FISCHER'S MAGAZINE

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347

AUGUST, 1923

Every Life is a Strife—With Temptation or With Conscience.

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

Fischer's Magazine

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

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Vol. I AUGUST, 1923 No. 11

Physiotherapy

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

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

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

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

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

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

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

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

Iwan v. Büben (*Zentralblatt für Gynäkologie*, July 15, 1922) asserts that diathermy is a valuable adjunct in therapy, owing to the promotion of the healing power associated with the increased temperature and resulting hyperemia and the other physiological powers, especially in regard to its powers of relieving pain in the painful cystitides and in tenesmus. Diathermy is produced by means of an electric current of high tension and rapid alternation, which produces heat in the deeper tissues. The amount of heat developed depends upon the intensity of the current, the resistance of the perfused tissues, and the size and form of the electrodes. A large and a small electrode are used, the current being made to pass from the larger electrode to the smaller one, so that most of the current and heat are developed at the latter. If the electrode is too small, a coagulation of the tissues results with the use of strong currents; this is called a cold cautery and is used with good results for the extirpation of bladder tumors, chiefly papillomata.

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

—New York Medical Journal, July, 1923

Tonsillectomy

Electro-Coagulation and Desiccation

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

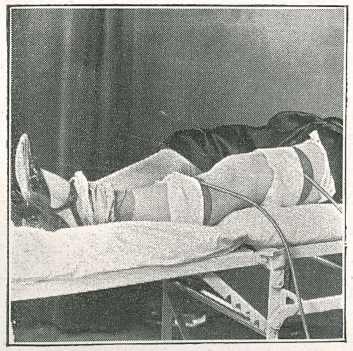
measured accurately. Experience, alone, will give one the desired information as to the length of time the current should be applied and the number of milliamperes required for a thorough eradication of all tonsillar tissue. The variation in the amperage is from 100 to 1,000 milliamperes, depending on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

—Extracted, New York Medical Journal, June, 1923

□ □ □

Effect of Radiation with Mercury Vapor Quartz Lamp

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



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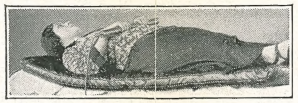

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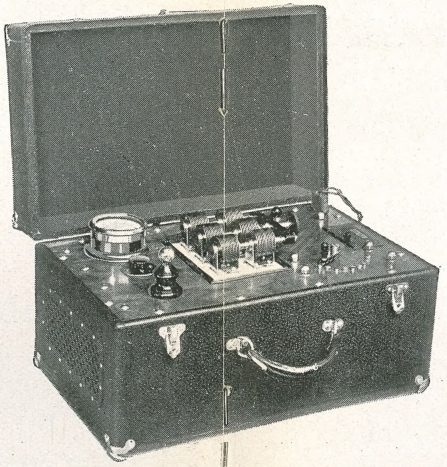

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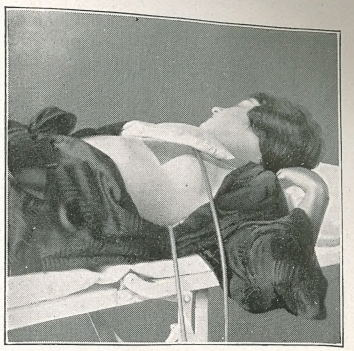

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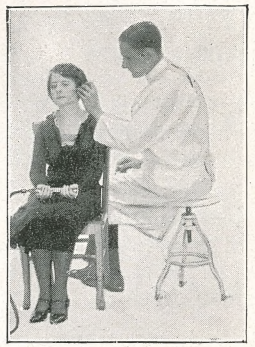

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Treatment by Diathermy

W. J. TURRELL

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

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

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

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

From Brit. M. Jour.

□ □ □

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

Blood Pressure Briefs

By Burton Baker Grover, M. D.

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

□ □ □

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

□ □ □

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

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

□ □ □

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

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

□ □ □

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

□ □ □

Use Diathermy next time.

□ □ □

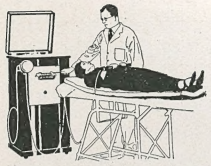
Ask any doctor who uses Diathermy.

