited to address our audience again in the near future; watch for announcements in this publication.

(All of the correspondence relative to Physiotherapeutic subjects is not of the most agreeable nature, as is evidenced by the two following letters. The first is copy of letter received by one of our distributors, and the second is their response thereto. The writer of the first letter is very skeptical, but he is just the type who, when he has a more thorough understanding of electricity in medicine becomes a very ardent booster.) THE EDITOR

————————————————————.

July 18, 1924.

————————, ————.

Gentlemen:

Answering your letter of the 10th inst., allow me to remark that the medical literature giving reports of successful treatments with Diathermy are doubtless numerous and interesting, but do you ever get the other kind? While writing these letters do you ever pause to think of the wonders of Diathermy? E. G. "In cancerous conditions and vascular tumors it seals the blood and lymph channels" and yet it dilates those same vessels in Arteriosclerosis? What a wonderful machine, or in other words "Ain't Nature Wonderful?"

Yes, I had a patient on whom the great Dr. ———————— operated for many long weeks in the ———————— Hospital. The patient had Gangrene from Arteriosclerosis and was doubly assured by the celebrated Dr. ———————— that the leg would be saved. Well it was saved until my patient nearly died from exhaustion, but common sense finally prevailed and the leg was amputated.

No this isn't all. The other leg was treated as a prophylaxis against a similar fate and on his return to ———————— he was treated several weeks more with Diathermy. This was about a year ago and at present the patient is suffering from all the symptoms of on-coming "Gangrene" and looks forward to another amputated leg before many months.

Yes, I agree with you. It has (in the hands of unscrupulous men) vast financial possibilities. I have seen this fact demonstrated to my entire satisfaction.

Well I guess this will be all for today. This letter is really a "Testimonial," but of course you needn't feel compelled to publish it unless you really feel that you must. Electricity is possibly of some use in selected cases, but if there is anything under Heaven "faked" as much, then I haven't heard of it.

Very truly yours,

————————————————————, M.D.

Dr. ————————————————.

————————————————————.

July 26th, 1924.

Dear Doctor ————————:

Replying to your somewhat effusive commentary on Diathermy, which no doubt was prompted by the fact that one of our circular letters came to your office, permit me to say that I agree with you, "Nature is wonderful;" but strange and baffling as she may seem, she is no less interesting than some of her products, E. G. some physicians I have known. While for many years our sole business has been dealing with doctors, yet every now and then we see new and strange things happening. For instance a physician who is presumed to be an educated man, expressing opinions concerning things with which he has had no experience or knows nothing about, as freely as the uneducated bigot who sits whittling on a soap box in a cross road country store down in the Ozarks, with an opinion for every question that reaches his ears, no matter what the nature of the question may be—political, sociological, scientific or what not, again we remark, "Ain't Nature wonderful."

Our old friend "Bill" Shakespeare said many years ago that "a little learning is a dangerous thing," and this we see exemplified over and over again. And it would seem that some of our doctors at times, feeling the urge of expounding some mighty truths concerning Diathermy, testify to the correctness of "Old Bill's" statement. For it is a fact, Doctor, if the statements contained in your letter are to be taken as an index of your knowledge of Diathermy you would pass with a grade of zero plus, because you know how to spell the word and that is all.

No one recognizes the paucity of knowledge among the rank and file of the medical profession with reference to some of these new modalities better than we, yet some of the biggest men in the profession have taken up this line of work and are beginning to write books and reporting results through the medium of the leading medical journals. So, Doctor, if you feel constrained to comment further on some of these newer phases of medicine, permit me to suggest the perusal of some of the newer medical books, or any of the leading medical journals.

For your information, I may say that a school will be conducted in ————————, one day each month, starting in September, for the benefit of physicians interested in this kind of work. If you are really interested we shall be glad to advise you further in this regard.

Further, let me say we always welcome criticism, knowing that it will not all be favorable or constructive, yet if it comes from someone with experience, or one who knows, it is gratefully received.

If we can be of help in furthering your knowledge along these lines, we stand ready to serve you.

Sincerely,

————————————————————

Electro-Coagulation of Hemorrhoids

J. B. H. Waring, in the Virginia Medical Monthly, presents the following treatment of hemorrhoids:

Operation is performed under local anesthesia. About three-quarters of an hour prior to operation, morphin sulphate, grains 1/4 to 1/3, is given by mouth, together with atropine sulphate, grains 1/100, and strychnin sulphate, grains 1/30. This may be given by hypo if desired.

Bowels should have been emptied prior to operation, preferably by a simple enema or glycerin suppository. Operative field is now cleansed with mild soap and water, followed by irrigation with a weak potassium permanganate solution, say 1 to 3,000 or 1 to 5,000; this largely eliminates fecal odor for the time being, and renders field more satisfactory to work in from an olfactory standpoint anyway.

An appropriate spot of rectal mucosa is swabbed with 10 per cent cocain and through this preliminarily anesthetized area, the entire operative field is successively anesthetized in a practically painless method by successive injections of 1 or 2 per cent novocain solution. If a glass suction cup of sufficient size to cover the anus is now applied, internal piles will be drawn down and temporarily converted into interno-external piles; likewise, all pile masses will be congested up and made prominent to inspection, so that the operator is not so likely to miss a budding pile or two, and have his patient return in six months after operation with the lament that his piles are coming back on him, etc. Individual pile masses may now be taken up one by one and held in the grasp of an appropriate sized suction tube of glass; or they may be drawn out with seizing forceps, and then held across their base with a regular pile clamp, merely for convenience of attack. The suction tube holds the hemorrhoid out prominently, and serves the purpose of a steadying forceps, without the crushing and lacerating effect of a pile clamp.

An electro-coagulation needle in an insulated handle is now brought into play, using the bipolar d'Arsonval high-frequency electric current directly on the pile mass. The indifferent electrode, usually about a 5 or 6 inch plate of diathermy metal, is strapped over one leg or over the shoulder or abdomen, care being taken to have good contact by means of a cloth wrung out of saline, damp felt or special electrode metal with soapsuds for better contact or patient may grasp the regular auto-condensation handle instead.

The electro-coagulation needle in an insulated handle is now connected by flexible insulated wiring to active pole, and the needle carried through base of hemorrhoid under edges of suction tube holding pile out prominently. With foot-switch usage, just enough current is sent through the needle to coagulate, but not to carbonize or burn hemorrhoidal tissues; this process is repeated with several injections of the needle until a layer of tissue at base of pile proper is entirely coagulated, thus destroying blood and lymphatic supply to the pile proper. A little experience will quickly determine for the operator just about the right amount of current to employ.

If there are, as is usually the case several pile masses to be removed, each successive pile is taken up and treated in the same manner; only a few minutes is required for the entire procedure. If care is taken to handle the pile masses gently and proper anesthesia obtained, the entire operation is painless. The tissues at base of each pile are simply coagulated in a manner similar to the poaching of an egg. Pain following the operation would be indicative of some sparking and some degree of carbonization on the active electrode, which is to be avoided.

This completes the operation proper; we have strangulated each pile mass far more effectively than if we had the stoutest ligature encircling its base, and this has been accomplished without any pain, bleeding or use of the knife; no raw surfaces have been left to cause the pain, which follows

the usual surgical treatment of piles. Coagulation of its base destroys blood and lymphatic supply of the pile mass, and in a few days this sloughs away in a painless and bloodless manner, skin and rectal mucosa involved healing over the operated area very rapidly. Our patient has not been subjected to hospitalization, with its attendant fright to the average patient; he is not upset and miserable in mind and body after reaction from a general anesthetic; further, he is not troubled to any extent with irritation around the anus. The treatment is admirably an office procedure, and at its conclusion our patient is ambulant, and able to go home under his own steam as it were. Nervous or weakly patients are instructed to take it easy for a day or two; one old lady of 80 summers, I kept in bed for three days; but most of them are up and about in short order.

We do not have to make any radical change in the patient's dietary, but instruct him to eat a trifle less for a few days until full activity is restored. Liquid petrolatum, or preferably petrolagar, in full dosage for a few days, is very helpful in rendering the bowel passages bland and easy; our patients do not dread the first bowel passage after operation; this gives them practically no discomfort, and we have the bowels move the next morning as usual. This is radically different from major surgical attack on hemorrhoids, where often the bowels are purposely restrained for "healing" purposes; and after a number of days the first bowel action is usually looked upon as a formidable adventure, fortified by large dosage of oleum ricini.

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To the Readers of FISCHER'S MAGAZINE:

Those of us who are convinced that physiotherapy is of real value in the practice of medicine, deplore the fact that there are so many prominent men in our profession who are skeptical or cynical, or even sarcastic about physiotherapy.

Some of the big men to whom we look up as authorities are still prone to consider the work somewhat in the light of quackery. Men who are well established in medicine look askance our apparatus and our claims for what it will do. We know that it is because they have not yet been sufficiently informed; we are sure that if they once gave it a fair trail, they would be with us. But, they won't listen when we talk to them.

These very same fellows, when insulin came out, accepted it instantly and implicitly. Why the difference? The whole thing hangs on the source from which they got their information. The announcements of insulin first appeared in the classical media of medical literature. It was a scientific news item first of all.

But, just because a large amount of the information on physiotherapy is being disseminated by the manufacturers in their own private literature, many of our conservative colleagues assume *ipso facto* (as I did before I became convinced by several years of personal study) that the whole business is a commercial scheme, and therefore valueless.

The facts in the matter are, that a large amount of careful scientific work has been done on physiotherapeutic subjects. But, the general run of medical men does not know of it, because the reports of it have not appeared in the current medical literature. There is a certain set of medical periodicals which are accepted as gospel by the great mass of medical men.

Physiotherapy is the most fertile field today, for original clinical observation. The editors of this same class of classical medical journals will be only too glad to get such material from any of us, if the observations are accurate, and the papers are scientifically worked up. The work would not even have to be new; a series of cases confirming or disproving the effect of autocondensation on blood pressure or of quartz light on carbuncles—accurate, logical, conserva-

(Cont'd on page 10)

SPECIAL ANNOUNCEMENT!

Annual Physiotherapeutic Meeting

At Chicago, Illinois

October 20th to 24th, 1924

The Convention of Physiotherapeutists at the Logan Square Masonic Temple, Chicago, last fall was heralded as such a decided success that it has been decided to make this an annual affair.

These meetings, where all manner of subjects pertaining to Physiotherapy may be discussed openly and informally, are the direct result of numerous requests, due to the difficulty experienced by physicians in obtaining practical information from reliable sources in the efficient application of these measures.

The following physicians of note will participate:

E. C. Henry, M. D., Omaha, Nebraska, *Chairman*
Miles J. Breuer, M. D., Lincoln, Nebraska
W. B. Chapman, M. D., Carthage, Missouri
Wm. L. Clark, M. D., Philadelphia, Pa.
Maurice H. Cottle, M. D., Chicago, Ill.
Leo C. Donnelly, M. D., Detroit, Michigan
Emile C. Du Val, M. D., Chicago, Illinois
R. F. Elmer, M. D., Chicago, Illinois
Chas. H. Fredrickson, M. D., Chicago, Illinois
Dean W. Harman, M. D., Ames, Iowa
Abraham R. Hollender, M. D., Chicago, Illinois
Wm. E. Howell, M. D., Chicago, Illinois
D. Frank Knotts, M. D., Chicago, Illinois
Disraeli W. Kobak, M. D., Chicago, Illinois
Gustav Kolischer, M. D., Chicago, Illinois
Arthur La Roe, M. D., Newark, New Jersey

Ellis G. Linn, M. D. Des Moines, Iowa
Frederick H. Morse, M. D., Boston, Mass.
Roswell T. Pettit, M. D., Ottawa, Illinois
Curran Pope, M. D., Louisville, Kentucky
A. L. Smith, M. D., Corry, Pennsylvania
Harry M. Thometz, M. D., Chicago, Illinois
Norman E. Titus, M. D., New York, N. Y.
Albert F. Tyler, M. D., Omaha, Nebraska, and
Mel. R. Waggoner, M. D., Cedar Rapids, Iowa.

Several other physicians skilled in physiotherapy have promised to be present and to lend their assistance. These meetings will be open to all physicians of standing. There will be no charges, and no obligation incurred by attending.

The complete program, which will appear in these pages in a subsequent issue, has been arranged with but one object in view—to promote greater efficiency in this work, and the entire proceeding will be strictly informal; allowing the greatest freedom for questions and answers.

THE DATES—OCTOBER 20th to 24th, 1924—Inclusive

THE PLACE — THE LOGAN SQUARE MASONIC TEMPLE, at the terminus of the Logan Square Metropolitan Elevated Line, CHICAGO, ILL.

It is earnestly requested that registration be made at once. While Auditorium facilities are almost unlimited, certain preparations must depend upon the number in attendance. This meeting to be held under the auspices of

H. G. FISCHER & COMPANY, Inc.
Address the Secretary of Arrangements at
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tive, scientific—would be gladly accepted. And, among the ranks of workers in physiotherapy, there must be plenty of men who are capable of making such observations and writing them up. What is wanted in this field, is not enthusiasm, but systematic work and rigid reasoning.

A few such articles from time to time, appearing in our State and District Medical Society publications, would very quickly attract the attention of the medical world to physiotherapy, and change the tone of its voice in speaking of this work. And, until systematic and accurate clinical observation begins to be reported in reputable current medical literature, physiotherapy will always be a cinderella.

Let us all get to work, we who are convinced of the value of these methods, and discuss them in our favorite medical journals and meetings, with the same scientific attitude that we hold toward the rest of medical knowledge.

Respectfully,

MILES J. BREUER, M. D.
LINCOLN, NEB.

Treatment of Paralyzed Muscles in Hemiplegia

(The following, from F. H. Morse, M.D., of Boston, Mass., is his reply to a letter received by us from one of our Magazine readers.)

Dear Doctor:

"I received a letter from H. G. Fischer & Co. of Chicago, asking me to write to you direct about the treatment of paralyzed muscles in hemiplegia. I am receiving many similar letters from doctors all over the country and it makes me wish I had more time to quickly finish my book on 'Galvanism and Wave Currents.' However, that is in the future.

"The treatment following hemiplegia resolves itself into maintaining the highest degree of nutrition over the paralyzed areas, and at the same time maintaining sufficient passive muscle exercise to prevent atrophy and functional inactivity. The book, 'The Therapeutics of the Morse Wave Generator,' which you have, will give you the information on the treatment of paralysis in general, but which might not apply to the case in question.

"The average case where nature is making an attempt at restoration by showing some improvement in muscle movements, use a mild current of galvanism; if the arm to be treated, one electrode at the occiput (positive) and the negative on the wrist using Cam No. 1, resistance three, 3 to 5 M. A. In about ten minutes the arm will have become warm from the passage of the current, and in a better condition for exercise. Leave the wrist electrode in place and put one electrode (about 4x5 inches) in the upper dorsal region, using Cam No. 2 on the alternating current up to the point of reasonable toleration. Exercise not over five minutes for fear of local exhaustion. A similar procedure can be used down the paralyzed leg from the lumbar nerve to the ankle by using, possibly, Cam No. 6, 7 or 8 for the exercise part on the A. C. This would be routine technic in the average case, all of which may be varied according to existing conditions."

The Treatment of Pyorrhea Alveolaris

(The following letter was written by W. B. Chapman, M.D. of Carthage, Mo., in response to an inquiry from one of our good customers.)

Dear Doctor:

"I have your inquiry addressed to H. G. Fischer & Co., relative to the treatment of pyorrhea alveolaris by Diathermy. As advised by Mr. H. T. Fischer, the location and nature of the disease is such that it cannot be treated to advantage by Diathermy. However, pyorrhea alveolaris is greatly benefitted by actino-therapy, and where the gums have not receded too greatly, the condition can be cured.

"The technic is as follows:

"Remove all tartar, fragments of food, etc., from the teeth, passing silk between them, and rinsing the teeth and gums thoroughly before beginning treatment. All abscessed teeth, crowns, roots, and other sources of infection must be removed.

"Charge the water-cooled quartz lamp and allow it to run for five minutes before beginning treatment. The water should be turned on so that it flows steadily, but without force, through the lamp. Never allow it to flow with enough force to raise a column of water more than one-inch above the end of the drain.

"Using a straight quartz glass tooth applicator treat all diseased areas on the gums in front of the teeth allowing the ray to penetrate between the teeth. Give from one to two minutes to each spot. More than two minutes will irritate the gums and make the condition worse. After all of the diseased areas in front of the teeth have been treated, take the

bent quartz tooth applicator and treat the gums behind the teeth in the same manner. It is better to treat the gums every day for a short time exposure than to give a more severe treatment with longer intervals in between.

"The patient should be given minute instructions regarding brushing the teeth, and should use a very mild toothpaste and [illegible]. The vigorous rubbing with a stiff brush tends to break down the mucous membrane and encourage the spread of the infection [illegible]. I recommend ordinary salt water."

Very truly yours,

Auto-Condensation Treatment

(Here is another splendid contribution from our good friend, Dr. W. B. Chapman, also written in answer to inquiry direct to us, and which we felt should be answered from a medical source.)

Dear Doctor:

"I have your inquiry directed to H. G. Fischer & Company of Chicago, relative to auto-condensation treatments, etc. I find that Mr. Fischer has answered all of the questions very fully with the exception of the cause of the oppression observed by patients after auto-condensation treatments wherein the plate was applied directly over the precordium.

"The heat energy that is generated within the tissues of the body due to the very rapid transmission of electrical impulses through same, stimulates automatically the vaso-dilator nerve endings within the walls of the smaller blood vessels. This is what causes the fall in blood pressure that is observed during such treatments.

"In applying the smaller electrode directly over the precordium, you concentrate a great deal of electrical energy within a small area that contains the cardiac plexus which is rich in vaso-dilator nerve fibres. These nerve fibres are distributed to the heart, and other highly vascular organs, and when stimulated, cause an immediate congestion of the splanchnic region with a consequent fall in blood pressure. This disturbance to the cardiac plexus is transmitted automatically to the vagal system and sets up similar reactions within the brain so that a feeling of lassitude or oppression results. I can explain this reaction in detail but it would take too long. I will say, however, that the reaction is not without danger, and I seldom apply the plate electrode above the heart except in strong robust patients, and then I watch them very carefully. I have had a few patients break out in a profuse sweat and require cardiac stimulation where this treatment was carried out too vigorously."

