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Physico-Clinical Medicine

A Quarterly Journal devoted to the study of the Electronic Reactions of Abrams and the Visceral Reflexes of Abrams, in the diagnosis, treatment and pathology of disease.

Vol. 1

MARCH, 1917

No. 3

FOUNDED AND EDITED BY

ALBERT ABRAMS, A.M., M.D., LL.D., F.R.M.S.

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PUBLISHED BY
PHILOPOLIS PRESS

2135 SACRAMENTO STREET

SAN FRANCISCO, CAL.

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Physico-Clinical Medicine

Vol. 1

San Francisco, March, 1917

No. 3

All the subject-matter of this Journal refers to the original research work of Dr. Albert Abrams. Citations from other sources will be duly accredited. "Spondylotherapy" and "New Concepts in Diagnosis and Treatment" constitute the archetype of this Journal and *S*, in parenthesis, followed by a number, refers to the page in the former and *N. C.*, to the latter work where extended consideration of the subject cited will be found. *J*, refers to a previous number of this Journal. The motive of this Journal is to replace the cell doctrine by the Electron theory. Vital phenomena are dynamic and the actions of organisms should be regarded as processes and not as structures. Exclusivism is excluded inasmuch as all sciences are embraced in practical medicine and diagnosis must invoke physical, biological and chemical methods. All problems in medicine not in accord with the progress made in physical science are doomed to perish.

Price of Subscription per year, Payable in Advance
To Subscribers in the United States, Canada and Mexico.....\$2.00
To Subscribers in other countries (Postage prepaid).....\$2.50
Price of Single Copies\$1.00

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CORYZA AND POLARITHERAPY

On another page (66) in this Journal, reference is made to *electronotherapy*. Therapeutic nihilism is merely the product of therapeutic inefficiency. Skodiac pessimism still prevails. Skoda, proclaimed his contempt for treatment as follows: "We can diagnose disease, describe it, and get a grasp of it, but we dare not by any means, expect to cure it." From the same school of therapeutic nihilism one recalls Hebra, who said that 10,000 cases were required before a therapeutic opinion could be justly formed. Our medical treatment of many diseases is a monument to sepulchred theories. Specific medication is therapeutic optimism not yet realized. To select judiciously among the old drugs is equal to inventing new ones. Bactericides may be effectual in the laboratory, but not at the bedside. There is a vast difference between a culture tube and a patient. If we are unable to cure an accessible tuberculous lesion, like lupus, by means of bactericides, is it not chimerical to assume or even hope, that such agents will ever be effectual in pulmonary tuberculosis? Accepted as a paradigm laryngeal tuberculosis, an easily accessible region for local medication, and one observes that the great variety of treatment recommended eloquently proclaims the futility of drug delirium and suggests that it possesses more audacity and courage than reason. Germs thriving on certain media perish or cease to grow on other media. Dr. W. S. Whittenmore, in *The Boston Medical and*

Surgical Journal (Aug. 17, 1916), refers to insufflations of Kaolin powder in the treatment of coryza. This soothing powder was most efficacious in promptly relieving coryza and tonsillitis resulting from nose and throat infections. This powder is not absorbed and exerts no chemical action. It is supposed to act by removing bacteria from the mucosa and rendering them harmless by adsorption, while binding the toxins simultaneously. The writer has recently had an opportunity of testing this remedy (pipe clay was used) in a large number of acute and chronic nasal affections. In a large number of cases it was practically a specific, whereas, in other cases, it was either innocuous or even accentuated the symptoms. If the rationale of its action were essentially due to adsorption, then the results would be uniform irrespective of the nature of the bacterial invasion. Inasmuch as such was not the case, it was necessary to analyze the results with reference to the polarity of the soil as determined by the nature of the bacteria and their toxins. It was determined that when the soil yielded a neutral or positive energy (determined by the stomach reflex) the results were excellent, but inversely so, if the polarity reaction were negative. Pipe clay has a negative polarity with an energy potentiality of 30 ohms.

If the action of drugs were investigated after this manner, clinical therapeutics would be established on a more secure foundation. All phenomena are dynamic and until we study the actions of organisms as processes and not as structures, we shall continue to regard drugs as mere incidents in the treatment of the sick.

It cannot be a mere coincidence according to my investigations that Malaria yielding a positive energy is most effectually combated by quinine which yields a negative energy. A normal joint yields a neutral energy and that salicylates, vaunted specifics in Rheumatic Polyarthritis, owing to their neutral energy must act by restoring the joints to their normal polarity. The polarity reaction in polyarthritis from the implicated joints is positive, hence the salicylates do not act by neutralizing the etiologic factor of the disease.

A THRENODY ON DIAGNOSIS AND TREATMENT

In consonance with the foregoing, one is constrained to dwell briefly on the many deficiencies of our art; not as a rebuke to the Herculean efforts made by traditional investigators, but to arraign our complacency which accepts things as they are and to view as a sacrilegist any one who questions authority. Five physicians of eminence in this city were in attendance on a patient and all of whom concurred in the diagnosis of appendicitis and the necessity of an immediate operation.

"Gentlemen," said the patient, "I do not doubt the accuracy of your diagnosis but, inasmuch as the operation necessitates an anaesthetic, will you not assure me that my heart is in good condition." All the physicians located the heart in the conventional position by *percussion*. "Now, gentlemen," remarked the patient after all the physicians had agreed on the area of heart dullness, "permit me to question the infallibility of your diagnosis and to announce as this radiograph of my chest will show that my heart is located on the right side and, that I am in consequence a victim of what is technically known as dextrocardia."