□ □ □

Diathermy isn't theory—it is practical fact.

Diathermy in the Treatment of Hypertension

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



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

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

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

It is important, therefore, in all cases of hypertension to examine carefully for an engorged liver, and even though it may not be markedly enlarged, treatment toward enhancing its functions should not be neglected. All cases of hypertension should receive some treatment of this organ, else the work is not done. Whether this be by diathermy or the static wave, sinusoidal or other, matters little, so long as the result is secured. In the writer's opinion, diathermy should be used no matter whether one of the other two modalities is or is not used, but of course the use of the latter should be a matter of judgment. By this is meant, in cases of very marked hypertension, the diathermy is of importance, while the static or sinusoidal will be too stimulating during the period of the pressure height. Subsequent to a reduction to the point of safety, one or the other should be used in addition to the diathermy, as the result will be more quickly accomplished. In the writer's judgment, the static wave current is then the current of choice.

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

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

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

Maryland & Pacific Aves.

□ □ □

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

More About Mesh Electrodes

"They are wonderfully adaptable"—

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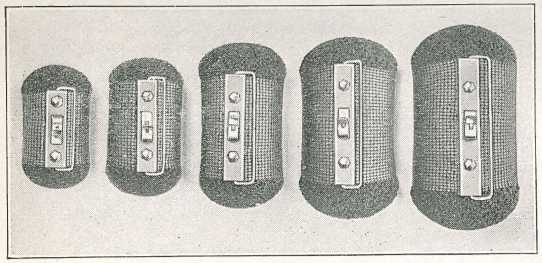

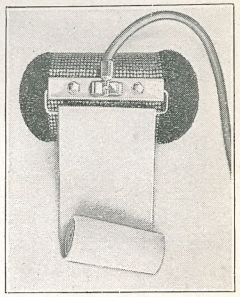

The Sponge Rubber padding may be washed and always kept clean. It is very soft, and conforms well to any uneven surface. The elastic bandage is entirely removable. Stocked in five sizes:

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

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Reserve the dates—October 15th to 19th

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

Red Letter These Dates, and watch for particulars!

IN PREPARATION

Diathermy and its Application to Pneumonia

By HARRY EATON STEWART, M. D.

Attending Specialist in Physiotherapy, U. S. Marine Hospitals, N. Y.
Consultant in Physiotherapy, U. S. V. B. Hospital, New Haven, Conn.
Director, New Haven School of Physiotherapy
Formerly Assistant Director, Section of Physiotherapy, Office of the Surgeon General, U. S. Army, and Supervisor of Physiotherapy, Bureau of U. S. Public Health Service, Washington.
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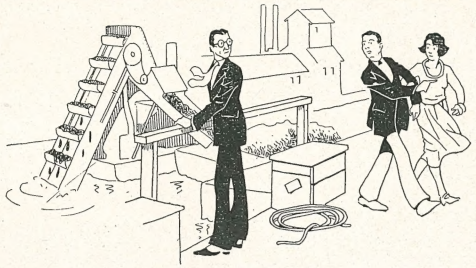

A party of holiday-makers were paying their first visit to New York, and for one of their number the endless row of buckets in a dredger at the docks seemed to possess a singular fascination.

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

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

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

□ □ □

Experienced

"You must have been walking carelessly," said the lady whose car had run down a man. "I'm very careful. I've been driving seven years."

"Lady, that's nothing, I've been walking for fifty-four years."—Erie Dispatch.

□ □ □

As Good as Gold

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

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

□ □ □

The Very Idea!

Teacher—"This time we are going to have a little talk on wading birds. Of these the familiar stork is one—what are you laughing at, Elsie?"

Little Elsie—"Oh, but teacher—the idea of there being any storks!"

He Knew Her

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

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

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

□ □ □

Necessities Only

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

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

□ □ □

Sweet Memories

'Twas at a wedding yesternight,
A young man sat sedately,
I asked him if he'd kissed the bride,
He answered me, "Not lately."

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

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