DIATHERMY IN INTERNAL MEDICINE

In an article entitled "Diathermy in Internal Medicine" published in The Journal of the American Medical Association, July 26, 1924, p. 266, Edward W. Jackson, M. D., Rochester, N. Y., says that many persons complain of heart pain. He believes that a large percentage of these pains are diagnosed erroneously as angina pectoris. His examination frequently discloses the cause of the pains to be a neuralgia or myalgia of the chest wall. The slow and often unsatisfactory results obtained in treating these conditions with rest, medicines, conductive and convective heat, and other time-honored remedies, led Jackson to investigate diathermy, the only method he knows of whereby it is possible to apply physiologic heat to tissues beneath the surface. Jackson emphasizes the fact that a proper technic is as important in diathermy as in any other therapeutic measure. In fact a better judgment and a broader general knowledge of medicine are required in the proper application of diathermy and in the selection of cases for treatment, than in most other therapeutic measures.

In all, 1,470 treatments were given by Jackson to sixty-one patients, divided among the various body systems as follows: circulatory, 526; nervous, 266; respiratory, 54; joints, 352; muscular, 223, and urogenital, 39. Full use of the various diagnostic measures was made in the study of these patients. When found, foci of infection were removed, but diathermy was not withheld pending a clearing up of the foci of infection. This, Jackson says, is important, since during the treatment prompt relief was obtained in many painful conditions, thereby proving diathermy of diagnostic value, and lastly, when successful, of economic value in curtailing further diagnostic and therapeutic expense. Thirteen selected hypertensive patients, who had been under Jackson's care for three or more years, agreed to cooperate for the purpose of investigation for more than one year. The treatment for a year or more had been as simple general diet; rest, including a midday rest period, and carefu

avoiding emotional disturbances; good elimination, and hygiene. During this period of what Jackson terms rational treatment, the patients had been seen every month or two and the blood pressures had averaged remarkably uniform for each case.

The types into which these cases fall are: (1) climacteric, five; (2) essential hypertension, three; (3) nephritic, three, and (4) arteriosclerotic, two cases. To avoid unfavorable emotional and physical disturbances, these patients were treated in a quiet, darkened room; tight clothing was loosened and they reclined comfortably on the dielectric pad. The office type Tycos instrument was used, the sleeve being left in situ during the treatment. Before starting the treatment, blood pressures were taken at intervals of from one to three minutes until no further lowering was recorded. This usually required from five to ten minutes. The treatment was then given. Until the final pressure reading was made, every precaution was taken, so that the patient was not disturbed. The d'Arsonval circuit was used.

The length of treatments varied from one-half to one hour, mostly the latter; the frequency of treatments varied from one to five weekly. Jackson found that too prolonged treatments with high milliamperage were weakening. Under ideal conditions of the application of diathermy to reduce hypertension, the patient should rest in bed for several hours directly after treatment. The retention of the heat in the body tissues would thus be aided and its physiologic action prolonged and augmented. Jackson's investigation had now been carried on for more than a year. It had been determined that, with careful attention to details, diathermy would reduce arterial hypertension, and, as long as the treatments were continued, would keep the pressures within safer limits.

Properly applied, the treatments were time consuming and harassing. Therefore, Jackson entered into anagreement with eight of these patients, whose home conveniences were such that sedative baths could be taken at their pleasure, to compare the action of baths with his records of diathermy in reducing their pressures. The physiologic effects of such a bath, under the prescribed conditions, followed by noctural bed rest for from eight to twelve hours, were superior to other methods of hydrotherapy in the treatment of hypertension.

Invariably the reduction of pressures following these baths compared favorably with diathermy. Restlessness, insomnia and weakness followed over-treatment, as with diathermy, and it was necessary to adjust the frequency and duration of the baths and to caution that the proper temperature of the water be observed. In time, these baths prove irksome and are likely to be indifferently performed by the average patient. Even with this selected group, frequent observation and evidence of the physician's deep interest were necessary to encourage them. There is a minimum to which any given case of compensatory hypertension may be reduced without provoking symptoms and signs of circulatory failure. As long as the fall of the pressures is unaccompanied by circulatory or nervous discomfort, whatever the method used, it is safe to proceed cautiously with attempts to lower them.

Baths and diathermy, singly, or when wisely combined and adjusted to fit the particular patient, are equally efficient in reducing hypertension. This reduction persists as long as the treatments are continued, provided the other important factors—rest, diet and hygiene—are faithfully observed. When baths and diathermy are stopped or indifferently performed, the pressures gradually creep up. A proper application of diathermy is but half the treatment; the other half is the after-care. Five patients with organic angina, all men in late middle life with a chief complaint of substernal pain, believe that diathermy has been of definite value to them, their attacks being less frequent and severe. Jackson is convinced that the symptomatic relief obtained has justified its use. If complete relief

is not obtained from diathermy, a source of infection must be located elsewhere in the body and removed. The results obtained from 1,470 applications of diathermy to sixty-one patients suffering from various conditions common in internal medicine have convinced Jackson that diathermy is of value for the reduction of arterial hypertension, but sedative baths under carefully prescribed conditions are equally helpful. Diathermy has given symptomatic relief in many painful conditions more promptly than was obtained under usual treatment, and it is an addition to other therapeutic resources Jackson recommends that diathermy be studied in hospitals and large clinics to define its scope, indications and limitations.

Blind Radioist Recovers Sight While at His Set

SYDNEY, N. S., July 24.—Hugh Roper, 87, totally blind, experienced an almost complete recovery of his sight for a period of 48 hours as a result of electrical vibrations received while listening in on a radio concert.

On the morning following, Mr. Roper was able to distinguish the hour of day on a small clock placed some distance away.

□ □ □

Physiotherapeutic Lectures at Omaha

A splendid program has been arranged for October 6th, 1924, in the Lecture Hall, 1118 Farnam Street, Omaha, Nebr. The speakers of the day will be:

B. B. Grover, M.D., Colorado Springs, Colo.,
Disraeli W. Kobak, M.D., Chicago, Ill.,
R. W. Fouts, M.D., Omaha, Nebr.,
G. A. Fleischman, M.D., Des Moines, Iowa,
Norman C. Prince, M.D., Omaha, Nebr.,
M. Wood, M.D., Tekamah, Nebr.,
W. L. Ross, Sr., M.D., Omaha, Nebr., and
W. D. Chessney, M.D., Milton, Wis.

This meeting will be followed with a banquet and a very interesting evening session.

All physicians are invited to attend; no cost, no obligation.

The Role of Physiotherapy in Low Back Conditions

By FRANK B. GRANGER, M.D.
Boston, Mass.

That the diagnosis and treatment of disabilities of the low back type is unsatisfactory, goes without saying. You have had excellent papers on their etiology and pathology, yet in many cases the diagnosis is difficult to make and consequently to institute the proper treatment is still more perplexing.

In traumas of the back the victim usually falls into the hands of one or more of the following classes:

1. The casual treatment of the casual physician where chloroform liniment and a few strips of adhesive suffice, whether the pathology be a crushed vertebrae, hypertrophic spine, ligament or muscle injury.

2. The osteopath or chiropractor who in a few cases succeed, but who in many others increase the disability and perhaps add their share to the existing trauma.

3. The orthopedist whose idea of support, rest and fixation are good and who links the X-ray with careful physical examination, but who in some cases is obsessed with the idea of rest and fixation to such a degree that atrophy and loss of muscle tone markedly retards recovery.

4. The physiotherapist who, too frequently, knows little and cares less for proper fixation and rest and who attempts often with success to relieve muscle spasm, to produce an active hyperemia, with consequent tissue drainage, but who also at times unduly stimulates structures needing for a short time rest and sedation.

It is evident, therefore, that success in treatment depends on: first, a careful and correct diagnosis; second, intimate team work between orthopedist and physiotherapist.

In all traumatic cases, with which I suppose this meeting is chiefly concerned, it is presupposed that there has been excluded postural defects with their consequent relaxation, congenital anatomical defects, and all abdominal pathology which might cause a somewhat similar clinical picture.

The traumatic cases which come to the Department of Physiotherapy at the Boston City Hospital exhibit muscle spasm as their predominant factor.

Relieve the spasm, add what fixation is necessary, if necessary, for a short time, institute what may be called general tonic measures, and as soon as possible employ proper voluntary muscle exercises not only to restore muscle tone but also to relieve the mental inhibition that exercise or work is impossible.

Many of the cases we see are found, on X-ray examination to have had an old hypertrophic spine, which the trauma cause to flare up. Once in a while, we find the classical hitherto unrecognized vertebral crush. Rarely indeed, but still quite definitely, we find a true sacroiliac.

Treatment.

1. Hypertrophic spine aggravated by trauma. In these cases diathermy (internal baking) seems to give the quickest relief. This is due probably to the active hyperemia which it produces locally with consequent tissue drainage, and to the marked muscular relaxation it induces muscle spasm which is not of central origin.

Technic. Place a metal electrode, generally 2x10 inches over the lumbar region of the spine, while anteriorly there is held on the abdomen by means of a sandbag or the hands of the patient a 10x12 inch metal electrode. Treat for at least 20 minutes with whatever current strength the patient can stand without discomfort. This will usually register on the meter from 800 to 1200 milliamperes. Of course if there is the slightest degree of pricking it means that good contact has not been secured, and poor contact may mean a burn.

If pricking does occur the area where it exists should be firmly pressed against the skin. If this does not remedy it, the electrode should be reapplied. At times when the pain is severe, galvanism, with the positive pad posteriorly and the negative anteriorly for 25 to 30 minutes, 15 to 40 milliamperes, will accentuate the effects of diathermy. In some cases, betimes, a low back brace insures a certain degree of physiological rest. If the process is fairly old, and the exacerbation not too acute, deep massage, vibration, the static wave current or the slow sinusoidal will shorten the time of disability. At times, also the application of radiant heat will, by dilating the cutaneous capillaries, deplete the enlarged deeper muscle and relieve pain and stiffness. By some of the above methods the classical six months minimum may be materially lessened. Here again it is assumed that all possible foci of infection have been eliminated such as teeth, tonsils, sinuses, gall bladder, prostate or pelvic infection, etc.

2. Sprain of the lumbo-sacral or lower lumbar joints. These are the so-called "lifting strains" where the patient feels that something gives way and perhaps hears a snap. These are generally ligamentous or muscle tears. The ligamentous ones are characterized by soreness and tenderness which are deeper situated. Here again, muscle spasm stares us in the face. Pain is elicited by lumbar movement. The erector spinii muscles, deep spinal ligaments or the ligaments which are inserted about the sacrum or sacro-iliac joint, are chiefly involved. The muscle spasm is naturally a reflex one due in part to nerve pressure, which pressure is caused by the resultant edema or possibly hemorrhage into the soft tissues. Physiological rest, an adequate back support and immediate physiotherapeutic measures should and do lessen the duration of disability. Again diathermy with larger electrodes than hypertrophic arthritis, but with the posterior one appreciably smaller than the anterior; followed by the sinusoidal or the static wave current, has given us the best results.

3. *Sacro-iliac strain often associated with sciatica.* Here, manipulation followed by short *adequate* strapping, diathermy or baking, sinusoidal or static wave current, and deep massage or vibration, should achieve quick results.

4. *Myositis.* Though this diagnosis has been overworked at times, yet inflammatory processes do occur in muscles; and true myositis is quickly relieved by radiant heat, deep vibration, massage, and static sparks. At times diathermy or the slower heating process of galvanism, with a positive pad over the contracted muscle will also achieve the same result.

5. In spinal infections, such as tuberculosis or osteomyelitis, in addition to appropriate orthopedic and surgical measures, ultra-violet light therapy given both locally and generally, at least deserves a trial.

6. *Periostitis.* A few cases have shown under X-ray examination, a definite periostitis which has persisted and which has caused severe pain. Either because of or in spite of diathermy, a fair percentage of such cases have promptly recovered.

7. *Malingerers.* We get them at times. It is hard to say a man hasn't a pain in his back just because we can find no objective evidence. In most of these cases, the greenback has all other therapeutic measures beaten by a large margin.

From *The Industrial Doctor.*

□ □ □

WHY?

I like my dentist. He's a friend I would not do without.
How quickly he relieves my pain! He knows what he's about.
My doctor, too, is surely good at curing human ills.
He always knows just what I need of poultices and pills.
Their offices they have equipped with up-to-date Fischer machines;
But tell me why will they display such ancient magazines?

(With apologies to A. D. Ihrie.)

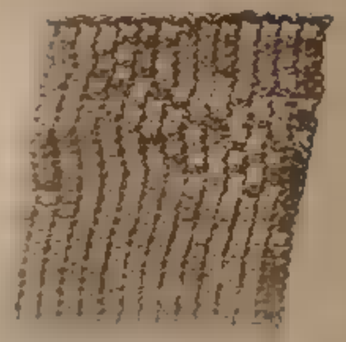
Smooth-Link Mesh Electrode Material

It is quite significant to note that while nearly three-quarters of a million square inches of our German Silver Mesh Electrode Material are in use throughout the country, most of the recent orders are "repeats." It seems that "once tried, always used" fits exceptionally well in this case, as those who are using Mesh continue to buy more of it.

We feel very sure that a number of our readers would be glad to look through our latest No. 14 Accessory Catalog in which this is only one of hundreds of interesting items. Just send a card, and we will mail catalog at once.

A Mesh Electrode

Combination Mesh and Rubber Sponge Electrode



Section of Electrode showing exact size of links

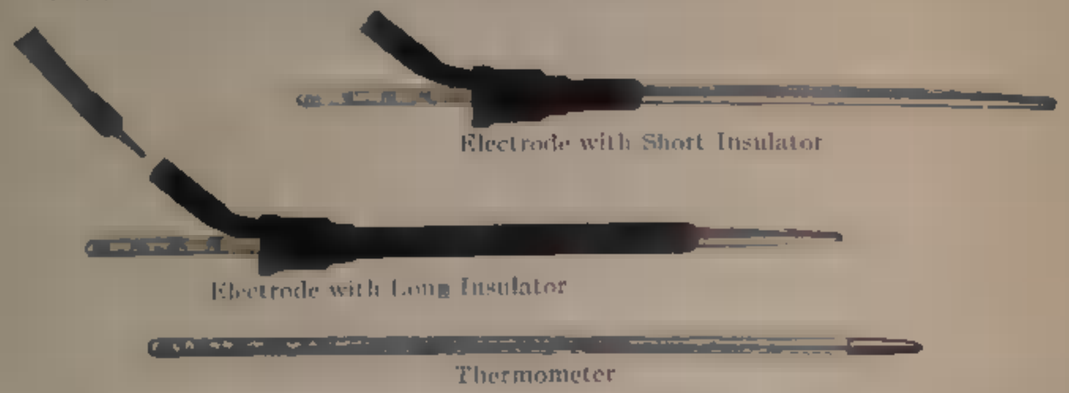
Application Mesh Electrode

Mesh Electrode Clamp.

The Corbus Endocervicitis Electrode

For the treatment of Gonorrhoeal Endocervicitis with Diathermy. Thermometer registers degree of heating obtained, Fahrenheit.

Instrument consists of four pieces.



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Electrode with Long Insulator

Thermometer

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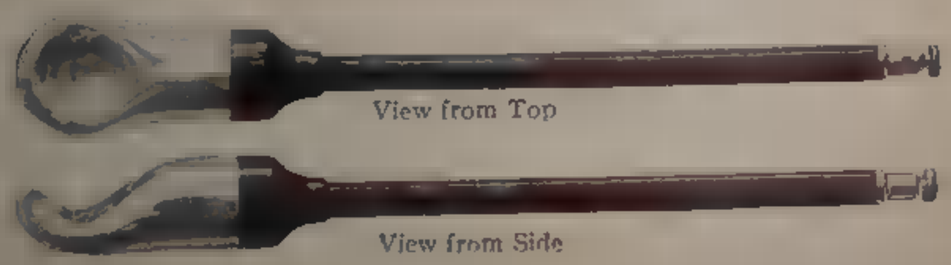
Designed along scientific lines, with size and shape of polished metal end to properly engage the lips of the cervix. The shank, or handle, is made of hard rubber. This electrode is to be used with Diathermy Current.



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The Waggoner Physiotherapeutic Lecture Courses

By Mel R. Waggoner, Cedar Rapids, Iowa

There will be two such classes held in the month of September

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September 15th to 20th
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September 22nd to 27th
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MEL. R. WAGGONER, M. D.
Cedar Rapids, Iowa

DOCTOR WAGGONER will also appear during the balance of 1924 at
Chicago, Illinois, October 20th to 24th.
Chicago, Illinois, October 27th to Nov. 1st.
Charlotte, North Carolina, November 10th to 15th.
New York, New York, November 17th to 22nd.
Cleveland, Ohio, December 8th to 14th, etc.

—Watch for Announcements in "Fischer's Magazine"

A PAGE OF FUN

Jock and Janet were sweethearts and were sitting together one night in the front parlor. Jock was silent for a long time.

"A penny for your thought," said Janet.

"I was thinking I would like a kiss," said Jock.

Janet gave him one.

Again he sat in silence for a long time.

"Were you thinking you would like to kiss me again, Jock?"

"Na, I was thinking you didna gi' me the penny."

□ □ □

A dairy maid milked the pensive goat,
And, pouting, paused to mutter
"I wish, you brute, you'd turn to milk,"
And the animal turned to butt her.
A teddy bear sat on a cake of ice,
'Twas cold as cold could be.
He soon got up and walked away,
"My tale is told," said he.

□ □ □

Wifie: "I suppose now you wish you were free to marry again?"

Hubbie: "No—just free."

□ □ □

Bride (consulting cook-book): "Oh, my, that cake is burning and I can't take it out for five minutes yet!"

□ □ □

She: "Your new furs are magnificent, my dear; what did they cost you?"

