AUTOTHERAPY

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CHARLES HENRY DUNCAN M.D. 1908

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BY

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DISCOVERER AND FOUNDER OF AUTOTHERAPY

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This book is dedicated to

MY MOTHER

that rare genius of the sick-room who possessed the combined qualities of broad sympathies, keen intuition, and uncommon good medical sense. These she inherited from her father, Dr. Charles Henry Webb of Princeton, Kentucky, for whom the author was named. Her exceptional medical endowments were cultivated to full fruition by her brother, Dr. James Webb of Little Rock, Arkansas, and by my father's twin brother, Dr. George W. Duncan of Franklin, Kentucky.

PREFACE

This volume has been prepared at the request of many physicians who have had their professional interest aroused by reading one or more of the many articles on the subject in Autotherapy that had appeared in standard medical periodicals during the past eight years.

Autotherapy has gained wide recognition and received the unqualified endorsements not only of many well-known physicians and veterinarians but of leading medical, and veterinary medical societies. By means of a text-book only can the thousand and one questions that are constantly being asked by physicians be answered. The majority of these will be answered in the contents of the book, but it is essential that a satisfactory answer be given at this time to questions that are bound to occur to the reader when his attention is directed first to the subject, namely:

(1) How long has Autotherapy been under continuous study? To such a question the author's reply is—that he has been continuously occupied in this pursuit for the past eight years.

(2) Has Autotherapy been brought before the attention of the profession in such a manner as to secure on the one hand abundant corroboration, and on the other hand such searching criticism as a new idea in therapeutics must welcome?

During this period in question the author has made known his experience in the best-known media, including:

The Medical Record, Lancet-Clinic, Proceedings of the Veterinary American Medical Association, Medical Era, New

York Medical Journal, Boston Medical and Surgical Journal, Medical Sentinel, American Practitioner, American Journal of Surgery, Therapeutic Record, Medical Times, New England Medical Gazette, Northwest Medicine, New Albany Medical Journal, American Medicine, Interstate Medical Journal, Medical Council, Medical Standard, Western Medical Times, Medical World, Southern Medical Journal, International Journal of Surgery, Long Island Medical Journal, Texas Medical Journal, Buffalo Medical Journal, etc., in the United States. *The Paris Médicale, The Practitioner* (London), *Practical Medicine* (Delhi), *Indian Medical Gazette* (Calcutta, India), *British Veterinary Journal,* and other foreign journals.

(3) It is now an axiom that a new method of therapy, or a remedy, must be tried out at least two thousand times in order sufficiently to eliminate the possibility of spontaneous cure; effects of suggestion; wrong diagnosis, etc. If this is true, is the author's method properly grounded? The reply here is quickly forthcoming:—As one of the two founders of the Volunteer Hospital in New York City; President of the Medical Board; Operating Surgeon; Consulting Surgeon in the Dispensary; and Genito-Urinary specialist, the writer has had unlimited opportunity of amassing a preponderance of clinical evidence as to the great therapeutic value of Autotherapy in various infections, almost weekly, during the years 1910, 1911, 1912, 1913, and 1914. Without making a systematic count of the letters received, it appears there are many more than two thousand physicians scattered throughout the world who are using Autotherapy successfully, daily, in both private and hospital practice. One physician in Pennsylvania has employed Autotherapy in over six hundred cases, and his results have been such that he has practically discarded the use of vaccines. Many have used it from three to five hundred times. Many have used it when opportunity pre-

sented from one to eight years. All who have used it conscientiously and intelligently, are enthusiastic over its use. It is widely employed in veterinary medical practice; and the Veterinary Medical Association of New York City has twice officially endorsed it in the highest terms. It is not uncommon to find a battery of from two to six filters in active use in veterinary hospitals. The veterinary physicians are unanimous in vouching for the specificity of Autotherapy. It appears from the number of physicians using Autotherapy successfully, and the official recognition it has received, and from the fact that the range of its application extends to the treatment of animals, that this mode of treatment has long passed the experimental stage and has come to the physician's hand to stay.

(4) For a new method of treatment to receive prompt recognition it should be susceptible of the widest possible generalization. If its use must be restricted to a few experts, or a few localities, it cannot pose as a great innovation in medicine. In replying to this the author will state that Autotherapy is eminently suited to wholesale application; it may be used by any qualified medical man in any locality.

(5) Is the method scientifically grounded and in harmony with the laws of biology as they are understood at the present time? The doctrine of Autotherapy is a natural outgrowth of the accepted views of Pasteur, Ehrlich, Behring, Wright, and of all other great immunologists; it comprises nothing that is antagonistic to science and has no foundation in any teachings of the isms of pre-scientific days. It may be used in conjunction with other plans of treatment save for certain exceptions to be enumerated later.

(6) What outside corroboration of the author's claims is there at present aside from case histories? Since in all independent discoveries there are usually one or more discover-

ers,—has any reputable scientist or physician independently come upon Autotherapy? There are numerous replies possible to this query. Several well-known clinicians in different parts of the world have devised systems of Autotherapy at a period several years subsequent to the author's initial studies and reports, which show a remarkable parallelism with the author's teachings. He is naturally in doubt as to whether these men were influenced by his writings directly or indirectly, for it is impossible to believe that his views could have been entirely unknown to them. The writer makes no claim to priority in regard to Autoserotherapy and Autodrainage, in connection with the treatment of serous effusions, and these are only remotely related to Autotherapy. They have but a limited field of application and are not outgrowths of vaccinal therapy, having been in vogue long before the time of Wright. The mechanism of cure in these cases is not yet fully understood.

Not the least support of the author's claims is found in the reinjection of sterile pus and secretions in general for recent wounds that was successfully tried out in France for gas gangrene during the great world war, and in India for general purulent infections; and in the successful use of Autotherapy by missionaries where stern necessity demanded its continual use.

(7) The technic needs further elaboration—there is little in medicine but that does. There is no unanimity now regarding the dose of vaccines and sera. An important consideration is embodied in the words of the committee appointed officially to investigate Autotherapy: "It is not dangerous, or no more dangerous than the use of the vaccines and sera now in daily use among us."

The main motives that have actuated the author's endeavors are: (1) The desire that all physicians may be as successful

in treating their patients as the author is in treating his. (2) The desire for *simplicity*.

The author has been wholly altruistic in giving Autotherapy to physicians; there have been no secret formulas; nor is there any claim for superior skill. There has been no effort to make money out of it in any way. He has answered all inquiries and distributed freely reprints of his articles to physicians, by the thousand.

He is indebted to a number of his confrères and co-workers for able and friendly criticism, time consumed and interest manifested in the development of Autotherapy. These with undimmed interest have upheld his hands and stimulated his enthusiasm in the gradual awakening of autotherapeutic possibilities; and in the unfolding of new lines of medical thought, from their inception.

For these and other courtesies the writer wishes to express his sincere thanks and appreciation to:

Dr. Henry T. Brooks, former pathologist of the New York Post-Graduate Medical College and Hospital, Pathologist St. Mark's Hospital. Dr. George F. Laidlaw, Professor of Diagnosis and the Theory and Practice of Medicine, New York Homoeopathic Medical College and Flower Hospital. Dr. William H. Dieffenbach, Professor of Electro- and Hydro-Therapeutics, New York Medical College and Hospital for Women. He is under obligation to Dr. Edward Preble for reviewing and editing the MSS.

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Syphilis
Snake Bite
Typhoid Fever
Sleeping Sickness
Whooping Cough
Measles, Scarlet Fever and Diphtheria
Eczema
Erysipelas
Riggs Disease

INTRODUCTION

In Dr. Duncan, the man, and autotherapy, the system, the old dream of curing disease with its own poison reaches its highest modern development; for this idea of curing disease with its own poison is age-old, so old that we cannot point to its beginning in the traditions of ancient medicine. The idea is found among many primitive and savage peoples. In the history of medicine, it appears, vanishes and reappears, each time a little finer and better developed than before. As a kind of practice called isopathy, it appeared nearly a century ago and, in our time, is presented anew by the bacteriologist as the most modern development of scientific medicine.

In the last century, the idea appeared with Lux and the isopaths about 1820. Declaring that every contagious *disease* contained in its discharge the remedy for its cure, Lux prepared his remedies by diluting the discharge with water and gave this preparation by the mouth in very minute doses. In those days, the bacterial culture, the vaccine and hypodermic medication were unknown.

It was not from this isopathic source that Dr. Duncan derived his autotherapy but rather from the bacteriological school. The bacteriological school owes nothing to isopathy, but is rooted further back in Jenner's prevention of smallpox by the poison of a similar disease. This prevention of smallpox was a tantalizing light that danced before the eyes of the great Pasteur, with its vision of preventing all other human and animal scourges and beckoned him on and on to the prevention of anthrax and of rabies, incidentally founding the

great science of bacteriology. Pasteur advances a step by using not a similar disease but the virus of the same disease, but he restricts himself to prevention of disease; for, true to its origin in vaccination, the effort of early bacteriology was the prevention of disease rather than its cure. Koch with his tuberculin and Behring with his diphtheria antitoxin carry the idea of prevention forward to the idea of cure. Koch's last tuberculin, the bacillus emulsion, the closest that he dared go to the full, unchanged virus of tuberculosis, marks another step forward, and the preparation of emulsions of killed bacilli was developed by Wright in his vaccine therapy. In my opinion, Dr. Duncan's Autotherapy is the logical next step after Wright. It is the use of the full, unchanged virus of disease, unaltered by heat or chemicals, that Koch indicated as the true remedy, but Koch got no further in his technique than stock emulsions of bacilli killed by mechanical grinding. Like the old isopaths, Koch missed the autogenous principle and the use of *all* the infecting bacteria in mixed infections. Wright added the valuable idea of autogenous origin of the virus and, curiously enough, reached the same conclusion in one respect as had the old isopaths that these remedies must be used in a very minute dose and that there should be a long interval between doses.

By this time, the revival of the ancient idea of curing disease with its own poison was in full swing and sweeping everything before it under the new name of *immunology*. Give a dog a bad name and you can hang him. Conversely, give a dog a new name and you can introduce him into very respectable society. The old jibes against the isopath were forgotten. Everybody was doing it. Learned professors were trying to cure cancer and all sorts of incurable diseases by small doses of their own or their neighbor's poison. From this point, Dr. Duncan started developing his technique of autotherapy.

As already stated, autotherapy is the next logical step after the vaccine of Wright. It is a more nearly perfect form of the autogenous virus on which Wright insisted and it employs the full virus of disease which Koch named as his goal but did not succeed in preparing. It is well known that the best vaccine is that made from the exact strain of bacteria that attack the patient. Similar bacteria taken from another patient may be useless. Manufacturers of stock vaccines attempt to meet this difficulty by preparing the polyvalent vaccine, made from many different sources, hoping that the However, such is the myriad variety of bacteria and the char- strain of bacteria that affect the patient may be among them. acteristics of the strain so altered by the tissue or media in which it grows, that the inclusion in the stock vaccine of the particular strain that affects the patient is a matter of chance and often a long chance.

Autotherapy is an advance on autogenous vaccine therapy because there are four difficulties in applying autogenous vaccine therapy that Dr. Duncan's method easily solves. These difficulties are: the offending bacteria or some of them may fail to grow on the culture medium; the autogenous vaccine must be treated by heat and chemicals, both of which weaken its curative power, as both Koch and Denys pointed out; the preparation of the autogenous vaccine requires the help of a skilled bacteriologist and a laboratory; finally and most important in pneumonia and acute disease, the preparation of an autogenous vaccine requires at least twenty-four hours, and in practice often longer. Moreover, any little carelessness or inattention on the part of the bacteriologist or his helpers may vitiate the product. Thus, from the time that the bacteria are taken from the patient until they are returned to him in the form of an autogenous vaccine, the material is subject to many vicissitudes, none of which are under the control of

the physician himself. On the other hand, autotherapy uses the very bacteria *and all of them* that affect the patient, with all their poisons intact, endogenous and exogenous, in the same proportion in which they are present in the patient; there is no culture of bacteria with its uncertainties of some growing and others not; autotherapy uses them fresh without heating or chemical preservatives; the technique is so simple that any doctor, learned or unlearned in bacteriological methods, can carry it out anywhere, in city or country, with the simple apparatus of a filter and a hypodermic syringe; there need not be the delay of sending cultures to a laboratory and waiting for them to grow; and every step of the process is easily under the eye and control of the attending physician.

I have watched Dr. Duncan's work from the beginning, admired his tireless energy, his patient experiment and investigation. He has met the common lot of reformers, cold neglect, derision, persecution, perhaps, and met them cheerfully, recognizing frankly that this was a phase through which all new work must pass, boldly confident that the honesty of his work must sooner or later win the indifferent and the skeptical. His mind is essentially honest and scientific and if, at times, the enthusiasm of the discoverer colors his vision and if his boundless hope leads to occasional error, which of us can say that we ourselves, standing on the threshold of a great discovery in therapeutics, that we ourselves would reason coldly and resist the rush of enthusiasm that alone carries us upward and onward in our work.

Dr. Duncan is a natural investigator and an ingenious experimenter, which means that he is naturally gifted for scientific research. If any reader of this book should have a friend of wealth and philanthropic spirit who desires to benefit his race and to associate his name with the advance of medical science, I would suggest to him that the founding of an

institution for medical research with a man of Dr. Duncan's energy and talent at the head of it, would produce results of everlasting benefit to the art of medicine and the fame of the founder.

GEORGE FREDERICK LAIDLAW.

NEW YORK,
July 1, 1918.

If Medicine "Were content to mark and work on the foundation Nature lays, It would not lack supply of excellence."

—Dante, Cary's Translation.

CHAPTER I

A BRIEF HISTORY OF AUTOTHERAPY

It is seldom the privilege of a clinician to report a new therapy or method of healing, and it is especially rare that a method so very effective should have been developed upon clinical experience; for clinical experience has ever occupied the minds of the world's great thinkers of all ages.

The roots of Autotherapy extend far into the distant past and reach deep into the texture of our very being. Within recent years the medical world has revived the old medical axiom, "Disease carries with it its own cure," and has fixed attention upon stock and autogeneous vaccines. Alluring as have been the brilliant cures occasionally obtained with these, it is well known that the plans of Nature in curing the sick, do not include immunizing the patient to heterogeneous toxins, nor even to modified partial autogeneous toxic substances; but she has foreordained that the patient should be immunized to *his own unmodified toxin-complex* or toxins and toxic tissue substances elaborated within his own body by the action of the infectious agents upon the body tissues.

Autotherapy proves that a natural cure is brought about by *autoimmunization;* that is, by immunizing the patient to his

own unmodified toxin-complex. This is the fundamental basic principle upon which Autotherapy rests.

A brief history of one of the first cases treated autotherapeutically and the conclusions then made, may not be out of place here. The reader will thus be able to follow, step by step, the sequence of events that ultimately led to the further development of the principle underlying the cures made by its use and its application to all localized infections.

In December, 1909, there was brought into the hospital under my surgical service a patient suffering with a compound fracture of both bones of the left leg. There were also severe bruises and contusions all over his body, caused by being run over by an automobile. Infection set in and progressed in spite of all that could be done. When it became apparent that he could live but a short time, the writer, as a last resort, decided to see what effect the animal method of placing the live infecting microorganisms from the wound directly into the patient's mouth would have upon the course of the infection. Accordingly, a few drops of pus* taken from the wound, were placed in the mouth of the patient. Within two days the purulent discharge entirely disappeared leaving healthy granulations. The appetite improved, the temperature fell to normal, and he became cheerful and improved in every way. His friends then removed him from the hospital and he was lost sight of. This case set the writer thinking and he decided to make further tests upon apparently hopeless cases that came under his surgical service. It was not long before he had an opportunity of making tests upon three severe cases of infection following accidental wounds. These were treated in a similar manner and in each instance the former results were confirmed. *Pus by the mouth acts therapeutically at once, and the results*

* This technic has been much improved since then and the principle has been extended to include all localized infections.

tend to be permanent. Here was the first medical fact, anchored and demonstrated. It appealed to some, however, as being particularly disagreeable, even though its action is described by physicians employing this method in treating themselves to be "like magic."

The odium was intensified perforce by those who preferred to give "pretty pink pills." However, the author believed that the "physician's first duty is to cure his patient," and rather than see them die when there were means at hand that would save them, he persisted in the treatment.

In the effort to make a more elegant autotherapeutic preparation a dilution of pus was filtered through a Berkefeld filter and the efficacy of the filtrate tested both by the mouth and hypodermatically. This also was found to be effective when given in the manner described. Here was a second medical fact or stepping-stone in the development of Autotherapy. With this beginning it was not long before new and startling medical facts quickly developed, until the record of each day's work resembled in some respects the successive editions of the daily press. Medical truths, everlasting and immutable, were uncovered daily. It then dawned upon the writer that all localized infections have a discharge and that the filtrate of this contained the unmodified toxins from all microorganisms present in the focus of infection. I asked myself the question: "Since this treatment is so effective in purulent infections would it be equally efficacious also in other localized infections?" Then came busy days. In quick succession many infections were treated successfully. Acute bronchitis cured within twenty-four hours; pneumonia in the early stages was checked almost instantly; in endometritis, salpingitis, mastoiditis, otitis media, etc., the curative reaction was apparent often within a few hours, and it tended to be permanent. As one after the other of these infections was conquered, it was real-

ized that a great secret of nature had been discovered and demonstrated beyond all shadow of doubt.

As the data accumulated the writer began to give them to the profession. What concern was it of his if those physicians who had at first opposed Autotherapy were forced to reverse their expressed opinion or find themselves alone in opposition to truth? What cared he if surgeons at the hospital, through petty jealousy, used their positions and personal influence to obstruct his work; he persisted in his tests and publications. The profession at large was attracted, and letters of congratulation and encouragement came pouring in from broad-minded physicians all over the world. Words of appreciation came from a Medical Missionary in the far-off Philippine Islands: "I am saving the women from operations following gonorrhea." Surgeons in India enthusiastically took up the work and published in the *Indian Medical Gazette* several able articles upon the subject of Autotherapy, relating prompt cures in otherwise incurable conditions. From the Portland, Oregon, General Hospital, came the words, "We feel that our patients cannot get well nowadays unless we have some autotherapy to offer them." Scarcely a month passed but that several articles referring to remarkable cures made by Autotherapy, appeared in the standard medical periodicals. Papers on the subject of Autotherapy were read in Vienna, Budapest, Marietta, and Cleveland, Ohio; Denver, Chicago, Portland (Oregon); Omaha, Boston, Philadelphia, New York, etc. Veterinary physicians took it up with vigor and endorsed it in the highest terms. After a most rigid official investigation, the Homoeopathic Medical Society of the County of New York unanimously endorsed it. The odium was dispelled, and the opposing forces brushed aside by sober medical opinion.

But in many hospitals where it is used for the first time the conflict begins anew; progression versus "pretty pink pills."

The philosopher is aroused from his dreams, for here are new facts that do not fit his systemic order of things, but rather tangle his philosophy. Those who on general principles oppose anything that is new, found here an opportunity privately to voice their sentiments. It was only occasionally that one became so bold as to oppose it upon the floor of the County Society.

Now, what does this all mean? Why this odium, this enthusiasm, this philosophical entanglement, this opposition without investigation? Even to a superficial observer it means that Autotherapy marks an era in medicine. The handwriting is on the wall that has for each an almost individual meaning. Since it means for you quicker cures, fewer operations, and the use of a less number of drugs, etc., let us remember also that it means for humanity a blessing. And the world moves on. Times have changed and the profession eventually will adjust itself to the new order of things.

"We move from the complex to the simple, and the obvious is the last thing we learn."

—Dr. Elbert Hubbard on Autotherapy.

CHAPTER II

THE BASIC PRINCIPLES OF AUTOTHERAPY

Autotherapy is the physician's method of treating the patient with *unmodified toxic substances* elaborated within the latter's body, by the action of the infectious agent on his body tissues, against which the tissues react in a curative manner.

Autotherapy is a new system of therapeutics. It is simple in its application; far reaching in its effect; and the principle upon which it rests so sound that it might with propriety be called "The Basic Principle of Therapeutics."

The unmodified toxic substances may be employed in the form of the filtrate, obtained by filtering the pathogenic exudate or other body fluids containing the toxic substances elaborated within the patient's body by the action of the infecting agent on the body tissues, through a Duncan Autotherapeutic Apparatus. The bacteria-free filtrate may be injected subcutaneously in all acute localized infectious diseases. In acute infections in no way connected with the alimentary tract or the respiratory system, the crude pathogenic exudate, or the filtrate may be given by the mouth.