During the recent "Infantile Paralysis" scare, several physicians

had concurred in this diagnosis and after sequestration of the patient, a physician who was summoned proved conclusively that the paralysis (?) was the result of a fractured bone. When bacteriodiagnosis and bacteriotherapy after an embittered struggle gained admission into the sacred precincts of medicine, we deluded ourselves into the conviction that we had achieved our Utopia. In a recent number of the *J. A. M. A.* (Feb. 3, 1917), there are two communications of analytic interest. In "The Treatment of Gonorrheal Infections" by Harry Culver, and emanating from the Department of Experimental Medicine, University of Illinois, the accepted specificity of the action of vaccines in diagnosis and treatment can be seriously questioned. He shows that neither the reaction nor the therapeutic results achieved by the use of vaccines is due to specific organisms. That while intravenous gonococcal vaccines were employed, similar reactions were secured by injections of meningococci and colon bacilli. The reactions produced in nongonorrheal patients in every way resembled the reactions in gonorrheal patients. Eleven patients were treated with gonococci with one failure, and eleven patients with meningococci with one failure, while but two were treated with colon bacilli, and both recovered.

Culver concludes that the specificity of the vaccine was a negligible factor and that the fever and hyperleukocytosis were the real factors concerned in cure. In fact, he agrees with many other observers that the artificial production of high temperature has a favorable influence on any established infection. It is practically conceded that vaccine therapy is without definite dependable value and it is interesting to note that Warden (*J. A. M. A.*, Feb. 10, 1917), has suggested a new treatment based on the *physicochemistry* of the gonococcus, a study which emphasizes the importance of polartherapy. He shows that the cocci are anions and carry an electronegative charge. Our studies show that the gonococcus yields a *positive* and *negative* duling ergy and from the lesions the splanchnodiagnostic reaction is manifested by areas of dullness in both iliac regions extending from the ant. sp. of the ilium to the *symphysis pubis* (Fig. 8). A like reaction is obtainable with cultures. Fisher (*Ibid.*, P. 366), in his contribution on "Syphilitic Bone and Joint Lesions", emphasizes the frequency of negative Wassermann reactions in undoubted cases of bone syphilis and in despair, maintains that the most reliable test (of course he knows nothing about the electronic reactions) of syphilis, is the therapeutic test thus reverting to the pre-serologic period, when the nature of a disease was revealed by the cures effected (*Naturam morborum curationes ostendunt.*) The disputants of the paper are somewhat skeptical to say the least, concerning the value of the Wassermann and express themselves as follows:

Ridlon—"The diagnosis (of syphilis) has to be made by instinct in many cases, instead of by positive clinical facts."

Watkins—"The only reliable test is the therapeutic one. One has to go back to the dictum of the pre-Wassermann clinicians and say with them: 'when in doubt treat for syphilis.'"

Ely—"There is no reliable test for joint syphilis. The Wassermann test, the Roentgen ray, the clinical course, the history must all be considered, and we are not certain about our diagnosis."

Horwitz—"The negative results with the Wassermann are fully 50 per cent.: so we do not as a rule, rely on this test, but look for

other essential points. The laboratory diagnostician can never supplant the physician and the constant mistakes of the former are the evidence. Abderhalden, and his protective ferments, have been relegated to oblivion and justly so, when one-third of all *men* yield the test of pregnancy. Is the Wassermann to suffer the same fate? Positive reactions with the latter are elicited in nonsyphilitics (2.6 to 18.1) and many occur in tuberculosis, acidosis, malaria and other affections. There is only one chance in five that a specimen of blood submitted to ten serologists will result in an agreement.

SPLANCHNO-DIAGNOSIS

MALARIA

When energy is conveyed from the spleen of the patient to the subject (between the 3rd and 4th dorsal spines), an area of ventral dullness may be demonstrated (equal to a 50-cent piece) slightly anterior to a line drawn upward from the *left* anterior superior iliac spine. The area is approximately

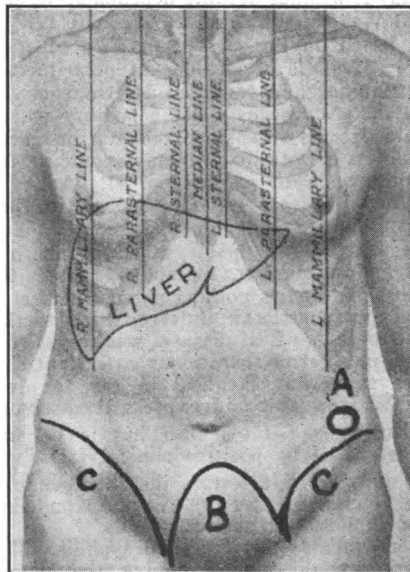


FIG. 8. Ventral areas of dullness in malaria (A), congenital syphilis (B), and gonococccic infections (C).

3 cm. upward from the latter spine (Fig. 8). This dullness persists when the *positive pole* of a bar-magnet is presented to the area in question, but is dissipated when the negative pole is thus presented, hence, the energy in malaria is positive. The reaction is present in the absence of symptoms. In other words, if the patient has at any time contracted malaria, the reaction can always be elicited. The latter fact is in accordance with the view entertained by Italian observers, viz., that despite quinzation, one is unable to free the system completely of the malarial parasites.

The reaction cannot be elicited from the blood (J. vol. 1, No. 1, p. 9) in the absence of symptoms. One knows that one can precipitate a paroxysm of malaria (S. 354, 506) even in supposititious cases of cure by exciting contraction of the spleen. Even in larvated cases of malaria, spleen contraction thus elicited will yield a blood reaction.

The employment of splenic contraction is of great diagnostic value in a symptomatologic direction. A typic malarial paroxysm need not necessarily ensue to clinch the diagnosis. An intensification or recurrence of previous symptoms (aches, pains, chilly sensations, etc.) suffices to suggest the diagnosis. The writer from recent experience with a large number of malarial patients is justified in concluding that the conventional treatment of malaria coupled with concussion of the 2nd lumbar vertebral spine to provoke splenic contraction is the most efficient means for jugulating the disease.

THE ELECTRONIC REACTIONS OF ABRAMS

The following are a few excerpts from a contribution "The Electronic Reactions of Abrams," which is to appear in the March number of *International Clinics*.