Her Friend: "Three fits of hysteria."

□ □ □

The teacher was examining a class in physiology: "Lucy, will you tell us what is the function of the stomach."

"The function of the stomach," the little girl answered, "is to hold up the petticoat."

□ □ □

Conductor: "Watch your step, Miss."

Flapper: "It's not necessary; there are several sapheads behind doing that!"

BELIEVE IN YOUR OWN ABILITY TO DO BIG THINGS.

ONLY BY HAVING FAITH IN YOURSELF CAN YOU COMPEL OTHERS TO HAVE FAITH IN YOU.

Program for Our

Monthly Physiotherapeutic Meeting

Monday, November 10th, 1924

L. C. SAMMONS, M. D., Shelbyville, Ind.
"Physiotherapy in General Practice" . . . . . 10:00 to 11:00 A. M.

WM. E. HOWELL, M. D., Chicago, Ill.
"Ease and Effectiveness of Electro-Coagulation Operations" . . . . . 11:00 to 12:00 Noon

D. W. KOBAK, M. D., Chicago, Ill.
"Diathermy and Sinusoidal as Complimentary Technic" . . . . . 1:30 to 2:30 P. M.

ABRAHAM R. HOLLENDER, M. D., Chicago, Ill.
"The Influence of Medical Diathermy on Tinnitus Aurium" . . . . . 2:30 to 3.15 P. M.

MAURICE H. COTTLE, M. D., Chicago, Ill.
"The Scope of Indirect Diathermy in Certain Eye Conditions" . . . . . 3:15 to 4:00 P. M.

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BY SURFACE CAR — Western Avenue to Wabansia Avenue, and one block east to Claremont.

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FISCHER'S MAGAZINE

OCTOBER, 1924

THE SECRET OF SUCCESS
IS CONSTANCY OF PURPOSE.

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.

H. G. Fischer & Co., Inc., 2333-43 Wabansia Ave., Chicago, Ill.

Vol. II OCTOBER, 1924 No. 11

Leaders are Learners

IT has been said, and no doubt widely believed by the laity, that no man gets a new idea after thirty—or thirty-five, or forty. The age varies, but the statement is just as gravely erroneous, it seems to us, though the limit be set at seventy —or ninety.

That there are people to whom new ideas come as unwelcome and disturbing visitors, there can be no doubt. You will find them of all ages and all professions. But you will never find a *leader* among them.

For leaders are learners, all their lives long. Out of their daily experiences, out of their contact with others, out of the books and magazines and treatises they read, successful men are constantly drawing a fund of new knowledge that can be applied in the conduct of their professions and their lives.

Have you ever noticed that one of the common characteristics of big men is their inquisitiveness? They always, one and all, are looking for the why and wherefore of things. Make a statement to one of them, and, often as not, he will question it; not because he doubts the truth of what you say, necessarily, but because he wants more details, a more complete and accurate picture of the facts. Yes, leaders are learners. But learners, too, of the essential things. All of us learn, from day to day, and from hour to hour. Our

minds entertain a constant procession of new thoughts. Whether those thoughts are of baseball, for example, of society, or of our professional work, is the important thing.

That is where the real leader has the advantage of the rest of humanity. Whether it is born in him or he has acquired it through hard experience and self direction, he possesses clear knowledge and clear vision in connection with the one big thing that to him is worth while.

And that thing is—leadership and success in his chosen profession.

Diathermy

FRANK B. GRANGER, M.D.
Boston, Mass.
Associate Editor of the Physiotherapy News Bulletin

Diathermy, or internal baking, has masqueraded under a number of synonyms such as thermo-penetration, thermo-faradic (as its name indicates, a poor diathermy), endo-thermy, etc.

While it is a high frequency current, ordinarily of the D'Arsonval type with a fairly high voltage and milliamperage, yet in practice it varies widely, dependent upon the construction of the high frequency apparatus employed. It is evident that a machine wound to give a high milliamperage and a relatively low voltage will have less ability to overcome resistance and consequently less power of deep tissue penetration than one constructed to deliver a much higher voltage with a somewhat less milliamperage. It should have voltage enough, however, to insure its passage in parallel lines from one electrode to the other. In all other electrical currents, except perhaps the static, the electrical lines of force do not go in straight lines through the tissue from electrode to electrode, but are diffused in widely divergent ones, and are only concentrated at the points of contact of the electrodes.

Hence it necessarily follows that the deeper structures are much less under the influence of the electrical current. Diathermy, on the contrary, provided as stated above the voltage is sufficient, flows in a straight line from electrode to electrode and the intervening tissues are generally well heated with of course a greater intensity of heat nearer the smaller electrode. It is this process of generating heat within the tissues that makes diathermy so valuable. All other forms of heat are to a great degree blocked in their penetration by the skin, whether they are conductive heat such as the hot water bottle or electric heating pad, or convective heat such as incandescent light applicators or the arc light. Diathermy, however, is true conversive heat, that is heat generated in the tissues; hence it penetrates deeply and to a great degree uniformly.

The penetration and clinical results of the infra-red rays, despite generous advertising is still a mooted question.

Diathermy then is a high frequency current ordinarily of the D'Arsonval type with sufficient voltage to overcome tissue resistance, and with sufficient amperage or quantity to heat, because of internal tissue resistance, the structures through which it passes, as it flows in straight lines from one electrode to the other.

Diathermy may be divided into medical and surgical diathermy. Surgical diathermy, which includes electro-coagulation and dessication, will not be considered in this paper.

Medical diathermy may be divided into direct and indirect diathermy. Auto-condensation is the most important example of the indirect type.

The methods of application of direct diathermy are the lateral method, the double cuff method, and the cuff and water method.

Of these the first, the lateral method, insures the greatest concentration of heat to a given local area in the shortest time. The cuff method is also efficient but requires a much

longer time of application. The cuff and water method is the least efficient. It is ordinarily used where the toes or fingers are to be diathermatized.

Materials

Only a metal contact should be employed such as block tin, preferably 22 gauge Crooke's metal, organ pipe metal, limpit metal, or metal mesh. The interposition of moist cotton, felt, or asbestos increases greatly the chances of a burn. Either one of two things may happen. The pads may become dry, more resistance ensues, carbonization takes place, and the tissue is showered with fulgeration sparks; or as has happened with the asbestos type the metal back may become disintegrated and the area of contact be thus greatly reduced in size with consequent concentration of current strength, and an electro-coagulation of the part under treatment. Great care should be taken in preparing metal electrodes. They should not have any sharp edges. They should be perfectly smooth so that no undue pressure might be exerted. If they have been used before, good contacts should be ensured by smoothing them with a squegee, or even a large static spark ball. In hospital practice the skin is well lathered before the electrodes are applied. In the office, where there is presumably less rush and aides with wider experience, the electrodes are dropped into basins of hot water in order that the metal may feel warm, and are placed in position with only the small amount of moisture present which may cling to them. If the current is gradually turned on, the resistance of the skin should be overcome without any discomfort to the patient. If the part is hairy it should be well lathered or shaved. The electrodes should then be bound on with an elastic bandage such as the Ace. A paper or cotton bandage may also be employed. I ordinarily use a cotton bandage or a rubber strap (old inner tubes are handy for that purpose). The contacts should be exact, and if the patient complains of burning or prickling the metal should be firmly pressed against the skin over the area in question.

If this does not give relief, the metal should be reapplied. This is important, for if the metal is not in close contact with the skin, the passage of minute sparks will in time either fulgerate or coagulate, and a high frequency burn will ensue. These burns are not ordinarily harmful, unless they are deep enough to cause a scar, but they are bad technic. If by any chance the skin is anesthetic, the greatest care should be employed. Much has been written concerning the swelling of the tissues under the diathermic electrodes. I think that this has been overstated, and it is much better to bind on snugly enough to secure good contact, thus avoiding a burn. As stated above it is better to use a bandage which is somewhat elastic. A gauze bandage may exert undue pressure on some part, and from this excessive pressure and the resultant ischemia, a burn may result. For this reason also it is well to avoid bony prominences.

Dosage

From 50 to 100 milliamperes per square inch of contact is ordinarily sufficient. If the arteries are sclerotic 50 milliamperes is better than 100.

Spark Gap

The spark gap should be in good working order, special attention being paid to its cleanliness. It is better to have the spark gaps fairly close and to increase the amount of current by allowing more to come in from the alternating current mains rather than to use a wide open, sputtering spark gap as thereby a faradic character may be imparted to the diathermy which would not only be more disagreeable to the patient, and less current could be used, but it would also act as a stimulating diathermy rather than as a sedative one.

Time of Treatment

This cannot be exactly interpreted in minutes as the result and the reaction are the main factors. In general it takes at

least 20 minutes to heat thoroughly a part. With the double cuff method the treatment should be continued until the skin between the inner edges of the electrodes becomes hot. This may take from 20 to 60 minutes.

Frequency of Treatment

This depends on the underlying pathology. For the relief of pain, or in a pneumonia, one or two treatments a day may be necessary. In non-union or delayed union of bone, two or three times a week will suffice.

Some Special Indications for Diathermy

1. Non union or delayed union of bone. Here diathermy, where a fair degree of fixation of bone can be secured, is of value. Wherever possible the lateral method is used. If apparatus can not be removed, the cuff method is best.

2. Bursitis, especially subdeltoid with calcification. Under diathermy and chlorine ionization through the shoulder followed by massage and gentle manipulation the calcified bursae disappear.

3. Hypertrophic arthritis. Here, provided overgrowth of bone is not a mechanical obstruction, and even though the X-ray picture remains unchanged, prompt symtomatic relief is usually obtained by diathermy and ionization. Numerous cases physically incapacitated are returned to gainful occupation for periods of many months.

4. Pneumonia. An internal poultice such as is afforded by diathermy, the increased local temperature (nature's method), the increased hyperemia and drainage, and the augmented phagocytosis all seem to mark the use of diathermy as a rational procedure. Often the improvement in the pulse, disappearance of cyanosis, and the decrease of pain, is coincident with the treatment. Treatments may be given twice daily.

5. Neuritis. Frequently a very acute neuritis will be more quickly relieved as regards pain by diathermy than by any other method. The double cuff technic is usually employed. In brachial neuritis, not infrequently the cervical and upper thoracic spine is affected, hence in such cases I employ the following technic: Suppose it is the right arm—place a semicircular strip of metal over the left side of the spine, and a cuff over the upper arm. Diathermatize until the shoulder is hot, 600 to 900 milliamperes. Remove the cuff from the upper arm and place it around the wrist continuing until the whole arm is hot. The first treatment will often cause increased pain, but this apparently is not a bad sign.

6. Spasticity. This is best treated by diathermitizing the appropriate centers in the spine, and then by the double cuff method, heating the spastic muscles.

7. The contra-indications to diathermy are two:
   1. Pus without drainage.
   2. Lesions where there is likelihood of hemorrhage.

Diathermy: A Specific for Gonorrheal Epididymitis

BUDD C. CORBUS and VINCENT J. O'CONOR
Chicago, Illinois

Gonorrheal epididymitis occurs in from 20 to 30 per cent of all cases of gonorrhea. It is more prevalent in dispensary than in private practice. This painful and destructive complication, in an economic way alone, represents the sum total of time lost in 90 per cent of the cases of specific urethritis.

During the past seventeen years the management of this condition has received serious and more detailed consideration from urologists in general but particularly from American urologists. This was largely stimulated by the work of Hagner, Bazet and Belfield.

The time honored method of treating this class of cases by elevation or strapping of the testicles, rest in bed, and the external application of heat or cold, incapacitates the patient for from five to fourteen days and may later necessitate operation to drain the infected epididymis.

The interest in this troublesome situation, from a surgical point of view, has become so keen that few patients escape the procedure of epididymotomy. This is not only true of patients in private practice but in most dispensaries as well. The results of this operation, in a large proportion of cases, have been excellent but the patient must be laid up at least three to ten days.

While the outcome of an individual case of gonorrheal epididymitis is rarely in doubt, the disability which accompanies the usual methods of treatment is annoying and embarrassing both physically and financially.

It is apparent that any method which can abort the attack, or stop the pain and absolutely eliminate the usual incapacity, would be a decided step forward in this type of therapy.

Knowing that the gonococcus is instantly destroyed at a temperature of 108° F., it occurred to us that if a suitable instrument could be devised we could induce sufficient heat within the body of the epididymis to destroy the gonococcus in its local invasion, stop the pain and abort the attack. This knowledge was gained by an experience of several years in the application of diathermy in the treatment of cancer and in gonorrheal endocervicitis. The results of these studies are published elsewhere.

We have been so successful with this procedure that we believe we are justified in calling this method a specific for gonorrheal epididymitis.

Description of Instrument

The instrument as devised by one of us (B. C. C.) consists of a fiber clamp with curved arms, one of which is movable.

This movable arm may be fastened at any desired point by means of a lock-nut. Two concave discs are attached to the distal ends of the arms. These discs measure 4 cm. in width and 5 cm. in length, and are swiveled that they may be easily adjusted. Each disc connected to a binding post so bi-polar current may be applied. The electrode is rigidly constructed and, due to the self adjusting discs, is applicable to any size scrotal content.

Method of Application

The patient is placed in the recumbent position and the scrotal and suprapubic region exposed. Shaving soap lather is placed between the skin and the contact point of the electrodes. The entire body of the testis and epididymis is encased between the apposed electrode surfaces and heated uniformly by the d'Arsonval current. In order to effect the greatest degree of heat induction possible in the individual, the current is increased to the extent of cutaneous discomfort. When this point is reached the current is then reduced slightly so that no unpleasant sensation accompanies the treatment. Our routine has been to apply the heat for at least forty minutes, since even at 104° to 106° F. the gonococcus is killed during this time. In those cases seen during the first twelve to twenty-four hours of epididymal involvement by the gonococcus one such treatment has usually sufficed to check the attack and start the process of resolution. In those instances where the inflammatory reaction has been present for a number of days, three or four treatments on successive days have been sufficient to eliminate all untoward effects.

A very distressing funiculitis often accompanies the epididymal involvement and may persist after the symptoms of the latter have completely subsided. This is as quickly relieved by placing the instrument in a vertical position with one electrode over the globus minor and the other over the

region of the internal abdominal ring. This permits an induction of heat throughout the accessible portion of the vas deferens; this should be continued for forty minutes.

So mild is the attending inflammatory reaction following a heat treatment for gonorrheal epididymitis, that there is absolutely no hydrocele present. Both poles of the epididymis are distinctly palpable as hard painless nodules, this is rendered more distinct on account of the absence of any orchitis.

A Few Typical Case Reports (Quoted)

Case 1. R., aged thirty-five years, during the course of an acute urethritis motored several hundred miles in one day. That night his right epididymis became very tender and gradually enlarged. The next morning, August 2, 1923, when he presented himself the entire epididymis was swollen to five times normal size. There was slight accumulation of hydrocele fluid, temperature 101°, pulse, 110, leucocyte count 13,500. The patient was very weak and could hardly walk so great was the pain in the right testis and groin. It was imperative to his business interests not to be laid up that week because of a local convention. Diathermy for forty-five minutes was followed by complete relief from local pain. The following day the patient felt perfectly well. There was no local pain or tenderness although the lower pole of the epididymis was three times the normal diameter and very hard. The patient had no further discomfort and five days later his scrotal content seemed normal.

Case 2. H., aged twenty-three years, professional dancer developed a left gonorrheal epididymitis in the fifth week of an acute urethral infection. He presented himself, October 10, 1923. Left scrotum red and swollen to twice the normal size. Lower pole of the left epididymis was markedly swollen and so tender that palpation caused severe prostration. There was very slight hydrocele present. Temperature 100°, pulse rapid. Diathermy for one hour gave marked relief. The patient was very anxious to avoid prolonged absence

from the stage but was advised to remain in bed for the following twenty-four hours. A similar diathermy treatment was given the following day and complete subsidence of all pain, swelling and tenderness was noted on the second day. In spite of repeated warnings the patient persisted in doing his acrobatic dancing stunts for an aggregate of thirty minutes each day. The scrotal content was kept elevated by an elastic supporter. No recurrence took place and five days later both testis and epididymis were normal. The patient lost only one day of work.

Case 3. P., aged twenty-two years, presented himself October 1, 1923, with a left gonorrheal epididymitis of three weeks duration. Rest in bed, hot applications or tight suspensories had failed to do more than temporarily relieve the pain and swelling. The epididymis was twice normal size hard and painful on palpation. The vas deferens was half again as large as normal and was tender as far up as the external inguinal ring. Walking even with a well-fitting suspensory, was attended with a sickening pain in the left testis and groin. Diathermy for one hour gave no apparent immediate relief. Twenty-four hours later the pain left the epididymis completely and the patient declared on the third day that there was absolutely no discomfort. The acute swelling had entirely subsided four days later and there has been no recurrence.

These 3 cases are typical of the results obtained in a series large enough to justify our enthusiasm as to the specificity of diathermy for gonorrheal epididymitis.

Summary

Diathermy provides us with a method of inducing heat within the body of the epididymis, testis and spermatic cord. By using the electrode described above the gonococcus can be rapidly destroyed in its local invasion obviating prolonged inactivity or operative interference. Our results with this

(Cont'd. on page 14)

THIRD ANNUAL

PHYSIOTHERAPEUTIC CONVENTION

CHICAGO, ILLINOIS—OCTOBER 20 to 24, 1924
at the LOGAN SQUARE MASONIC TEMPLE

H. G. Fischer & Company join with the following physicians in cordially inviting you to attend what we are confident will prove to be "the greatest meeting of Physiotheraputists of all time".

The following physicians of note will participate:

E. C. HENRY, M.D. . . . . Omaha, Nebr.
Chief of Staff, the Lord Lister Hospital—*Chairman.*

MILES J. BREUER, M.D. . . . . Lincoln, Nebr.

W. B. CHAPMAN, M.D. . . . . Carthage, Mo.

MAURICE H. COTTLE, M.D. . . . . Chicago, Ill.
Eye, Ear, Nose and Throat Surgeon at the American Hospital.

LEO C. DONNELLY, M.D. . . . . Detroit, Mich.