A natural or spontaneous cure of an infectious disease is due to the entrance into the blood stream of the unmodified

toxic substances developed within the focus of infection. When this occurs, the power of the blood serum is raised and the activity of the leukocytes stimulated, with the resultant development of specific antibodies. Autotherapy, or auto-immunization, is based on Nature's method of cure; for by Autotherapy the patient is immunized with, and therefore to, the unmodified toxic substances elaborated within his body, by the action of the infectious agent (symptom producing agent) on his body tissues. With Autotherapy, the physician simply immunizes the patient with the same unmodified toxic substances that Nature utilizes when a spontaneous cure occurs. The bacteria-free filtrate contains all of the unmodified toxic substances from all of the microorganisms, both causative and complicating, that are in the locus of infection; in the same proportion and virulence in which they appear in the patient's body, and when this unmodified bacteria-free filtrate is injected subcutaneously into (comparatively) healthy fixed tissues, resistance by these is developed to all of the toxins and toxic tissue substances (the toxin complex) within the locus of infection.

The studies of Buchner * that were extended by Bail, who developed the doctrine of aggressins, show that in every infected area there are causative microorganisms and their toxins; and that there are also toxic tissue substances that correspond to each bacterial toxin, as enzymes, ferments, and toxic results of chemical changes in the protoplasmic molecule, etc., against which the tissues react in a curative manner. They further show the pathogenic activity of the bacterial toxin is intensified when in the presence of its corresponding associated toxic tissue substance; and that it is the toxic tissue substances that cause wound fever in clean wounds. In other

* Hiss and Zinsser, Text-book of Bacteriology. Second edition. Chapter on Aggressins and Anti-aggressins, pp. 292 and 330.

words, healthy tissues react against toxic tissue substances, as well as against bacterial toxin. His work was a laboratory demonstration, and was not employed for therapeutic purposes in the manner suggested by the writer.

The therapeutic value of all vaccines is lowered. The influence of the culture media on bacterial growth, development, biological, and morphological characteristics is beginning to be pretty well understood as new light is thrown on the subject by many investigators.

In France it has long been taught that the media upon which bacteria grow, modify the microorganisms, both in regard to their biological characteristics, as well as their appearance. Vincent shows that it is possible to make certain non-pathogenic microorganisms pathogenic, by simply incubating them on certain culture media; and then vice versa, he may change them back again into a non-pathogenic variety by growing them again on the media upon which they originally grew. This is highly important from a therapeutic point of view, as showing the great modification and transformation and what grave dangers may be developed by the supposedly innocent culture media.

Again, one investigator has shown that certain bacteria may be made fermentative or non-fermentative at will, by simply employing certain culture media. By a similar process, another shows that certain bacteria may be made gas-producing or non-gas-producing at will. One investigator has gone so far as to state it is only when bacteria are grown on culture media prescribed by the text-books, that they behave in the manner the text-books describe.

If there are no conditions under which a microorganism can grow outside of the patient's body that are exactly like those in his body, then it is not difficult to understand why they should not be so grown, if the best therapeutic effect is

to be obtained. There are no accidental or altered toxins from the culture media in my unmodified toxin-complex, nor are the morphological or biological characteristics of the infecting microorganisms altered or changed by the simple process of filtration. For these reasons the autotherapeutic remedy *individualizes the patient as can no other remedy.*

*"It is well known that *the animal organism has the power of developing antibodies to any foreign albuminous substances introduced into it, which neutralize, or destroy the foreign substance.* Furthermore, these antibodies are produced in excess of the amount required to neutralize the stimulus, so that the blood of the animal so treated contains antibodies, some of which can be demonstrated by suitable methods.

"Now bacteria are such foreign albuminous substances, and the phenomena of recovery and acquired immunity are thus explained; and it appears that when a disease does not end in recovery but becomes chronic, the mechanism has broken down"; but if the soluble albuminous part of the bacteria be filtered to exclude the microorganisms (to prevent spread of infection) and the filtrate in the form of unmodified toxic substances be introduced into a part of the body which has not been exhausted, new antibodies will be formed in excess of those required, and these will pass into the blood stream and be available against the infection.

The antitoxins of both diphtheria and tetanus are developed in animals in response to the injected *filtered toxins* of the diphtheria and tetanus bacilli respectively. The antitoxins developed in the animal in response to these filtered toxins, tend to combat or antidote any further injection of toxins and also tend to rout the corresponding microorganism when it is injected into the animal. Developing active immunity in the animal to

*Hiss and Zinsser.

a given microorganism by injecting the filtered toxins of that microorganism in the healthy fixed tissues, is similar to the development of active immunity in the patient to his own toxins and infecting microorganisms by injecting him with the unmodified filtered toxins from his own infecting microorganisms. By this process we *autoimmunize* the patient, i.e., immunize him to his own infecting microorganisms. Again when a patient is injected into comparatively healthy tissues with the unmodified filtered toxins from the focus of infection, leukocytes are attracted to the point of injection in large numbers, and they are stimulated by the development of specific antibodies to perform a very definite function, namely to destroy that microorganism only to whose toxins they respond,—the microorganisms from which the patient suffers. There being none of these microorganisms at the point of injection, the specific leukocytes pass on into the circulation to the focus of infection by tropism, where they tend to combat or rout out that microorganism from the soil of its recent adoption. By no other active *immunizing* agent can that microorganism be attacked so successfully as by the antibodies aroused in the patient's body in response to the unmodified toxin-complex of that particular organism or by the autotherapeutic remedy.

There is no certainty of cure with any heterogeneous toxin or set of toxins; clinical experience for upwards of a century clearly proves this. Administering the stock conglomerate vaccines has been frequently termed shot-gun therapy, and empirical prescribing pure and simple, and is considered by many wholly unscientific.

Sir Almroth E. Wright was the first of modern biological investigators to grasp albeit imperfectly the idea of the great therapeutic value of the autogenous agents and gave to the medical world the autogenous vaccines; but he lowered the

therapeutic value of the unmodified natural toxins which he took from the body which represent the exact remedy (the unmodified toxin-complex developed in the patient's body) through the elaborate process which his autogenous vaccine undergoes during its preparation. It is the consensus of medical opinion that the therapeutic value of autogenous *vaccines* is superior to that of the stock vaccines, yet *the therapeutic effect of all autogenous vaccine is either absent or altered by every step in the process through which it passes in the laboratory* during its preparation, for the following reasons:

1. Autogenous vaccines may not include the causative microorganisms through error in technic.
2. By the action of heat.
3. By the action of chemical preservatives.
4. By expiration of time.
5. Through changes that occur by being grown in foreign culture media.
6. By being grown outside of the body tissues.
7. By being grown under entirely different conditions.
8. Wright's autogenous vaccine does not include the unmodified tissue toxic substances that correspond either to the causative microorganisms or the complicating microorganisms.
9. Extraneous matter may creep in, thus rendering his vaccines worthless.
10. The autogenous vaccine of Wright may not contain the complicating microorganisms of which there are many in severe infections.
11. If there is an attempt made to include the complicating microorganism in the vaccine we are often compelled to make growths on several different media, or make sev-

eral different vaccines and each one is subject to errors above enumerated.

For these and other reasons the therapeutic effect of a vaccine made according to Wright's method, is altered or lowered as compared with the unmodified parent antogenous toxin-complex or the autotherapeutic remedy. Again there are weighty reasons why the physicians may not use Wright's autogenous vaccines:

1. The patient may pass the crisis and die before the vaccine is prepared.
2. Not every patient can afford to have his vaccine used in his behalf.
3. It requires an extensive laboratory with ovens, thermostats, culture media, etc.
4. It requires a skilled bacteriologist, one on whom absolute dependence can be placed; he is not always easy to find.
5. There is no known method of growing some pathogenic microorganisms outside of the human body.
6. We may not be able to identify all of the microorganisms present.

Wright's autogenous vaccine is a near-autogenous, time-consuming, cumbersome agent of altered therapeutic value and often a poor substitute for Nature's remedy (the unmodified toxin-complex), the autotherapeutic remedy; and it may not be available. Vaccine therapy at best is an imperfect imitation of natural therapy. *Autotherapy is the culmination of vaccine therapy.* Autotherapy is induced, natural therapy. Wright's vaccines at times give brilliant results and they often do not. It is not advisable to attempt to prepare such a highly complex, complicated remedy, subject to error, and

at times not obtainable, when the remedy Nature offers is at hand and often may be obtained. The autotherapeutic remedy may often be administered as early as the stock vaccines; it usually requires not more than one or two hours to prepare it, and it often may be given in as many minutes. If Wright's vaccine cures, such cure is due, not to the culture media, chemical preservatives, and heat, etc., but in spite of these. *The Autotherapeutic remedy is the only strictly autogenous therapeutic agent we have in fighting disease. Wherever a patient suffering with an infectious disease may be he has his natural remedy within his body, and it often can be obtained.*

The writer was the first to perfect the principles that underlie the cures made by Autotherapy, and by so doing, has placed it upon a firm, safe, scientific basis.

When a sublethal dose of any foreign protein substance is introduced into healthy tissues, the latter develop, or tend to develop, resistance that is specific or exactly antagonistic to it. If the protein substances are the unmodified toxic waste products of a disease from which the patient suffers, the tissues in developing specific resistance to them develop specific resistance to his disease. No other toxic substance is the exact substance that causes the symptoms from which the patient suffers, so the resistance developed by the reaction against any other substance will not be the exact reaction or resistance to the disease from which the patient suffers. It cannot be the ideal curative agent.

Reaction by the tissues to toxic substances tends to develop resistance in the tissues that is specific or opposite to the toxic action or the true cure for its action. A higher degree of resistance to a toxic substance may be built up by repeated inoculation of non-lethal doses, or repeated toxic action. For example—a person addicted to the use of morphine tends to

build up in his tissues resistance to morphine to such a degree that at times he is able to take, with little or no manifest toxic action of the drug, an amount of morphine sufficient to kill several normal individuals. It is well known that we are not able to demonstrate antibodies to morphine, and in fact we know very little regarding the resistance that is established by the tissues to the repeated injection of any alkaloidal substance. But that the tissues do develop resistance to morphine, by repeated injections of non-fatal doses, is indisputable. In building up this resistance the tissues do not establish a resistance to arsenic, cocain, etc.; on the contrary, they build up resistance directly antagonistic solely to or against morphine. When a sublethal dose of any poisonous substance is injected into comparatively healthy tissues, these tend to develop a resistance that is directly antagonistic to the toxic effect, or the antidote to the action of the poison in question. Let us suppose a patient is suffering with a localized infectious disease, i.e., from toxic substances that have been elaborated within his body by the action of the infecting agent upon his body tissues. Let us assume he is now injected into fixed tissues with a toxin, developed previously in agar, or in a guinea-pig or turtle, or a test-tube, originally from some other patient or source. The healthy fixed tissues adjacent to the point of the needle will then tend to develop resistance to the turtle, guinea-pig, or test-tube toxin, or vaccine respectively as they tend to develop resistance to any toxic substance placed in them. As this is not the toxic substances from which the patient suffers, the resistance developed to these may not be that curative resistance to the unmodified toxins from which the patient suffers. But when the patient is injected in comparatively healthy fixed tissues remote from the seat of infection, with his own unmodified toxin-complex these tissues will develop or tend to develop

specific resistance to the toxic substances from which he suffers. The resistance to no other toxin, or set of toxins, is the exact resistance to his own toxins, for no other toxins can be identical with his own unmodified toxin-complex.

The unmodified autogenous toxin-complex is the ideal therapeutic agent, for with this we tend to combat the toxins from all the microorganisms from which the patient suffers. The autotherapeutic remedy contains the toxins from the causative and complicating microorganisms in the same proportion and virulence that are found in the patient's body. There is no certainty that the toxins from one patient will cure any other patient, and there is less certainty that a toxine or vaccine developed in an animal or test-tube will act therapeutically. In selecting the appropriate curative agent, the individuality of the patient must be taken into consideration. If a foreign toxin does not act therapeutically, it tends to be harmful, and expensive to the patient's vitality. There is no toxin that individualizes the patient as does the unmodified autogenous toxin-complex, or the autotherapeutic remedy.

General Rule for Autotherapy:

When the pathogenic exudate or the end product (or a dilution of the same) of any localized, loosely localized, and possibly non-localized infectious disease is filtered with a Berkfeld filter and the filtrate injected hypodermically, or placed in healthy tissues remote from the infected area, antibodies specifically corresponding to all of the microorganisms in the locus of infection will tend to be developed.

A corollary to this general rule that is often convenient in the application of the autotherapeutic principle is as follows:

In extra-alimentary and extra-pulmonary diseases if the crude pathogenic exudates or end products are placed in the mouth, specific resistance to all of the infecting microorganisms in the locus of infection will tend to be developed. The live

pathogenic causative microorganisms appear to be especially prompt and curative when given in this manner.

Most Infections are Mixed

An advanced or severe infectious disease is usually a mixed infection. There are various microorganisms other than the principal causative one present, acting as complicating factors. The reaction to be most curative must be against all of the toxins that develop symptoms; that is, the toxins of the causative microorganisms and its set of toxic tissue substances, as well as against the action of the complicating bacterial toxins and their respective set of corresponding toxic tissue substances. Complicating microorganisms which are often present are the bacilli of influenza and pseudo-diphtheria, the micrococcus tetragenes, the bacillus pyocyaneus, the staphylococcus and streptococcus, the colon bacillus, unknown microorganisms, and any one or more of these. It is the unmodified bacterial toxins, and the associated toxic tissue substances and not alone the body of the bacteria per se, that cause a curative reaction in the tissues. When the unmodified bacteria-free *toxin-complex* is injected hypodermatically the same thing occurs as when Nature cures, namely, the bactericidal power of the blood serum is raised, activity of the leukocytes is stimulated by the action of the specific antibodies to overcome or combat all of the microorganisms in the locus of infection from which the patient suffers. As more antibodies are developed when the toxins are placed in subcutaneous fixed tissues, than when they are injected into the blood stream, and as by autoimmunizing the patient early, the physician may often steal a march on the slow natural method of autoimmunization; Autotherapy has distinct advantages over even the natural or spontaneous method of cure.

The unmodified toxin-complex is therefore the ideal therapeutic agent for treating a patient suffering with any localized and possibly non-localized infectious disease. Furthermore my unmodified toxin-complex therapy has distinct advantages over any form of vaccine therapy, for the reason that the unmodified toxins are the parent toxins or set of toxins that are in the patient's body, the therapeutic value of which is unchanged or unaltered by the mechanical process of filtration. It must be admitted that we are not always able to identify and it is impossible to duplicate exactly the complicating microorganisms within the locus of infection by employing the vaccines now in use; but it makes little difference as far as the autotherapeutic remedy is concerned what they are, for all of the exact toxins from both the causative and complicating microorganisms, and all of the corresponding toxic tissue substances of each, in the same proportion and virulence in which they appear in the locus of infection are in the filtrate ready for use at the bedside. This is one of the vital points of superiority of Autotherapy over any of the vaccines. With Autotherapy we have none of the enumerated objections that vaccines offer. The autotherapeutic remedy offers practically the same convenience of stock vaccines, and the therapeutic effect is far greater than that of even the so-called autogenous vaccines.

In order that the principles underlying the cures made by Autotherapy may be better understood, it is necessary that we incorporate in this first chapter the results of tests, that in logical order, would come later; hence in referring to appendicitis in this first chapter, it is intended here only as a brief reference to demonstrate results that throw a flood of light on the basic principles of Autotherapy.

In November, 1911, the writer was called to see a patient suffering with acute appendicitis. For some time previously

the patient had been suffering from a catarrhal condition of the respiratory tract, which appeared to be aggravated at this time. Autotherapy of bronchitis, pneumonia and other respiratory infections having previously been so successful in the hands of the writer, he decided to make a test in this case to learn whether the treatment of bronchitis with the filtrate of sputum would have any effect on the infection of the appendix. He knew one of the most certain things in medicine is the ability of Autotherapy to stop a non-tubercular cough quickly, and as the cough was a most troublesome symptom, its relief would cause the patient to have a better chance of resisting the infection in the appendix. Accordingly he gave the patient an injection of the filtrate of sputum. The appendicular pain ceased in eight hours. It began to be clear at this time that the filtrate of sputum had possibly a wide range of usefulness and it was on account of this and similar tests that the writer was led to treat other abdominal infections in a similar manner. He made many tests and published his results in the medical press; in these reports he stated that "There is often an atrium of infection in the respiratory tract from which the causative microorganisms in abdominal infections may frequently be obtained," and he reported cases that had been cured by this elementary simple autotherapeutic treatment. Since then he has treated successfully a number of cases of acute *appendicitis by injecting hypodermatically at intervals, the filtrate of sputum. The amelioration of all symptoms was so prompt and unprecedented as to cause many physicians to be skeptical or incredulous; even the editor of a prominent medical journal earnestly besought the writer to "have a heart" and not ask him to publish what he (the editor) frankly admitted he did not believe, because the reputation of his journal might suffer thereby; for as yet there

*See Appendicitis in index.

had been no scientific explanation as to how it was possible for such profound and deep-seated infections to be cured so promptly and by such simple treatment. (The true meaning the writer desires to convey in using the word "cure" in reporting his cases is that the process of destruction is checked, and the process of repair instituted in its place).

The possibility, and even the probability, of this treatment having a sound scientific basis caused many to assume a "watchful waiting" attitude and to hold their judgment in abeyance; for it has long been held by advanced scholars that the respiratory tract is often the site of entrance into the body and the nidus of many pathogenic microorganisms. If the causative bacteria can be obtained from the mucoglandular excretions of the respiratory tract, there is no logical reason why we should not expect a speedy curative reaction to set in when a filtrate of sputum is injected hypodermatically. This has been done continuously and successfully, as opportunity presented itself from time to time, in the writer's hospital and private practice, as well as in that of other physicians. After some years of doubt, indifference and suspicion on the one hand, and on the other a splendid series of successes that are otherwise inexplicable, this method of treating acute appendicitis, cholecystitis, etc., receives no little support from the original researches of Dr. Edward C. Rosenow.* The writer would urge that these articles be read in connection with Autotherapy in these conditions. Had Dr. Rosenow begun his researches with the object in view of proving many postulates of Autotherapy and of verifying the cures previously

*1. Edward C. Rosenow: Elective Localization of Streptococci. *Journal of the American Medical Association,* November 13, 1915. 2. Edward C. Rosenow: An Epidemic of Appendicitis, and Parotitis Probably Due to Streptococci Contained in Dairy Products. *The Journal of Infectious Diseases,* April, 1916.

made by the writer, it would have been difficult for him to have proceeded otherwise. One of Dr. Rosenow's cases is of particular interest from an autotherapeutic point of view.

"M., a cadet who previously developed symptoms of acute appendicitis on February 21 was operated on the following day and the acutely inflamed and edematous appendix removed. The lumen of this appendix was found to be very narrow and filled with bloody pus. There was no fecal concretion or other foreign body, and there were no constricting bands. The peritoneal coat was edematous and opaque and over the portion near the distal end was a thin fibrinous exudate. The mucous membrane was edematous and hemorrhagic throughout the larger portion, this condition extending well into the submucosa and the peritoneal coat. Sections showed an enormous number of streptococci within the lumen and within the infiltrated membrane. Scattered diplococci were found also in the adjacent lymph follicles and in the peritoneal coat. In the lumen there were also a few gram-negative bacilli. *Cultures from a swab of the tonsils* sent me by Dr. Reed ten days after the operation showed a preponderating number of green-producing streptococci, a few colonies of hemolyzing streptococci, and a large number of colonies of micrococcus catarrhalis. The broth culture revealed a pure growth of a short-chained streptococcus. Two rabbits were injected with the latter culture, one of which showed hyperemia and hemorrhage in the mucous membrane and peritoneal coat of the appendix. It also showed a few hemorrhages in the tricuspid valve. Cultures from blood on bloodagar plates disclosed pure growths of green-producing streptococci. The emulsion of one of the areas of hemorrhage in the peritoneal coat of the appendix showed many green colonies of streptococci. On June 4, *cultures from the tonsils* were again made. The tonsils were larger than normal but not badly infected. The culture in ascites-dextrin broth was injected into one rabbit; it developed a number of small hemorrhages in the appendix with hyperemia and edema, as well as a marked hemorrhagic edema of the parotid and associated lymph glands."

"There were also a number of hemorrhages in the muscles,

particularly in the adductor muscles of the thigh. The localization in the parotid is of interest especially since this individual was the janitor in the hospital in which the patients with parotitis were treated and hence may be considered a possible carrier."

The last sentence is full of meaning from an autotherapeutic point of view. It is probable that all operative appendicitis cases are carriers for a greater or less period of time (mark this) after the appendix has been removed. There is a probability almost amounting to a certainty that this patient could have been cured quickly by means of Autotherapy without an operation, if other apparently similar cases in which the pain ceased within from ten to twenty-four hours, while the temperature became normal in twenty-four hours with no recurrence for from one to three years, are any criterion. (See case reports on Appendicitis.)

Autotherapy in appendicitis is no longer an experiment, for it has been employed successfully for the past seven years in daily practice and has received the unqualified endorsement of many leading physicians in all parts of the world. By many it is claimed to be, not only a successful method, but *the only method of treatment* that will cure many profoundly septic respiratory and abdominal infections.