Diagnosis is the most exalted and yet, the most difficult task of the physician. A correct diagnosis in many important diseases falls below 50 *per cent.* in recognition and in some, below 25 *per cent.* This is because medical practice is only 50 *per cent.* efficient. Until the physician can weigh, measure and express his knowledge in numbers, his art has scarcely attained the dignity of a science. All knowledge irrespective of its source has participated in the development of our art. Thus, Descartes, a philosopher, discovered the reflex; Leonardo, an artist, discovered the function of the heart; Hales, a clergyman, discovered arterial pressure; Leeuwenhoek, a "bedell," discovered the capillary circulation; Wren, an architect, discovered intravenous injection and Priestley,

a clergyman, discovered the function of the green plant. The physicist limits the phenomenon known as radiation to a few elements, because his apparatus lacks sensitivity. It can be demonstrated by the aid of the reflexes that radiation is a universal property of matter.

Dr. George Jarvis, who confirmed the visceral reflexes of Abrams at the operating table executed several investigations during laparotomies bearing on the conveyance of energy from tuberculous and carcinomatous material to the region between the 3d and 4th dorsal spines (Splanchno-Diagnosis). Within several seconds each time after the electrode was brought in apposition with the latter area, there was a decided *vasodilation* in specific intraabdominal areas corresponding to the ventral areas of dulness elicited by percussion. This observation was confirmed by Drs. Parsons and A. W. Boslough. In experimental work on animals, the writer found that the slightest augmentation of vascularity of the stomach and intestines caused a transition of the percussion note from tympanicity to dulness.

A subject with reddish hair must not be selected for making the reactions. If colors approximating this shade are placed across the cranium of the subject, many reactions cannot be elicited.

CONGENITAL SYPHILIS

Reference has been made (J. 1, Vol. 1) to the differentiation of congenital and acquired syphilis. In this test, the energy is conveyed from the eyes of the patient to the subject. In the presence of a syphilitic affection of the eye, either in congenital or acquired syphilis, a like reaction would ensue.* The following test will obviate the latter error. In congenital syphilis *only*, it will be noted that when energy is conveyed from the spine, liver or spleen of the patient, there is, in addition to the epigastric area of dulness, an area measuring 10 cm. vertically and 12 cm. horizontally beginning midway between the navel and the *symphysis pubis* and extending to the latter (Fig. 8). The subjects' bladder must be empty to eliminate the impaired resonance of the distended viscus.

*In the Kiel eye clinic the optic nerve was effected in two thirds of fifty syphilitics.

PULMO-DIAGNOSTIC REACTIONS

NOTE.—It is known that if one stimulates the area between the 4th and 5th cervical spines, one may provoke the lung reflex of contraction (S. 313). This lung contraction which implicates both lungs may be viewed Roentgenoscopically. Like in splanchno-diagnosis (J. Vo. 1, No. 1, P. 4), radioactivity in disease is a question of wave length and definite diseases having an energy of specific vibratory rates will only stimulate certain bronchoconstrictor fibers in the vagus and only definite pulmonary areas will contract. The latter are usually demonstrated by percussion although they may be shown by careful inspection with the fluoroscope. In the elicitation of the pulmo-diagnostic reactions, the method of execution is the same as in splanchno-diagnosis with the only difference that the energy from the patient to the subject is conveyed to the area between the 4th and 5th cervical spines of the latter. These reactions will confirm the evidence of splanchno-diagnosis. Only the reactions in carcinoma and syphilis will be shown in this issue of the Journal.

PULMO-DIAGNOSTIC REACTION IN CARCINOMA

To increase the interscapular region, the subject places his right hand on his left shoulder and the other hand on the right shoulder. In carcinoma, an area of absolute dulness during energy conveyance appears (location defined with arms hanging) at the *right* inferior angle of the scapula bounded internally by the vertebral border of the scapula and extends from the latter 5cm. externally and measures vertically 7 cm. (Fig. 9). The polarity of this dulness like in splanchnodiagnosis is positive, *i. e.*, on presentation of the positive pole of a bar-magnet to the area of dulness, the latter persists but disappears when the negative pole is thus presented.

PULMO-DIAGNOSTIC REACTION IN SYPHILIS

The area of dulness (Fig. 9) is located at the inferior angle of the *left* scapula and measures 4x4 cm. The polarity of the energy in syphilis is neutral hence, the dulness disappears when either pole of the bar-magnet is presented.

RADIUM AND CANCER

After many months of experimentation with radium on animals and humans, the CROCKER CANCER RESEARCH LABORATORY of COLUMBIA UNIVERSITY, concluded that no cures were effected. Radium in small doses avers Dr. F. Wood, the Director, has a directly stimulating effect on cancer cells whereas large doses may reduce the rate of

growth. Some of the results show that the tumors after the use of radium may remain latent for one or two years, only to grow later and prove resistant to radiumization. Radium has an analgesic action and may prolong life. The present morphologic conception of a neoplasm must be supplanted by an electronic conception. A tissue at rest is in a condition of electric equilibrium (isoelectric) and, if the latter is disturbed by irritation (the most frequent etiologic factor in cancer) or some traumatic factor, a difference of potential is established and the altered tissue becomes electronically

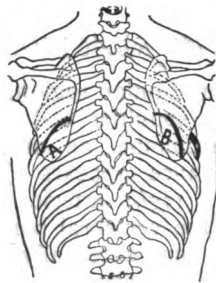


FIG. 9—Pulmo-diagnostic reactions in carcinoma (A) and syphilis (B).

positive to the normal. The reflexes show that the energy discharge in cancer is *positive*. Until our therapeutic methods are computed in chemico-physical terms, they must still be referred to as a "meditation on death", as Asclepiades said of the Hippocratic treatise on therapeutics. The term *Electronotherapy* suggested by the writer (N. C. 199), finds its expression in a modification of the soil by change in vibratory rate and notably, in polarity (polaritherapy). Notably the latter, for the reason, that change in vibratory rate is as yet impossible whereas a change in polarity is an accomplished fact. Three kinds of rays are distinguishable in radium—*alpha* (positively charged), *beta* (negatively charged) and *gamma* (neutral) rays. The *alpha* rays are among the most feebly penetrating and are absorbed by a single sheet of paper or by a few inches of air. Furthermore, they possess over 95 *per cent.* of the energy evolved from radioactive substances.