EMILE C. DU VAL, M.D. . . . . Chicago, Ill.

R. F. ELMER, M.D.. . . . . Chicago, Ill.
Attending Surgeon, Chicago General Hospital.

CHAS. H. FREDRICKSON, M.D. . . . . Chicago, Ill.
Attending Physiotherapeutist, the U. S. Veterans' Bureau.

DEAN W. HARMAN, M.D. . . . . Ames, Iowa

ABRAHAM R. HOLLENDER, M.D.. . . . Chicago, Ill.
Attending Eye, Ear, Nose and Throat Surgeon, the American Hospital.

WM. E. HOWELL, M.D. . . . . Chicago, Ill.
Attending Physiotherapeutist at the American Hospital.

D. FRANK KNOTTS, M.D. . . . . Chicago, Ill.

DISRAELI W. KOBAK, M.D. . . . . Chicago, Ill.
Attending Physiotherapeutist, the Cook County Hospital.

GUSTAV KOLISCHER, M.D.. . . . . Chicago, Ill.
G. U. Surgeon at the Michael Reese and Mount Sinai Hospitals.

ARTHUR LA ROE, M.D. . . . . Newark, N. J.
Formerly of the U. S. Public Health Service and U. S. Veterans' Bureau at Newark, Staten Island and New York.

ELLIS G. LINN, M.D. . . . . Des Moines, Iowa

FREDERICK H. MORSE, M.D. . . . . Boston, Mass.
Ex-president the American Electrotherapeutic Association.

ROSWELL T. PETTIT, M.D. . . . . Ottawa, Ill.
Physician-in-charge at the Illinois Valley Hospital.

CURRAN POPE, M.D. . . . . Louisville, Ky.
Medical Director the Pope Sanatorium, and Consulting Neurologist and Physiotherapeutist to Saint Anthony's Hospital.

A. L. SMITH, M.D. . . . . Corry, Pa.

HARRY EATON STEWART, M.D. . . New Haven, Conn.
Director New Haven School of Physiotherapy, formerly supervisor Physiotherapy Bureau U. S. Public Health Service, Washington, D. C.

HARRY M. THOMETZ, M.D. . . . . Chicago, Ill.
Assistant Surgeon the Illinois Eye and Ear Infirmary, and late of the U. S. Government Service.

NORMAN E. TITUS, M.D. . . . . New York, N. Y.
Vice President American Electrotherapeutic Association and New York Electrotherapeutic Society. Director of American Academy of Physiotherapy. Director of Physiotherapy, Beekman Street Hospital.

ALBERT F. TYLER, M.D. . . . . Omaha, Nebr.
Professor Roentgenology Creighton Medical College, Roentgenologist St. Joseph's Immanuel, Paxton and Douglas County Hospitals.

MEL R. WAGGONER, M.D. . . . Cedar Rapids, Iowa

Several other physicians skilled in Physiotherapy have promised to be present and to lend their assistance. These meetings will be open only to licensed physicians of good standing. There will be no charges, and no obligation imposed by attending.

This is the one meeting of the year that you cannot afford to miss!

original method have been so uniformly satisfactory that we feel free to describe it as one which is specific for gonorrheal epididymitis.

Jour. Urology.

Physiotherapy in Government Hospitals

The following extracts from General Order Number 68D, U. S. Veterans' Bureau, issued by Director Frank P. Hines, and bearing date of June 4, 1924, shows that physiotherapy and occupation therapy are now a constituent part of the medical care and treatment in U. S. Veterans' Hospitals and in Government Hospitals operated by The War, Navy and Interior Department, and even in the National Homes for Disabled Volunteer Soldiers.

"1. Physiotherapy and occupational therapy in U. S. Veterans' Hospitals are a constituent part of medical care and treatment and, like other clinical measures, shall be carried out under the supervision and control of the Medical Officer in Charge of the hospital, acting under the general direction of Central Office, which will control the appointments of personnel and the furnishing of supplies and equipment. In the case of contract hospitals such occupational therapy and physiotherapy personnel and equipment as are to be furnished by the Bureau shall be provided through the District Manager concerned, and shall be under his supervision, except as hereinafter specified. In the case of Government hospitals operated by the War, Navy, or Interior Departments, or by the Board of Managers of the National Homes for Disabled Volunteer Soldiers, these measures are carried on under the direction of such authorities, and by means of personnel, supplies, and equipment which they provide.

"2. Physiotherapy is the use of physical measures for therapeutic purposes, and includes massage, hydrotherapy, thermotherapy, electrotherapy, actinotherapy, therapeutic exercise, and remedial gymnastics.

"3. Occupational therapy shall include any occupation, mental or physical, definitely prescribed and guided for the distinct purpose of contributing to and hastening recovery from disease or injury, and shall include activities formerly carried on under the designation of pre-vocational training. Neither physiotherapy nor occupational therapy shall be applied except as prescribed by medical authorities. The term "Reconstruction Center" and the title "Educational Director" shall be discontinued, and the head of the Occupational Therapy Service shall be designated as the Occupational Director.

"4. In U. S. Veterans' Hospitals the Medical Officer in Charge, unless he performs such duties himself, shall designate some medical officer especially qualified in physiotherapy to have supervision of that activity whenever such officer is available. The ranking physiotherapy aide shall have charge of the administration of physiotherapy under the direction of that officer. The same officer, or some other especially qualified in occupational therapy, shall when available, be designated by the Medical Officer in Charge to supervise that activity, unless the Medical Officer in Charge performs such duties himself. The Occupational Director shall have charge of the administration of occupational therapy under the direction of that officer. When no officer is especially assigned to have charge of these activities, the ranking physiotherapy aide and the Occupational Director shall be responsible to the Medical Officer in Charge for the proper conduct of their respective departments. * * *

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Until we acquire a more definite knowledge of the causes of hyperpiesis, its treatment must be more or less empirical. However, during the first stage auto-condensation has proven satisfactory.

Prostatitis

Question received:

"Gentlemen:—

In some treatments of Prostatitis both acute and chronic, with diathermia, we have failed to get results. Can you give us any points as to why? Is it the machine or the operator, or both? Have tried every technic described and with no results. This same thing has occurred in some cases of acute arthritis in the knee. In the ankle and wrist we have secured wonderful results. In epididymitis, our paper speaks for that. As you will recall, we are using your Portable at both hospitals. Any suggestions will be more than appreciated."

Answered by W. B. Chapman, M. D. of Carthage, Mo., as follows:

"Dear Dr. Peacock:—

Your inquiry to H. G. Fischer & Company of Chicago has been referred to me. I presume that they have already supplied you with my little pamphlet entitled 'Electrotherapy in Prostatitis,' and I hope that you will read it carefully. In case you have tried this technic without results, I would examine the patient carefully for other complicating diseases, especially tuberculosis and syphilis. I have recently treated a patient from down in your country who was so run-down and anemic that he did not respond to any form of treatment for weeks, but finally began to improve after persistent administration of iron and arsenic both by mouth and intravenously.

Where the patient does not respond satisfactorily, especially in chronic prostatitis, I would give some foreign protein subcutaneously to stir up his resistance. For this reaction I use typhoid vaccine, diphtheria antitoxin or some of the mixed sera or vaccines. It makes very little difference which you use as it is the foreign protein reaction that you desire. These injections repeated on alternate days will often stir up a healthy reaction with fever and an increased leucocytosis and the local condition will begin to improve immediately.

In arthritis of the knee an X-ray will probably show what the trouble is. The knee-joint is weight bearing, and the infection often erodes the cartilage and forms exostoses or roughened areas of bone in the joint. When the patient rests the joint, these areas stick together with excruciating pain to the patient when he attempts to move again. Neither medicine nor diathermy will help this condition as it is strictly operative."

The Treatment of Tumors of the Bladder

By HOWARD A. KELLY, M.D., F.A.C.S. and
WILLIAM NEILL, Jr., M.D., F.A.C.S.

From the Howard A. Kelly Hospital, Baltimore, Md.

The problem of tumors of the bladder, so long treated as the stepchild of urology, has in recent years taken on a new interest owing to the advent of several new factors. First of all, there is the more ready recourse to surgery of the viscus, exposing the tumor and attacking it effective in loco; then, there is the use of radium which has been found curative in an astonishing percentage of cases; and, finally, a new agent has come to claim a position in recent years, by which a current of electricity directed to a spot acts as a desiccating agent (endothermy) capable of penetrating the depths of the tumor and destroying it rapidly and without hemorrhage.

Surgery. Surgery is the most aggressive procedure and the only one associated with a serious risk. The limitations of surgery are at present, as in the past, due to the fact that with rare exceptions it is only applicable to isolated pedunculate growths, the simplest group under discussion, while it is worse than useless in any carcinoma invading the bladder wall. With the new agents now at our disposal, it is difficult to see just what field will remain for the pure surgeon except to employ his art as an adjuvant to the use of radium or endothermy,—that is to say, in exposing the field through a suprapubic opening in the bladder for the treatment. We, ourselves, have felt a serious temptation to spend considerable time in developing another form of surgery, however, that is to say, to labor to acquire skill in operating through the open cystoscopic, 14 cm. long and 10 mm. in diameter; especially in the female bladder does this method afford access to all parts, opening up a way for working with delicate instruments. In the male the instrument must be longer. It is quite certain, however, that any

attempt to remove a tumor by means of forceps, knife, or scissors is necessarily exposed to a risk of serious hemorrhage and should, therefore, be eliminated.

Electric Coagulation or Endothermy. We have for years used fulguration in attacking papillomata through our open air cystoscope with the patient in the knee-chest posture, but have always found that the chief difficulty was that we were able to make so little impression on a massive tumor at one sitting, even though we attacked the pedicle. Fulguration seems to yield its best results in sparking out superficial flat areas of disease where the papillary tumor is disseminated. In papillary carcinomata with infiltration, it is of course worse than useless. It is not our desire, however, to deprecate an agent which in a limited field has proven such an advance over previous ineffective methods.

More recently, an effective apparatus has been devised by Edward V. Clark of Philadelphia and extensively utilized by his former co-adjutor, Dr. George A. Wyeth of New York, who has brought this machine to a remarkable perfection. Wyeth, who is also a first class surgeon, as well as urologist, has made use of the desiccation and endothermic method to destroy tumors in the bladder by making a suprapubic opening and then penetrating and desiccating the disease in an area all around the base of the tumor which is then undermined, desiccated, and removed. The method is not applicable where there is basal infiltration but only to the papillary carcinomata not yet become invasive and to simple papillomata.

The writers believe that this method affords an extraordinary facility for dealing with these tumors without an incision, through the open cystoscope, in the male as well as in the female, and that in this way it will be possible to desiccate the bases of all pedunculate tumors and destroy them as a rule at a single sitting. Such a procedure simply calls for dexterity in the use of a cystoscope and in introducing a long well insulated needle to be brought into contact

with the base of the tumor or to be plunged into it. This will cut out the use of radium in all but the infiltrating, metastatic, or superficially widespread types, a welcome retrenchment in the radium field.

In recapitulation, the method which has the widest field of utility is the use of radium, and we have here an agent whose value is not yet fully appreciated in dealing with those otherwise hopeless cases. The endothermic method, however, greatly simplifies and extends and helps the radium application in removing masses of disease and curing the patient quickly in the simpler cases, and in limiting the field for radium to those in which the bladder wall is invaded.

Abs. from *Ur.* and *Cut. Review.*

Electro-Coagulation Essentials

By T. HOWARD PLANK, M.D.
Chicago

The first essential for good results from electro-coagulation is a good working knowledge of anatomy; the second and equal essential is a good grounding in pathology, for one must know how far he can go with the destruction, and electro-coagulation in destruction, and equally one must know how far it is necessary to go to obtain good results, and this can only be accomplished by having the necessary information at one's finger tips.

The limits of the pathology in the case at hand are the boundary lines that he must reach to obtain success. If the anatomy of the parts will not permit of this amount of destruction then the case is not one for electro-coagulation and some other method of treatment is to be followed.

The third essential is as perfect a knowledge of the destructive agent used as it is possible to obtain. In this instance it is the high frequency currents, either Oudin or D'Arsonval, either unipolar or bipolar, depending entirely upon what one wishes to accomplish.

The fourth essential is a machine that will deliver a non-faradic current. A current that is high enough in frequency and properly balanced in amperage and voltage to deliver heat, not electricity. Remember that the destruction by electro-coagulation is accomplished by heat and this is produced by the resistance of the tissues to the passage of the current; friction if you wish to liken it to such. If your machine gives too low a frequency, nerve impulses will be generated. If of too low an amperage and too high a voltage greater nerve impulses will result.

Proper anesthesia for continuous operation without danger to the patient is the next essential, and this is best accomplished by the use of morphine sulphate, one-fourth grain, and hyosin hydrobromate one one-hundredth grain, given one and one-half hours before beginning the operation and a like dose repeated three-fourths of an hour later, to be followed immediately before operation with enough ether to produce profound anesthesia.

The following are essential to a smooth operative technique: proper applicators for the case at hand which can be changed in a moment's time to one better adapted for a particular part of the operation being performed; applicators that require the least possible attention of the operator; a good reliable foot-switch to give the operator perfect control of the current at all times. With the above essentials should go as much operative experience as it is possible to acquire. Remember first, last, and always that electro-coagulation is a surgical procedure and must be so kept and considered. It is the sharpest knife you ever handled, yet it causes no bleeding, no after pain, and does give results that cannot be accomplished in any other way or by any other method known to the medical profession today. Add it to your surgical armamentarium.

Med. Herald.

Physiotherapeutic Lectures at Omaha

A very complete program has been arranged for November 3, 1924, in the LECTURE HALL, 1118 Farnam St., Omaha, Nebraska.

The entire morning will be devoted to a practical Clinic in X-RAY, RADIUM and PHYSIOTHERAPY at the RADIUM HOSPITAL—conducted by D. T. Quigley, M.D., and H. L. McLeay, M.D., of Omaha, and W. B. Chapman, M.D., of Carthage, Missouri.

W. B. Chapman, M. D., of Carthage, Missouri, will have two afternoon appearances: "The Practical Use of Medical Diathermy" and "Quartz Light Therapy."

W. Scott Keyting, M. D., Salt Lake City, Utah: "Physiotherapy Modalities and When to Select Them."

T. B. Lacey, M. D., of the Glenwood State Hospital, Glenwood, Iowa: "The Use of X-rays in the Treatment of Mongolism."

Roland G. Breuer, M. D., of the State Sanitarium for Tuberculosis, Norton, Kansas: "The Limitations of Physiotherapy in the Treatment of Pulmonary Tuberculosis."

E. G. Linn, M. D., Des Moines, Iowa: "The Value of Diathermy in the Treatment of Certain Diseases of the Ear."

Sanford Withers, M. D., Denver, Colorado: "Radiation Therapy."

G. B. Massey, M. D., Philadelphia, will read a paper and conduct a clinic.

There will be a banquet at the University Club, and very likely more papers on interesting subjects, although this is the only definite information we have up to the time of going to press.

All physicians are invited to attend — no cost, no obligation.

Over one-hundred physicians took advantage of the September Clinics and enjoyed a very instructive day.

The Waggoner Physiotherapeutic Lecture Courses

By Mel R. Waggoner, Cedar Rapids, Iowa

Classes for the Coming Season Follow:

Chicago, Illinois (The Auditorium Hotel)	**October 27th to November 1st**
Charlotte, North Carolina (Charlotte Hotel)	**November 10th to 15th**
New York, New York (Hotel Pennsylvania)	**November 17th to 22nd**
Philadelphia, Pennsylvania	**November 24th to 29th**
Cleveland, Ohio (Hotel Winton)	**December 8th to 13th**
Detroit, Michigan (Wolverine Hotel)	**December 15th to 20th**
Chicago, Illinois (Auditorium Hotel)	**January 5th to 10th**
Los Angeles, California (Lecture Hall, Professional Bldg.)	**January 26th to 31st**
San Diego, California (Grant Hotel)	**February 2nd to 4th**
San Francisco, California (St. Francis Hotel)	**February 9th to 14th**
Seattle, Washington (Olympic Hotel)	**February 16th to 21st**

Personally conducted Courses, Clinics, Lectures

For Details, Fee, Etc., Etc., write the Secretary of the Waggoner Lecture Courses, at 1664 N. Claremont Ave., Chicago, Illinois.

(Watch for announcements in Fischer's Magazine)

THE FISCHER GALVANIC CURRENT GENERATOR was designed and placed on the market only after repeated requests from operators of Fischer Diathermy and X-ray apparatus—requests for a machine that would generate a perfectly smooth flow of Direct Current at any desired voltage and milliamperage, with an accurate and finely calibrated meter, that would be simple to operate.

We are offering just such an outfit in our Model No. 1200.

The units are mounted on a one-piece metal frame, finished with a crystallized black enamel. The smaller attachments are of brass, heavily nickel plated, and stand out handsomely against the black background.

Model No. 1200

The generating device consists of a small noiseless motor driving a Direct Current generator. The voltage output ranges from zero to 150, and the milliamperage from zero to 25. A "Universal" type motor is employed which is equally effective on either alternating or direct current, at from 105 to 120 volts. The current obtained is direct from the generator—there is no ground connection.

Catalog No. 1200—The Fischer Galvanic Current Generator, with black crystallized finish, with connecting cord and plug, ready to operate from either Direct or Alternating current of from 105 to 120 Volts, with

1—No. 316 Spongio Dise and Handle
1—No. 1900 Hard Rubber Needle Holder
12—No. 1901 Sharp Steel Needles, and
2—No. 1904 Rubber Covered Connecting Cords

Catalog No. 1200 — complete — code GALVAN price **$100.00**

A PAGE OF FUN

R.I.L.: I have asked every one I know what could possibly make a man write a poem like "The Deserted Village," and today a book agent enlightened me by saying, "Oliver Goldsmith was inspired to write The Deserted Village, while in Glasgow, Scotland, on a Tag Day."

One Sunday two lovers went to church. When the collection was being taken up the young man explored his pockets and finding nothing, whispered to his sweetheart: "I haven't a cent; I changed my pants."