Dr. Rosenow demonstrated by experiment on animals, that isolated streptococcus culture from appendicular lesions produce appendicitis in sixty-eight per cent. of animals injected intravenously. After the first to the sixth passage, forty-five per cent. of the animals developed appendicitis. When a strain is cultured for a week or more its elective affinity or tropism is markedly altered; only fifteen per cent. of the animals injected develop lesions of the appendix. (See Table.)

Rosenow also shows that a certain percentage of animals injected with *culture made from tonsils* of individuals that

had appendicitis developed lesions in the appendix. He states that "*filtrates of streptococcal culture* from various diseases were injected intravenously, in some instances producing lesions in the organ from which the strains were isolated; the lesions, however, were not due to the living microorganisms because the broth which was inoculated and incubated with the tissues failed to produce any lesions. The results, while inconclusive, may be said to indicate that streptococci produce substances which cause injury specifically in the tissues from which the strains were isolated."

Dr. Rosenow has thus demonstrated by experiment on animals why it is possible to cure patients suffering with appendicitis, cholecystitis, etc., by the writer's method of injecting the filtrate of mucus from the respiratory tract.

If any greater proof were required to show that the unmodified toxins of the causative microorganisms in these abdominal infections are often found in the sputum and that the injected filtrate acts therapeutically at once, it is supplied by Dr. Rosenow's further tests and observations.

" Since different bacteria may acquire simultaneously affinity for the same tissue, diseases which resemble each other more or less closely, such as the different forms of arthritis, may be due to bacteria of different species each having elective affinity for the particular structure involved.

" The results detailed in this and previous papers seem to bring the necessary experimental proof that chronic foci of infection play a most important rôle in causing systemic disease, a fact which has been observed and frequently commented on by different observers."

The writer has not attempted to review Dr. Rosenow's articles completely, as time and space forbid, but it will repay any one interested in Autotherapy to study them carefully, for the great curative effect of Autotherapy in many abdominal

infections is proved by him beyond any shadow of doubt. The object here is principally to focus attention on a few facts, developed by Dr. Rosenow's researches along autotherapeutic lines, that throw a flood of light on the writer's method of treating appendicitis, cholecystitis, peritonitis, etc., and lay at rest forever the criticism of Autotherapy that these cures could not be made because there was no precedent for them.

Source of Streptococcus	Strains (220)	Animals Injected	Percentage of animals showing lesions: Appendix	Stomach	Duodenum	Gall Bladder	Endocardium	Skin
Appendicitis								
When isolated	14	68	68	6	1	1	21	0
Later	8	26	15	19	15	4	19	0
After animal passage	7	22	45	45	30	40	20	0
Ulcer of stomach in man								
When isolated	18	103	2	60	60	20	12	0
Later	8	22	5	5	0	5	14	0
After animal passage	7	39	0	23	33	30	5	0
Cholecystitis								
Isolated	12	41	0	29	15	80	10	2
Later	5	14	14	28	14	7	14	0
After animal passage	4	16	0	31	13	56	19	0
Endocarditis								
When isolated	8	44	0	7	0	5	84	2
Erythema								
When isolated	6	20	0	10	0	0	20	90
Later	3	9	0	22	0	11	11	22
After animal passage	6	14	0	21	0	50	14	43
"Lab" strains								
Before and after animal passage	5	100	2	18	5	2	49	2

Abbreviated table from Rosenow.* 1. The word "isolated" in the table indicates from one to six cultures, or one passage through an animal and the first culture thereafter. "Later" indicates that the strains were cultured for a week or longer. "After animal passage" indicates usually from the first to the sixth animal passage.

*Reference to Rosenow—See (1) p. 19.

Since the culture media so markedly affects the elective affinity or tropism of infecting microorganisms, it is altogether probable that had Rosenow injected the animals with the microorganisms directly from the appendix without cultivation, the percentage of appendicitides developed in the animals would have been even higher, or nearer 100 per cent.

In Autotherapy there is no cultivation on artificial media of the infective microorganisms, for by so doing they lose their characteristic elective affinity or tropism for the tissues on which they grew. In Autotherapy the physician employs the unmodified toxic substances elaborated within the patient's body by the action of the infectious agent on the body tissues, against which the tissues react in a curative manner. Dr. Rosenow states in a subsequent paper: "Since the streptococci lose their characteristic affinity after cultivation on artificial media, after animal passage, and apparently in the focus of infection after recovery, the conclusion seems warranted that the atrium of infection is not only the place of entrance, but the place where the streptococci by growth in symbiosis with other bacteria and under varying grades of oxygen-pressure, may acquire the peculiar properties necessary to infect in this particular manner."

In an article entitled "Autoimmunization in Respiratory Infection," that appeared in the *Medical Record,* September 5, 1914, the writer reported two cases of appendicitis, and two of cholecystitis cured by injecting hypodermatically the filtrate of sputum. There he also stated: "If the physician treats catarrhal conditions of the respiratory tract autotherapeutically, he will often be surprised to discover that he has cured many conditions supposed to be foreign to the lungs." This holds true in a wide range of diseases.

In the light of Dr. Rosenow's experiments the truth of the above assertion is obvious. It would appear that the injected

filtrate of sputum of a patient suffering with appendicitis from the unaltered characteristic elective affinity of the toxic substances it contains, acts in a therapeutic manner directly on the appendix; hence the cures the writer reported are substantiated in a manner that removes all doubt. As rational reasonable human beings we must accept the autotherapeutic cures of appendicitis, cholecystitis, peritonitis, etc., for they have all the force of an experiment. It is comparatively easy also to accept the statement that we are able to forestall many mastoid and sinus operations by injecting the filtrate of sputum, and likewise many major operations on the female pelvis by injecting the filtrate of the discharge from the cervix; for in these conditions we know the unmodified causative microorganisms are in the discharge and the immunizing toxins in the filtrate.

There are other tests by Rosenow that are instructive in studying Autotherapy, for the reason that they throw a flood of light on much that was heretofore obscure relative to the promptness of the cures. In reviewing his actual tests on animals, the reader should keep in mind the fact that the discovery of the autotherapeutic principle of cure preceded the investigation of Rosenow by several years. These tests serve to confirm the writer's autotherapeutic cures. There is much, however, in Autotherapy that has yet to be explained. It is difficult to understand by what course of reasoning any one finds it necessary to grow infecting microorganisms on culture media in order to obtain the best therapeutic effect, when they may be obtained with their tropisms or elective affinity unaltered directly from the pathogenic exudate from the patient. Rosenow states further "Microorganisms have tropism or elective affinity for the tissue upon which they grow." Again his conclusions point to the fact that the culture media alters their tropism, in proportion to the number of cultures made.

Thus we see by the table (p. 23) the following infections in man of *appendicitis, ulcer of the stomach, cholecystitis, and erythema nodosum,* where from one to six cultures are made, from sixty to ninety per cent. of the animals injected develop infections that correspond respectively to the tissues upon which the microorganisms were originally grown. When a strain is cultivated for a week or longer the number of animals contracting the disease that correspond respectively to the tissues on which the microorganisms grew, falls to fifteen to twenty-two per cent. If we accept these findings of Rosenow's, and there appears to be no reason to doubt them, we are forced to the conclusion that microorganisms *should not be grown outside of the patient's body* if the best therapeutic results are to be obtained. There is no therapeutic reason why they should be so grown.

The writer would emphasize that the speed, certainty, and comparative freedom from danger with which nearly all acute infections may be cured by Autotherapy, make it imperative on the part of the physician to treat the patient (and not the disease) autotherapeutically according to his needs, if he would cure him in the quickest and best manner possible and prevent or forestall the sequel in the shape of a chronic condition or another infection, or the possibility of the microorganisms or their toxins migrating to distant parts of the body with concomitant distress, increased temperature and remote sequelae in the shape of indurations, fibrous changes, adhesions, pain, etc. The question arises, since acute infections treated early are usually cured quickly by means of Autotherapy, may not many of the long category of chronic conditions resulting from infections or contagions be forestalled? The question is one of great magnitude and importance, and the affirmative answer we are bound to give, opens up therapeutic possibilities for Autotherapy that are endless.

Autotherapy is no therapeutic fad or passing fancy, to be discarded in a little while for some other whim, method or mode of therapy. The patient's own unmodified toxin-complex should cure his acute localized infection in a thousand years from now as well as it does today. A natural spontaneous cure is one of the few things that has endured since the earliest period of human existence, and an induced spontaneous cure will endure for all time, for the principal underlying cures made by its use are the same, everlasting and immutable. For this reason Autotherapy has come to the physician's hand to stay, and the physician who does not use it in treating patients with localized infections is not employing one of the greatest weapons we have at our command in fighting disease. We are gradually moving away from complex medication, back to obvious natural therapy.

Natural methods may appear crude and simple. The fault is not with Nature, the fault lies in the fact that we have moved so far away from her that we fail to appreciate or perceive the truths she holds out to us in all of their bearings. This accounts for the endless speculations, controversies, and uncertainty that have characterized the study of medicine through past ages. In spite of our vaunted knowledge it is perhaps humiliating to be told that the patient brings his natural remedy with him in his body to the physician, and it often can be obtained. Autotherapy does not treat the disease empirically in the sense which we ordinarily understand by the word; it does not give the patient a little symptomatic treatment, or treat the disease locally with modern medicines with high-sounding names. Autotherapy treats "the patient" with the remedy Nature designed and foreordained to fit his condition exactly. The wonderful therapeutic value of her preparations cannot be denied. Old Dame Nature is the pharmacist supreme.

Antiseptics, oils, and mucous membrane stimulants are at times useful, after the bactericidal elements of the blood have destroyed the infecting microorganisms, to assist in the repair of the relaxed condition of the local tissues due to the inflammatory condition accompanying the infection, and they at times do cure. Autotherapy, on the other hand, strikes at and tends to remove the cause of the disease, and seldom requires supportive treatment of this nature, except for the physician to have the appearance of "doing something." Local treatment of known therapeutic value is not contraindicated, as far as the writer knows, except that the local medication should not contaminate the discharge from which the toxins are prepared. The writer believes that many antiseptics as such or preservatives will modify to some extent the delicate enzymes, ferments, etc., that correspond to each bacterial toxin. *The reaction to the unmodified toxins that come out of a patient's body is the exact specific reaction to the same toxins remaining in the body.*

The attitude of the true physician, *"Investigate every method of treatment that may accomplish good with an open mind and hold fast to what is found to possess true merit."*

CHAPTER III

THE LIMITATIONS OF AUTOTHERAPY

That there are limitations to every therapeutic method or system of healing, is evident. But it is difficult to define or set limits to the possibilities of Nature's efforts in arresting a given process of destruction and instituting in its place the process of repair.

"Nature tends to restore the tissues," is a medical axiom or truism that has been accepted since Hippocrates gave his "Expectant Treatment," or leaving the non-malignant condition to the efforts of Nature at restoration.

While it is true we understand better than formerly the efforts Nature puts forth to overcome the invasion of pathogenic microorganisms, namely, raising the bactericidal power of the blood serum, and increasing the activity of the leukocytes to overcome the invaders, still our knowledge in the aggregate might be considered small indeed, compared with the truths hidden behind the veil of our comprehension. A complete understanding of the means that Nature employs in restoring the tissues necessitates a complete knowledge of all possible changes that can transpire in complex organic chemistry and in biology. It will probably be a long time before we

possess such profound knowledge, but in the meantime we must content ourselves with observing results brought about by Nature and imitating her methods in accomplishing these as closely as possible, disregarding perhaps for the time being a scientific explanation of the natural phenomena she employs in accomplishing her ends. In Autotherapy the physician employs Nature's weapons in accelerating the natural process of repair and for this reason it is difficult to define accurately the limits of cure that bound Autotherapy. However, certain known facts are established, the knowledge of which is essential if the maximum assistance be rendered the tissues in their efforts to arrest the process of destruction and to institute in its place the process of repair. No one can object to the use of Autotherapy where it is known it will do good.

Alexander Fleming, M.D., in an article under the title of "Vaccine Therapy" that appeared in *The Practitioner*, of March, 1914, states: "We have known that an immunizing response can be obtained by the use of widely divergent quantities of vaccine and that clinically good results can be obtained by the use of small doses, or by doses more than a thousand times as large. Sir Almroth and his colleagues in attempting to explain the question of dosage, put forward the following theories:

1. "When a dose of vaccine is a very small one, it is anchored at the site of inoculation; thus only protective substances reach the systemic circulation."
2. "When the dose of vaccine is greater than can be anchored at the seat of inoculation, then part of it passes into the circulation, and reaches the general tissues giving rise to systemic immunizing response. Here, then, we have a toxin entering the blood stream and later protective substances elaborated by the action of this toxin in the tissues of the body. This is shown serologically by the occurrence of a negative phase, immediately after the

injection of large doses of vaccine and the subsequent positive phase denoting the immunizing response. The dose depends on, not the actual quantity of vaccine incorporated, but the quantity of the antigen which will be set free from it in the organism of the patient. The condition of 'tolerance' which can be obtained by frequent large doses of vaccine may be a condition not of immunization but of bacterioclastic power similar to the conditions of patients with severe tuberculosis who when the illness is nearing a fatal end fail to give the Von Pirquet Reaction."

Since it is claimed by Wright and his confrères that there is a limit to the reaction of fixed cells to any bacterial toxin, we should never inject the toxin-complex in the same place twice. There are also limits to the systemic reaction a given patient may develop; hence after a severe systemic reaction, the interval between doses should be materially lengthened. We can learn these limits only by studying the individual, and at times the idiosyncrasy of the patient, the power of recuperation possessed by him at the time of the injection, whether anaphylaxis is present or not, whether the condition is acute or chronic and the degree of virulence of the microorganisms, etc. In the presence of anaphylaxis an exceedingly small dose, say one billionth of a minim or smaller, is indicated.

The usefulness of Autotherapy is also limited in those patients from whom apparently we are not able to obtain the toxic substances from which he suffers. It is altogether probable that this latter limit will be considerably narrowed as we learn more of the complex biological changes that are possible to take place within the living cells. We know that at the present time, we are able to utilize the blood and blister serum, spinal fluid, etc., in a wide range of infections. From what has preceded, we see there are limits to the reactive response that any patient can develop to a given vaccine or

toxin; and for this reason care should be exercised that we do not overstep these limits. This may be done first by giving a comparatively small dose and increasing or decreasing it according to the needs of the patient, and lengthening the interval between doses when either the cutaneous or systemic reactions are pronounced. It is difficult to generalize in this connection, but in order that the reader may approach the subject from a clinical point of view intelligently, it is altogether proper that attempts be made at general instruction. This is given with the understanding that in case of doubt, we should be inclined to err on the safe side, namely in giving the smaller dose, then if improvement does not follow withholding the remedy till we are sure the patient is not suffering from a negative phase. A slight rigor or chill indicates pronounced systemic reaction. When this occurs we ordinarily do not give a succeeding dose as soon as we would had there been no rigor or chill. As a general rule, in the early stages of an acute infectious disease the patient will stand a larger dose better than later when the system is taxed with the poison of the disease; for example, the third or fourth day of pneumonia, when the patient is overpowered with toxins. Chronic infections usually require smaller doses than acute infections. It appears to be unnecessary to state that the very young, the very old, and patients with low vitality should receive smaller doses, but in order that there be no misunderstanding, it is necessary to make many statements that are apparently obvious, and some that are of minor importance.

The limitations of Autotherapy are welcomed first,—By those who are not in sympathy with anything that is new. Second,—By the progressive element of the profession who welcome anything that will do good. Third,—As a guide to the general practitioner in the treatment of his patients. Ad-

verse criticisms of Autotherapy usually come to us from the "old rut thinkers," and those with whose specialty it interferes. A few of these criticisms are given:

1. Autotherapy should be excluded till it receives further elaboration.
2. Autotherapy is crude and unscientific. There is no standard dose.
3. There is no telling when Autotherapy cures, for many of the diseases it is claimed to cure quickly are self-limited.
4. It is too difficult and dangerous for the general practitioner to prepare the remedy; it should be prepared only by an expert.
5. It interferes with the specialists.
6. It is useful only in purulent infections, as boils, abscesses, infected wounds.
7. Pus by the mouth is ineffective because its action is interfered with by the gastric juices.
8. Autotherapy is not as convenient as vaccine therapy.
9. Autotherapy is limited to diseases which are referable to bacterial infection.

1. *Autotherapy should be excluded till it receives further elaboration.*

A natural or spontaneous cure of an infection is not new, but this method of assisting the tissues or hurrying, or arming them to perform a spontaneous cure at will is new. Prof. Geo. F. Laidlaw says, "Autotherapy is but one step forward in the regular developments of biological therapeutics."

Dr. James Law, ex-Dean and Emeritus Professor of The New York State Veterinary Medical College, at Cornell University, says, in reference to Autotherapy, "Who has always been the Great Healer? Is it not the Great Creator? Before

medicine had a name or a substantial reality sick and wounded men and beasts largely recovered from their morbid conditions by what would be called the defensive actions of Nature. No thinking man can close his eyes to the obvious facts that every recovery is a triumph of the living being over the malign conditions and causes that beset it. Had the evil influence continued with unabated force in a system that could get up no greater resistance, a fatal outcome would have been inevitable. The repair of the wounded tissues has been as a rule expected and looked for. The counterpart, in the repair of deeper and more obscure tissue, of deranged function in cells, metabolic processes, etc., was equally to be looked for through the corrective action of Nature's loom."

We have arrived only within recent years at the point where we endeavor to imitate natural cures with vaccines.

The criticism that *Autotherapy needs further elaboration* is justifiable if we admit that any branch of biological therapeutics is complete. The principle needs further elaboration—there are few great principles, in biology or immunity, that do not. We know comparatively so little of the physiological workings of the human body in its relation to the defensive action of the tissues that some one has said, "The physician is a man who knows little, who puts drugs of which he knows less, into bodies of which he knows nothing." But there is no reason why we should not apply Autotherapy in treating the sick where it has been abundantly proved it will do good.

2. *Autotherapy is crude and unscientific. There is no standard dose.*

The criticism of Autotherapy as unscientific, and of the dose as inaccurate has been advanced so ingenuously and constantly that we have decided to answer this criticism more fully. If Nature may appear crude and unscientific in her efforts at restoration, the fault lies not with Nature's methods, but in

the fact that we have moved so far away from her that we fail to perceive and appreciate the truths she holds out to us, in all of their bearings; this accounts for the endless speculations, controversies, and uncertainties that have characterized the study of medicine throughout past ages. *Nature often cures where so-called science utterly fails.* Hippocrates recognized NATURE as the Great Healer.

What is considered scientific today may not be scientific tomorrow, as new light is thrown on the subject by many investigators. So-called scientific medicine has ever teemed with prophecies unfulfilled and too often has led us into the mire. Many therapeutic agents derived from so-called scientific deductions are annually discarded after a brief period of clinical usage—not alone for the reason that they are inefficacious but for the far more weighty reason that clinical tests have proved them to be positively dangerous to life. When we get away from the idea of standardizing the dose we will be in a better position to cure our patients, for there is no standard dose any more than there is a standard sick individual.

With Autotherapy we treat the patient according to his needs and not the disease. The criticism of Autotherapy—that many diseases which it cures are self-limited and that the patient would probably have recovered without medication—is answered, by the fact that Autotherapy often cures many chronic conditions, even those of many years' standing, quickly. In this connection I would suggest that mastoiditis is an infection that not infrequently leads to double operation. A number of mastoid infections that had been operated on one side in which the symptoms indicated that the other side also was involved, in which the operation was forestalled by Autotherapy, robs this criticism of force.

Curing bronchitis of years' standing within a few weeks by means of Autotherapy must be counted as a triumph, and

makes this criticism ridiculous; and when the criticism is opened by one with whose specialty it interferes, it is obvious the critic is speaking from personal grounds and not with a view of establishing a therapeutic truth.

Meltzer, of the Rockefeller Institute, says, in *The Journal of the American Medical Association:* "Men trained exclusively in the laboratory do not seem to see that a medical fact observed critically by a capable physician deserves as much credence and consideration as a fact developed by laboratory methods."

Lack of scientific explanation of the phenomenon of cure, does not detract from its established therapeutic value, and should not deter us from using it. An unexplained truth may open up a broad field for scientific investigations. A remarkable feature of this criticism is that it usually comes from men who claim little scientific knowledge of immunity.

Dr. J. J. Sellwood, of the Sellwood General Hospital, speaks forcibly to the point when he states, in *The Medical Sentinel,* of June, 1914, in an article under the title of "Autotherapy," "Two years of experience with a multitude of cases and absolutely no bad results, but on the contrary good results, certainly proves something, and should at least make those of us who are not blinded by personal prejudice, ignorance, and gross asininity see the light of knowledge clearly."