The foregoing demonstrates two facts, *viz.*, the inefficiency of radium in neoplasms below the surface and the pre-

ponderance of positive rays which only serve to contribute to the growth of the carcinoma.

In our investigations, we have found that all chemicals are radioactive and that the energy coefficient of radium is relatively small when compared to many inexpensive chemicals. Radium (10 milligrams) yields an energy potentiality of only 22-25 of an ohm. It was found furthermore, that chemicals yielding a *neutral* energy were most efficient in inhibiting the growth of cancers. It is yet too early to report our results but the latter have been phenomenal in incipient and recurrent growths (after operation) when metastases could be excluded. Among the chemical agents yielding a neutral energy and cited elsewhere (N. C. 210) are the following:

AGENT	Potentiality of Energy
Eosin	2½ Ohms
Turpentine (Venice)	16 "
Methyl Violet (not durable)	45 "
Picric Acid (saturated)	50 "

All these chemicals have a penetrating action to a considerable depth.

The latest formula which the writer uses is as follows: Picric acid, Eosin, Calcium Chlorid and Boracic acid, equal parts. This has an energy potentiality of 160 ohms. The powder is mixed with water and the moderately thick paste is painted daily over the site of the cancer. After painting, the part is covered with some non-conductor to concentrate the action of the radioactive mixture. For the latter purpose, *silk* or a silk shirt or undergarment of the same material may be used.

HOW ELECTRONS WERE ISOLATED AND WEIGHED

NOTE.—Professor R. A. Millikan, of the University of Chicago, delivered a course of lectures at the University of California. His most epoch-making discovery is subjoined by one of his former students. I was duly impressed with Millikan's description of "Moseley's laws," which he regarded as the most scientific discovery of the past 50 years owing to the impetus which they give in the interpretation of the universal forces. Employing the X-rays, the spectra of a large number of elements were photographed. He determined that the principal lines in the spectra were associated by a simple relation. The square roots of the frequencies of vibration are always proportional to the ordinal numbers arranged in the order of the atomic weight of the elements and that they increase by one in passing from one number of a group to the next.—EDITOR.

When Professor Robert Andrew Millikan of the University of Chicago succeeded in isolating and weighing electrons, the ultimate units of electricity, the most unthinkable minute particles ever thought of by man, far smaller than atoms, he made for himself an International reputation, and for the science of physics one of the most fundamentally important discoveries of the twentieth century.

He set himself this definite problem: Is there a unit of electricity—a single electric charge of constant value of which all larger amounts of electricity are made? If so, what is the value of this "atom" of electricity?

To solve this problem, his general method was this: He sprayed fine oil droplets between two charged plates of a condenser, allowed the oil droplets to catch electrically charged atoms (ions), measured the rapidity with which the droplets approached the positive or negative plate when carrying the charges, and from these measurements determined the value of the charge. When he found that the charge was always of a certain minimum value or of an integral number of times that value, he saw that the minimum value was a true electric unit.

In more detail, this is the way he made his epoch-making discovery:

Picture to yourself two metal disks, horizontal, and one above the other with a small space between them. To the upper disk is attached the positive wire of a direct current electric circuit; to the lower disk is attached the negative wire of the same circuit. There is a potential difference (voltage) between the two plates or disks, but owing to the unbridged space between them there is no actual current flowing. The amount of voltage between the two plates is controllable and measurable at all times.

Into the space between the two plates microscopic oil drop-

lets are sprayed with an atomizer. They are so small that they fall very slowly, just drifting toward the lower (negative) plate. One of the droplets is brightly illuminated by artificial light and watched through a telescope; it looks like a slowly moving star. As long as it is not electrically charged it moves only under the influence of gravity. Its downward drift is accurately measured for later reference, and from this the weight of the droplet can be accurately determined.

Now a tube containing a radio-active mineral is brought into the room. It at once ionizes the air around it, and the ions (electrically charged atoms and molecules) scatter throughout the room. Soon we see a sudden change in the behavior of our star-like droplet. It stops its downward drift and begins to rise toward the upper, positive plate. It has evidently caught one of the negative ions made by the radium and is now electrically charged. The pull of the electrically charged positive plate on the now negatively charged droplet is stronger than the pull of gravity and the droplet therefore is pulled up.

(Or the droplet may catch a positive ion. If it does, the downward motion will be accelerated as the pull of the negative plate is added to the pull of gravity, and the value of the positive charge can be deduced from the acceleration. But for the sake of simplicity in this brief account, let us consider that it is a negative ion which is caught.)

By decreasing the charge on the positive plate (you remember that the voltage between the plates is measurable and controllable at all times) we can bring it to the point where the upward pull of the electricity is exactly equal to the downward pull of gravity and the droplet is poised in mid air, motionless. Then perhaps, no negative ion is caught. Immediately the droplet starts to rise again. We must again decrease our positive charge on the upper plate—we must decrease it by exactly the value of the negative charge caught in order to neutralize the effect of the new charge and poise the droplet again. We can measure the exact amount of change we have to make and can thus calculate the value of the new charge.

Thousands of measurements like this are made. The exact amount of every charge of electricity caught by the suspended oil droplet is calculated and tabulated. Then the numbers are compared. There is one number which appears a number of times and which is smaller than any of the others. The others are all found to be an integral number of times as big—*i. e.*, of times as large as the smallest number—never one and a they are either 2, or 3, or 4, or 5, or some other whole number

half times as large, nor two and a third times as large, nor any other mixed or fractional number of times. In a word, the larger numbers are all made up of two or more of the smallest number, which evidently represents a single and indivisible electric charge. It is a single charge, or else we would sometimes find a smaller one. It is indivisible, or else we would sometimes find a fraction of it. Yet thousands and thousands of measurements, made in often repeated experiments through a period of over seven years now, have failed ever to find any smaller quantity of electricity, nor any larger quantity which was not an exact whole number of times as great.