Meanwhile the girl had been searching in her bag and finding nothing, she blushed a rosy red and said: "I am in the same predicament."

□ □ □

Tom: "Harry ate something that poisoned him."

Dick: "Croquette?"

Tom: "Not yet; but he's very ill."

□ □ □

"No," she said, "everything's over between us. We're through. Shall I return your letters?"

"Yes, please," replied the rejected one. "There's a lot of good stuff in them I can use again."

Strolling along the quays of New York Harbor an Irishman came across the wooden barricade placed around the enclosure where emigrants suspected of suffering from contagious diseases are isolated.

"Phwat's this boarding for?" he inquired of a bystander.

"Oh," was the reply, "that's to keep out fever and things like that, you know."

"Indade!" said Pat. "Oi've often heard of the Board of Health, but bejabbers, it's the first time Oi've seen it!"

What a wonderful bird the frog are,
When he stand, he sit,
When he hop he fly,
ALMOST.
He ain't got no sense,
HARDLY.
He ain't got no tail
Either.
When he sit down he sit on
What he ain't got
ALMOST.

THERE ARE BOATS THAT MIND THE HELM AND BOATS THAT DON'T. THOSE THAT DON'T, GET HOLES KNOCKED IN THEM SOONER OR LATER.

—Elbert Hubbard.

Program for Our

Monthly Physiotherapeutic Meeting

Monday, December 8th, 1924

W. B. CHAPMAN, M. D., Carthage, Missouri.
"The Application of Physical Agents in the Treatment of Pulmonary Tuberculosis" - 10:00 to 11:00 A. M.

T. A. KREUSER, M. D., Chicago, Illinois.
"Galvanism" - - - - - - - - - - 11:00 to 12:00 Noon

C. L. BARBER, M. D., Lansing, Michigan.
"Applied Medical Diathermy" - - - 1:30 to 2:30 P. M.

W. B. CHAPMAN, M. D.,
will speak informally on "Physiotherapy in General Practice" - 2:30 to 4:30 P. M.

How to Get Here:

DRIVING—Follow Washington Blvd. west to Oakley Blvd., north on Oakley to Wabansia Ave., and one block west, or

BY ELEVATED—Take the Humboldt Park "L" to Western Avenue Station, walk one block north to Wabansia Avenue and a short block east to Claremont, or

BY SURFACE CAR—Western Avenue to Wabansia Avenue, and one block east to Claremont.

We have ample space for all of you. Remember the date and come to our Lecture and Demonstrating Rooms at

2335 WABANSIA AVE.
CHICAGO

H. G. FISCHER & CO., Inc., Phone Armitage 0323

FISCHER'S MAGAZINE

Fischer CHICAGO, ILL.

THIS BOOK
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H. G. FISCHER & CO., Inc.

362

NOVEMBER, 1924

SHUN IDLENESS.

IT IS THE RUST THAT ATTACHES ITSELF TO THE MOST BRILLIANT METALS.

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.

H. G. Fischer & Co., Inc., 2333-43 Wabansia Ave., Chicago, Ill.

Vol. II — November, 1924 — No. 12

The Convention

NOW that it is all over, we are able to see in perspective the tremendous significance of the Third Annual Physiotherapeutic Convention held at Logan Square Temple during the week of October 20-24. Frankly, during the Convention everyone in the Fischer organization was too busy to devote much time to analysis of the events of those five days!

Aside from the magnitude of the gathering—nearly seven hundred registered M. D.'s were present—perhaps the most impressive feature was the territory covered. Not only was every part of the Union represented, from California to Maine and from Washington to Florida, but there were present physicians from Canada and the West Indies as well. What stronger evidence could there be of the nation-wide establishment of Physiotherapy?

"It has been the most constructive convention that I ever attended," said a doctor from New York. We felt that, too. All through the week there was evident an earnestness and enthusiasm that made the excellent lectures and clinics doubly interesting and valuable to every participant.

There was an undercurrent of supreme confidence evident in both lectures and clinics; confidence based on experience and success, and indicative of the strides that have been taken in Physiotherapy during recent years. Truly, scientific medicine is forging steadily ahead.

Many of the visiting doctors expressed especial appreciation of the arrangements that had been made for their comfort and convenience; accommodations, amusements, stenographic facilities and the like. We were very glad, indeed, to do our best in this respect, for we appreciate that it is to the best interests of all concerned that every visitor be free to devote his attention and energy wholly to the convention itself.

It was a great Physiotherapeutic Convention. The finest of its kind that has been held. When we predict that next year's gathering will be even bigger and better, we are setting a high standard, indeed. To those physicians who are interested in Physiotherapy we can say in full confidence that this Convention was well worth attending and that the next one will be even more so.

This Convention—And the Next

It is not only with extreme pleasure, but with pride, that we announce the *success* of the greatest gathering of physiotherapeutists of all time. The fondest hopes of past years are fast becoming a reality.

A friendly feeling prevailed throughout the big meeting, and we feel safe in stating that every physician in attendance derived even more benefit from the lectures and clinics than he had hoped for. Criticisms were offered, but in every instance they were constructive, and, as in previous years, such criticisms will be of tremendous assistance in planning future clinics.

Our effort next year, however, will be to outclass this meeting in every way. So if, during the course of your stay, you found occasion for constructive criticism, you will help build up these big meetings to a point where they will be of greater benefit and convenience to physicians attending, if you will point out such conditions by corresponding with Mr. H. T. Fischer, Editor of FISCHER'S MAGAZINE, while the affair is still fresh in your mind. We shall tabulate every such constructive suggestion, and make every effort next fall to apply them.

Several eye, ear, nose, and throat specialists suggested a plan of submitting their subjects during one or two successive days, instead of spreading them over the entire week. Many were of the opinion that more clinics, more round-table talks, and more clinical material, would be beneficial and would add to the already excellent program.

The vacancies in the big program, caused by a few physicians who, we regret, were unable to attend or who were called away, were quickly filled by able men, and the big convention hall fairly buzzed with eagerness during the entire five days.

The whole-hearted appreciation expressed by the boys when leaving for home will be an incentive to make the 1925 program greater in every way. I want to take this occasion to thank the physicians in attendance for making the meeting the greatest success ever achieved in physiotherapy, and to express the hope that the next few years may raise the plane on which physiotherapy rests to a point where it will of necessity become the most valued adjunct in *every* physician's office.

To this height we have set our goal.

H. G. FISCHER.

Valedictory to the Convention

By EDWIN C. HENRY, M. D.

Lord Lister Hospital, Omaha—Chairman of the Convention

Gentlemen, the time has come to say goodbye. Since Monday morning, we have been the guests of H. G. Fischer & Co., who have extended us every possible courtesy in this pleasant hall.

You may be interested to know just who *we* are. We come from thirty states of the Union, Mexico, Canada, and the West Indies. We number between six and seven hundred representative physicians of regular medicine.

Here is the criterion as to whether this meeting has been a success or no. Are you going away holding your head a little higher, your spine a little straighter, because you belong to the healing profession? Are you going back determined to reread your Anatomy and Physiology? Have you made up your

mind to look the world squarely in the face and use every means known to Science and Art to help your patient? Have you resolved to dedicate your life to give the sick the best that is in you in service? Then this meeting has been a success.

In summing up such a Convention, only the high points can be touched. Only the things that were of prime importance can be noticed. Almost every speaker has stressed the vital importance of viewing the body as a whole. For example, when a patient has a tubercular gland of the neck, he is a tubercular patient, and instead of focusing our attention on that one gland, we must realize the whole body must be treated. Remember this one from Pope,—"Every patient that comes to you may be soil in which is planted Tuberculosis, Syphilis or Malignant Disease."

It will take a good while to digest the physics of the Actinic Ray as so ably outlined by Donnelly. If we are going to master this new science, we must go back to the old masters just as he has done and study Newton, Tyndal and Helmholtz.

Remember this pungent truth from Donnelly, "All the energy that comes to us making life possible, comes from the Sun." One octave is called visible light. Above that, consisting of three octaves, are rays called Actinic. Actinic rays are just as real, just as demonstrable as visible light. Pettit gave us some wonderful pictures showing how light and Actinic rays cured tuberculosis. He gave Rollier credit for his pioneer work in bone tuberculosis.

Surgical Diathermy was demonstrated as a real aid in treating malignant disease. Dr. Kolischer testified he had given up the knife in cancer of the cervix. Surgical Diathermy, Radium, Deep X-ray, skilfully used, will save an enormous amount of suffering, and there is evidence of many lives being saved. In all of his talks, Dr. Kolischer showed the trained mind of the surgeon with a broad grasp of the field of malignant disease and the action of radiant energy on the cancer cell.

Radiant energy is now an established part of the doctor's armamentarium. Visible Light, Actinic Rays, X-ray and Radium are but different parts of a mighty spectrum coming to us from the Sun.

The Convention owes a debt of gratitude to the physicians who gave their time and their knowledge in clinics and lectures —these are the men:*

Miles J. Breuer, M. D.
W. B. Chapman, M. D.
Maurice R. Cottle, M. D.
Leo C. Donnelly, M.D.
Chas. H. Frederickson, M. D.
Dean W. Harman, M. D.
Abraham R. Hollender, M.D.
Wm. E. Howell, M. D.
D. Frank Knotts, M. D.
Disraeli W. Kobak, M. D.
Gustav Kolischer, M. D.
Ellis G. Linn, M. D.
Frederick H. Morse, M. D.
Roswell T. Pettit, M. D.
Curran Pope, M. D.
A. L. Smith, M. D.
Harry M. Thometz, M. D.
Albert F. Tyler, M. D.
Mel R. Waggoner, M. D.

That the splendid work of H. G. Fischer & Company in arranging this Convention and carrying it through, is thoroughly appreciated, has been demonstrated by the unanimous rising vote of thanks we have tendered to them.

EDWIN C. HENRY, M. D.

*To these we must add the name of Doctor Henry himself! His invaluable work as chairman contributed much to the success of the Convention. H.T.F.

Thermopenetration in Treatment of Disease of the Female Bladder

Buben, in Deutsche Medizinische Wochenschrift, reports fifty patients treated, some for gonorrheal conditions, others for cystitis, incontinence, or painful urination. In twenty the applications were intravesical; in the remainder extravesical only. In the latter an olive-shaped electrode was used in the vagina with Kelen's thermometer, the external electrode being a lead plate the size of a man's palm over the symphysis. The improvement in these was less satisfactory than by the internal method, although usually good results were obtained in this way also.

The internal electrode employed in the cases treated intravesically consisted of a metal catheter twenty centimetres long and narrowed in the middle, fitted with a cock and with a two centimetre screw tip. From the cock to the removable tip the narrower central portion is insulated with rubber-coated silk webbing. Through the metal tube the bladder may be filled with salt solution, the cock may then be closed, and the same tube serve as an electrode. The fluid is thus gradually and uniformly heated by the passage of the current, and the entire mucosa of the organ in this way receives an intensive warming. Three applications a week were given of ten to twenty minutes' duration with one-half to one ampere of current. On an average ten applications accomplished a cure. The most marked success was that obtained in juvenile enuresis.

There is no doubt in the author's mind that the heat effect of thermopenetration differs materially from that of heat applied externally. The explanation of this difference is not to be sought in the action of the electric current in thermopenetration, but in observation that, while external warmth affects only the surface tissues to a depth at most of one or two millimetres, the deeper tissues may be heated by thermopeneration to any desired temperature below the coagulation level of 50 degrees C. This heat generated in the deep tissues

is manifested not only in a hyperemic effect on the nerve endings of the arterial walls, but also by affecting other trophic nerve endings, and so, by raising the temperature of the interior of the body, a tonic effect is produced on the chemical constitution and metabolism of the region penetrated by the current.

Quartz Light Therapy in Diseases of the Ear

By LEO C. DONNELLY, M. D.
Detroit, Michigan

Ear specialists quite generally admit that Ultra Violet Rays, as well as the X-ray and frequently Electro-Therapy, are important adjuvants in the diagnosis, prognosis and consequent treatment of diseases of the ear.

The author, as an Ultra Violet Ray specialist, frequently has had cases coming in this category referred to him for treatment.

Included therein have been cases where partial deafness appeared as a symptom. Suppurating middle ear with poor prognosis, as well as operated patients, have all been seen and treated.

Let us summarize typical happenings: A patient is suspected of developing a mastoid abscess. Operative procedure, while anticipated, is not immediately resorted to. It is, therefore, entirely feasible to use our method to build up resistance and alleviate pain, both of which are certain to accrue if the Alpine Sun and Kromayer lamps are properly made use of at this time. Infection may be checked so that the necessity for operation is overcome.

Every ear surgeon knows of many cases where the mastoid process had been operated, leaving a sluggish non-healing wound. The patient is run down, worn out perhaps by long continued sepsis, and pain--in fact, altogether discouraged with daily routine of dressings which seem never to end. At this point comes a suggestion from some source that Quartz Lamps be employed. The picture now undergoes a complete change.

Very shortly sleep is more natural, toxicity decreases, appetite increases, and these results bring renewed hope to patient and friends alike.

Here, our technique is arranged so as to conduct the Ultra Violet Rays to all parts of the wound, and the necessity for first or second degree reactions is determined, and a course of general treatments prescribed dependent upon general bodily vitality indexes. Evidences of the benefit derived are indicated by a more watery discharge, generally becoming more profuse after a few treatments, while the appearance of the wound changes from its grey, sluggish, septic state to one of a more healthy nature and the prognosis is then materially altered.

A mastoid abscess is osteomyelitis of the mastoid cells. The entire body is damaged by the absorption of septic materials from the necrotic bone. Calcium metabolism is especially lowered. Increased calcium metabolism aids in curing osteomyelitis by producing new bone to wall off and, later, replace the diseased bone. The fact that quartz light therapy cures rickets, tetany, spasmophilia and is the best adjuvant in the treatment of tubercular and other forms of osteomyelitis is now well known by physicians who read the modern medical literature. These beneficial results are partially brought about by the quartz light stimulation of calcium and phosphorus metabolism. This stimulation is further increased by spraying the patient with a three per cent solution of calcium chloride during the treatment.

The type of applicators used, postures assumed for the proper manipulation of same, at times supplemented by some irrigating system to be employed, are all necessarily determined by individual factors and environment present or lacking, in each case.

It is important to note that probably all cases of this type are benefited, some being cured, and manifestly a medium capable of approximating these results in the hands of any intelligent physician is sufficiently valuable to be made universally serviceable.

Tonsil Fulguration Better Than Tonsil Operation

By THOMAS M. STEWART, M. D.

The writer claims success in ninety per cent of cases treated by fulguration which is equal to the degree of success claimed for the cutting operation. This method together with one or two X-ray treatments using a 7 to 9 inch spark gap leaves nothing to be desired. Most tonsil operators are unaware of the wide range of unsatisfactory results after the cutting operations and a review of the literature reveals a large number of fatalities following such operations.

Davis (Journal A. M. A., April 22, 1922) in the examination of 7500 school children during a period of two years, says: "I was impressed with the large number of children showing pronounced enlargement of the glands of the neck and poor nose breathing, although their adenoids and tonsils had been removed." His conclusions are:

1. The incidence of heart disease in children referred for tonsil operation is very small.

2. The glands of the neck enlarge as often after as before removal.

3. There is more complete relief from symptoms when removal is done at from 7 to 10 years of age.

4. Early removal gives mechanical relief for a short time, but the original cause of the growths, whatever it may be, is present and active until a much later period.

Abstracting from a large number of articles by prominent men the author concludes that the end results in tonsil operations do not guarantee a disappearance of the symptoms and infections traceable to the tonsils. Neither do tonsil operations prevent the recurrence of the symptoms and infections. It is logical therefore to use other methods to reduce large tonsils in size and render them more healthful. Tonsil fulguration and its modifications meets the requirements, and does not carry with it the attendant dangers of the cutting operations.

The advantages of high frequency currents by means of fulguration, electro-coagulation, dessication and diathermy, are:

1. Bloodless work. The danger of hemorrhage is abolished.
2. The danger of infection due to local anesthesia and of death due to the general anesthetic is also abolished.
3. The diseased parts undergo sterilization because the current used is germicidal.
4. The singing and speaking voices are in no way impaired.

Technic

The first step is the application of the local anesthetic to the tonsil along the borders of the pillars and on the upper pole. For this purpose a one per cent cocaine solution may be used. This is painted on by cotton swabs. Solutions of procaine or novocaine may also be used. Adhesions must be separated and tonsillar crypts flushed out. In applying the high frequency technic, it is best to consider three types of tonsils:

1. The hard tonsil.
2. The disintegrating tonsil.
3. The soft inflamed tonsil.

The Hard Tonsil Technic

This tonsil because of poor circulation and low grade tissue changes responds to heat. The D'Arsonval high frequency current is of lower voltage than the Tesla, consequently it has greater amperage. The greater quantity of current is needed in diathermy and electrocoagulation. The pole or terminal of the D'Arsonval coil is attached to a probe, cotton wrapped, soaked in epsom salt solution, and the probe is fastened into a Cook fulguration handle. The other terminal is attached to the auto-condensation chair or the ordinary auto-condensation handle which the patient then holds. The cotton wound probe is pressed against the tonsil and the current gradually turned on until it is hot and then it is moved over the surface of the tonsil, into the crypts and space around the tonsil. All manipulations are gently done. The application to each tonsil consumes

three to five minutes of time. The after-soreness is slight and disappears in a day, at most two days, and then another treatment is in order. It is better to perform the operation four or five times than to over-treat at one sitting.

The Disintegrating Tonsil Technic

Use D'Arsonval current 500 to 800 milliamperes, controlled by foot switch. Here good local anesthesia is usually needed. Mould a piece of block tin or metal mesh cloth, six inches square will do, to shoulder and back. Hold it in place with sand bag or bandage so that perfect contact is obtained. One terminal is connected to this as the indifferent electrode. The other terminal is connected to Cook's handle which carries a long needle. Insert needle into tonsil one-eighth to one-quarter of an inch. Turn current on for an instant, the part will turn white if coagulation is perfect, if not, repeat. Treat several areas, the whole tonsil can be treated at one sitting if desired, after one has had the experience by which to judge results and estimate reactions. It is best to do a little at first sitting and give two or three treatments rather than to do too much at one time. Two week intervals may be required between treatments. With this method, some after-pain may ensue. Cold epsom salt compresses will help nicely. One-half teaspoonful of epsom salt to cup of water. Use part as gargle.