Adverse criticism of Autotherapy is usually in direct proportion to the ignorance or prejudice of the critic. Ignorance of a new therapeutic measure may be excused in the practicing physician who has often little or no time or opportunity for keeping informed regarding current medical literature, but when a physician becomes so bold as to flaunt his ignorance, consideration for his feelings should no longer deter us from pointing out the evils, the dangers, the positive menace to human life to which his teachings are liable to lead.

In the early days of the development of Autotherapy many physicians were drawn into the unenviable position of criticising it unjustly. How such an one is now pitied—by himself—when he has at last seen the light!

4. *It is too difficult and dangerous for the general practitioner to prepare the autotherapeutic remedy. It should be prepared only by an expert.*

Facts, however, are stubborn things, and they have given this criticism, the *coup de main;* for it is being used successfully by thousands of practicing physicians with little biological training, and has been for several years, wthout any evidence of injury. The principles that underlie the cures made by Autotherapy agree with practically all we know of modern biological therapeutics.

In making a plain statement of facts, the essayist may be suspected of being carried away with enthusiasm and we may not agree with the deductions made, but to submit an established medical fact to argument is as futile as the scriptural oxen kicking against the pricks. Facts are not debatable.

We have actually been told that Autotherapy is too difficult and dangerous for the practitioner to employ. What? Too difficult and dangerous to lick a wound? Then the dog's life is in constant danger when he licks and cures his injured foot. We wonder how our critic could improve on this simple obvious technic, and why all dogs are not long since dead.

5. *It interferes with the specialist.*

Was it Macaulay who said, "If Newton's Law of Gravity conflicted with vested interests it would not be recognized today?"

When Autotherapy aborts a thousand dollar operation of course there are objections and criticisms, certainly! it is then that we hear the criticism that Autotherapy is unscientific, difficult and dangerous.

6. *It is only useful in purulent infections as boils, abscesses, infected wounds, etc.*

This is the criticism of those who have not tested it properly.

7. *Pus by the mouth is ineffective because its action is interfered with by the gastric juices.*

We are not concerned regarding this, or in fact any other criticism, of Autotherapy; this one in particular is too easily met.

Dr. Laidlaw says, of the critics of Autotherapy, "A strong man's enemies do him more good than his friends. His friends flatter him and never tell him the truth. His enemies show him his weak points and force him to work harder than ever to improve his work so that it will stand criticism."

Certain it is as far as criticism is based on truth time and clinical experience will demonstrate its worth, but when an obvious self-evident truth is assailed, namely: that pus by the mouth is ineffective; we are either forced to the conclusion that the testimony of many hundreds of physicians is worthless, or that the critic is prejudiced, and for want of better excuse in opposing Autotherapy has hit upon this very poor one. The entire subject will be reviewed in another connection.

Passing on from the seventh criticism, which has been mainly covered in the preceding paragraphs, we come to the eighth.

8. *Autotherapy is not as convenient as vaccine therapy.*

With the man who shuts his eyes, ears, and understanding, who will not comprehend that the simple process of filtering the pathogenic exudate is about as simple a process as sterilizing the hands for an operation, we have no contention. We will say even less of the yet simpler and most convenient process of giving the crude discharge by the mouth. Further answer to this criticism appears unnecessary.

To the laboratory worker with his necessary elaborate apparatus, the convenience Autotherapy offers is obvious. The superior advantage that Autotherapy offers over stock vaccine and the speed with which it may often be administered (from one minute to two hours) inclines us to suspect this criticism had its origin in a brilliant conception of some commercial manufacturer of vaccines.

9. *Autotherapy is limited to diseases which are referable to bacterial infection.*

The diseases that are not referable to bacterial infection, either directly or indirectly, are rapidly diminishing as new light is thrown on the subject by many investigators. For one by one the number of diseases not known to be of bacterial origin are diminishing. Many physicians are hardly yet familiar with the fact that common colds, jaundice, rheumatism, are due to microbic invasion.

Within the last decade the spirocheta pallida has been discovered; and the hunt is still on for the evanescent poliomyelitis microbe. Till within recent years we were apt to underrate the important rôle that bacteria play. At the present time we are liable to attribute much weight, at times too much weight, to the opinion of the bacteriologist, who in many instances has not seen the patient, and we consequently are too often subjected to the mortification of failure by giving the dose and repetition of the dose of vaccine he recommends.

At the present time wonders are being claimed for the use of many procedures which a few years ago would have seemed incredible, to say nothing of the various body organs which are being prescribed, not only in conditions wherein they might seem indicated but in other conditions in which there is no rationale for their action.

One could hardly look upon dried placenta as an aesthetic remedy, yet there has been no outcry against it on this score.

If an extract of prostate or testicle has specific or other therapeutic efficacy, one could hardly strain at giving some of the substances recommended in Autotherapy, on the score of their not being aesthetic, or of their inertness.

How many readers realize the source of many remedies in daily use? *Moschus* is the smegma from the musk-ox, and is given in strong or weak doses according to the needs of the patient;—and *mephitis putorius* the odoriferous extract of the anal glands of the skunk; *sepsin,* these and many other remedies of a similar nature are commonly given when indicated.

Taking exception to the autotherapeutic method of placing back into the patient's body that which came out of it, appears to be like,—"straining at a gnat and swallowing a camel."

Would not Bramwell, who caused a youth to grow some inches by giving him thyroid (thereby making it possible for him to be admitted for military service), have been called a medical adventurer in the past? Every time we think of cases like these we feel sorry for the poor public for among such marvels how can they tell what to believe?

The Magna Charta of the Healing Art—
The Remedy Comes From Within.

CHAPTER IV

AUTOIMMUNIZATION

The human body is a self-regulating mechanism, and automatically restores normal equilibrium; restoring equilibrium is the all-important factor in the treatment of disease.

Self-preservation is the "First Law of Nature"; so in considering Autotherapy or self-therapy we are in reality considering in a new light the "First Law of Nature."

Autotherapy agrees with practically all that is known of modern biological therapeutics, but was developed by clinical experience. The value of clinical experience was long ago recognized by Hippocrates, who taught that "Observation rather than speculation is the true instrument of progress."

In Autotherapy we take advantage of the slow natural process of autoimmunization and immunize the patient quickly. We put out the match as it were before the conflagration is well started.

This chapter deals briefly with several methods of autoimmunization, that have not always been recognized as such. It is the object of this chapter to appeal to reason and thus to awaken professional interest in this natural method of healing the tissues, that is now placed within the hands of the physician. The main thought that is desired to emphasize

forcibly is, *The purification of the body comes from within; that Nature is the purifier or the true healer of the body tissues.*

Vegetable and mineral drug antagonism to infection has been weighed in the balance and found lacking.

Many have realized the shortcomings of medicine, and during the last decade have openly advocated therapeutic nihilism, but therapeutic nihilism must give way to the Magna Charta of the healing art, namely, "*The purification of the body comes from within,*" that Nature is the true healer, the physician her servant and that we at best assist the tissues in their efforts at restoration. Care should be exercised that we do not contravene or block Nature in her efforts at restoring the tissues, by meddling, or the injudicious use of drugs.

Autotherapy proves *every patient suffering with a localized infection, carries the remedy for his condition within the locus of his infection.* The application is so simple we wonder it was not discovered long ago. The Autotherapeutic remedy is Nature's remedy, uncontaminated and undefiled with complexities of laboratory technic, manufactured in Nature's laboratory—the body tissues of the patient.

Autoimmunization by Hyperemia, Hot Fomentations, etc.

We are all autotherapeutists, humiliating as it may be to realize it. Sir Clive Riviers, M.D., says in his scholarly thesis, under the title of "The Rôle of Auto-inoculation in Medicine: A Plea for Its Rational Extension," that appeared in the February, 1911, *Proceedings of the Royal Society of Medicine.* "It is this natural auto-inoculation that is exploited with success by the time-honored process of hot fomentations." "Nature was the earliest therapeutist, by arousing the natural defensive forces from within. In assisting Nature by induced

hyperemia we have several natural processes to study and imitate. First, irrigation of the infected area by plasma and leukocytes, and this of itself may be enough to cure a mild infection. Second, auto-inoculation, or washing of the bacterial products into the blood stream, to stimulate in the tissues the formation of new antibodies, specific to the invading microorganisms. By induced hyperemia as in hot fomentations, etc., not only is irrigation assisted, but such irrigation of plasma, itself of value, necessarily helped to an increase of that auto-inoculation on which the improved resistance of the body depends. Such an effect is obvious as far as hyperemia is concerned. In the application of hyperemia the influence of the physician has been solely in the direction of irresponsible irrigation, but Nature's armamentarium contains in addition the weapon of auto-inoculation, a weapon to be brought into use where irrigation with plasma alone has failed. The physician has neglected this weapon; he has been an irrigator pure and simple. To be sure, auto-inoculation has necessarily occurred as a result of his irrigation, but has he directed it? has he applied his hot fomentations at such intervals that time may be allowed between for the formation of antibodies? Has he calculated at what intervals he should auto-inoculate his cases to maintain most successfully their toxic immunity? As a matter of fact he has done none of these things."

"*Auto-inoculation is open to one disadvantage of more or less serious nature—namely, the fact that we must auto-inoculate into the blood stream instead of into the tissues.* It is, of course, well known that toxin immunity (exemplified in the preparation of antitoxins) is better achieved by subcutaneous than by intravenous injection, and the evidence generally seems to show that the most active formation of bacterial antibodies takes place in these tissues. Bacterial products

must necessarily be greatly diluted in the blood-stream, and when they reach the tissues by this path are not so fitted to call forth a response as they would be if injected subcutaneously. Nevertheless this apparent disadvantage accompanies all natural methods of cure and by auto-inoculation we are but imitating Nature's mechanism. It may be that the tissues conjoining the diseased focus play a large part in this 'antibody' formation, but at any rate we need hardly fear to follow Nature's lead."

"To auto-inoculate we must irrigate powerfully, and that at suitable intervals. Since we do not know the microorganism with which we are fighting, it behooves us to strike such intervals as are generally suitable, since the inoculation curve does not vary much in length where different organisms are concerned. Once a week where auto-inoculation is large or twice a week where small, will probably be most suitable."

Our means of getting rid of the infecting microorganism is twofold: (1) By raising the protective power of the blood by auto-inoculation; (2) by irrigating the focus in a thorough manner with this plasma of raised power.

Moist Dressings

It has been reported by hunters that animals when wounded often seek a stream of water or pond in which they lie for days.

Physicians have long recognized the use of the moist application to inflamed areas and much space is allotted to this method of treatment in the large number of books that have been published under the title of Hydrotherapy. The application of moist dressing to the seat of infection is time honored and classic.

Many physicians claim that it is but little short of a crime

to allow a patient with a wound on the hand to suffer, for a moist application will tend to relieve the pain and hasten the cure. The " Murphy Drip " is well known, and needs only to be mentioned in this connection. The physiological effect of the moist dressing has been little understood, but it appears from close analysis to depend in its curative effect in a large measure on autoimmunization. It appears further that the relaxed and flaccid condition of the tissues due to the more or less continuous application of moisture, allows the unmodified toxic substances developed in the area of infection to escape into the surrounding tissues and the general circulation, and there build up antibodies specific to the infecting microorganisms. It should be noted in this connection that the dose is not accurate or easily controlled, and where there is not free drainage, toxins escaping from the inflamed area into the tissues may be excessive, and liable to injure the patient. There are other beneficent effects manifested by the moist dressings that we will not discuss at this time; namely, the reduction of fever by a constant cool application, or supplying the tissues with moisture; thus facilitating the elimination of toxic substances from the tissues, etc. Clinical experience in the administration of the autotherapeutic remedy, shows that the filtered toxin-complex may be given in much larger doses if it is prepared immediately after it is taken from the patient's body than when it is allowed to stand for twenty-four hours.

Allowing the mixture of pathogenic exudate and water to stand from six to twenty-four hours adds to its potency or therapeutic effect; for this reason, it must be given in much smaller doses. This is accounted for by the fact that the ferments according to Bail, that correspond to each bacterial toxin, increase in the exudate quickly, after it is thrown out of the body. Before the exudate is expelled from the body fermentation has progressed but little, hence the toxic sub-

stances in the exudate are less toxic. With this explanation the warning given in other chapters, namely: *Do not allow the exudate and water to stand longer than twenty-four hours before filtering,* is readily understood. The clinician skilled in preparing mucus, for filtration, is often able to tell the time when the mixture of water and mucus should be filtered by closely watching and noting the stage of fermentation. The exudate should be filtered at or just before the time the solid particles settle to the bottom of the retainer.

Radio- and Electro-Autoimmunization

"The hypotheses of electro- and radio-autoimmunization are accounted for by numerous phenomena otherwise inexplicable.* The evidence in any one direction is not very abundant or very conclusive, but the cumulative evidence along various verging lines is, I think, considerable.

"The first thing that led to the suspicion of a possible vaccinal action of the Röntgen Rays was the fact that a number of skin diseases of totally different origin and nature seemed to improve under exceedingly small doses of the irradiation. Psoriasis, lupus, eczema, all were apparently benefited.

"Acne that had resisted treatment for years would disappear under the rays, just as if the case had been treated by the injection of a vaccine. What more natural than to suppose that the patient himself had furnished the necessary vaccine, under the stimulus of the Röntgen irradiation? The hypothesis received still further confirmation when cases of lupus were reported in which an irradiation of one region—the leg, for example—was followed by improvement in another region,

* Dean Butcher, in a paper before the Royal Society of Medicine, under the title of "Vaccine Therapy, Treatment, Value and Limitations," read June 15, 1910.

such as the face. The same thing was observed in other diseases. Acne of the face was cured by X-ray and high-frequency effluves applied to similar lesions on the back and shoulders; high-frequency effluves applied to a crop of boils would apparently render the patient immune to further inoculation; lupus erythematosus of one region was influenced by X-ray treatment of an adjacent part, and even widespread carcinoma of the breast was influenced by irradiation of only a portion of the affected area. The hypothesis received further corroboration from observation, that in certain cases of lupus, and even of cancer, irradiation of affected glands was followed by improvement in the lesion itself.

"Let me give you a few instances to show the sort of evidence on which we base our case. They are but impressionist sketches, but perhaps may give as accurate an idea of the fact as a more formal picture, duly authenticated by initials, dates and curves:

"A young soldier—turned out of the army incurable—deeply pitted with variolar acne—face, neck, shoulders and back covered with indurated nodules and suppurating abscesses. He is cured in a few weeks by X-rays and high-frequency effluves. No other treatment is given, either external or internal, and the abscesses are not even opened; they gradually shrink, the adjacent skin becomes dry and brawny; the fluid contents of the abscesses dry up, with the final evacuation of a tiny plug of inspissated pus. There is no further formation of pustles. The man is immune to staphylococci infection.

"A poor governess comes in much the same condition—pale, anaemic, half starved with pustular acne of many years' standing. She is treated with high-frequency effluves—a mixture of sparks, X-rays, and ultra-violet light. The back and neck are chiefly treated, but the face also rapidly improves. The nodules disappear, the abscesses dry up, there is no fur-

ther development of pustules; the case has been cured by electrical vaccination.

"A young naval officer has been plagued all of his life with slight acne. He is treated with two very slight irradiations by X-ray. The treatment is unexpectedly interrupted by his return to his ship. Nevertheless he is cured, and has no return of his lifelong complaint. He has been rendered immune by radio-vaccination.

"A nurse has lupus in the posterior nares, and begs for X-ray treatment, although she is told it will be absolutely useless. Only two small doses of X-ray are given, such as one would expect could hardly reach the affected region. Nevertheless the case is greatly benefited, perhaps cured.

"A married woman is treated for psoriasis by X-ray, with the result there is a premature menopause, and a menorrhagia of many years' duration is cured.

"One could add to these cases many others, to prove the profound influence of electric and radio-active treatment on the general organism. Even the ordinary process of Röntgen epilation appears to be a biological rather than a merely destructive phenomenon. It is, at least in part, a vital reaction—phagocytosis, since it has been found that the process of epilation is more rapid in the diseased areas, and is delayed by the application of disinfectants, and the consequent depression of the processes of vital reaction.

"Our hypothesis then supposes that the ethereal waves, or the electro-thermo-penetration, contribute to the process of auto-inoculation by the production of opsonins, by the detachment of the side chains of Ehrlich, by facilitating the reaction to the toxin from its laboratory in the tissues.

"One of the greatest arguments in favor of the vaccinal hypothesis is the latent period which followed Röntgen or radium irradiation and which precedes the reaction. The

ominous pause is to my mind eloquent, and indicates that all of the resources of the organism are being called upon to resent the insult. The reaction is not merely a physical or chemical one but a biological reaction in which the energy of the reaction may exceed the energy of attack.

"Much time must elapse before we can hope for practical means of producing or controlling auto-vaccination by electrical means. If the vaccine therapy itself is correct—if the production of antitoxins and antibodies is our only means of resisting bacterial invasion—then you will allow that the electrical method of exciting the resistance of the cells, or calling out the home-levies, the militia of the organism as it were, is a great advance over the cruder method of vaccinal treatment by injection of foreign-bred vaccine."

Electro-Thermo-Penetration

Dr. Wm. Harvey King, of New York City, reported at the 1915 meeting of the New York State Homoeopathic Medical Society, the following case of appendicitis cured by electricity. The word cure * is used here to denote the process of repair was instituted in the face of destruction. Dr. King found by experimenting on a beef liver with the electrodes placed ten or twelve inches apart, that midway between the poles a higher temperature was registered by a thermometer, than when it was placed in other parts of the liver. He found by adjusting a certain current he could control the height of the temperature. Now he placed the poles on the abdomen and back of a patient suffering with appendicitis in such a way that the appendix in normal position would come immediately between them, and turned on the proper amount of current. A reaction followed similar to the reaction that sets in when a patient is

* The word cure is always used in this sense.

treated autotherapeutically by injecting subcutaneously the filtrate of his own sputum. Here was a case undoubtedly autoimmunized by electricity, the electricity causing a hyperemia or congestion which resulted in autoimmunizing the patient.

Autoimmunization by Sea Plasma

One of the ablest exponents of Sea Plasma Therapy states that, " Sea Plasma is made in the laboratory by combining deep sea-water with spring-water in proper proportions to make an isotonic solution, and when this is injected in sufficient amounts in from fifty to two hundred cubic centimeters, the results are most gratifying in neurasthenia, enterocolitis, and many other infections."

In the light of Autotherapy it appears reasonable to assume that the injection into the patient of such large quantities of fluid might rupture some minute blood vessels, and therefore produce some extravasation into the tissues. The toxins would now be diluted with physiological salt solution within the loose cellular subdermal tissues where we know the greatest amount of antibodies is developed. With this explanation it appears that the Sea Plasma process is nothing more nor less than an autotherapeutic procedure. It appears that the various elements of sea-water (strontium, chlorine, lithium, etc.) are not the elements that effect the cure of the various infections; that raise the opsonic index to the staphylococcus, influenza bacillus, bacillus of Friedlander, coli bacillus, streptococcus, pneumococcus, pseudo-diphtheria bacillus, etc. It appears that they have little or nothing to do with the cure, except as they conjointly make up the specific gravity producing an isotonic, or physiological salt solution. It appears that a common sterile salt water solution of the proper density would be equally efficacious.

The writer is led more strongly to this belief by a paper published by G. A. Stevens, in the *British Medical Journal,* April 5, 1913, in which a number of cases of syphilis were cured or benefited by the hypodermic injection of rather large doses of sterile water. We know that syphilis is a blood disease, and by the process described above, the patient is inoculated with his own unmodified toxins in the subdermal tissues. This is the fundamental principle upon which the cures made by Autotherapy rest, that has been iterated and reiterated by the writer over and over again since 1909. It appears that this is but another inexact method of employing the great principle of autoimmunization that underlies the cures made by Autotherapy and that was distinctly foreseen and mentioned in the author's earlier articles. For example, in the *Lancet-Clinic,* November, 1911, the writer stated " Now that the way is opened other methods of administering the unmodified toxic products of disease may be developed."—" Any method or system of therapy that employs all of the unmodified autogenous toxic substances developed during the course of an infection to cure the patient comes under Autotherapy."—" Cures made by applying this principle must be considered as autotherapeutic cures." The writer has treated infections successfully by puncturing a vein with a hypodermic needle, drawing the blood into the syringe that already contains a proper amount of this sterile physiological salt solution, and then withdrawing the needle till it is just beneath the skin and injecting the contents there.

By this method the toxins are diluted and placed in the subcutaneous tissues and we avoid the liability of rupturing some minute blood vessel. In Autotherapy we see the toxic solution in the syringe and can accurately measure it.

The probable efficacy of a trauma that results in an extrava-

sation of the blood into the subdermal tissue in a patient suffering with some chronic infection is at once apparent.

From what has preceded, it is readily understood that the benefit derived from the Kromeyer Light, Alpine Light, and other forms of leukodescent and actinic rays, and sunlight, is explained by the process of autoimmunization that at times occurs in the tissues when the rays above mentioned are employed therapeutically.