The problem is solved: There is obviously an electric unit—an indivisible particle of electricity of constant value. The electric value has been found by the experiment just outlined, and calculations from this and the known weight of the oil droplets which caught the charges show the weight of the particle—a weight too inconceivably small to mean anything if written.

An idea of the smallness of the charge was given by Dr. Millikan in his lecture at the University of California last month. He said that if the two and a half million people who lived in Chicago were to begin to count, and count as fast as they could day and night without stopping to eat or sleep or die, for twenty thousand years; then if the amount all had counted were added up, the total would be the number of electrons passing through an ordinary electric light filament in one second!

Something of the importance of the determining of the value of these particles can be seen, when one realizes their omnipresence; It is the electrons shoving each other from atom to atom in an electric wire that constitute the currents of electricity which we use every day. It is the accumulation of electrons on the droplets of water in the clouds that give us our lightning; it is the stream of electrons given off by radio-active things which constitute the beta rays. It is the stream of electrons again which constitute the cathode ray used in X-ray tubes. And it may very possibly be that electrons are the substance of the atoms of the different elements, and that they are therefore the very stuff of which the universe is made.

CARLETON W. WASHBURN,
*Supervisor of Physical Sciences, California State
Normal School at San Francisco.*

TELEDIAGNOSIS

NOTE—There have been so many inquiries concerning this method that the editor is constrained to reproduce the appended article which was contributed to a lay journal. The writer contemplates conducting a test between New York and San Francisco. The technique of telediagnosis has been described elsewhere (N. C. 305.)

Among the triumphs in the evolution of science is the annihilation of distance. Long distance diagnosis is evidently destined to subserve a like function. Recent successful experiments by two physicians between San Francisco and Los Angeles, appear to demonstrate that the telephone wire can be employed for conducting the radioactivity of disease.

There is a Latinism, he who makes a good diagnosis, makes a good cure. The awakening of the intellect succeeded the universal submission to the authority of ecclesiasticism which sent Bruno, Vanini and Servetus to the stake. The human mind and its view-point of the world machine has changed. We had to dispense with the hypothesis of vitalism which predicated the existence in our bodies of a special mystical force differing from the chemico-physical energies of the inanimate world. We are confronted with a more difficult undertaking and that is to demolish the cell theory. All problems in medicine not in accord with the progress made in physical science are doomed to perish.

Perhaps the greatest contribution ever made to scientific knowledge was the Electron Theory.

This reduced the ultimate constituents of all matter to electrons or charges of electricity. Whether matter is represented by the animal body or an inanimate object, the basic and ultimate constituent is always a charge of positive and negative electricity. We speak of perpetual motion as impossible, yet the whole universe is nought else. Matter is only an effect of a definite kind of motion.

During the revolutions of the electrons, thousands of billions of times per second, an electro-magnetic field of energy is created which is called radioactivity. The physicist limits radioactivity to only a few elements because his apparatus is not sensitive enough to detect the radiations of matter.

It can be shown that all matter is radioactive if one employs the human reflexes. A reflex is an involuntary act. When light which is radiant energy strikes the eye, the pupil contracts. This is a reflex. The animal reflexes exceed in sensitivity any apparatus yet devised by man. The retina of the eye comparable to a photographic plate is 3000 times more sensitive than the latter. It has been shown that

the sense of smell surpasses in sensitiveness the most impressive scientific instruments.

The lungs antedated the bellows; the heart, the pump; the hand, the lever; and the eye, the photographic camera.

Telephonic and telegraphic apparatus duplicate mimetically what has always been done by the nervous system and always by aid of the same energy.

Every phenomenon in nature is merely a question of a definite kind of motion or vibration. When the aerial waves are more than 36,000 vibrations per second, the ear cannot recognize sound; when 18,000,000 vibrations have been reached, we perceive a sensation of heat; 462,000,000,000 vibrations in a second produce a sensation of light, and as the vibrations gradually increase the eye perceives one color after another, until violet is reached with 733,000,000,000 vibrations to a second.

When a variety of colors is perceived synchronously, it is because our optic nerves contain different fibres which are natural detectors and always attuned to definite vibration rates. Recapitulating the foregoing subject-matter, the following conclusions may be formulated:

1. Misinterpretation heretofore made in medicine is to regard the cell and not the electron as the ultimate constituent of animal organization. Vital phenomena are dynamic and the actions of organisms are processes and not structures.

2. The human must not be segregated as something apart from other entities of the physical universe. Health and disease must be studied by the same laws of physics, chemistry and mechanics which equally govern all animate and inanimate phenomena.

3. Each disease has its characteristic and invariable radioactivity due to the uniformity of the vibration rate of its electrons.

4. The electromagnetic phenomena associated with the vibration of the electrons usually elude detection by the instruments of science, but when the human reflexes are employed, they are always recognizable.

5. Not only is it possible to recognize disease in its incipiency but one can accurately measure its virulency. After the same manner, one may gauge the progression or retrogression of the disease under treatment.

When the radiant energy of disease is conveyed to a certain nerve, the blood-vessels dilate in definite regions of the face and abdomen. The former may be seen by the unaided eye,

whereas the latter are detected by striking or known technically as percussion of the abdomen.

At the office of the physician, only conducting cords are necessary to convey the energy but when the energy is conducted over a considerable distance, it must first pass through an apparatus containing an induction coil which increases the voltage of energy.

In telediagnosis, the telephone wire acts as the conductor and further conduction to the subject is made by cords.

Primary efforts in telediagnosis were successfully made in this city at a distance of several blocks. Later, reactions were correctly made at a distance of 11 miles. On Oct. 2, 1915, reactions were made between Los Angeles and San Francisco. At this time only reactions were successfully made with cultures of germs. The character of the germs used was not previously known.

On Nov. 2, 1916, patients in Los Angeles were first used. The nature of their ailments were unknown to the physician at the receiving station in San Francisco.