The Soft Tonsil Technic

Less heat is needed for treatment of this type of tonsil, because the vessels are already dilated. The D'Arsonval current would only dilate them to a greater degree. Less current and more voltage is needed and this is the character of the current obtained from the Tesla winding or Oudin resonator. The application of this current is highly germicidal and will contract the tonsil down to normal size. The auto-condensation chair is connected to one Tesla terminal. The wooden or glass tongue depressor of the author's design is used, as metal ones are contra-indicated. Then with a probe insulated in its middle portion, draw the current out of tonsil at different points until it is slightly blanched. The current is felt in the

operator's fingers, he being the partial ground. The fingers not holding the tongue depressor, touch the patient's face, and by using one or more fingers, the current may be controlled. The after-soreness will disappear in three or four days.

The Unipolar Current for Relapses

If a tonsil needs a little more treatment at a later date after dismissal, the Oudin or unipolar current is a simple technic and effective. After two or three swabs of the local anesthetic, use insulated electrode with about one-eighth inch spark. Each spot treated will turn white. Go around the outer edge of the tonsil.

Conclusion

By using one or more of the electro-therapeutic methods described above it is possible to treat diseased tonsils with an equal or greater degree of success than by the cutting operations, and without the dangers or bad after-effects of the latter.

(The American Physician, Vol. XXIX, August '24)

Treatment of Neuralgia with the High Frequency Current

Schurig, in Deutsche Medizinsche Wochenscrift, says that while it should be a matter of routine practice in every case of neuralgia to ascertain and treat the cause still many of the severest forms are necessarily classed as "idiopathic," in which no other origin than "taking cold" can be assigned, and these are apt to prove particularly stubborn. In all these forms the author finds high frequency a sovereign remedy, greatly superior to any other. Foremost among them he places certain cases of supraorbital neuralgia of long duration and resistant to numerous efforts at relief. Occipital neuralgia is not infrequently an associated feature. Most obstinate of all are brachial and intercostal neuralgia, but even these yield to persistent treatment.

Excellent results are obtained in sciatica, both acute and chronic. In cases so acute that the pain is well nigh unbearable,

after a few sittings the patient feels better, becomes able to walk with a cane and later without one, and in twenty or thirty treatments a complete cure is effected. To accomplish this the current must be as strong as can be borne, the length of a sitting half an hour, and the treatments preferably daily. In the chronic form the same measures produce an improvement in five or six sittings, and twenty or thirty, occasionally more, afford complete relief from pain that has tormented the patient for years and decades.

In exceptional cases high frequency applications prove ineffective. Then the author resorts to the galvanic current, after the method suggested by Stanowski of Danzig in 1898, very strong and as long as can be borne, up to half an hour. Especially in sciatica has the author obtained in this way most gratifying results.

Diathermy and Angina Pectoris

By S. EDGAR BOND, B. A., M. D.

Richmond, Indiana

(Doctor Bond discusses the pathology of Angina Pectoris at some length, together with symptoms and methods of relief. He continues:)

Nitro-glycerine is the remedy par-excellence for the internist. An uncertain and dangerous operation, as yet in its incipiency, is the relief offered by the surgeon. The patient faces the alternative of a quiet life or one more attack and possible death.

Some recent experiences from other operators in this clinical field in the use of physical therapy have given me reason to hope for relief for some cases of angina pectoris. A case treated during the last year may well illustrate some possibilities in the use of diathermy or internal electrical heat as one of the future possible methods of relief or cure of this

and similar diseases. I have secured relief. Time alone will prove its permanence.

Case Report

Mrs. A., age 58, plump, complaining of attacks of pain in the chest with continual pain over cardiac area, especially noticeable in the superior cardiac aortic region near sternum. She gave a history of several attacks varying in severity from slight spasm of pain to *in extremis*. These had been relieved by an extended stay in the open plains and among the foothills of the northwest. On returning home she was again seized with attacks as formerly. She suffered great dyspnea with little relief of pain after her first attack. Physical examination and history of the case indicated a typical case of angina pectoris.

I at once suggested she place herself under my care and the use of diathermy. She began treatment October 21, 1923. She took in all twenty treatments. A small metal pad large enough to cover the cardio-aortic area was placed over the heart, and a larger electrode was placed opposite this on the posterior surface of the body. The first fifteen treatments were taken regularly every other day, and later treatments irregularly because the patient did not feel the need of them. Relief was noticeable from the first treatment. The last treatment was given February 19, 1924. For some time prior to that she was practically free from pain. She has suffered no attacks since, and considers herself cured. She is at present at work on her farm, but she has been cautioned against undue exertion. She, however, continues to perform light farm duties.

In this case I purposely withheld all treatment in the nature of drugs in order that I might test out the efficiency of diathermy. The above experience is not sufficient to herald a cure, even in this specific case, but the returns to both physician and patient have been of such a nature we feel as the time passes along that we can record for physiotherapy another triumph in the field of incurable disease.

(Journal of the American Association for Medico-Physical Research, July 15, 1924.)

SPECIAL CLINICAL COURSE IN X-RAY and PHYSIO-THERAPY

Monday December 1st, 1924--Omaha, Neb.

The fourth of a series of ten clinical courses sponsored by the Magnuson X-ray Co. for the purpose of further educating their customers in the uses of these modern therapeutic agents. These meetings are conducted by physicians of the highest standing who have had many years' experience in this work and they deal with the practical side of the question.

PROGRAM

9:00 to 12:00 a. m.—Practical Clinic at Lord Lister Hospital.

2:00 to 5:00 p. m.—Lectures and discussions by:

B. H. Sherman, M. D., Dexter, Ia., Chairman.
Curran Pope, M. D., Louisville, Ky.
G. W. Kauffman, D.D.S., Des Moines, Ia.
Sanford Withers, M. D., Denver, Colo.
T. B. Lacey, M. D., Glenwood, Ia.

6:00 p. m.—Banquet at University Club.

The Louis Gregory Cole G-I films will be shown after the banquet.

You are invited to bring any interesting clinical cases to Lord Lister Hospital—any of them operated during the clinic will be hospitalized without charge.

NO FEE IS CHARGED FOR THIS COURSE

Diathermy Soap Lather Paste

Have you tried our Diathermy Soap Lather Paste, put up in handy collapsible tubes? Convenient, always ready and very reasonable in price—Catalog No. 875—tube 35c.

Physiotherapy Treatment of Bone and Joint Injuries

R. W. FOUTS, M. D.
Omaha Clinic, Omaha, Neb.

The treatment of any bone or joint injury will depend in a great measure upon the length of time that has elapsed between the receipt of the injury and instituting treatment. . . . .

In a case of injury in the region of the joint, for example, the ankle, which is a so-called bruise or sprain, what particular thing is responsible for the disability?

The pain, of course; but why so much excruciating pain when we may have only a slight tearing or laceration of the soft parts in this region? We are all aware that if we get but little swelling, only a moderate or trifling amount of pain will be experienced, and our conclusion is that the injury was only slight because there was but little swelling and pain. The seriousness of the original injury is usually gauged by the amount of pain and swelling. This, however, is fallacious. . . .

The difference is in the amount of fluid poured out in the tissues in nature's effort to combat or limit the extension of the irritation. If nature is generous or over-enthusiastic, as is sometimes the case, and an excess of serum is poured out, resulting in an extensive edema, a proportionate swelling occurs with its consequent pain and disability. The edema of itself produces additional injury by laceration of the muscle sheaths and traumatizing the soft tissues. . . . .

From the foregoing it is evident that treatment should be instituted as soon as possible following the injury, before the usual edema and swelling occur. However, these conditions are no barrier to or contraindication for treatment, but all agree that "an ounce of prevention is worth a pound of cure," and that it would be better to prevent the edema, swelling and pain, rather than wait till these symptoms are present and then attempt to relieve them.

Given a case of severe sprain of the ankle, with immediate extensive swelling and consequent pain, how shall we proceed?

First, a thorough examination which can be made only with the X-ray. A fluoroscopic examination will not suffice. Pictures must be taken in both planes, or better still, if taken stereoscopically.

Fractures will be detected many times with this kind of examination that would otherwise be overlooked.

The presence of a small fracture makes no difference so far as treatment is concerned, but it is a mighty good thing for the physician to know, particularly, if for any reason the case should pass out of his hands and the patient later be appraised of the fact that he had a broken leg.

Our effort in the treatment of a case of this kind is toward the relief of pain, and we do this by relieving or preventing the one thing that is causing the pain—the edema. This is accomplished by the use of diathermy after the following technic:

If the pain is not so great that the foot cannot hang down, it is placed in a basin of salt water and a combination of the cuff and salt water electrode method is employed: the cuff being placed well above the ankle on the calf of the leg, care being taken that the cuff is only tight enough to insure contact and it must be loosened and reapplied from time to time during the course of treatment, which should last thirty minutes to an hour. If the cuff is not loosened it will become a constriction and an impediment to the return circulation within a few minutes after the treatment is begun. The electrodes may be applied laterally if so desired, but the combination method, if it can be employed, seems better. The greatest amount of heat is produced at the point where it is most needed, and the efferent vessels higher up the leg are dilated, favoring the return flow of the lymph.

Another factor which contributes to the pain in a great measure is the spasm of the muscles. The sedative action of diathermy relieves this by relaxing the muscle spasm. The efferent lymph channels are opened and edema and swelling are prevented if treatment is instituted early, or is quite promptly disposed of if present. During the treatment and for a few minutes following, gentle massage from below upward will materially assist in the process.

After treatment, the limb is covered with a thin layer of cotton, an extra layer being placed below the malleoli, and an elastic bandage applied from the toes to the calf of the leg. The limb is kept elevated and in six hours the treatment is repeated.

With the edema and swelling eliminated, the pain is reduced to a minimum and is of small consequence.

With the edema and swelling held in check for 36 or 48 hours the ankle may be strapped with adhesive tape after the usual fashion and the patient walks with but little pain or inconvenience. . . . .

What has been said about treatment of sprains, applies equally well in the treatment of fractures, providing the fracture is of such a nature as to admit of this form of treatment. . . . .

For illustration, let us take a fracture of the forearm. After the fragments have been properly reduced, our efforts should be directed toward preventing edema and swelling.

If the injury is such that it may be treated in this manner, diathermy may be given by the application of metal splints applied directly to the forearm extending well up to the elbow. After a thirty to forty-five minute treatment, the muscle spasm is relieved, the efferent channels are opened and edema and swelling reduced to a minimum. With these conditions relieved the pain is of small consequence. The part is kept continually elevated during the treatment and for 36 to 48 hours following. Treatment may be repeated three or four times during this period, after which a plaster cast or whatever form of splint desired may be applied and the patient become ambulatory.

This treatment has to its credit, not only lessened pain during the first few days, but the distinct advantage of eliminating the additional trauma produced by the edema and the resulting fibrosis of the soft tissues after healing has taken place.

We have many times been impressed by the conditions often encountered upon removing a cast or splints after four to six

weeks: The flabby atrophied muscles in some cases, while in others the partial loss of function, due to fibrosis of the muscles, and the difficulty encountered in restoring this function. . . . .

This condition may be overcome or prevented if proper treatment is instituted. The muscular contractions elicited by the early electrical stimulation enable the muscles and tendons to free themselves from the intra- and peri-muscular adhesions that are in the process of formation, thereby preventing the usual disability frequently present in these cases. The auto-muscular or cellular massage has a favorable influence upon the edema by dispersing the effused lymph.

This procedure may be carried out by utilizing the faradic current with a mechanical surge, so controlled that we may begin the treatment with very light stimulation and contractions increasing in strength as the case progresses.

Treatment may begin three or four days following the injury and be carried on without disturbing the splints by making application over the motor points higher up the limb. If bipolar contact is desired, this may be done by means of a water soaked electrode applied to the hand; in this way fibrosis and muscular atrophy are eliminated.

In the cases seen several weeks or months after the injury where firm fibrosis or ankylosis has taken place, the foregoing measures are supplemented with X-ray and manual manipulation. These are the cases that demand an unlimited amount of patience and perseverance. Here massage and manipulation play a great part and the results obtained will depend upon the judicious administration of these measures.

A preliminary treatment of diathermy materially assists by inducing a relaxation of the parts. We believe the X-ray to be the best solvent known for fibrosed tissues. Its action upon scar tissue is too well known to necessitate further discussion. It is employed in small doses, one-third of an erythema dose, once a week.

In addition to massage and manipulation, the faradic surge is employed, as it affords a very convenient and efficient mechanical means of exercise and is of distinct value.

Summary

1. Diathermy is of value in bone and joint injuries and should be used early. It relieves muscle spasm, prevents edema and lesseus pain.

2. By controlling edema and swelling, further traumatizing of tissue and the resulting fibrosis is prevented.

3. Fibrosis of soft tissues may be prevented by early employment of electrical stimulation. If continued and increased in strength will prevent atrophy of the muscles.

4. In cases of long standing with fibrosis and ankylosis diathermy is of value, preliminary to massage and manipulation.

5. Small doses of X-ray assist in the absorption of scar tissue.

6. Massage and manipulation consistently employed is of greatest value in cases of old standing.

The value of physiotherapeutic measures is not understood or appreciated by the vast majority of physicians, and for this reason is not regarded with favor.

However, it has distinct value and is entitled to a place in medicine. Positive proof obtained by these measures merits a conscientious consideration from every physician interested in doing better work.

(Read before the Western Electrotherapeutic Association Kansas City, April 17, 1924)

THANKSGIVING

For peace and plenty; for national prosperity beyond the dreams of less favored countries; for the kindness of our fellowman; for the rich heritage of knowledge and skill that is available today in the alleviation of human suffering; for the wonders of this age which are at our beck and call on land and sea and in the air; for countless advantages which were unknown to the founders of this Feast, let us be thankful.

The Waggoner Physiotherapeutic Lecture Courses and Clinics

By Mel R. Waggoner, M. D., Cedar Rapids, Iowa

Classes for the Coming Season Follow:

Charlotte, North Carolina (Charlotte Hotel)	**November 10th to 15th**
New York, New York (Hotel Pennsylvania)	**November 17th to 22nd**
Philadelphia, Pennsylvania (Sylvania Hotel)	**November 24th to 29th**
Montreal, Quebec (Mount Royal Hotel)	**December 8th to 13th**
***Detroit, Michigan** (Wolverine Hotel)	**December 15th to 20th**
Chicago, Illinois (Auditorium Hotel)	**January 5th to 10th**
Los Angeles, California (Lecture Hall, Professional Building)	**January 26th to 31st**
San Diego, California (Grant Hotel)	**February 2nd to 4th**
San Francisco, California (St. Francis Hotel)	**February 9th to 14th**
Seattle, Washington (Olympic Hotel)	**February 16th to 21st**

*Those who planned to attend the Cleveland class (which has been canceled) are advised to attend the Detroit class instead.

Personally conducted Courses, Clinics, Lectures

For Details, Fee, etc., etc., write the Secretary of the Waggoner Lecture Courses, at 1664 N. Claremont Ave., Chicago, Illinois.

(Watch for announcements in Fischer's Magazine)

A PAGE OF FUN

Jack: "Mrs. Reilly wants to know how long babies should be nursed."

Cass: "Tell her the same as short ones."

□ □ □

At a golf club one Sunday morning a member turned up late. Asked why, he said it was really a toss-up whether he should come there that morning or go to church.

"And I had to toss up fifteen times," he added.

□ □ □

She: "Since I inherited that property I've had three proposals."

He: "Oh, for the land's sake!"

□ □ □

"What precautions do you take against microbes?"

"First, I boil the water—"

"Yes, and then?"

"Then I sterilize it—"

"That's right, and then?"

"I drink nothing but beer."

He (after a long argument): "So you see, dear, you misjudged in saying that I was making love to that other girl just because we were out on the porch."

She: "All right. I believe you. Now wipe that eyebrow off your cheek and we'll go home."

□ □ □

The way to kill some people is to ignore them; the way to ignore others is to kill them.

□ □ □

Poor Fish (after breathless minutes): "Dearest, am I the first man that ever held you in his arms?"

Fair Fisher: "Yes, of course! Why do you men always ask that the first thing?"

□ □ □

Modern Girl (telephoning home at 3 a. m.): "Don't worry about me, Mother. I'm all right. I'm in jail."

THE ABSENT MINDED WAITER — COURTESY JUDGE

FOR THEY CAN CONQUER WHO BELIEVE THEY CAN

FISCHER'S MAGAZINE

THIS BOOK
IS THE PROPERTY OF
H. G. FISCHER & CO., Inc.

363

DECEMBER, 1924

SHOW ME A MAN WHO MAKES NO MISTAKES AND I WILL SHOW YOU A MAN WHO DOESN'T DO THINGS.
— THEODORE ROOSEVELT

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.

H. G. Fischer & Co., Inc., 2333-43 Wabansia Ave., Chicago, Ill.

Vol. III — December, 1924 — No. 1

Christmas

Let us take a little trip down Memory's Lane.

At the end of the lane, we are back in an old fashioned home. It is Christmas Eve, and all outdoors is covered with soft, white mask of new fallen snow. We have been put to bed early, for we are only a few years old, and little folks must be out of the way when Santa comes. Under the warm blankets we shiver with excitement as we listen for the muffled patter of reindeer hoofs and the silvery jingle of sleighbells.

Presently, however, in the midst of our vigil, the Sandman has his way with us and we fall asleep. We are startled into glad wakefulness by mother's voice—or father's—"Santa Claus has been here; come and see what he left for you!" We come, round eyed with expectancy.

What a vision! A corner of fairyland, transplanted into the familiar room. Candles gleam softly against the dusky green of a tall Christmas tree, their light reflected in twinkling splendor by brilliant, colored ornaments and glittering tinsel. On the boughs and all about the tree are things straight from Santa's workshops. With a thrill of purest joy, we set about inspecting these.