It is difficult to determine the exact amount of toxic substances liberated in the tissues, or the dose of the unmodified toxin-complex that the patient receives from the above mentioned treatment; and it will be a long time before we can expect to be as exact in determining the dose of toxins administered as we are in giving the autotherapeutic remedy, in the manner described by the writer.

Again there are other disadvantages in employing light in autoimmunizing the patient that are explained fully in the chapter dealing with the administration of the sera; for after the first dose is given by means of the light rays, the toxins remaining in the patient's body that will be given in subsequent treatments are less aggressive and hence less therapeutically effective than are the toxins obtained before any treatment was instituted. When the patient requires but one small dose to complete the cure there is no objection to this treatment, but we never know when we begin a treatment how many doses the patient will require; and since the majority of patients require more than one dose, the response after the first dose will not be so prompt, and the treatment will have to be extended over a longer period of time than if the toxins obtained before any treatment was given, were employed in all subsequent treatments.

It appears there is nothing these lights will do but that can be done better by Autotherapy. The cost of the lights is

considerable, they are not as therapeutically effective as is Autotherapy, and they are not applicable to many conditions that are promptly relieved by Autotherapy.

The Small Dose

The writer does not believe that exception will be taken to the infinitesimal dose when it is indicated, from the fact that so many authorities agree that the infinitesimal subdivisions of matter at times have marked effect on animal life.

It is a matter of common knowledge and experiments have shown that something like the trillionth of a milligram of an antitoxin will often prove fatal in a mouse that has been sensitized to this agent.

We believe that when any animal organism is sensitized by hypodermatically injecting a foreign protein substance, a subsequent injection will have to be materially decreased.

In this connection it may be well to refer briefly to tests that show how profoundly nitrate of silver affects some of the lower forms of animal life. The latter will not proliferate in a solution of the silver salt that would correspond to the subdivision of a billionth, trillionth or less of a grain. In fact, it was found they would not proliferate, even in a silver dish. From this it was inferred that the action of silver on these organisms was so great that it was not possible to state the subdivision that would prove effective. It has been found, also, that other mineral poisons in concentrations corresponding to the trillionth of a milligram, inhibit the growth of some minute forms of life. In giving a minute dose of toxin referred to as a " therapeutic agent," it is not understood that the total amount of the drug used would amount to a dose sufficient to give a physiological effect. It might be well to state, to further emphasize the point under discussion, that it

is well known that when a dose of strychnine has killed an animal, nearly, or quite the entire amount can be recovered from the urine. The fraction which cannot be found might be set down to defective technic; and unless we choose to believe that the drug has decomposed and then recomposed in the body—which is almost inconceivable—we have to admit that the poisonous action has been due to an immaterial or imponderable dose.

The minimum dose of Pasteur is well known, and Koch's Old Tuberculine is known to be therapeutically effective when exceedingly minute doses are given. The tests made by Solis Cohen along this line are too well known to be more than referred to here, to say nothing of the small doses commonly given by the homoeopaths and eclectics.

Parenteral Infection and Buccal Immunization

Of late years the subject of parenteral infection has evolutionized some former views. The original investigations of several Swiss authorities have shown that even typhoid, cholera, etc., may not be due to swallowed bacteria but to their absorption through the lymphatics of the buccal cavity where they are taken up by the circulation and reach the ileum, caecum, appendix, etc., by elective affinity. This is in accordance with and harmonizes well with many daily tests made in Autotherapy.

Parenteral infection is mentioned here with the idea in view, not of entering into a lengthy discussion but of focusing the reader's attention on the subject so that he will not be misled with questions regarding the destructive action of gastric juices on the microorganisms and the oft-repeated assertion in criticism of Autotherapy, that buccal immunization is ineffective.

Much has been left unsaid in regard to the naturalness of ingesting pathogenic microorganisms that are in food; people are constantly doing this and it is natural that they should. No one knows as well as the surgeon or bacteriologist, the wide distribution and prevalence of pathogenic microorganisms. They are taken at every meal and by people who have intranasal, gingival and other local troubles.

Up to the time Autotherapy was discovered and in fact several years afterwards, immunization by the mouth was considered to be more or less a product of the imagination; that the "wish was father to the thought," and that there was no clinical or scientific basis on which to rest the claim that immunity is established by means of oral vaccination or buccal immunization. Autotherapy has so persistently hammered at the clinical fact that autoimmunization is quickly established when infecting microorganisms or their toxins in extra-alimentary and extra-pulmonary lesions are taken by the mouth, that the attention of the profession was directed to and focused on, the subject. Within the past few years much has been written on the subject of *buccal immunization.* Many writers have contributed able articles on the subject: Dr. Bryan D. Sheedy states in the *Medical Record,* in an article under the title of "Vaccine Therapy, the Opsonic Index, and Immunity." "In considering the functions of the tonsils, we must take into consideration and study carefully the teachings of Goodal, Wood, Wright and others, all practically agreeing (1) that the tonsils possess phagocytic properties; (2) that the lymph currents from the mouth and nose converge toward the tonsils. Some observers have noted that foreign particles pass with the lymph current through the epithelium lining the crypts of the tonsils but that living bacteria remain in the crypts. When we consider the location of the tonsils above described, generally spoken of as Waldeyer's ring, we are

forced to the conclusion that this circular fortification of secreting tissues was not erected without some good purpose in view. This becomes more apparent when we stop to consider that, while all roads at one time led to Rome, all channels whether over or under the mucous membrane, lead toward the tonsil. Food laden with bacteria on its way to the stomach is forced against some portion of the tonsillar ring by the muscles of deglutition. Food ejected from the stomach is also forced against it and the millions of bacteria passing into or out of the body through the nose and mouth pass or come in contact with this fortification. One investigator pointed out that bacteria entering the crypts of the tonsil remained there, while their toxins passed on into the blood current via the lymph channels, and those toxins in the tissues, or by their presence in the circulation, stimulated the opsonins or resisting substances, thus developing what we call immunity."

If we accept the writings of these and many other well-known authors, no further explanation of the clinical manifestation of buccal immunization is necessary; and we must accept the writer's statement that he is able to autoimmunize his patients quickly when live autogenous pathogenic microorganisms or their toxins are administered by the mouth, in the manner described. We believe when the lymphatic tissues composing the tonsils are overcome by a virulent infecting mircroorganism and an infection of the tonsils occurs, the process of immunization is reversed and the tonsils now instead of becoming the graveyard for bacteria entering the body, become their residence; and the microorganisms from their newly established abode, pour out their toxins, or microorganisms, into distant parts of the body and there set up systemic disturbances, such as pain, increased temperature, etc., or rheumatism, appendicitis, cholecystitis, etc.

Within the past few years the teeth have been considered

the principal focus of infection that caused many infectious diseases. It was not, however, until after Autotherapy was discovered that these claims received such wide clinical verification. These localities are but relatively infrequently the locus of infection in rheumatism, appendicitis, cholecystitis, etc. In but one rheumatism case in forty are these avenues responsible for the entrance of the microorganisms, or their toxins, into the tissues where they set up systemic disturbances mentioned above. At least this is the percentage the writer finds after successfully treating several hundred cases. It is perhaps, needless to state that when the initial focus of infection is in the tonsils or other portions of the respiratory tract, immunity is not always established quickly by swallowing the microorganisms, for these tissues are involved with the toxins of the disease. Enucleation of the tonsils will not always cure an appendicitis nor rheumatism where the primary locus of infection is through the tonsils. Healthy fixed tissues develop the maximum resistance or antibodies to a given toxic substance. When the filtrate prepared from the causal microorganisms is injected into healthy fixed tissues, antibodies specific to these microorganisms are developed at once whether the initial foci are in the tonsils or elsewhere. For this reason buccal immunization is not always successful in intra-alimentary and intra-pulmonary infections but in chronic disease a very small dose is often successfully administered in this way. Microorganisms in extra-alimentary and extra-pulmonary infections are not usually encompassed by mucus, and it appears that these microorganisms coming in contact with comparatively healthy fixed buccal lymphatic tissues, are destroyed by their phagocytic powers. Their toxins then go into solution by autolysis and are readily absorbed by the tissues where they fulfill their protean mission of arousing combative antibodies.

The writer has not attempted to make any elaborate explanation of the phenomena of cure resulting when patients are treated autotherapeutically, for this comes under the domain of the pathologist and others who may be interested. As a therapeutist he merely states clinical facts and facts are not debatable.

Capsules

The question as to the destructive action of the gastric juices on microorganisms has been raised from so many quarters as to cause doubts as to the effectiveness of the writer's method of treating extra-alimentary and extra-pulmonary infections by buccal immunization. In this connection it is well to examine minutely the experiments of Mangan and others. The objection is purely on theoretical grounds, for several who have made tests with capsules containing the exudate given by the mouth, have finally given up this method of treatment from the fact that experience clearly demonstrated the use of capsules to be unnecessary. Based on the well-known tests of giving iodine in keratin capsules—that the capsules are not dissolved by the gastric juices and that its contents are liberated in the intestines, many tests were made in giving pus in capsular form with the idea of having it escape the gastric juices. Several of these capsules broke in the animal's mouth, but the results were equally as good as when the capsules were swallowed. For this reason the capsules were finally eliminated by some who were the strongest adherents of this method of administration.

The tests of Daniel J. Mangan, D.V.S., Chief Veterinary of the Department of Street Cleaning of New York City, and others in employing pus sterilized by heat should be mentioned in order that there may be understood the wide range of ex-

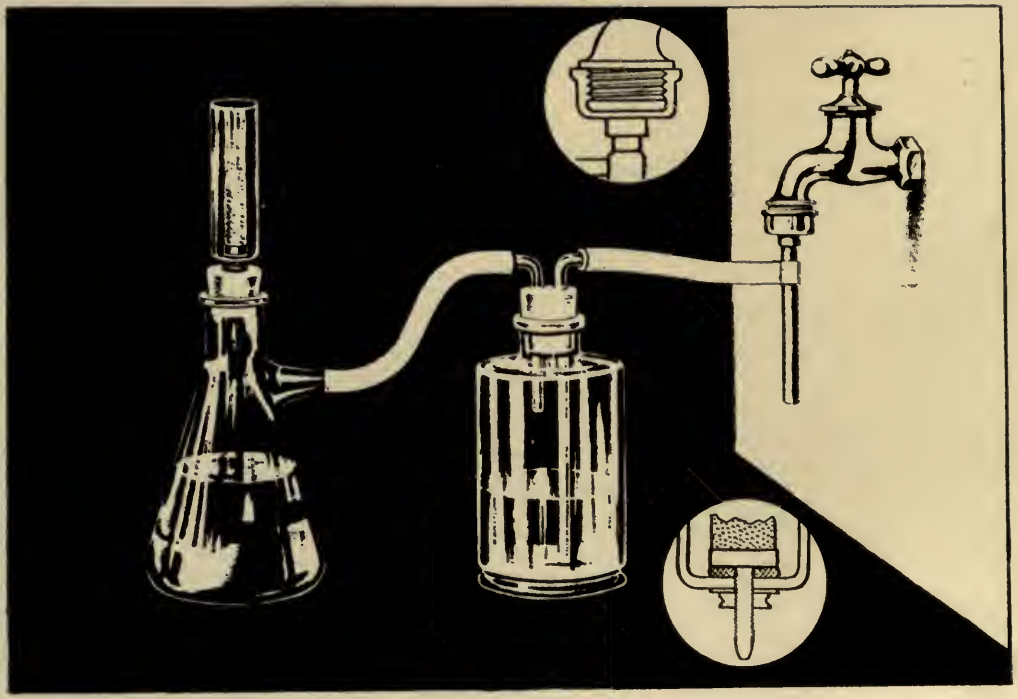
periments and tests that have been made on human beings and animals. Mangan heated the exudate for thirty minutes at a temperature of 140° F. to 145° F. to destroy the pathogenic bacteria, then filtered it through sterile filter paper and injected the filtrate subcutaneously. The disadvantage of this method of treatment is pointed out by Mangan in an article under the title of "Autotherapy," published in the *American Veterinary Review* of July, 1912. This was republished in several European Veterinary medical papers. While many brilliant cures have been recorded by this method of treatment, yet on the whole it is not considered by Mangan as satisfactory as the method of sterilization by filtering either through a Pasteur-Chamberland, or the Berkefeld filter. For by heating the exudate some of the delicate enzymes and ferments which correspond to each bacterial toxin (against which the tissues react in a curative manner) are destroyed. Some of the albuminous constituents of the exudate are altered to a form where they are not available for therapeutic purposes. Therefore, the heated exudate does not contain all of the unmodified toxic substances against which the tissues react in a curative manner, as when a spontaneous cure of an infectious disease occurs. In hastening the spontaneous cure by applying the autotherapeutic principle, we employ the unmodified toxic substances which Nature utilizes when the spontaneous cure of infectious disease occurs. In many acute infections, however, where the filter is not available, and the exudate is rich in aggressins, it may be employed with a reasonable assurance that the treatment will do good. The writer is thinking particularly here of pneumonia, acute tonsilitis, or other severe acute infections. The toxins are said to be thermo-stable.

In extra-alimentary and extra-pulmonary infections, that is to say, in infections in no way connected with the alimentary

tract or the respiratory system, the dependable method of buccal immunization may be resorted to with confidence. It may be well to mention here if only for the purpose of eliminating it, the method of preparing the toxins for hypodermic injections by centrifugalizing the exudate. In using this method Mangan states, "We are not certain that the fluid injected is sterile, and we therefore run the risk of infection at the point of the needle puncture." While infection of this kind has never been severe in the writer's practice, it is not advisable to court infection in this manner when there are other means at hand that will obviate all danger in this direction, namely, as properly filtering the exudate in the manner described.

It has been taught and perhaps is still that the young infant can be fatally infected by swallowing pathogenic microorganisms. For example,—from the nipple, because as yet its defenses are not organized. It is not the writer's custom to treat nursing infants by means of Autotherapy, although he has treated a number of babies successfully by injecting the filtrate of a dilution of the pathogenic exudate hypodermatically.

In the chapter under the title of "Autogalactotherapy," is pointed out a method of immunizing the mother to the microorganisms active in the infant; the antitoxins developed by the mother to the infant's infecting microorganisms passing to the child with the mother's milk, tend to immunize the child by passive immunity.



DUNCAN AUTOTHERAPEUTIC APPARATUS NO. 2.

For use in Hospitals, where there is running water. The bottle between the filter and syphon is merely a trap to catch the water remaining in the tube from being sucked back into the vacuum flask, when the water at the faucet is shut off.

CHAPTER V

DESCRIPTION OF THE DUNCAN AUTOTHERAPEUTIC APPARATUS

In order that there may be a standard simple apparatus available, and little confusion in its selection, the writer decided long ago to furnish the apparatus to physicians at their request. This apparatus has been selected for convenience and cheapness, also for the simple means it offers of sterilization.

There are only two filters at present on the market, which give an absolutely sterile filtrate. One is the Berkefeld Filter,* the medium of which is infusorial earth found in the well-known Fossil mines, of Hanover, Germany. The peculiar properties and microscopic construction of this earth (composed as it is of silicious skeletons of diatoms) renders it peculiarly suitable for the purpose of filtrations. The form of these minute skeletons (ladder-like and interlacing) gives an enormous number of exceedingly small pores, thus affording a free passage for the liquid and at the same time stopping that of the minutest suspended organic or inorganic matter. The great difficulty to be overcome finally has been the formation of a solid substance of this deposit thoroughly annealed together. It will positively give germ-proof filtrates; can be easily cleansed and sterilized and kept in a state of germ-proof efficiency and is used in chemical and biological laboratories everywhere. It is endorsed by Dr. George M. Sternburg, former surgeon of the United States Army; Professor M. Gruber, of the Hygienic Institute of the University of Budapest; Professor Guido Tiz-

*The description of the Berkefeld Filter is taken from the manufacturer's catalogue.

zoni, of the Royal University of Bologna; by Surgeon General Dr. Plagge, of the Medical Division of the Prussian War Department, and many others of world-wide reputation.

The other filter is the Chamberland-Pasteur Filter. This is composed of unglazed porcelain. Endorsement of this filter by the author is unnecessary, as it is also a standard filter throughout the world.

The reasons the Pasteur filter was not selected in preference to the Berkefeld are as follows: First, the Pasteur is far more complicated and is not as convenient for the average practitioner to manipulate. Second, it takes a much longer time for the filtrate to pass.

The special apparatus has been designed or selected for the convenience of the practicing physician either at the bedside or in the office.

In the clinical or bedside apparatus the air pressure forces the solution of toxin-complex through the porcelain part. This is accomplished by means of an atomizer bulb or bicycle pump which forces the air through a perforated stopper that fits into the top of the cylinder-shaped filter. There is a receiving flask with a broad base that sets under the filter which allows the apparatus to stand alone. This is the simplest and cheapest apparatus, and is known as the "Duncan Autotherapeutic Apparatus No. 1." (See Illustration.)

The apparatus designed for office use does not have the atomizer bulb, but instead has a part called a siphon that screws on to the faucet. When the water is turned on, a suction of about twelve pounds to the square inch is created in the suction or receiving flask below, tending to suck or draw the toxin-complex through the pores of the filter, thereby straining out the microorganisms. This is known as "Duncan Autotherapeutic Apparatus No. 2." This apparatus may have standard or an upright that gives it stability, and allows it to

stand upright. In No. 2 apparatus when the faucet is turned on and the suction started, the physician may leave it, returning in ten minutes he finds the filtrate ready for use. The filtrate of exudate is usually colorless and perfectly transparent. If proper care is exercised during the process of filtration the filtrate is perfectly sterile, this is minus pathogenic microorganisms. After using, the filter cylinder should be rinsed under a running faucet, and the accumulated matter brushed off lightly with a sponge or soft brush. At each cleansing a very thin layer of the surface material itself is brushed off, together with the accumulated material, and thereby one regains a new filter surface. It should then be boiled for twenty minutes. At least an ounce of distilled water should always be run through the filter before it is used for the toxins to flush out the pores. Before a new filter is put in use, it should have water run through it, for it will run cloudy for a few minutes. The filters are so constructed that all parts are detachable to admit a thorough cleansing and sterilizing. There is no place where dirt can lodge. The toxins are not altered or changed by filtration. If it is deemed advisable a new porcelain part may be purchased for each patient, as the cost is but nominal. A filter will last for a hundred or more filtrations if proper attention is given it. A number of extra washers should be purchased and be on hand.

Apparatus Necessary for Treating Patients by the Wholesale Autotherapeutically

The apparatus given below is convenient for treating twenty hospital patients.

Filters

(1) Either a Berkefeld or Pasteur filter should be employed although any other filter that can be relied on to give an abso-

lutely sterile filtrate could be used. Up to the present time there is no other filter on the market that meets these specifications.

Two forms of apparatus are suggested—one to meet the conditions of running water and one for use where it is impossible to obtain it. For this reason both the No. 1 and No. 2 Duncan Autotherapeutic Apparatus should be provided. The porcelain part of the filter stone being interchangeable there will be an extra filter stone that may be used when either apparatus is employed.

The No. 2 apparatus is suitable for base hospitals where there is running water. The siphon is screwed on the faucet and with the water turned on, the suction thus created, tends to draw the soluble toxins through the filter candle or stone. No. 1 apparatus is adapted for field hospital service—the toxins here are forced through the filter by air pressure on top of this mixture of exudate and water. To accomplish this the No. 1 apparatus is provided with either an atomizer bulb or bicycle pump. Both the suction in No. 2 apparatus and the air pressure in No. 1 are for the purpose of hurrying the filtration. Allowing the toxins to pass through the filter by gravity alone consumes too much time, especially where the mucus is thick as it often is in respiratory infections. There are advantages in either form of suction flask illustrated—the flask having a broad base allows the filter to stand alone without other support. The test-tube with the side neck is not so easily broken and lends itself more readily to sterilization as it lays flat in the sterilizer, occupying less space, but when this is employed it is necessary to have a stand with a clamp to support it. An additional two feet of pressure tubing should be carried for emergency.

Bottles

(2) Twenty-four 4-ounce wide mouth bottles for preparing the toxins from dressings should be provided. These should have ground glass stoppers to permit of easy sterilization. These are known as the *exudate bottles.*

(3) Twenty 2-ounce wide mouth bottles, with ground glass stoppers, for the filtrate. These are known as the *filtrate bottles.*

Syringe

(4) One hypodermic syringe, glass cylinder and metal plunger of 5 c.c. capacity—and one dozen hypodermic needles No. 25—and ⅝″ in length. Two gold, platinum or iridium needles for each hospital, to be kept in a solution of spirits to which is added a little lysol.

Labels

(5) Labels of sufficient size should be used with printed lines for patient's name, date, source of exudate, dose administered, etc.