The following diagnoses made in succession were later confirmed:

1. Pus,
2. Tuberculosis,
3. Tuberculosis and pus (mixed infection),
4. Carcinoma (cancer of the breast),
5. Infection from the colon bacillus.

The telephone wire (non-insulated, 30 to 50 feet above the ground and not re-enforced by telephone repeaters) extends 475 miles from Los Angeles to San Francisco.

It is quite safe to predict that, with larger coils to re-enforce the energy, this distance diagnosis may be exceeded.

It has been suggested by captious critics that telepathy is in some way associated with telediagnosis. This contention may be eliminated insomuch as in a number of investigations the nature of the disease was unknown to the physician who transmitted the energy of the disease and was only revealed by subsequent investigations by other methods of diagnosis which corroborated the telediagnosis.

One must not by any means conclude that the determination of the radioactivity of disease will entirely substitute the conventional methods of diagnosis. This would be manifestly impossible insomuch as a correct diagnosis must always invoke physical, biological and chemical methods.

INTERROGATORY

NOTE.—This department has been added to the Journal in response to many inquiries.

How do you differentiate an active from a quiescent lesion in tuberculosis by splanchnodiagnosis?—Necropsic examinations have repeatedly demonstrated the spontaneous arrest or healing of tuberculosis and the frequency of unsuspected tuberculous lesions, facts, which seem to justify the German aphorism, "*Jedermann hat am Ende ein bischen Tuberculose.*"

Despite the numerous recognized tests, the early diagnosis of tuberculosis is yet unsatisfactory. The most recent test is that of a serum diagnosis proposed by Miller and Zinsser in the *Proceedings of the Society for Experimental Biology and Medicine*, July 1916. In this Journal (Vol. 1, No. 1, p. 7), it was shown that in Splanchno-diagnosis a tuberculous lesion always yields a reaction. In healed tuberculosis, the reaction is present when the receiving electrode is in contact with the skin over the lesion. If the reaction is elicited at a distance exceeding one inch from the skin surface, the lesion is *active*. A more accurate test is by aid of the Ohmmeter (*Ibid.* p. 6). In active tuberculosis, the energy potentiality may exceed 12 ohms. In healed tuberculosis (electrode on skin over the lesion), the reaction is not greater than $\frac{3}{25}$ of an ohm. When the latter is exceeded, the lesion is active. The ohmmeter is of great value in determining the progression of retrogression of a lesion and is a mathematic gauge to the efficiency of our treatment. Reference has been made to the successful employment of polaritherapy in early tuberculosis. I am constantly investigating the radioactivity of different chemicals by the method suggested elsewhere (N. C. 209.) The latest preparation which I employ is composed of two parts of *gambo* and one part of *barium sulphate*. This is mixed with alcohol and painted on the skin over any tuberculous area as shown elsewhere (N. C.) This mixture yields a positive and negative dulling energy with the enormous potentiality of 532 ohms. It is interesting to note that the normal lung reaction is a positive and negative non-dulling energy. In tuberculous lungs (over an area without a lesion) or lungs predisposed to tuberculosis, there is a neutral non-dulling energy.

All forms of tuberculosis of the skin (lupus and *verruca tuberculosa*) yield the usual splanchnic reaction of tuberculosis and are amenable to treatment by the *gambo*-barium sulphate mixture.

SPLANCHNO-DIAGNOSTIC REACTION IN CARCINOMA

In addition to the conventional area of ventral dullness in carcinoma, there is a dullness strictly limited to the umbilicus when carcinomatous energy is conveyed from the patient to the subject. Chronic inflammatory conditions yield the same splanchnodiagnostic reaction of carcinoma *but not this umbilical area*. Inflammation is always associated with *irritation* (N. C. 183, 185, 191), and the latter, electronically speaking, is on the border line of clinical malignancy.

ELECTRIC BELTS

This subject has been discussed in the last number of this Journal (Vol. 1, No. 2). It was suggested that every being was a transformer of energy and that a constant conveyance of electricity to the human augmented his output of energy. The average electric belt was a delusion and its substitution by a dry cell was suggested. The duration of the life of the latter, however, is limited. This may be obviated by the construction of a belt on the principle of the *thermopile*. Strips of zinc and copper (each strip one-half inch wide and one and one-half inches long), separated one-half inch from each other are riveted to an army belt. This belt shows that for each 10 degrees difference between the body temperature and the atmosphere, each thermo-couple when worn on the body yields .02850 Volt. The yield of the latter is constant and with increase of body temperature, the amperage increases at the rate of .015 milliamperere per 10 degrees difference in radiant energy. With 20 thermo-couples on the belt, there is .3 of a milliamperere for each degree above the surrounding temperature. Thus, with the body temperature at 98.6 deg. Fah., and an atmospheric temperature of 60 deg. Fah., one obtains a constant current of approximately 1.2 milliamperes. No injury to the skin ensues. The thermo-couples must be smooth and beveled and kept bright and worn next to the skin. To break down the skin resistance of fat, the skin approximating the belt should be sponged daily with a saturated solution of magnesium sulphate.

THE MATCHLESS ALTAR OF THE SOUL

Edgar Lucien Larkin, the distinguished Director of the Lowe Astronomical observatory, has just published a book on this subject. He refers to many phenomena due to a higher

phase of electricity, the electronic state, known to adepts, but not yet discovered by science in the use of any kind of instrument. He insists that no such thing as a miracle can exist. Because the word "Soul" is a set word in human language, he uses it interchangeably with the term subconscious mind and spirit. Nothing exists but electrons and these have been created and directed by mind into atoms. The mind is not subject to science. The latter is at present restricted to whatever can be weighed and measured. The author does not prove that the human soul exists. The laws of chemistry and astronomy can be proved by one mind to another, but one human cannot prove to another the existence of a soul.

Physical science makes the most elaborate use of polarity in all dynamic electrical mechanisms and it is reasonable to suppose that every mental phenomenon is merely a question of different rates of vibration and of polarizing influences.