Never, in after life, may we experience an hour just like that one. The nearest approach to it, perhaps, lies in the reflected joy that is ours as we stand in the background at

Christmas time while today's generation of little folks takes the place that once was ours.

May that joy, and all the pleasant merriment of Holiday Time, be yours in full measure, this coming Christmas tide.

Electrotherapy in Chronic Prostatitis

An Open Letter From

L. B. WILLIAMS, M. D., TORONTO

"Gentlemen: In Fischer's Magazine, October Number, Page 16, 'Prostatitis,' both the enquiring and the responding doctor seem to be chafing under defeat. The former used Diathermy and 'failed to get results.' The other doctor in answering his confrere says 'where the patient does not respond satisfactorily.' Impaired prostate (chronic) is today, and unnecessarily so, one of the most serious conditions of man's maturer years. Electrotherapy and surgery in their respective schools of thought in medicine are the rostrum of therapy. The writer, who has experienced much of both, has no hesitancy in saying that in the earlier days of symptoms, Electrotherapy will remedy the patient to his satisfaction with no thought of surgery. In the long neglected cases it will help much to make life less of a burden, whereas with surgery life is too far spent to give any assurance; it isn't a fifty-fifty chance of either living or betterment.

"In the light of what may be accomplished today with Electrotherapy, the blight of the contemplation of this 'late stage' lies on the doorstep of the medical profession.

"I think the trouble with the first doctor is that he 'put all his eggs in one basket.' He used only diathermy. Manufacturers are partly to blame for this. Their booklet literature, naturally, refers only to that which their outfit produces. The writer's treatment of chronic prostate trouble may be illustrated by a simple analogy. The farmer, to renew an old, red, hardened, muddy martingale of his harness, washes it off, puts it in an oven under a prolonged gentle heat, then soaks it with oil, and when he realizes that thorough penetration of the oil

is effected, he begins to manipulate the strap, or otherwise a type of massage. These respective maneuvers have their sequence as well as their need. The chronic prostate patient experiences constitutional nervousness, sluggish abdomen, generally congested pelvic tissue, contracted unhealthy bladder, lethargic rectum, probably piles, pelvic motor nerve impairment, all apart from the individual indiosyncrasy.

"After the bowels are flushed, I first start the abdomen towards better tone with Diathermy followed by surging Sinusoidal. Rapid Sinusoidal treatment to lower spinal nerve plexuses. This type of treatment clears the prostatic environment of stasis, and is imperative. You must have favorable surroundings. Diathermy with metal mesh plate to whole perineum working against a bifurcated cord to plates, one over bladder and the other over sacral region; at times disconnect one bifurcated cord and again the other, which will regionally concentrate. This one change is only typical of many innovations for which your experience must be on the alert.

"Now for prostatic massage, the deep, prolonged, culminating surge, special applicator in rectum, absolutely against prostate: and I have apparatus for making sure of maintaining what I set. The current won't go through an old, petrified prostate if it can get easier media. Here is where haphazard procedure fails.

"The type of surge makes all the difference. I use here a type of machine that, in its pull, lacks polarity effect, because with some of my Sinusoidal wave outfits, before I could effect sufficient pull to suit me, the patient would be indicating a feeling of bowel evacuation necessity. The indifferent pad I place over the bladder to improve its condition indirectly. Occasionally I use an insulated flexible olive tipped electrode in the penis, operating just where you feel the insertion offers resistance, using the same surging current. Sometimes, with considerable urethral narrowing, I employ galvanism, positive pole if tenderness and tendency of slight manipulation to make a little showing of blood; or negative pole if I desire some softening. The surge I use is slow, starting from zero, gradually reaching its zenith of pull, which wringing effect is pro-

longed, for obvious reasons, before retiring. I use sponge disc electrode with surge throughout urethral tract posteriorly outside penis. Diathermy with a rectal electrode is used in prolonged treatments and not too heavy for its general metabolic effect.

"You have to deal with enlarged prostate, nerve force exhaustion, constricted urethra, atrophied irritable bladder, pelvic congestion and stasis; and in the wake of it all is general nervousness with its by-products. How far reaching are your results, of course, has many determining factors, but you will have very beneficial effects with which, under the circumstances, both doctor and patient will be pleased; so much so that the first doctor will not enquire about his failure nor the second doctor acknowledge, 'Yea—even so.'"

A Brief Outline of the
Course in Physiotherapy
For Physicians' Office Assistants

Thorough training in the use of Physiotherapeutic apparatus, which will provide skilled assistants for physicians, is assured through this comprehensive course.

The course will be highly intensive, and covers Physical Therapeutics thoroughly, including all branches of electrotherapy and massage. Three weeks constant attendance is required. Each day is divided into six one-hour periods, starting at 9.00 A. M. and ending at 5.00 P. M., with a two-hour luncheon recess. The work for each period has been very carefully and completely outlined, to the end that every minute shall count and no time be wasted in aimless discussion. A trained nurse, familiar with Physiotherapeutic apparatus and experienced in teaching, has charge of the work.

Following is a brief outline of the subjects covered in the course:

Outline

1. *General Office Procedure*—Including specific consideration of general nursing practice in connection with Physiotherapy. Also care of equipment.

2. *Anatomy*—Will be reviewed briefly in connection with the instruction in massage.
3. *Massage*—Swedish method for massage of body will be given, including active and passive exercises.
4. *High Frequency Currents*—Will be considered as to their source and application, as well as the proper manipulation of the machine. Actual practice in applying electrodes and administering the treatments will be included, giving Medical Diathermy according to the various technics; also Auto-Condensation and Vacuum and Non-Vacuum Tube applications.
5. *The Galvanic, Sinusoidal and Interrupted Galvanic Currents*—Will be considered as to sources, types of currents, machines for obtaining currents, manipulation of machines and application of electrodes. Particular attention will be given to the Morse Treatment for Intestinal Stasis.
6. *Phototherapy*—Including both the Heat Rays and Actinic Rays, will be considered both as to technic of application and as to physiological effects.
7. *Inspection Trips*—Through the Fischer factory, to see and understand the interior construction of equipment, and to various clinics in the city, will be made from time to time.

Reciprocal Registry System

Under our *Reciprocal-Registry* system, doctors may enter their applications for Fischer-trained nurses, and nurses may register for positions where such training is required. A nominal charge is made for the course, covering both training and laboratory fee.

First classes started November 24, and extend through until December 13. The second series will begin at 9.00 A. M. January 5 and close on January 24. Prompt registration for this second series is urged, as reservations undoubtedly will be exhausted early.

Doctors and nurses desiring further information are requested to communicate with Mr. H. T. Fischer, either by letter or by telephoning Armitage 0322.

Diathermia and the Physiological Treatment of Cancer

By ALBERT C. GEYSER, M. D.
New York City

In a paper read before the ninth annual convention of the American Association for Medico-Physical Research, and printed in the Journal of that Association, Dr. Geyser discussed at some length the nature and causes of cancer. Of special interest to our readers are the following excerpts from this article which deal with the use of diathermia. We quote verbatim:

Some of the Research Findings

In the third report of the Imperial Cancer Committee (1908) Haalan, at the suggestion of Ehrlich, undertook some tests with heat upon cancer tissue intended for inoculation. The result was that when such tissue was heated for thirty minutes to 111.2 F., the tissue was no longer viable when transplanted. . . . . Jenson repeated the experiment and, in the annual report of the New York Cancer Laboratory, 1910, shows that all cancer cells die when heated to 116.6 F. for thirty minutes; Leob found that sarcoma cells died when exposed to a temperature of 113° F. for thirty minutes; Wood showed that nearly all tumor growth was arrested with a continuous temperature of 104° F.; Lambert, in 1912, pointed out the relationship that exists between the degree of heat and the time of action on malignant as well as on normal cells. . . . .

Heat Electrically Applied

Electric coagulation, cathophoric sterilization, fulguration and cauterization are methods wherein heat is used to a degree of complete destruction of malignant cells in situ. I shall omit the description of these because they are in reality akin to surgery; they attempt to kill, destroy and remove the offending cells from the system in toto.

Physiological therapy does not consider the histological nor the anatomical formation or location of malignant growths;

it endeavors to deal *only and entirely with the physiology* of such cells.

It has clearly been shown that heat of a certain degree destroyed tumor cells, yet in no way affected normal tissue. It is also a well known fact that dry or moist heat applied to the living body can only penetrate three to five millimeters. All of the good effects observed from the application of moist or dry heat is due to the gradual heating of the entire blood volume and to the reflex effects of local heating.

In the diathermic phase of a high frequency current we have an agent that heats the tissues *through and through* without practically exerting any influence upon the outside. A malignant growth is of a much firmer, harder consistency and with a lessened circulation than normal tissue; it is therefore especially adapted to the *storing* and *retaining* of heat, when this is artificially supplied. In fact the malignant mass is *always* of a higher temperature *after applying diathermia* than the surrounding normal tissue. Under these circumstances it is easy to maintain a tissue or an organ in a state of elevated temperature for hours.

From practical experience it has been shown that when the entire malignant growth has been subjected to an increase of *three degrees* of temperature for sixty minutes daily its *physiology* is markedly interfered with. Cachexia is prevented or removed: the tumor mass undergoes a retrograde metamorphosis, individual nodules soften and they become smaller and finally disappear; pain ceases entirely; discharges lessen and lose their offensive odor. . . . .

Technic of Diathermia

Reference has been previously made to the thermic effects upon cancer cells. In all of those tests the cells had been *removed* from the patient for the purpose of transplantation. It was then shown that these cells, after the application of certain degrees of heat to them were no longer viable; therefore did not produce cancer upon the experimental animal. It is not our desire to remove cells and then destroy them. We intend to *leave the cells in situ*, but by the application of an

electric current cause them to become heated to exactly the *same degree* of temperature as the experimented cells. It is not our object to interfere with their anatomy, but we *do want to change their physiology*. To do this it is necessary to include the entire tumor between the two electrodes of a high-frequency current. With breast or superficially situated skin cancers this is quite simple. With intra-uterine and rectal cancers, while a little more complicated and uncertain, nevertheless practical results may be achieved in eighty per cent of the cases.

In the case of breast cancers, a suitable electrode is applied directly over the lesion, the other electrode containing *at least* four times the surface area, is placed directly opposite upon the dorsum of the patient. The current is turned on to the point of tolerance, which is usually about fifty milliamperes to each square inch of the anterior electrode. If the skin overlying the growth is as yet intact, the reading may go as high as one hundred milliamperes to the square inch. From forty-five to sixty minutes should be consumed for each treatment, repeated daily or at least on alternate days.

When the growth is situated in the cervix uteri, or rectum, a suitably shaped electrode is placed in position, then a larger anterior and posterior electrode are placed on the skin of the abdomen and back of the patient, these two large electrodes are short circuited and led to one binding post of the high-frequency machine. The intra-uterine as well as the rectal cavity will bear temperatures considerably higher than the external skin. It is not uncommon to use 200-300 or even 1,000 milliamperes to the square inch of area in these mucus membrane applications. The treatments should be given daily or at least on alternate days for at least two months, then once per week for an indefinite period.

Let it be thoroughly understood that the application of diathermia *does not necessarily* remove the growth but it *does interfere* with the physiology of the cancer cells in such a manner that the previously present cachexia disappears, there is a complete cessation of pain, all lymphatic enlargements subside,

the patient gains weight and appears to all intents and purposes normal.

After Diathermia has been used for a sufficient length of time, and these constitutional changes have been brought about, there is no reason why the growth should not be removed surgically or otherwise, because practically all chances of recurrence have been forestalled. The growth which was previously malignant, may now be looked upon as a benign tumor and dealt with accordingly.

Use of the Cervical Thermophore

The following information, contained in a letter written by Budd C. Corbus, M. D., of Chicago, in answer to a query from Dr. E. L. Hergert of Brooklyn, N. Y., may well prove of value to many or our readers.

"Concerning the Cervical Thermophore, it is anchored to the set screw of the bivalve speculum, either by a piece of wire or string. There is no danger of short circuiting if the electrode is firmly fixed within the cervix. If one has a ring stand holder or any such device, it can be substituted for the method described.

"Answering your queries: (1)—The Leucorrhoeal discharges that remain after thermophore treatment are best treated with topical applications of Mercurochrome or a continuation of Hot Vaginal Sitz Baths with the vaginal speculum.

"(2)—Non-Gonorrhoeal Endocervicitis is always greatly improved with Diathermy but barring laceration from childbirth is always systemic in origin and calls for systemic treatment. Always put the whole tip of the thermophore into the cervix or you will have a short circuit.

"(4)—The black cap that comes with the instrument is used when the thermophore is introduced in the male. The long rubber cap is substituted for the short one, then you have the long electrode for the male urethra. The reasons for the thread are obvious. If the cervix is too small and it is impossible to introduce the thermophore it would be better to use some other treatment. Do not mutiliate your patient to use the thermophore.

The Waggoner Physiotherapeutic Lecture Courses and Clinics

By Mel R. Waggoner, M. D., Cedar Rapids, Iowa

Widespread and rapidly growing interest in these classes and clinics is indicated by the increased attendance that has marked the assembly of each succeeding class. Doctors who are keeping pace with the development of physiotherapy find them a valuable source of new information and up-to-date practices.

Classes for the Coming Season Follow:

Detroit, Michigan - - - - - - - - - December 15th to 20th
(Wolverine Hotel)

***Cleveland, Ohio - - - - - - - - - - January 5th to 10th**
(Hotel Winton)

Los Angeles, California - - - - - - - January 26th to 31st
(Lecture Hall, Professional Building)

San Diego, California - - - - - - - - February 2nd to 4th
(Grant Hotel)

San Francisco, California - - - - - February 9th to 14th
(St. Francis Hotel)

Seattle, Washington - - - - - - - February 16th to 21st
(Olympic Hotel)

*NOTE: In response to many requests, the Cleveland class, which had been canceled, has been reinstated as indicated above.

Personally conducted Courses, Clinics, Lectures

For Details, Fee, etc., etc., write the
Secretary of the Waggoner Lecture Courses, at
1664 N. Claremont Ave., Chicago, Illinois.

(Watch for announcements in Fischer's Magazine)

Diathermy in Urology

WALTHER, H. W. E., M. D., and PEACOCK, C. L., M. D.
(New Orleans)

Medical diathermy is subdivided into *sedative* and *stimulative*. Sedative diathermy produces an active hyperemia, stimulates phagocytosis and revitalizes tissue cells.

The authors report on 73 urologic cases treated by diathermy, either medical or surgical, during the year ending June 1, 1924. There were 11 cases of bladder tumors, 15 lesions of the external genitals (including chancroid, granuloma and warts), 3 cases of gonococcal endocervicitis, 25 cases of gonococcal epididymitis, 1 case of orchitis complicating mumps and 3 cases of gonococcal arthritis.

Negative results in prostate gland cases are attributed to the fact that a portable unit only has been used in this work, which does not deliver sufficient voltage to carry through the dense prostate structures.

Authors think that for treating primary papilloma of the bladder, surgical diathermy has no equal. It offers as much relief to malignant conditions in this viscus as any other one agent In the latter cases, by means of the open operation, growths can be thoroughly cooked out with surgical diathermy.

Of the 11 bladder tumors treated 4 were so far advanced that cystotomy, surgical diathermy and radium were used principally to check hemorrhage and pain. The other 7 cases responded promptly to diathermy, but they must be kept under surveillance for some years.

Tumors of the urethra in the male can be treated as expeditiously with surgical diathermy (i.e., electro-coagulation) through the McCarthy Cysto-urethroscope as can tumors of the bladder through a cystoscope. Diathermy has been found superior to any other means of destroying urethral papilloma in women.

In the 15 lesions of the external genitals, the authors feel convinced that the procedure materially shortened the time

of convalescence; and particularly recommend it on account of its cleanliness. Diathermy is specific for chancroid.

Although only 3 cases of endocervicitis were treated, the results have been very encouraging. They have used Corbus and O'Connor's thermophore, but varied the technic to the extent of alternating the indifferent electrode between the supapubic region and the back, so as to treat effectively both anterior and posterior cervical lips.

Sedative diathermy is the most satisfactory of all methods devised for the treatment of epididymitis. One treatment suffices in the majority of cases.

Points in the technic of this are: insulated table on which patient lies; *no air space* between electrode and skin; scrotum supported by insulated shelf; piece of mesh used for active electrode large enough to cover affected organ; patient keeps perfectly still; current starts at 50 milliamperes for one minute and is gradually increased to 1500 milliamperes, the increase being about 50 every 30 seconds.

Most patients will only tolerate up to 750 milliamperes. When the limit is reached it is kept up steady for about 20 minutes.

The results in the 3 cases of gonococcal arthritis were sufficiently striking to warrant their inclusion in this report.

Convention of P. C. P. A. Is a Big Success

The Third Annual Convention of the Pacific Coast Physiotherapy Association, held at the Professional Building in Los Angeles the last week in November, was a highly successful one, according to reports from the west coast city.

Attendance broke all records, and the earnestness and enthusiasm displayed at every meeting was a splendid index of the progress that Physiotherapy has achieved in that section. As one doctor has phrased it, "We are on the right road, and a long way along that road, toward full knowledge and full use of *all* the electrical modalities that are at our disposal today."

Officers and members of the P. C. P. A. are to be congratulated, not only upon the success of their Convention but upon their progress and success as Physiotherapists.

Program for Our

Monthly Physiotherapeutic Meeting

Monday, January 12th, and Tuesday, January 13th, 1925

MILES J. BREUER, M. D., Lincoln, Nebraska.
"Physiotherapy in Internal Medicine" - - 10:00 to 11:00 A. M.

HARRY M. THOMETZ, M. D., Chicago, Illinois.
Tonsil Clinic - - - - - - - - - - - 11:00 to 12:15 M.

L. C. SAMMONS, M. D., Shelbyville, Indiana.
"Physiotherapy in General Practice" - - - 1:30 to 2:30 P. M.

ERNEST CADWELL, M. D., Chicago, Illinois
"The Business Side of a General Practitioner's Life and Physiotherapy as an Aid" - - - - - - 3:30 to 4:30 P. M.