Sterilizer

(6) One sterilizer capable of holding the apparatus above enumerated. As a sterilizer is part of the equipment of all hospitals, it may seem unnecessary to add this item to an autotherapeutic outfit, but as the sterilizer is employed in operating rooms it is deemed advisable not to use the operating sterilizer as this would necessitate bringing pus into the operating room—the thing to be strictly avoided, and for this reason a small sterilizer should be provided with this apparatus. The bottles should be arranged in two racks—one for the exudate bottles and one for the bottles that are used for the sterile filtrate.

The sterilizer should be designed so that it is capable of containing the whole apparatus conveniently packed, for the purpose of easy transportation. The top should be fitted with hinges and a catch that will hold it securely when shut. There should also be provided appropriate handles to facilitate easy transportation.

In setting up the apparatus all parts should be boiled for at least twenty minutes—the parts of the apparatus assembled—bottles labeled and syringe made ready. The care and sterilization of the filter is given in a preceding paragraph.

Apparatus for Buccal Immunization

The four-ounce bottles above mentioned may be employed for buccal immunization. For the purpose of preserving the toxins for daily use, 10 drops of pus or the equivalent of this amount that has soaked into the dressings, are added to two ounces of alcohol.—The usual dose is ten drops of the decanted fluid in an ounce of water, hourly, for ten doses.

Six extra washers should be carried for each filter.

The Hypodermic Syringe

The syringes employed for autotherapeutic purposes are of two kinds. A brief discussion of hypodermic syringes in general may not be out of place, for it is intended by so doing to give the reader a clear understanding of the mechanics that enter into the construction of the syringes. Then he can better understand why a certain syringe has been selected for a certain use and why two different kinds are recommended.

The syringe for injecting the toxins must necessarily be perfect so far as the fitting of the plunger into the cylinder is concerned, and the one that will wear the longest time without leaking, is of course the best.

Now there are four kinds of standard syringes on the market that might be used but the wearing capacity of each is not the same. First, there is one with a glass cylinder and glass plunger; second, a metal cylinder and metal plunger; third, a glass cylinder and metal plunger; fourth, a glass cylinder and packed plunger. Now it is a well-known principle in mechanics that two parts of the same substance do not wear well together under friction, as glass on glass, or metal on the same kind of metal. But glass on metal that is not too hard wears better practically than any other substances in a syringe. A well-made syringe with a glass cylinder and metal plunger will often not leak a drop after long usage, and is strongly recommended. If any viscid substance like blood or blister-serum is used it will often cause the plunger to stick, so that it is impossible to move it without breaking the glass cylinder.

For this reason a second syringe is recommended for blood and blister-serum, ascites fluid, spinal fluid, etc. The second syringe should have a plunger that is not so close fitting. To suit these specifications, the plunger should be wound with some softer material, as asbestos or some other soft material. It may have to be packed often but it is better to pack the plunger of a cheap syringe than to ruin an expensive one. An old glass on glass or metal on metal syringe will do for this purpose. These serums are usually given more frequently than the filtered exudate.

The two syringes recommended are, first, one with a glass cylinder and metal plunger holding 5 c.c. Second, one with a glass cylinder and an asbestos wound, or loose fitting plunger, holding 10 c.c. for denser substances. After giving many thousands of hypodermic injections, with practically no abscess formation, the writer believes he can speak with authority on the subject (the writer uses a 5/8" needle of No. 25 bore.)

Technic of Giving a Hypodermic Injection

Draw into the syringe carbolic acid 95 per cent., then sterile water twice, then alcohol 95 per cent., then sterile water twice, and eventually the toxins. Cover about a square inch of the tissues where the needle is to enter, with iodine, allowing it to dry; then grasp or pinch up the skin into a fold with the thumb and forefinger of the left hand at the edge of the iodine and hold it. Grasp the barrel of the syringe with the right hand, and holding the needle parallel to the body skin surface, plunge the needle into the elevated fold of skin between the thumb and forefinger. When the point is just under the skin withdraw the plunger slowly to be sure a blood vessel is not punctured, then press the plunger slowly with the thumb of the right hand. After the contents of the cylinder have been emptied under the skin, withdraw the needle quickly and rub the part over the site of the injection firmly through a piece of sterile bandage, till the substance injected is well dispersed through the adjacent tissues. If this is not done a lump will be formed under the skin that will last for several days or weeks before it is absorbed, and at times be tender during this period. Then seal the point of injection with collodion on a small glass rod. The writer employs a toothpick as a cotton carrier to apply iodine to the surface. If an abscess follows an injection through carelessness the method of treating this is extremely simple and efficacious. Freeze the parts with ethylchloride solution and with a hypodermic needle of larger bore, aspirate a few drops of pus and give it to the patient in a little water to drink at one dose. In my hands these abscesses seldom occur; if one should occur, the above treatment will cause it to disappear rapidly, for within twenty-four hours after it is given all symptoms will usually subside and nothing more will be heard of it.

The Filtrate

The greatest care should be exercised in obtaining the exudate, to be sure that no foreign microorganisms contaminate it; otherwise its therapeutic effect will be lessened or annulled. All specimens should be collected in a sterile bottle with a sterile stopper. Extra precaution should be taken in collecting the blood, blister-serum, and spinal and ascites fluids, etc., for the reason that they are most excellent culture media, and any slip in the technic may cause foreign microorganisms to multiply in sufficient numbers to destroy its therapeutic value, and even render the toxins dangerous; however, it is well known that comparatively healthy tissues can take care of a certain number of pathogenic microorganisms. If there is doubt in the mind of the physician that any filter does not give a sterile filtrate, a culture of the filtrate should be prepared, and if the filter candle is found defective it should be destroyed.

It is always advisable to prepare at least half an ounce of the filtrate before an injection is given. This will obviously last a long time; the reason for this step is that the first injection develops antibacterial substances in the tissues, these rendering the microorganisms remaining in the patient's body less aggressive, or virulent. As stated elsewhere, "The more virulent the infecting microorganisms, the more therapeutically effective the toxins." A filtrate made after the first injection is given is usually less potent, or has less therapeutic effect, than the one prepared before any injection is given; although it still tends to be potent and curative.

The freshly prepared filtrate is usually transparent, colorless, odorless and without taste. When it is allowed to stand for twenty-four hours, there is usually a faint cloudiness or precipitate diffused throughout the solution. A filtrate that does not have this cloudiness is usually of less therapeutic

value as compared with a filtrate in which it appears; therefore a filtrate in which this cloudiness is present is not necessarily to be condemned, as the novice in Autotherapy might infer, but rather such turbidity should be considered desirable. After several days the precipitate will often settle to the bottom and when the top clear fluid is decanted, and the fluid near the bottom, rich in this precipitate, is injected, marked local and constitutional reactions follow, and in acute diseases there will usually be a quick amelioration of symptoms. It is usually not necessary to do this save occasionally in chronic cases.

A method that is at times found useful in treating chronic infections is to make several ounces of the filtrate. After this has stood for several days and there is a diffused precipitate throughout the solution, the fluid contents of the filtrate are evaporated on a water-bath almost to dryness; then to the precipitate, distilled water is added and the contents thoroughly agitated. This is employed hypodermatically in treating the patient. This precipitate may be obtained by centrifugalization.

In acute infections begin the injections with as large a dose as is expedient or as the experience of the physician leads him to believe the patient will safely stand. The formulas given are well within safe limits, and the physician inexperienced in autotherapeutic methods should begin with these; then if sufficient reactions or improvement are not obtained in acute infections, increase the dose slightly at each injection. At times during the treatment of chronic cases, when the dose has not been properly regulated, the patient will cease to improve. When this occurs small doses of calomel will often cause the patient to respond to the toxins quickly. When the dose is in excess of the amount the patient requires the symptoms are temporarily aggravated. Under these conditions withhold the

medication and decrease the dose materially. The writer has often been compelled to employ from the sixth to the twelfth and higher centesimal dilutions. In many chronic diseases it is often necessary to do this, to control properly the symptoms. The subject of withholding the remedy when a severe aggravation occurs is discussed in a succeeding paragraph.

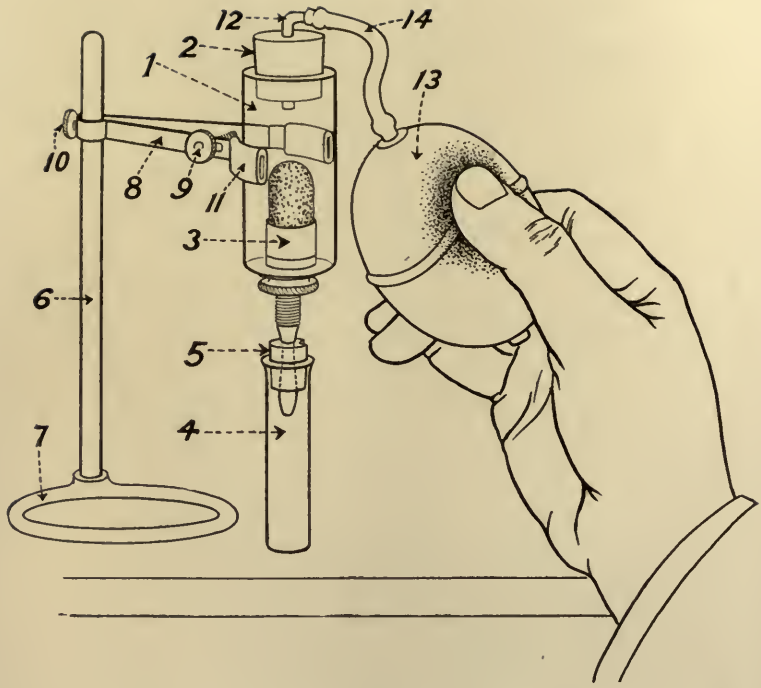
Immediately following the injection there is a stinging sensation; this is but transient, seldom lasting more than a minute or two. If the toxins happen to be injected near a cutaneous nerve, the stinging momentary pain will be intensified. The patient is conscious that something unusual has entered the tissues, and is inclined to become alarmed unless he has been warned previously that the pain is but transient.

Occasionally when the toxins are very virulent, as in a rapidly advancing acute disease, the patient feels a peculiar sensation travel from the point of the injection to the infected area and when this occurs the relief is usually strikingly quick. Keep such toxins, as they are most valuable; that is, do not make another filtrate for this patient, unless it is absolutely necessary, as they tend to be curative in even a more diluted form, being rich in aggressins.

The reaction differs somewhat in each individual and in each disease. It is not dangerous where the formulas are closely followed, or no more dangerous than the vaccines and the sera now in daily use—for example the reactions in endometritis are usually greater than the reactions in acute bronchitis. The reactions in some cases of endometritis are greater than the reactions of some other similar cases, or greater in the same individual than they would be if given at another stage of the infection.

The reactions to the injected toxins are local and constitutional. If more of the toxins are injected than the local tissues can take care of, a general manifested systemic reaction

ensues. In acute infections the writer usually prefers to gradually increase the dose till a small recognizable constitutional reaction takes place; this is manifested by a slight chill. *As long as the patient is improving, do not give another dose;* especially is this the case in chronic infections. Wait till the amelioration has about ceased before a subsequent injection is given; we learn this period after giving two or three injections. Treat the patient according to his symptoms and not the disease. From three to twelve hours after the injection, there is a spreading area of cutaneous redness around the point of needle puncture, and the arm is inclined to become somewhat stiff and tender to the touch. This is known as the local reaction. The inflammation is not deep-seated and a slight superficial brush on the arm is more painful than a firm pressure. Within twelve to twenty-four hours the patient will feel listless or drowsy, with a slight fullness or flush of the face; encourage him to rest quietly during this stage of the reactions, especially if the infection is extensive. There may be a temperature of 99° F., or even 100° F. Then the local reaction will begin to recede. The constitutional reaction is often manifested by a slight chill. This usually appears from two to twelve hours after the injection. It seldom lasts more than a few minutes. Caution: if it lasts longer, increase the interval between the doses. The sooner the constitutional reaction or the chill begins after the injection, the greater it will be; do not increase the dose when there has been a strong constitutional reaction following the last injection. The writer has never had a fatality follow these injections, so in stating "the greater the constitutional reaction, the quicker will be the response and cure," he does not mean to say a fatal dose cannot be given, for he believes it can. The reactions a patient can develop to a toxic substance are limited, so we should be careful not to exceed this limit; but the range of dose that



DUNCAN AUTOTHERAPEUTIC APPARATUS NO. 1.

For use at the bed-side or in the field.

No. 1.—Glass Cylinder or of nickeled brass.
No. 2.—Rubber Stopper.
No. 3.—The filter itself.
No. 4.—Receptacle for filtrate.
No. 5.—Rubber Stopper for same.
No. 6 & 7.—Frame for holding apparatus upright.
No. 8, 9, 10 & 11.—Filter Clamp.
No. 12.—Elbow, made either of nickeled brass or glass.
No. 13.—Atomizer bulb or bicycle pump.
No. 14.—Rubber tubing.

will act in a therapeutic manner is very great. For this reason we should begin well within safe limits, and start with what experience teaches us is a safe dose. A wide clinical experience has proved that the toxins are not very toxic, and if the formulas given are closely followed, there is no necessity for anxiety.

Tell the patient the greater the reaction the quicker will be the cure; that a local and some constitutional reaction is necessary. This warning will allay his fears, and he will seldom object when the arm becomes tender and somewhat painful. Morphine will tend to counteract a severe constitutional reaction.

At times the pain in the affected area will be temporarily worse, but in acute infections it usually subsides within twelve to twenty-four hours and often within two hours. We are thinking of acute appendicitis, cholecystitis, mastoiditis, etc.; rarely, however, do the severe symptoms of the disease last twenty-four hours after the first well regulated injection.

In chronic conditions the patient may not improve till after two or more days. When this is the case wait till the improvement ceases, then give a smaller dose at the next injection. At times the first dose appears to sensitize the patient, then the second dose acts promptly.

As a general rule it may be stated that when there is little or no drainage, the injection will have to be given more frequently than when there is good drainage. It is necessary if the best results are to follow, to have free drainage.

The time when another injection should be given depends on the patient alone; there are no set rules that will fit all cases. Generally speaking, it is advisable to keep the bowels open with enemas or calomel, and keep the patient on a strong nourishing diet during the reactive period. If the infection is in a locality richly supplied with blood, the relief of pain is

often astonishingly quick, as in the female pelvis, lungs, appendix, etc. The reason for this is that the antibodies in the blood stream are brought freely to the infected area.

If the exudate and water be allowed to stand longer than twenty-four hours before filtering, the mixture becomes exceedingly toxic; and both reactions will be intensified without added therapeutic effect. Care should be taken that this does not occur. In bronchitis we may often filter the fresh undiluted sputum without allowing it to stand, and inject the filtrate with most excellent results. Somewhat larger doses may be given in this. We are not always able to obtain sufficiently large quantities of sputum to do this. The formula given under each infection in the text should be our guide in daily prescribing. The size of the local reaction, or local area of redness, varies from an inch to eight or more inches in diameter. When given over the biceps muscle it frequently extends almost around the arm and down past the elbow. Especially is this true in purulent endocarditis, and in rheumatism. The writer has never to his knowledge, approached the danger line in giving these toxins, but in some cases he would have been frightened at the extensive area of reactive inflammation, and would have thought of an extending cellulitis, had he not known it simply as the reaction. Usually the best and quickest results follow a large local and mild constitutional reaction.

Nicotine inhibits the action of the toxins in respiratory infections. A patient who smokes even mildly may not be treated successfully. Inhibit smoking instantly and resort to active elimination for several days before the mucus is obtained for therapeutic purposes.

The circulation should be increased in fistulas if the best results are to be obtained. This may be done preferably by a curettage or escharotics.

The great therapeutic power of the filtrate can only be appreciated by those who use it. It is not a "cure all" and it is not intended to convey the impression that it should be used to the exclusion of remedial agents, and therapeutic measures of *known* value.

The question of acidity or alkalinity of the filtrate has been raised but as this appears to be more of an academic question than one that concerns the clinician and leads to theorizing, the writer has made no scientific investigation into the subject; but a number of filtrates that were examined, showed them to be either neutral or slightly acid.

The injections may be made much less painful if chemically pure sodium chloride be added to the filtrate in strength sufficient to make it an isotonic solution, or near the specific gravity of the blood. Freezing the parts with ethylchloride will assist in lessening the pain that accompanies the injection.

The author has found it unsatisfactory both to the student of Autotherapy and to himself to allow others to handle his apparatus. For it has been found that manufacturers are inclined to make parts that break easily, for the purpose of "making business" in supplying them, and are loth to change the design when improvements in it have been made. To obviate these conditions and for the convenience of the purchaser the author has decided to supply the apparatus himself to physicians desiring it, thus insuring to the purchaser unbreakable parts as far as possible, prompt delivery, and the latest models.

Transverse sections of a perforated rubber stopper, make excellent washers for the filter.

"A wise physician, skill'd our wounds to heal, is more than armies to the public weal."—Pope.

CHAPTER VI

THE PREVENTION AND CURE OF PURULENT INFECTIONS

Autotherapeutic Septic Rule for Surgery or The Immediate Method of Wound Treatment

The dog, in licking his wounds, swallows a dose of unmodified autogenous toxins.* For this reason, his wounds heal quickly; he never has a bad infection except on the head, where, for anatomical reasons, he cannot lick. Placing living pyogenic microorganisms in the mouth early raises the power of the blood serum, and stimulates the activity of the leukocytes quickly to overcome the invaders. Too often we hear of physicians and surgeons infecting their hands during an operation, or autopsy, and dying from sepsis. If the physician will remember to suck the wound then and there, and afterwards whenever there is irritation in it, there will be no more deaths from this cause, for the wound will heal by first intention. Too great publicity among physicians cannot be given to this simple therapeutic measure. Homely it may appear, but in therapeutic value it surpasses anything that medicine or surgery has yet given us for this condition. In punctured and gunshot wounds, in which foreign material, such as cloth, wood, etc., has been driven into the tissues, if

*This was pointed out first by the author in 1910, and has since been referred to in many of his articles.

the material is removed before antiseptics are applied, and placed in the patient's mouth after he has come out of anaesthesia, and he be instructed to chew it, swallowing the saliva and juices and spitting out the foreign particles, there will in all probability be placed in the mouth some of the microorganisms that entered the wound. We know when this occurs there will be a probability, almost amounting to a certainty, that severe infection will be prevented.

Without in the least depreciating the value of aseptic and antiseptic technic in the treatment of wounds, I offer the above method of wound treatment as a means of resisting microbic invasion, by raising the power of the blood serum, and increasing the activity of the leukocytes by the action of specific antibodies which cleanses the wound better than any other method. "It must be admitted there is much we do not know in connection with the healing of wounds; for at times when the most rigid aseptic technic has been employed, wounds become septic; while in the accidental wounds, when infection is expected or invited, the wound often heals by first intention. We account for this by the well-known fact, that sterilization of the skin is never absolute. There must ever be a few residual bacteria in the deeper tissues of the skin, that are not destroyed by the antiseptics and whether or not infection follows an interruption of the skin, depends upon two factors, namely, the natural resistance of the tissues; and the activity of the organisms in question. Our methods of measuring these two variable quantities are not accurate, for we never know there will be an infection until after its appearance."

On the other hand Autotherapy presupposes the wound to be infected, and utilizes the toxic product of the infecting microorganism to develop antibodies to combat the microorganisms.

An important factor which enters into every infection has not been given the consideration it deserves, namely,—*the*

recuperative power of the patient. Hahnemann recognized this and called it the *"vital force of the patient."* Wright mentioned it as *the reactive power possessed by the patient.* Since the recuperative power of the patient varies within wide limits, even in the same patient at different stages of his infection, it is not possible for us to adhere to any standard dose of medicine; for the dose to which one patient would quickly respond, may prove fatal in some other patient and possibly to the same patient, if it is withheld during the course of the infection till his recuperative powers have been reduced to a minimum.

While it is difficult to accurately determine just what the recuperative power a given patient possesses at the various stages of his infection, yet it is the clinician who can better estimate this power, for he is in a better position to select the dose suited to the patient's condition, than any one who has not seen the patient. This can usually be fairly accurately done. The advantages of recognizing the recuperative power of the patient and giving the remedy according to his individual needs, over the present method of giving the standard dose printed on the bottle, is at once apparent.

If a wound is clean, this prophylaxis will do no harm. The problem that presents itself in applying my autoseptic technic to fresh wounds is quite simple; for all extra-alimentary and extra-pulmonary wounds. The problem is solved if we merely place or transfer the infecting microorganisms from the wound in the mouth early in order that resistance to them might be developed before they have become acclimated to their new surroundings, or become residents of the body tissues. In arriving at the proper technic, we have established facts to guide us, as for example the dog in licking and curing his wounds lets in a flood of light on the subject. A fresh wound usually bleeds to some extent. When pyogenic

microorganisms enter a wound, some of them will tend to be washed out with the blood. Some of the microorganisms are probably destroyed by the plasma; those remaining in the wound that proliferate, and those that come out with the bleeding engage our attention at present.