Excluding time and space, mind is the most expansive entity in the universe. Mentologists who have studied Larkin's previous work, "Within the Mind Maze," know that he observes that electrons only have been created or produced and that everything else has been formed of electrons by directivity—direction. Like the other evolutionists, he does not enter into a discussion of first causes and therefore does not answer the question, what created electrons and set them in motion?

This is an omission which developing science is destined to answer and thus dispose of the observation of Sir Oliver Lodge, "while a statement in terms of mechanics and physics can be clear and definite, it must necessarily be incomplete." The book contains a chapter on "Mind" by Dr. Albert Abrams.

SPONDYLOTHERAPY

EXOPHTHALMIC GOITER

Among the triumphs of Spondylotherapy, it is practically conceded by the *cognoscenti*, that simple concussion of the 7th cervical spine is practically a specific in the treatment of this disease and that it is criminal negligence for the physician to invoke surgery before giving this method a trial. The results are usually immediate, but it is always well to recall the aphorism of Sir George Humphrey, *via.*, "Nothing ever gets quite well." Patients soon forget the latter and importuned by captious friends, they often seek the surgeon who often makes 'confusion worse confounded.' Such patients often return and I remind them of the Italian epitaph.—"I was well—wished to be better—read medical books—took medicine—and died." The first symptoms to yield are cardiac irregularities, nervousness and perspiration. Exophthalmos is the most resistant sign and may yield synchronously with other symptoms, it may improve after treatment is suspended or it may be permanent. In a personal communication from Dr. M. A. Hansen (Iowa), in 100 cases treated (only two treatments a week), the results were uniformly good and he maintains that he has not had a single failure. The first symptoms to yield were the tachycardia and the size of the goiter. The improvement in weight was also manifest.

Among the cases were 5 patients who obtained no material relief from the operation, but with concussion, within a period of three months, practically all the symptoms abated.

In one patient in whom hyperthyroidism was incorrectly interpreted as tuberculosis, concussion of the 7th cervical spine after 18 treatments caused an increase of 14 pounds in the patient's weight. The same observer has treated about 200 cases of *simple goiter*. When the glands were vascular, concussion soon reduced them to normal. No results were achieved in cystic goiter. In addition to concussion in simple goiter, Dr. Hansen uses potassium iodid cataphoretically over the gland (treatment twice a week and each *séance* lasting 10 minutes.)

Dr. Wm. L. Heeve (Brooklyn, New York), observes that after concussion, the first signs of improvement were in the abatement of the cardiac and nervous symptoms. Reduction in the size of the glands was not noted in approximately 40 *per cent.* of his cases. He regards concussion as superior to all other methods. His treatments are given daily.

Dr. Louis Shreiber (St. Louis), reports a number of cases of exophthalmic goiter which rapidly yielded to the concussion treatment. In a symposium (*The Southern Clinic*) Gault, regards concussion as the most effective treatment. Siebert (*Western Medical Times Feb. 1917*) expresses himself as follows: "When all medical treatment in this disease fails, I have had splendid results by exciting the reflexes according to the method of Dr. Albert Abrams".

EXCITATION OF THE VERTEBRAL REFLEXES

It is a conceded physiologic fact that when any part of an organism is subjected to external stimuli, the response is not always precisely the same. In other words, there is no fatal necessity about the reaction. The condition of the organism is not always the same, hence no stimulus encounters a reacting system in precisely the same condition as a previous one did. Living cells are at the mercy of their environment. In contrasting individuals we are confronted with like varying conditions. No two individuals are precisely in the same physico-chemical condition. The cogency of the foregoing appeals to the writer when one takes into consideration, the varying stimuli employed for eliciting the visceral reflexes. In some individuals, sinusoidalization is more effective than concussion and conversely, the latter is more efficient than the former. In the last number of this journal "The Myth and Fetish of the Dislocated Vertebra," was discussed. Spinal manipulations certainly cure conditions that have failed of cure in the hands of experienced physicians. As a factor in this cure, the so-called "dislocated vertebra" was excluded and the results attributed to either the unconscious evocation of visceral reflexes through the spine or by the separation of ankylosed vertebral joints. Among the manipulations, *adjustments* (thrusts) are most frequently employed. They consist essentially of pressure on the arches and transverse processes of the vertebrae. In analyzing the latter manipulations with the other maneuvers for eliciting the visceral reflexes (concussion and sinusoidalization), the writer found that the reflexes in question superinduced by "adjustments" exceeded in duration and amplitude as a rule, the other methods of excitation as the following demonstrates:

HEART REFLEX	
(Excitation of the 7th cervical spine.)	
<i>Method</i>	<i>Duration of reflex</i>
Concussion	15 seconds
Thrust	1½ minutes
STOMACH REFLEX	
Concussion	20 seconds
Thrust	58 seconds

DIFFERENTIATION OF ANGINAL PAINS

Anginoid pains are symptomatic of a variety of cardiac affections. In the differentiation of true from false angina, one

must recall the writer's differentiation of the forms of angina pectoris (S. 539). It has been shown (*Ibid.*) that in false angina, cardiac enfeeblement with heart dilation is present and that relief is immediate following a toning of the vagus which indirectly evokes the heart reflex of contraction. In Spondylotherapy, a number of methods are discussed for subduing vagus hypotonia among which, concussion of the 7th cervical spine is the most effective. Pitfield (*J. A. M. A.*, Feb. 3, 1917), suggests that spurious anginal pains may be differentiated from the true pains by the following tests: If the person suffering from the pains will thrust the little finger firmly into the external auditory meatus (particularly the left), the pain is inhibited (in false angina). This maneuver stimulates the aural branch of the vagus which indirectly elicits the heart reflex. The same effect is achieved if the patient forcibly contracts his abdominal muscles. The estimation of our therapeutic maneuvers is essentially empirical and therefore unscientific. When one can estimate in numbers, all doubt is resolved and the mensuration of vagus tone (N. C. 154.) can annihilate this doubt. To test the maneuvers suggested by Pitfield, the following measurements were executed.