How to Get Here:

DRIVING—Follow Washington Blvd. west to Oakley Blvd., north on Oakley to Wabansia Ave., and one block west, or

BY ELEVATED — Take the Humboldt Park "L" to Western Avenue Station, walk one block north to Wabansia Avenue and a short block east to Claremont, or

BY SURFACE CAR—Western Avenue to Wabansia Avenue, and one block east to Claremont.

Doctor Breuer has kindly consented to remain over for an extra day and will be in our Lecture Room all day Tuesday, January 13th, to conduct clinics and to endeavor to assist you in solving the many and diverse problems which are constantly coming up in this particular line of medical work.

We look forward to two big instructive days and urge those who find it possible to attend to spend as much time with us as they can spare.

NO CHARGE—NO OBLIGATION

H. G. FISCHER & CO., Inc., Phone Armitage 0323
2335 Wabansia Avenue, Chicago

SPECIAL CLINICAL COURSE IN X-RAY and PHYSIO-THERAPY

Monday, January 5th, 1925 Omaha, Neb.

The fifth of a series of ten clinical courses sponsored by the Magnuson X-ray Co. for the purpose of further educating their customers in the uses of these modern therapeutic agents. These meetings are conducted by physicians of the highest standing who have had many years' experience in this work and they deal with the practical side of the question.

PROGRAM

9:00 to 12:00 a. m.—Practical Clinic at Lord Lister Hospital.

2:00 to 5:00 p. m.—Lectures and discussions by:
Leo C. Donnelly, M. D., Detroit, Mich.
Miles J. Breuer, M. D., Lincoln, Neb.
Dean W. Harman, M. D., Ames, Ia.
R. W. Fouts, M. D., Omaha, Neb.
A. L. Yocom, Jr., M. D., Chariton, Ia.
E. B. Kessler, M. D., St. Joseph, Mo.

The remainder of the week will be devoted to clinical work and instructions in practical technic, in charge of Dr. Donnelly and others.

You are invited to bring any interesting clinical cases to Lord Lister Hospital—any of them operated during the clinic will be hospitalized without charge.

NO FEE IS CHARGED FOR THIS COURSE

Is Diathermy Useful in Glaucoma? —In Epilepsy?

DR. CHAPMAN SAYS NO—AND YES

In response to an inquiry as to the value of diathermy in treatment of glaucoma and epilepsy, respectively, Dr. W. B. Chapman of Carthage, Mo., writes as follows:

"Regarding the question 'Is Diathermy Useful in Glaucoma?' It is not. Glaucoma is a mechanical condition. It is caused by a blocking back of the lymph inside the eye-ball and is marked by high intra-ocular tension. In fact, the diagnosis is made by a feeling of hardness of the eye-ball. Diathermy or any form of heat will increase the tension and aggravate the condition.

"As to the use of electrical modalities in epilepsy, I will say that they are beneficial in the majority of instances; however, if the convulsions are caused by some hereditary condition or are the result of meningitis or some similar condition, little can be done for the patient. I have recently had a couple of patients who were markedly benefited by the use of the Morse Wave Generator and galvanism. Both of these patients were afflicted with colonic stasis and were absorbing a great deal of poison from the lethargic colon. Huge doses of mineral oil and the Morse Wave Generator have straightened both of them out."

New Book on Diathermy in Genito-Urinary Diseases

"Diathermy in the Treatment of Genito-Urinary Diseases, with Especial Reference to Carcinoma," by Budd C. Corbus, M.D., F.A.C.S., and Vincent J. O'Conor, S.B., M.D., is the latest contribution to the literature of Physiotherapy and a most valuable one.

This book has been written for the express purpose of familiarizing both specialist and general practitioner with the tremendous value of diathermy in the treatment of genito-urinary diseases in both sexes. The medical and surgical methods of its application to these diseases are given in detail.

The compilation of the volume represents more than five years of closely applied study of these methods. Both experimental and clinical results are given in detail.

A complete review of the study of various forms of heat in the treatment of cancer is given, followed by the technique for treating cancer of the penis, bladder, prostate and female urethra.

There are thirty-one original illustrations in black and white and halftone. Every procedure is graphically described.

Copies of this book may be had upon application to H. G. Fischer & Co., 2335 Wabansia Avenue, Chicago. Price, $5.00.

Thank You, Doctor!

Congratulatory messages from those who attended the Convention at Logan Square Masonic Temple in October have poured in during the past month in gratifying volume.

The majority of these kindly letters embody specific praise of some feature or features of the Convention. Many of them indicate a firm resolve to attend the next annual Physiotherapeutic Convention. Some embody constructive criticism which is heartily appreciated, and which will be valuable in the preparation of future programs. The tenor of all is, "keep up the good work."

As your communications have come in, we have answered them individually. But we want to take this opportunity to say publicly, and very sincerely, "Thank you, Doctor!"

You have given us an added incentive to make the next Convention even bigger and better.

Radiologists and Physiotherapists Meet

Interesting Program at Third Annual Session

The third annual meeting of the American College of Radiology and Physiotherapy was held at the Hotel Sherman, Chicago, November 12 to 14. During these three days, a great deal of ground was covered in lectures and discussions, and doctors who attended expressed themselves as being well satisfied that the time thus used was indeed well spent.

An intensive program, utilizing every hour of the available time, and including addresses by many well known authorities, covered the general field of Radiology and Physiotherapy. An interesting evening session included the annual banquet and the conferring of fellowship degrees.

These annual meetings provide an excellent forum for the discussion of everyday problems and new methods, and there can be no question but that their effects for good are far-reaching indeed. This magazine extends its congratulations, both to those who attended the meeting and to the management.

The Treatment of Malignancies by the Use of Surgical Diathermy and X-Ray*

A. L. YOCOM, JR., M. D.
Chariton, Iowa

The treatment of cancer whether it be medical, surgical, X-ray, radium or electrocoagulation has not reached perfection in all types and in all stages of the disease. The physician who can use any or all of the above mentioned methods when properly indicated is the one who is best fitted at the present time to fight the battle of the suffering cancer patient.

Ever since radiation was first recognized for the treatment of cancer the surgeon has referred to the radiologist the worst wrecks wrought by this dreaded condition. For years this effort on the part of the radiologists to check the ravages of the inoperable case has assisted in keeping in the background the real value of this mode of treatment. Nevertheless something had to be done for the suffering patient, and the radiotherapist, even though failure seemed the rule, continued to make improvement in technique and so, with the aid of the manufacturers of apparatus and physicists there has been a great advance in the treatment of malignancies. As a result, radiology has made more advance than any branch of medicine during the last twenty years.

When an inoperable case appears before us, the patient beyond the aid of any treatment, it makes us realize that there was a time in the beginning of this dreaded disease when satisfactory treatment would have prevented his present terrible condition, hence, we feel that the general practitioner and particularly the patient himself, carries a greater responsibility in directing the right treatment to cure these conditions.

Epithelioma near the ala of nose before and after treatment by surgical diathermy.

*Read at a meeting of the Iowa Radiological and Physiotherapy Society, Des Moines, Ia., Feb. 28, 1924.

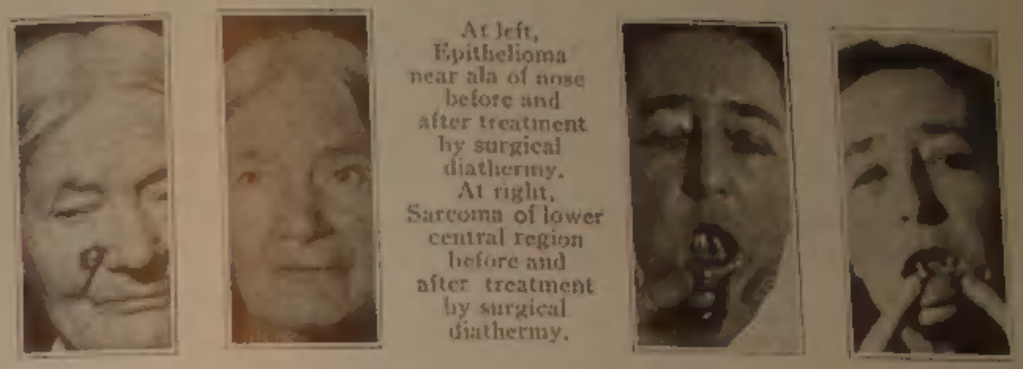
The fact that the surgeon and the radiologist has each continued to give treatment to the apparently hopeless case, while being stimulative to greater advancement, has nevertheless, driven from us many early cases that could have been cured, but the patients drifted hopelessly along waiting until too late or finding their way into the hands of the incompetent aid. Too often the average physician will pass up the small beginning lesion, which is readily removable, with a remark to the patient which leads him to think it is of no importance and can be ignored with perfect safety. The patient also is responsible many times for delay and thinks he will not bother the small growth until it begins to bother him.

Electrocoagulation and Surgical Diathermy

Electrocoagulation is the coagulation of diseased tissues by the Oudin current or one pole of the D'Arsonval current and is to be used for small superficial lesions.

Surgical diathermy is the application of high frequency currents for the destruction of tissues by the heat produced through the resistance offered by the tissue through which the current is forced, without sparking. The treatment differs from the application of the electrocautery or other applications of heat in that the heat with the latter methods is applied from without and does not have much penetrative power. The heat is generated in the tissues themselves and the temperature of the diseased area may be readily raised to a point of coagulation. Therefore it is the penetrating power of this heat which is more beneficial than the thermic cautery, which destroys only by transmitted heat.

Surgical diathermy is produced by the bipolar method of the D'Arsonval current, and should be of low voltage, high amperage and extremely high frequency. The indifferent electrode is a piece of block tin about eight inches in diameter and is strapped to the patient's back or shoulders. This electrode may be wet with a soap lather or used dry. The main object is good contact, and strapping with a good canvas binder



At left, Epithelioma near ala of nose before and after treatment by surgical diathermy. At right, Sarcoma of lower central region before and after treatment by surgical diathermy.

is all that is needed. The active electrode is smaller and either made up of a point or some other suitable electrode as to the shape and size needed.

In surgical diathermy or electrocoagulation it is necessary to use an anesthetic of some kind. For the superficial lesions which are not too large, a local anesthetic such as novocain or some other similar preparation is used. For the larger lesions we use hyoscine and morphine and find H. M. C. satisfactory. The one-fourth morphine size is given about 40 to 60 minutes before starting, and the one-half size or another full dose is given upon starting, with sufficient chloroform to produce necrosis. Ether is not satisfactory on account of the danger of explosion, especially when working about the face.

There is very little post-operative shock to surgical diathermy and on this account it is especially valuable in the aged. My oldest patient was 94 years of age and had practically all the lower lip removed and part of the upper without any shock and remained in bed only over night. There is a wonderful alleviation of pain. This is almost immediate after recovering from the anesthetic.

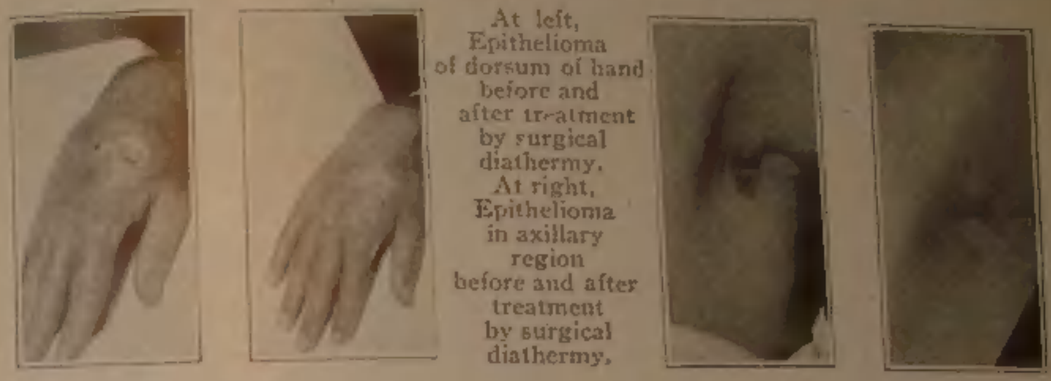
The local application of sufficient heat to the tumor mass destroys the growth. The use of a lower degree of heat to the periphery of the tumor and beyond its limits results in the inhibition of the growth of migrating cells. The dissemination of these cells throughout the organism is further prevented by the occlusion of the lymph spaces and channels, and further by the formation of scar tissue which forms a most desirable

barrier against the new growth. By diathermy the deep penetration of the high degree of heat destroys, or at least inhibits, instead of stimulating the neoplastic cells in the zone just beyond the periphery of the tumor mass. Surgical implantation of the tumor cells into healthy tissue is the unavoidable result of excision, and dissemination of metastases by the opening of lymphatics and blood vessels is not prevented. On the other hand the lymphatics and vessels are closed and metastases are not produced. By this method there is no possibility of transplanting or implanting cancer cells into new tissue. There is less likelihood of recurrence following diathermy. The dosage is accurate and, owing to the extreme heat, there is absolute sterilization of the wound and the growth is removed as a necrotic mass.

There is less tissue sacrificed than by surgery and there is ordinarily a good cosmetic result. If necessary to remove very large areas it may be necessary to do some plastic operation, especially if on the lower lip. If it were possible to destroy a tumor mass by ordinary cautery there would be some danger of the burn producing a systemic poisoning but there is no absorption from the burned area in coagulation on account of the sealed blood and lymph vessels.

The post-operative condition leads to a quick recovery and during this period the unpleasant odor is one of the disadvantages of this method of treatment. Powdered sugar used on the charred mass aids very materially in reducing the odor and I have found that boiling some water in the room with a small quantity of lysol or similar solution added to the same is a deodorizer. Another disadvantage to surgical diathermy is that there is no chance of saving blood vessels and nerves in close proximity to the disease. It is sometimes necessary to do a ligation before or after the treatment.

Any fissure or crust which lasts longer than a month should lead to the suspicion of malignancy and during this period the general practitioner has a great responsibility. Practically all cancers of the skin can be successfully treated by means of X-rays and electrocoagulation, provided they are treated early



At left, Epithelioma of dorsum of hand before and after treatment by surgical diathermy. At right, Epithelioma in axillary region before and after treatment by surgical diathermy.

and skillfully. Precancerous conditions in the skin, warts, moles, etc., are best treated by coagulation. Early local destruction of all malignancies by surgical diathermy followed by high voltage X-ray therapy of the local lesion and the draining lymphatic areas should cure all such cases. The combined treatment of surgical diathermy and X-ray therapy offers better promise of a permanent cure than either alone. Poor technique with any form of treatment will usually lead to failure and recurrent carinoma gives much less satisfactory results. It has been my practice whenever possible to radiate the area involved both before and after the surgical diathermy treatment and to also give another treatment after complete healing has taken place.

No tissue should be removed before treatment for diagnosis. It is better to have a lesion of long standing cured than to know the pathology and die from cancer.

Conclusions

1. There is immediate relief of pain. Every case upon awakening will say that he has no pain.
2. Immediate sterilization of the wound as the heat destroys the mixed infection and foul discharges.
3. Much less danger of extension and metastases than by surgery.
4. There is no shock and practically no hemorrhage.

The accompanying illustrations show the appearance of patients both before and after treatment, and are illustrative of some minor conditions which are treated by this method.

(Reprinted from The Journal of Radiology.)

Wide Choice of Modalities Available to Doctors

Away back in the primitive days of medicine, just a few remedies were depended upon for the relief of practically all diseases. Leeches and physic and a small number of simple drugs were the stock in trade of the medical man.

What a difference today! With all the vast fund of medical knowledge and modern drugs at his command, the doctor prescribes exactly those remedies which science has found most efficient for the malady he is treating. In many cases he includes in his prescription one or more special ingredients, to meet special symptoms present in that particular patient. Out of thousands of possible combinations of remedies, he chooses the one which he feels will serve best.

This is universally true today—of medicine. Yet, when we turn to Physiotherapy, what do we find? Not infrequently a condition closely approximating that which formerly existed in medical practice! One machine, perhaps only one modality, out of a field so rich in curative helps!

As a matter of fact, thanks to the enthusiasm and high endeavor of a host of earnest medical men, many distinct modalities are available today to the physiotherapeutist. Where one or two pieces of apparatus were available a few years ago, physicians of today may justifiably aim to install as many as six or eight; each with its own distinct electrotherapeutic uses, and every one a dependable and efficient mechanism, perfected far beyond the dreams of the earlier years of manufacture.

True, the doctor must always be a doctor first of all; combining wisely his physiotherapy and his medicine. Granting this, our point is, that a broad understanding of electrical modalities and comprehensive apparatus for their application is just as essential in truly modern practice as thorough knowledge of medicine.

A PAGE OF FUN

A certain professor at the University of Chicago, after a trying first-hour class said: "Some time ago my doctor told me to exercise early every morning with dumbbells. Will the class please join me tomorrow morning before breakfast?"

□ □ □

The father asked Clarence his reason for wanting to marry his daughter Lucille. The young man: "I have no reason, sir: I am in love."

□ □ □

Kitty: "What's a synonym?"
Rhoda: "It's one word that means the same as another."
Kitty: "You're crazy."
Rhoda: "Why?"
Kitty: "It's stuff they put on a bun."

□ □ □

"That makes a difference," said Willie, as he snipped off the left ear of one of the twins.

They don't name girls Prudence and Patience any more!

□ □ □

The policeman, hearing the shot, burst into the fashionable apartment. Cringing before him on the floor was the crumpled figure of a woman, weeping hysterically, a smoking pistol clutched in her trembling fingers.

"My husband! Oh, my husband!" she moaned.

"Control yourself, lady," urged the officer. "Where is the corpse?"

"Gone," sobbed the woman. "He went out through the window. I—I missed him."

□ □ □

Mother: "There were two apples in the cupboard this morning; now there's only one. How do you account for that?"

Freddie: "It was dark in the cupboard, and I didn't notice the other one."

THE LAST MINUTE XMAS SHOPPER

**"DON'T PUT THINGS OFF—
PUT THEM OVER!"**