In an infected wound, we expect pus to make its appearance by the third or fourth day. During this interval the invading microorganisms must proliferate extensively. The exudate formed by the rapidly multiplying organisms is fluid. Being fluid it travels in the direction of the least resistance, and if the wound is drained freely, it tends to travel towards the surface, and soak into the gauze covering the wound. Stress has been laid on the fact that the autotherapeutic remedy should be given early to be most effective, but in purulent infections the unmodified toxin-complex is extremely efficacious if given at any stage of an infection. When the anti-bactericidal elements of the blood are established to a given microorganism before the pyogenic wall is thrown out, the phagocytes will have free access to the organisms and will tend to destroy them quickly.

As the result of clinical tests, in early building up of the bactericidal elements of the blood to an infecting microorganism or microorganisms the following *autotherapeutic* rules for surgery have been formulated.

The Universal Formula, Applicable to All Wounds

If the exudate, or a dilution of the exudate from any fresh wound is filtered through a Berkfeld filter, and the filtrate injected hypodermatically at proper intervals, purulent infection will tend to be aborted.

A corollary to this general rule that is often more convenient in the application of this principle, may be stated as follows:

If the discharge from an extra-alimentary or extra-pulmonary fresh wound (the most common class of wounds with which we have to deal) is placed in the mouth, at proper intervals, purulent infection will tend to be aborted.

In test cases I have practically thrown aseptic technic to the winds, and seldom have an apparent infection follow this treatment. Wounds of the mouth, oesophagus, stomach and lungs must be treated by the general rule referred to above if the best results are to be obtained for reasons that will appear later. Compound fractures of the legs, arms, skull, etc., may be treated successfully by either of the above methods with equally good results. It is a question as to just how far down in the alimentary tract a wound may be located, in order that it may be treated successfully by following the treatment outlined in the corollary. It appears that wounds of the ileum and the large intestines may be treated successfully in this manner.

In closed wounds and in some punctured wounds in which the exudate does not come to the surface, and therefore cannot be obtained, the application of this principle is not practicable.

The blood serum from blood with a high leukocyte count may often be employed successfully, although it is not always as reliable as the filtrate of the pathogenic exudate, from the source of infection. In closed wounds a small silver wire or other drain inserted for three or four days will tend to lead the exudate to the surface without leaving a large opening. This often appears to be all that is necessary to allow the exudate to come to the surface where it may be obtained for therapeutic purposes. It is conceded of course, that shock, loss of blood, churning of the tissues, foreign bodies in the wound, etc., complicate the conditions, and the good effect of fortifying the tissues to the infecting organisms, under these

conditions, by *autoimmunization* might not be as apparent as under the conditions we should ordinarily expect to find in a wound. It is assumed that the surgeon will remove all foreign bodies, and treat the wound otherwise by well-known surgical procedures. In this discussion, we are dealing principally with wounds uncomplicated, except by pyogenic microorganisms. However, in all wounds this treatment tends to be beneficial; for under any conditions in which we can obtain the infecting microorganisms, we should be able to fortify against their successful invasion sooner and better than by any other method heretofore advanced.

In treating wounds *autotherapeutically,* I wish distinctly to be understood as neither advocating nor recommending any extraneous material or foreign microorganisms to be placed in the wound, either by careless or wilful handling; although in my test cases I have handled many accidental wounds that appeared to be unsterile with unsterile fingers, and I invariably have had my test cases heal without apparent infection. Aseptic technic should always be employed. Autoseptic technic should be employed also as an additional element of safety, for if aseptic technic has for any reason been faulty, or if for reasons little understood at the present time, the wound becomes septic, *autotherapy* will then tend to build up the bactericidal elements of the blood to the infecting organisms. In this way the wound is made to heal without infection being apparent. *Autotherapy* gives us more latitude in our operative surgical technic, correcting faulty surgical aseptic technic.

Cleanse the wound with normal salt solution only and dress it daily with sterile gauze. At each dressing catch all the oozing from the wound that is possible, using the stained gauze immediately over the wound, and the drain if there be one. Add only enough distilled water to bring it to an ounce of fluid. The gauze and water are placed in a bottle and well

shaken. It is then allowed to stand for from twelve to twenty-four hours, at the end of which time it is filtered through a Berkfeld filter, and from one to four c.c. of the filtrate injected hypodermatically, in the loose cellular tissues, as for example, over the biceps muscle. Keep this treatment up daily till after the danger of infection has passed.

A method of hurrying this process consists of grinding the bloody discharge in a mortar with powdered glass. After it is thoroughly ground, it is placed in an ounce bottle of water, thoroughly shaken to dissolve the soluble toxins properly. Filter and inject the filtrate in the manner described. Allowing the mixture of water and discharge to stand and the agitation as part of the first process, as well as the grinding of the second process, destroys some of the microorganisms mechanically. Their toxins will then go into solution by autolysis, and be in the filtrate ready for use.

Another method of applying the autotherapeutic principle in a simple manner is as follows: Dress the fresh wound once or twice daily. At each dressing cut out about four square inches of the stained part of the gauze immediately over the wound, place it in a four-ounce bottle of water, shake well, and give the decanted fluid to the patient to drink in several divided doses. This procedure is highly recommended in preventing infection, in extra-alimentary and extra-pulmonary wounds. The army surgeon's attention is directed particularly to it.

When we are able to obtain the infecting microorganisms in the exudate, and properly employ them autotherapeutically, early, there is no necessity for a wound ever to become severely purulent.

The first infecting or parent microorganisms are usually few in number; they must multiply extensively before the pus can be seen. At the time this treatment is being carried out,

the system is usually better able to react to the toxins than it would be later, for it is not then reduced by the fever coincident with pyogenic infections. The microorganisms are not as virulent then as later, when many successive generations of them have developed.

As operating surgeon for eight years in one of the large emergency hospitals of New York City, abundant opportunity for proving the therapeutic value of this *method of wound treatment* has been afforded. It is distinctly a new and original procedure and entirely foreign to all modern methods of treatment; yet wounds usually remain free from pus when this treatment is given. *Free drainage and autoseptic technic will cause almost any non-fatal wound to heal without infection being apparent. In the last analysis it appears that a patient may abort an infection by simply chewing his own bloody dressings twice daily. This is a fact, and we cannot know too many facts. The trouble in the past has been we have known too few. The knowledge of this simple fact may in certain rare instances be the means of saving human life.* The autoseptic treatment of wounds in no way interferes with the established aseptic method, but offers an additional simple and effective safeguard against infection, when the treatment is properly carried out. It is the source of a great deal of satisfaction to approach the operating table, with an additional assurance that no apparent infection will follow the operation.

The writer first successfully employed the live pathogenic microorganisms as a therapeutic agent.

Surgery has achieved wonderful results. Autotherapy comes in before and after operative surgery, achieving just as brilliant results in its special field of usefulness, tending not only to render many surgical operations unnecessary but also to correct faulty aseptic surgical technic. When Auto-

therapy is properly employed in the treatment of wounds of warfare the resultant loss of life of the wounded soldier is reduced to a minimum. For the average soldier is able-bodied and capable of developing strong reactions.

It is obvious from what has been stated above, that the technic of the autotherapeutic treatment of *wounds in warfare* is elementarily simple, and in its simplicity rests its accuracy.

Before entering into a discussion of the autotherapeutic method of treating purulent infections, it is particularly interesting at this time when the whole world is at war to hear what the English and American Army and Navy surgeons say of this method.

The following abstract is from an able article under the title of, "The Prevention and Treatment of Septic Wounds in Warfare," by Dr. F. W. Sumner, S.A., M.D., Civil and Military Surgeon, Saharanpor, India, U.P., appearing in the *Indian Medical Gazette,* November, 1914. Dr. Sumner says of Autotherapy in substance, "If one could devise a means of preventing wounds, received in warfare, from going septic, the number of fatalities would rapidly diminish. The first field dressing now in use is excellent as far as it goes, but it only if immediately applied, stops one of the modes of egress of septic material, etc., i.e., after injection. The defenses of the body against a successful pathogenic invasion, are, that in the first stage some toxins are absorbed from the wound (the less damage of surrounding tissues, the more easily are the toxins absorbed), these stimulate the production of *antibodies* in the body tissues; these are able to get at the source of trouble more or less according as the local tissue damage is more or less; in a clean-cut operation wound where the tissue damage is at a minimum, the microorganisms are held in check and the wound heals by 'first intention.' With more

damage, the surrounding parts are choked up with leukocytes, tissue cells and microorganisms, and a merry fight goes on between the offensive and defensive forces. The defense not only shuts off the body from an invasion of microorganisms, but at the same time prevents the body from pouring its ammunition of antibodies into the invaders; the slaughter of cells is great and shows itself by the amount of pus produced. Where the body cannot for some reason or other, manufacture its ammunition of antibodies and the defensive wall is set up, septicaemia, or blood poisoning occurs; the invaders' poison may have been so strong that the body cells could not react, and lie inert and unresponsive; or the cells may have been in an unfit conditon from chronic poisoning, diabetes, nephritis, etc., for the septic fever and other symptoms of the patient depend on how much or how little this manufacture of toxins is walled off from the body by the leukocytes and tissue cell barricade. Wounds of warfare lend themselves even more readily than other wounds to autogenous toxin treatment, for they are usually wounds arising in a healthy body. Many attempts have been made more or less successfully at vaccine treatment, such as the injection of stock vaccine, or vaccine prepared from culture grown from the causative germs, and of vaccine prepared from pus direct, also from the ingestion by the mouth of vaccine products."

Dr. Sumner states further, "The lines on which I have been working during the past few months, are, the injection or ingestion of bacteria-free and unmodified toxins, for which I owe my thanks to a paper by Dr. Duncan, under the title of 'Autotherapy' that appeared in the *Practitioner,* April, 1914.

"It is to be noted in Autotherapy that pure unadulterated toxins germ-free are thus injected, by his method, and *the result compared with other vaccine treatment—well, it is in-*

comparable. For the past few months I have used this method of treatment with the most gratifying results.

"An animal's wound—granted he can get at it and lick it—and assuming that his general state of health is good, practically never becomes purulent. Why? From the first he licks it, and the saliva with the toxins licked from the wound, is swallowed. This results in antibodies being produced by his bodily tissues, being circulated in the wound and paralyzing, and finally killing off all the microorganisms in the wound, so that aseptic healing of the wound occurs. It is especially to be noted that the animal is ingesting pure toxins; these are not sterilized at some sixty or other degrees of temperature; not preserved by adding antiseptics; not altered by keeping, not grown on culture media, but straight, fresh from Nature's laboratory. Here is a lesson of Nature to follow.

"Heat, antiseptics, keeping in stock, etc., all alter, modify or render inert the toxins, hence the disappointing results for the most part of vaccine treatment.

"Applying the natural autotherapeutic treatment made useful by animals to wounds, and especially wounds received in warfare; the following procedure must be carefully followed out; the simple instructions should be printed and given to every soldier for his guidance:

1. "No antiseptics to be placed on the wound.
2. "Where possible, the wound to be placed at once in the mouth and sucked for five minutes, every two hours, or oftener, for three or more days. Any foreign body to be taken out of the wound (bits of clothing, etc.), placed in the mouth and well chewed for five minutes, the saliva, juice, etc., from the wound, or foreign body, to be swallowed, the foreign body to be spat out.
3. "Where the mouth of the wound is small and tends to close up, retaining the discharges, it must be kept open by inserting a few strands of cotton thread, parts of the

bandage, etc., to act as a drain; where the wound is so situated that it cannot be placed in the mouth, take a piece of clean gauze (or rag) dip it in clean drinking water, squeeze out as much water as possible, and apply this to the wound to soak up the discharges. After two hours place the rag, after wiping up the wound with it, in the mouth, chew well for five minutes as above described; put on a similar piece of rag and repeat the process every two hours, being especially careful, where the wound is small, to take out the drain each time, to clean it with the rag and put in a fresh drain at each dressing.

4. "Nothing but boiled water may be used to cleanse the wound.
5. "As regards the 'rag,' it matters not at all whether it be septic or no, as any microorganisms on it will, by this method, produce their own antibodies, and their own destruction."

Dr. John C. Parham, M.D., Past Assistant Surgeon, U. S. Navy, Charleston, S. C., in an article under the title of "Autotherapy" which appeared in the *Southern Medical Journal*, April, 1916, Vol. IX, No. 4, pages 303-307:

"I want to prophesy a marked reduction in infected wounds in military surgery when Autotherapy is practiced prophylactically. I make it a rule to administer a filtrate in all extensive septic wound cases. The material for the filtrate is obtained from the wound before the application of the usual tincture of iodine and consists of particles of foreign matter contaminating the wound and expressed blood. In other cases the filtrate is made from a portion of the stained dressing impregnated with wound discharge taken at the time of the second dressing. In intra-abdominal and intra-thoracic conditions where pus is located, the patient receives a filtrate from the discharge. The filtrate from the exudate in aural or nasal-pharyngeal infections is of signal value in preventing mastoid

complications. It will be seen in surgical as well as medical fields the range of application of Autotherapy is wide and what is to the point it is effective.

"Entire credit for this method of treatment must be given to Duncan. The principles enunciated in this article are his almost without exception, and the sole purpose of this article is to attempt to direct attention to the procedure in order that it may gain the wider employment its merit deserves." Dr. Parham reported numerous cases he believed otherwise hopeless, cured quickly by means of Autotherapy.

Various reports have come to us privately from both civil and military surgeons as to the eminently successful results obtained in military hospitals in France in treating wounds of soldiers by means of Autotherapy; and testimony of the most convincing kind has singularly come to us from the lay press.

The writer had no idea that Autotherapy as a prophylaxis to infection was so extensively employed in Europe, although all during the war, he has left no stone unturned, to bring to the attention of the military authorities of all European Nations the great benefit that would be derived from treating the wounded soldiers autotherapeutically.

Scribner's Magazine for October, 1917, contained an article under the title, "In a Tank at the Messine's Ridge," by Lieut. "Z" of the British Army, in which he states, "After battle the wounded soldiers sit by the roadside *licking their wounds aseptically.*" Then in closing, he remarks, "On the return of the tanks, graphophones are whirling at top speed; bands are playing; bagpipes are squeaking; and somewhere over in the East, the Hun sits *licking his wounds,* and afraid."

French Army surgeons appear to be familiar with not only the autotherapeutic method of treating wounds of warfare but also the autotherapeutic method of treating respiratory

infections, from an article by the writer that appeared in the *Paris Médicale,* January, 1914, under the title of, " The Radical Treatment of Chronic Bronchitis and Catarrhal Infections of the Respiratory Tract," where the technic of Autotherapy in its application to respiratory infections is given. When a celebrated surgeon of the French Army had his attention directed to this method of treatment in 1916, he stated that it was not only well known in France but that it was used so successfully both in and out of the army, that two articles had appeared on the subject in the daily papers, the *Temps* and *Figaro* respectively, calling attention of the surgeons of the French Army to this effective method of treating bronchial conditions.

Gas Gangrene

No less authority than Roux, the Director of the Pasteur Institute in Paris, vouches for the remarkable curative effect of Autotherapy. In the Spring and Summer of 1915, five years after the author had been using Autotherapy continuously and successfully, he states in substance in connection with the treatment of gas gangrene: " As there was no time to wait for cultures, the idea was entertained of injecting sterilized crude pus or serum of the local lesion into its vicinity." This idea was due in part to the fact that as many as four or more germs were present in the secretions so that the labor of preparing a polyvalent vaccine would have been great and tedious. However, the cultures were duly made, while the crude pus was used, and eventually the autovaccines replaced the crude pus. He states that the men who actually did the work were Weinberg and Seguin, who receive credit for it while the man who brought the matter before the Society of Biology, was Professor Delbet, one of the most responsible of the French Surgeons.

The writer finds it difficult to believe that these authorities

did not have some knowledge of his work in view of the fact that he sent many thousand reprints of his articles broadcast throughout Europe, in the years 1911, 1912, 1913 and 1914.* He is naturally in doubt as to whether these men were influenced by his writings directly or indirectly, for it is impossible to believe that his views on this subject could be entirely unknown to them.

In devising this crude method of applying the autotherapeutic principle, these highly independent authorities confirm the author's previous teachings. Their work not only shows the remarkable therapeutic effect of Autotherapy but a striking parallelism to the writer's ideas expressed years before their articles were published.

Surgeon General Braisted of the United States Navy says: "Autotherapy is a subject of undeniable interest and importance."

Case 1. Dr. Francis H. Kirsch of New York City, reports the following case:

"On January 9, 1911, while performing a post-mortem on a patient that died from a cancer of the pylorus and intestines with general diffused peritonitis, I cut the middle finger of my left hand but disliked the idea of putting the unwashed finger in my mouth; instead I washed the wound with bichloride, one to one-hundred and painted it with iodine. Within thirty-six hours I suffered with much pain in the wound of a burning sensation. There was considerable swelling with redness and heat and I became frightened. At the suggestion of Dr. Duncan, the wound (which had become sealed) was opened and I was instructed to lick and suck the wound, swallowing the excretion; this stopped the pain within twelve hours and within twenty-four hours it began to heal; in a few days more it had completely healed."

Case 2. H. R., male, aged 45 years, applied for treatment

* "Autotherapy" by D. J. Mangan, D.V.S., *American Veterinary Review*, July, 1912, was republished in the *British Veterinary Journal*, 1913.

January 29, 1911, at my clinic. In falling, he ran a splinter of wood from a rotten board into the back of his right wrist. It was an inch long. It was decided to perform an experiment in this instance, and the writer asked two of the house staff, Dr. Dietrich and Dr. Kirsch, to witness it. In this experiment practically every known rule of modern aseptic surgery was violated and the best results followed. Nothing was cleansed or sterilized. The instruments used were a scalpel, an artery clip, and a pair of forceps. These were taken from the pocket case of one of the assistants and used as they were. The wound was opened with the scalpel and after a futile effort to withdraw the splinter with the forceps and artery clip, it was taken away piecemeal. Time consumed about ten minutes. First, the wound was not made sterile; second, the surgeon's hands were not sterile; third, the instruments were not sterile; fourth, the needle and suture were not sterile; fifth, the gauze covering the wound was not sterile; sixth, the wound was placed in the unsterile mouth. After the sliver had been removed, the patient was told to suck the wound vigorously for five minutes. Then a very superficial suture of silkworm gut was put in place, but the skin flaps were not drawn tightly. A flap of unsterile gauze was placed over the wound and held with a piece of tape. The tape was tied in a bow-knot, and the patient was instructed to loosen it and suck the wound every few minutes, especially when he felt any tickling or irritation in it. He was told to return to the clinic whenever it gave him trouble, but to return at any rate in six days to have the suture removed. He did not return for two weeks, and an orderly was sent to learn why; the answer was, "There was no necessity for returning; that the wound healed all right." He was told to return and have the suture removed. He said, "That's all right, I took that out with my jack-knife."

In order to substantiate further his claims to be able to abort sepsis by simply placing a fresh wound, or the discharge from a fresh wound, in the mouth, the author visited the dog-catching station at 10th Street and East River. It is believed that the bite from any animal is liable to result in

purulent infection, and possibly tetanus or hydrophobia, and any neglect to cleanse thoroughly or cauterize the bite from any animal invites infection. The dog-catchers never have purulent infection, gangrene, tetanus or hydrophobia follow their bites when they are able to get the wound in the mouth; they suck their wounds at once when bitten.

Case 3. Patient male, age 28 years, was admitted to the hospital suffering with a compound fracture of both bones of the left leg, lower third, the wound was opened, all blood clots removed, and a sterile drain inserted. The leg was put in a plaster cast with a window and dressed daily. Just before the operation, and on several succeeding days, the following treatment was given: About four inches of the stained gauze from immediately over the wounds, were placed in a four-ounce bottle of water; this was thoroughly shaken, and the decanted fluid given the patient to drink in divided doses. The wound healed by first intention.

Case 4. Dr. Charles T. Sibley, of New York City, a Baptist Missionary in the Philippine Islands, reports the following interesting case: There was brought into his hospital at Minandao, a young man who had been cut severely in a fight with a bolo. The father of this patient was a physician on a neighboring island, and the young man upon entering the hospital requested that a wireless be sent to his father regarding his condition. This message was sent and the answer came immediately in a long wireless message, instructing him to take care of his son by a new and wonderful method of treatment, called Autotherapy—going into details in regard to the treatment; insisting that this treatment be given as he indicated, and stating in conclusion that he was using this method successfully in his practice. Dr. Sibley answered by letter that Dr. Duncan was a classmate of his at college, and sent the father several reprints that Dr. Duncan had given him. The patient was treated autotherapeutically and the severe infection forestalled. The wound healed apparently by first intention.