Vagus tone before the execution of any maneuver 2, 9/25 ohms; Vagus tone after pressure in the external auditory meatus, 2, 23/25 ohms; Vagus tone after contraction of the abdominal musculature, 2, 9/20 ohms; Vagus tone after concussion of the 7th cervical spine, 4, 2/25 ohms.

It is therefore evident from the foregoing that concussion is the most effective maneuver for augmenting vagus tone.

TRIGEMINAL NEURALGIA

Freezing, in the treatment of this affection, has been extensively employed (S. 36). Jarvis and Endelman, conclude that for promptness and efficiency, freezing is surpassed by no other therapeutic or operative method in the treatment of pain of dental origin, or any structure of the face innervated by the trigeminus. In post-extraction pain, the freezing method, they continue, acts as if by magic. Their conclusions are based on a series of 200 cases of pain of varied degrees of intensity. The technique has been described elsewhere (S. 36.) Among the areas subjected to this method of psychotherapy is the region of the Gasserian ganglion. This is readily located by the writer's method of transmitted palpation (S. 83). Place the tip of one finger over the region corres-

ponding to the ganglion (S. 374, Fig. 96) and tap the latter with the other finger like in finger—finger percussion. When the area of the ganglion is attained, intense pain is felt by the patient.

POST-GRADUATE COURSE IN SPONDYLOTHERAPY

NOTE.—The following few excerpts are taken from the correspondence course of Charles F. Anderson, A. B., M. D., Lexington, Kentucky, formerly Associate Professor of Pediatrics in the University of his State, and first President of "*The American Association for the Study of Spondylotherapy.*"

EXOPHTHALMIC GOITER (S. 490)—A most severe case of ten years duration. Treatment by stimulation of the 7th cervical spine. Within three weeks, patient was dismissed as cured with a reduction of pulse rate from 120 to 82. Mention made of a patient (wife of Dr. A. S. Herrick), with a simple goiter and, by the same method, goiter was reduced 1½ inches within two weeks. "One physician wrote to me that the treatment of this disease was worth the price of the entire course."

PROSTATIC HYPERTROPHY (S. 634).—Stimulation of the 12th dorsal spine daily. "I have obtained results by this method of treatment of enlarged prostates when all other methods had failed."

SEVENTH CERVICAL VERTEBRA.—This is one of the most important centers in the entire spine. "The writer has found from his experience in treating several hundred cases that Dr. Albert Abram's claims for the use of concussion and the sinusoidal current are not empirical but therapeutic facts."

SPINAL THERAPY.—"The physician who decries spinal therapy does so either through ignorance of the subject or else is too narrow to admit the truth when he sees it."

CONCUSSION.—In using this method, do not strike the vertebrae too hard. The hammer should be used with the wrist and not the arm movement like in percussion. The strokes should be given interruptedly (strokes for ½ minute and then rest the same duration of time.)

MISCELLANY

DR. HUGO SUMMA (St. Louis)—This distinguished diagnostician is recuperating in Santa Monica, Cal., after a prolonged illness.

DR. CURRAN POPE (Louisville)—Oratory is not without its emotional influence on the average auditor despite the fact that the emotion may not survive the occasion. This is not true of the address on Abraham Lincoln, delivered before the Lincoln Memorial Meeting of the Muldraugh District Medical Association (Sept. 7, 1916), Dr. Pope demonstrated that his ability is equally secure as an orator as well as a physician. Readers of this Journal should send for a copy of his address. The following excerpt is worth repetition: "Would that all men, and *especially doctors*, were less hasty to condemn their brother doctor, without facts, without knowledge and without that reasonable investigation that the truth seeker should ever possess before he indulges in the luxury of an expressed opinion."

MCINTOSH CATALOGUE.—The 38th edition of this Electrotherapeutical catalogue has just been issued.

CHANGE OF ADDRESS.—Philopolis Press is now located at 2135 Sacramento Street, San Francisco. Communications to the editor should be sent to the same address.

AMERICAN INSTITUTE OF ELECTRICAL ENGINEERS.—Dr. Albert Abrams addressed this Association at Stanford University November 28, 1916, on the Electric Evaluation of Human Energy.

POSTURE IN SPLANCHNO-DIAGNOSIS. The necessity of the patient and subject exactly facing the WEST has been emphasized. In the absence of a compass, a watch may be used to determine the points of the compass by pointing the hour hand at the sun any time of the day, and then placing a small piece of straight wire crosswise between the hour-hand and the figure twelve, getting exactly half-way. The point of the wire which comes between the twelve and the hour-hand always points due south. Facing south, the right hand indicates west.

REFERENCE HANDBOOK OF THE MEDICAL SCIENCES (Wm. Wood and Co.)—In the last volume of the latest edition of

this monumental work, an extensive compilation of Spondylotherapy has been contributed by Dr. Abrams.

SCIENCE AND PSYCHOLOGY.—“J. B. Shroeder lectured on this subject before a large audience. The lecture was illustrated by photographs made by Baraduc, of Paris; also pictures of the apparatus of Dr. Albert Abrams of San Francisco, used in demonstrating radioactivity and which enables him to diagnose disease at a distance.”—*Everywoman*, Dec, 1916.

VISITORS.—The following are a few of the recent visitors to the research laboratory of Dr. Abrams: Drs. F. Gramenz, Minn.; George Jarvis, Oregon; W. R. Scroggs, Berkeley, Cal.; W. H. McChesney, New York; Geo. M. Terrell, D. B. Holcomb, Chicago; O. Eastland, W. J. Caesar, Richmond; G. F. Harding, Salt Lake City; W. E. Keith and A. E. Dickinson, San Jose, Cal.

Physicians who contemplate coming to San Francisco to Dr. Abrams for instruction, should invariably do so by appointment. Dr. Abrams must again insist on his invariable rule—that only those in possession of the M. D. degree, are eligible for admission to his classes.



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