Case 5. Patient, male, age 22 years, was brought in the hospital on the ambulance, suffering with a penetrating stab

wound of the left chest between the third and fourth ribs. Upon deep breathing, bubbles of air came from the wound and the sputum was streaked with blood. The wound was cleansed externally with normal salt solution, and a sterile drain inserted. In six hours, the drain was placed in an ounce bottle of water. This was allowed to stand for twelve hours with occasional agitation. It was then filtered, and 20 minims injected into the loose cellular tissues over the biceps muscle. Five treatments were given two days apart; the wound healed by first intention. The patient was kept in bed, however, for three weeks, when he was discharged cured. The toxins from this wound probably could not have been given by the mouth as successfully as by giving them hypodermatically.

Healthy tissues develop the maximum resistance, or antibodies, to toxins that are placed in them. In this stab wound of the lungs it was altogether probable that the wound was infected, for the lungs contained myriads of pathogenic microorganisms. The wound being infected could be classed as a bronchitis or other respiratory disease. In bronchial infections, there is very little reaction, because the patient is constantly swallowing the toxins contained in the sputum; and these tissues are already involved with the toxins; but when the sputum is filtered through a Berkfeld filter, and the filtrate injected hypodermatically, the cure in all acute conditions is expected to follow quickly.

Case 6. F. W. Sumner, M.D. A man had a ganglion situated over the wrist joint. This was removed through an incision one inch long. Immediately he came round from the anaesthetic the plain boiled water dressing was removed and wrist placed frequently in his mouth to suck. The wound healed by first intention.

Case 7. F. W. Sumner, M.D. Depressed fracture of skull in frontal region in a Sepoy of Remount Depot, Saharanpur. He had been kicked by a horse and the wound was dirty and contused. The skull was trephined, depressed bone raised, and a piece which had been driven into the brain substance re-

moved. The scalp was lightly drawn together. He was given by the mouth daily autogenous exudate from the dressings. The wound healed by granulation without complication.

Case 8. F. W. Sumner, M.D. (a good one for comparison with one above.) A boy fell from a tree on his forehead. He had a depressed fracture of the skull. I was absent and the case was operated on "secundum artem" by the assistant surgeon. He was admitted to the hospital the day following case 7's admission. Profuse suppuration took place and a hernia cerebri resulted. He was not treated with Autotherapy.

The Cure of Purulent Infections

It will readily be seen, the autotherapeutic technic employed in treating the following cases of purulent infection varies within wide limits; the basal consideration is, that the toxins should be fresh and unmodified by our present laboratory methods. That is to say, the toxins should be as nearly like the natural human, unmodified toxin-complex as it appears in the patient's body as it is possible for it to be. The cases cited have been taken from a list of thousands, that have been treated by the writer and by many other physicians, scattered throughout every State in the Union and from many parts of the world. This treatment is no longer an experiment; it has come to stay. A few drops of pus employed autotherapeutically will cure purulent infection a thousand years from now as it does today. There may be improvements in the technic of its administration, but the treatment outlined below is the specific medication for purulent infections.

No. 1. Autotherapeutic technic for purulent infection

℞.

Fresh pus ..... Minims 6.
Distilled water ..... Ounce 1.

Sig.—Mix in a bottle, shake well, and allow to stand for 24 hours. Filter through a Berkefeld filter. Inject 20 minims of the bacteria-free filtrate into the loose cellular tissues over the biceps muscle.

No. 2. There are various modifications of this treatment that are useful at times, but the therapeutic value of none of these has been proved to be greater than that given above. For example, we use the following method in treating desperate cases, in which it is necessary to hurry medication. This treatment is useful also when it is impossible to see the patient again. It is useful mainly because it saves time. The time between obtaining the pus and giving the injection may be shortened by thoroughly grinding ten drops of pus in a mortar with powdered glass, or fine sharp clean sand, previous to mixing it with the water. When this is done, the mixture should be thoroughly agitated in a bottle with an ounce of distilled water to dissolve the soluble toxins. When the microorganisms are destroyed, their toxins will tend to go into solution by autolysis. The fluid is then filtered through a Berkfeld filter, and 20 minims are injected at once.

No. 3. "One teaspoonful of pus is thoroughly shaken with two ounces of water. This mixture is then without loss of time, passed through a Berkefeld filter and one c.c. of the filtrate injected subcutaneously. The result is immediate and most gratifying both to patient and physician." *

No. 4. This method of treating the patient suffering with purulent infection is the one the writer has used successfully in treating hundreds of cases, and which he prefers to all others. This preparation will keep and if no additional microorganisms creep into the wound during the daily dressings, it may be used till the case is cleared up.

Pus ..... Minims 3.
Light curettage from the side of the wound .. Minims 3.
Milk sugar ..... Ounce 1.

Sig.—Mix in a mortar and grind thoroughly for ten minutes. Dose, 20 grains by the mouth. Repeat every hour till ten doses are given, then stop medication.

* "Autotherapy" by Dr. J. J. Sellwood, of Portland, Oregon. *Medical Sentinel*, June, 1914.

No. 5. Another method of treatment may be useful when a large number of patients are to be treated within a limited period of time. Place from two to six drops of pus on a lump of sugar, or in a little water (colored with cocoa if necessary to disguise any blood) and give to the patient in one dose. Many veterinarians just catch the pus on a spoon, or on a flat stick, and place it on the animal's tongue. They are unanimous in vouching for the specificity of Autotherapy. Their leading men say, "It would be a crime not to give it to horses."

No. 6. Another method that may be useful at times, is simply to lick the pus from the infected area. If the infection is very recent, this may be done at comparatively frequent intervals; if it is chronic, this treatment should not be so frequent. When another dose is needed, there is some indication for it in the wound. It feels irritated, or the patient's attention is attracted to it. If it is then placed in the mouth and licked, the irritation will soon subside. If it is impossible to reach the wound with the tongue, a part of the stained dressing may be chewed. In very chronic cases, one or two treatments of this nature is often all that is required.

If the best results are to be obtained in giving the autotherapeutic medication, the patient should be watched carefully for any change in his condition. Except in very acute cases, no further dose is given till the patient ceases to improve under the preceding dose; in chronic cases, this will often be from the third to the seventh day. In from six to ten hours after the treatment, if it is by the injection of the autotherapeutic filtrate, the cutaneous reaction will be from the size of a silver dollar to that of the palm of the hand. The constitutional reaction is usually slight, the temperature seldom rising above 100° F. After twenty-four hours, the cutaneous and constitutional reactions will begin to subside;

in forty-eight hours, they usually disappear. The pains in the wound will often cease, from one to twelve hours after the toxins are given. In twenty-four hours, the discharge will usually be noticeably less. Coincident with the discharge becoming less, it becomes thin and sanguineous, and the clinical symptoms begin to subside. A thin discharge is the indication that the curative reaction is continuing. No further dose is given, as long as the discharge is thin. If the discharge becomes thick again, another dose is given. Watch your patient carefully, let him be the guide as to when another treatment is needed. No set of rules will fit all cases. The doses given are for a strong healthy man. Never use antiseptics on a wound treated autotherapeutically, for many antiseptics destroy the therapeutic value of the toxins; that is, pus containing some antiseptics is useless for autotherapeutic purposes. When a moist dressing is desired, normal saline, or boiled water, may be used.

Case 9. Dr. A. Clement Shute, of Pottstown, Pa., reports the following test made on himself as a patient. He had a nest of boils in the axilla, and placed a few drops of pus from one in his mouth. It tasted sweet and took away all pain as if by magic. A dose or two more cleared up the whole condition.

Case 10. Dr. R. A. Agnew, of Jewett City, Conn., reports the following case successfully treated by him. "The patient had a discharging wound in the tibia for seven months. On December 18, 1912, I gave him 10 drops of pus by the mouth. On the 24th, the wound was clean and granulating nicely."

Case 11. Dr. E. F. Mills, 326 East 58th Street, New York City, reports the following case: "E. K., female, age 19 years, came to my clinic suffering with one of the most severe purulent infections I had ever seen. In the right forearm, lower third, there were a number of large pustules, from which there was a thick yellow discharge. Inflammation quickly ascended the arm, infecting the whole area. The lower arm was an oedematous boggy mass with multiple openings discharging

pus. Patient anemic and poorly nourished. The treatment consisted of antiseptic cleansing and aseptic dressing, usual for these conditions. This was continued for five days, but it did not result in improvement. I then decided to try Dr. Duncan's autotherapeutic treatment. Accordingly, I quietly laid aside one of the cotton wipes saturated with pus. When she had gone, I placed this in four ounces of sterile water. The next day—Friday—I gave her a 2 drachm vial of this water, and directed 10 drops to be taken every three hours in a little water. When she came in on Monday, the greatest improvement had taken place. The pus had dried up. The oedema had disappeared. The area of the skin was very red, but she had a handsomely shaped arm and wrist. She came once more, the second day following, for observation, when the case was discharged cured. Amputation has been performed for a very much less severe condition. I never saw another remedy act so quickly and beautifully in my life. It is dependable."

Case 12. Dr. P. A. Ela, of East Douglas, Mass., reports the following case treated successfully: "A young man had caught his hand in a machine: the flesh was torn and loosened from the greater part of the hand and three fingers, requiring many sutures and the removal of many pieces of bone. Dirt and cotton lint were imbedded in the tissues. On the second day following, having read an article on the subject of Autotherapy by Dr. Duncan, in the *New York Medical Journal* of December 14 and 21, 1912, I began giving the patient autotherapeutic treatment. I took the discharge from an old grimy handkerchief that covered the wound when he came for treatment. At this time the hand looked like a puffed pin-cushion, and the fingers like dark colored sausages. Medication was started on the 16th. On the 25th the swelling had nearly all disappeared; by this time there was a free discharge of thin clear yellowish serum, but no pus. In a few days the discharge stopped, and the wound promptly healed without further complication. On the first night before this treatment was begun it was necessary to give him a hypodermic of morphine, but this was not necessary after the unmodified toxin-complex was given. No antiseptics were applied after the first dressing. On every other day a solution of pus was given by the mouth. I have been using the Sherman stock vaccines

for over a year, but have seen no such rapid improvement. The special characteristic of this treatment is the quick relief of pain, and the rapid reduction of swelling."

Case 13. Professor W. H. Freeman reports the following case: "Patient, female, came to me with a carbuncle on the index finger of the right hand. She had been in delicate health since her first child was born. The finger and hand were swollen to large proportions and were tender and painful. The forearm was much swollen and the glands of the axilla were involved, with a temperature of 103° F. The lymphatics were streaked up past the elbow. The parts were freely lanced and the usual medication for such conditions given, but still the infection and swelling increased for several days. I took a drop of pus from the wound, triturated it with sugar of milk, and placed it on her tongue. In six hours the pain ceased. In twenty-four hours, the red line marking the lymphatics had disappeared and the wound took on a healthy appearance, temperature 99° F. In forty-eight hours healthy granulations had made their appearance. In sixty hours, healthy granulations covered the whole area. She made an uneventful recovery. Dr. Duncan's toxins are the most successful vaccines ever used in medicine."

Case 14. Dr. Alexander Vertes, of Louisville, Ky., reports the following case: "Patient, night watchman, had carbuncles and boils almost all of his life. He consulted me December, 1911. After lancing a carbuncle on his arm, I prepared a weak dilution from his pus which I gave him internally. The parts healed promptly, of course, but that he has had no more lesions seems remarkable. I am using Autotherapy in my practice, when it is applicable, to the exclusion of all other medication, because it gives me results no other medication has given."

Case 15. Dr. J. A. Archigouni, of New York City, reports the following case: "Patient, male, age 35 years, had multiple abscesses following typhoid fever. The patient was profoundly septic, and exuded pus at fourteen openings. Professor Wm. Todd Helmuth was called, and pronounced the case hopeless. Dr. John Thompson, surgeon, was also called to see the case. He opened several deep pockets of pus. Professor George F. Laidlaw, was then called in and referred me

to Dr. Duncan for autotherapeuttic treatment. After the first injection of his toxins the whole aspect of the case was changed. The patient had exuded over a gallon of pus. This free discharge materially lessened after each injection and under its continued use the patient made a complete recovery."

Case 16. Dr. J. W. King, of 62 Main Street., Bradford, Pa., reports the following case successfully treated by him: "Patient, male, 60 years, had a mass of abscesses from the axilla to the wrist. Under the usual remedies the patient grew weaker, and his end seemed close at hand, when I prepared pus according to your method, and in twenty-four hours, marked improvement was noticed. He made a complete recovery under its continual use. The patient has remained well (now over three years)."

Case 17. Dr. J. Hubley Schall,* a surgeon of Brooklyn, N. Y., reports the following: "I tried the unmodified toxin-complex on one case of severe furuncles. One dose consisting of a few drops of pus mixed with sugar of milk, was given by the mouth. I watched this case with much interest, and noted that it made better progress towards complete recovery than eleven other cases treated by other means."

Case 18. Dr. Sumner, of Saharanpore, India, reports the following: "Patient, a European Railway Guard, on the night of operation for hernia, managed to carelessly saturate his dressings with urine and again next day; the result was the most violent cellulitis extending all over the hypogastrium and the scrotum on that side. The two lower stitches were removed and unmodified toxins prepared and injected. The cellulitis subsided rapidly. The skin, however, had been undermined all round, in some places as far as four inches. Slight thin discharge went on for four weeks, probably kept up by deep stitch irritation. The final result was that all the operation wound had healed, except the lower one inch which granulated up. There was no sloughing of the skin, which under any other treatment would have been bound to happen with cord and testicles and belly wall complications."

* "Prophylaxis and Treatment of Furuncles," by J. Hubley Schall, A.B., M.D., Brooklyn, N. Y., *North American Journal of Homoeopathy*, May, 1912.

Case 19. Dr. Harvey D. Morris, Port Arthur, Texas, reports the following case: "Patient male, negro, age 38 years, came to the office with a cut on the index finger, made with a knife while slicing raw meat. The wound had closed, but the hand and forearm were enormously swollen and the patient was suffering a great deal of pain; temperature 102° F. Blood under the microscope showed a high leukocytosis. An incision was made on the finger and above the wrist, from which the pus spurted out. Ten drops of pus were placed in four ounces of water and well shaken. One-half of this was given him in the office and the remaining half was given in six hours. The next day the patient returned stating that he had felt much better. The same treatment was repeated. In sixty hours, or at his next visit, the wound was practically healed. A great deal of stiffness remained in the hand and wrist for some time, but this finally cleared up with massage and passive exercise. No other medication was given. This is only one of many brilliant results I have had with similar cases treated with Autotherapy."

Case 20. Patient, baby, age 18 months, had infected his little finger eight weeks before being brought under my medical care. Four physicians had told the parents that the member would have to be amputated to save its life. The finger was swollen to large proportions; the wound had been open to the bone, exposing the three phalanges. The sides of the wound were purple, and exuded a small amount of thin serous sanguinous discharge. The child was in poor physical condition and suffered so that it slept but little. The wound was cleansed with boiled water and sterile gauze applied. In twenty-four hours this was removed and the stained parts placed in an ounce bottle of water, and thoroughly shaken: the decanted fluid was then given to the patient to drink. The pain ceased within a few hours, and the child slept the night following. In 24 hours the wound was practically free from exudate. Within 49 hours it took on a healthy appearance. In 72 hours healthy granulations covered the infected area. In two weeks the patient was discharged cured: there were still ankylosis of the finger. The infecting microorganisms were the streptococcus short chain, and the staphylococcus pyogenes aureus.

The following case was reported by Dr. J. Wilford Allen, before the "Official Committee" appointed by the Homoeopathic Medical Society of the County of New York to investigate and report on Autotherapy.

CASE 21. "The patient, a young man, was first seen by me suffering with an orchitis resulting from gonorrhea contracted four months previously. He was in bed with a temperature of 104° F. The testicle had ruptured, leaving a sinus, in which was a gauze drain an inch long. The inflammation was rapidly extending, and peritonitis was at hand. Dr. Buck Carleton, a specialist in Genito-Urinary diseases was called to see the case. He recommended immediate castration to save the patient's life. The patient was in great pain, and apparently growing worse; operation was refused. Other prescribed methods of treatment gave no relief. I then decided to see what Dr. Duncan's Autotherapy would do for him. Accordingly I placed the drain in an ounce of water; it was thoroughly shaken, and allowed to stand for twenty-four hours, after which time it was filtered and 20 minims of the bacteria-free filtrate injected hypodermatically over the biceps muscle. In twenty-four hours, the pus had disappeared as had also the pain. The patient said he was feeling fine. Three more injections four days apart completely cured the case except for a small induration at the seat of the former infection."

The rapid arrest of suppuration and the reduction of pain are characteristically autotherapeutic in excessively virulent infections.

CASE 22. Dr. Andrew B. Gloninger, of Lebanon, Pa., reports the following case: "Patient a young man, farm laborer, living in a wretched mountain cabin. I found him tympanitic and profoundly septic. It was impossible to move him, and though the surroundings could not have been more unfavorable for surgical work, we put him on the kitchen table and operated. I found the appendix and a large portion of the omentum gangrenous, and a quantity of thin serous pus free in the abdominal cavity. After the operation his pulse was weak and thready and he looked as though he would not sur-

vive the day. I gave him a half teaspoonful of pus per os, while under anaesthesia, and took some to the office from which I made a filtrate according to your method. I sent this back to the nurse with instructions to give him one c.c. every three hours per os. The next day his temperature was normal, and he made an uneventful recovery."

The writer commends and emphasizes the importance of giving pus by the mouth while the patient is under anaesthesia. It is good autotherapeutic treatment, and should not be overlooked. At times it is all that is required to cause the repair of the tissues to take place promptly with no indication of pus, in a formerly purulent condition.

" Facts speak louder than words, and the physician who lays aside theoretical preconceptions so as to collect facts with unjaundiced eyes and unbiased mind, may be safely left to form his own conclusions."

Case 23. Dr. L. G. Phillips, of Pensacola, Fla., reports the following case: " Patient, mother of ten children, broke out with eruptions in the second week of typhoid fever. These changed to blisters and then pustules, and the skin seemed to raise and the pustules coalesce until they were great patches, from the size of a quarter to a saucer. They became black and sloughed and finally fell out. All ten children came down with typhoid and did well, except the mother who stayed up and nursed the little ones until she fainted with exhaustion. She was sick with the disease for more than a week before she was compelled to go to bed despite my urgent advice. Four nurses and myself did our full duty. The scent from the mother was indescribably foul. The skin came off from her shoulders, hips, sacrum, a portion over the chest, back and thighs. The pus each day filled a large vessel. She was exceedingly weak. I gave her several drops of pus on sugar, four doses, two hours apart, ten days ago, and repeated four days later, and the change is most wonderful. She will get well."

Case 24. Dr. John C. Parham, Past Assistant Surgeon

United States Navy, Charleston, S. C., reports the following cases: "My case records show many cases. In three of these cases of carbuncle the infection was seen early, but after the multiple foci showed pus. Two of them were on the upper lip and adjacent cheek and were not opened as extensively as they would have been otherwise, neither were they cauterized. The pus from these infections was added to 50 c.c. of sterile distilled water and allowed to stand with occasional agitation for twenty-four hours. After passage through a Berkefeld filter 2 c.c. of the filtrate was administered per hypodermic. Resolution set in, and the day after injection the appearance of the lesion was such as to cause me to doubt the accuracy of my diagnosis. In neither case was a second injection necessary. The third and fourth cases were seen after full development and were incised and treated as were the first cases. The well-known very high mortality of carbuncle of the upper lip needs no comment. I feel that I should state that previous experience in similar infections treated by autogenous filtrates exclusively, justified my actions in not incising and extensively cauterizing these lesions. Marked lessening of pain and discomfort, together with rapid resolution and regeneration of the affected areas, is noted within twelve to eighteen hours. Usually two or three injections are necessary in treating a severe case, but rarely does a good-sized furuncle appear after the first filtrate is administered."

Case 25. Dr. Harvey D. Morris, Port Arthur, Texas, reports the following cases: 1. "Female, abscesses of the ear, had been treated eight days before I saw her. Drain from ear placed in four ounces of water, well shaken and put through Berkefeld filter. Four doses of twenty minims each were given hypodermatically and case cured. Patient reported the day after first injection, that last night was the first time she had been able to sleep for some time.

No. 2. (Morris): "Male laborer in oil refinery. Multiple boils. Had been treated two weeks before he came to me. Ten drops of pus were prepared in the usual manner, patient well after four doses which were given one day apart. Have also had numerous other cases of boils with same results. In conclusion will say that Autotherapy has always proved prompt in its effect and decided in its cure."

CASE 26. Dr. Lewis J. Muthart, Jermyn, Pa., reports the following case: "Patient, male, had a large carbuncle of the right ear which was discharging about a cupful of pus per day. The infection continued spreading to surrounding tissues, the man growing weaker daily. He refused complete incision of the infected mass, so I decided to use Dr. Duncan's method of Autotherapy in this case. I gave him one drop of pus in a little water every hour for four doses. Ten hours after the last dose of the unmodified toxins by the mouth the pain ceased. That night he had the first good night's sleep in two weeks. In four days that carbuncle was clean and clear with healthy granulation springing up everywhere. Autotherapy is an immense addition to our therapeutic resources."

The *Medical Sentinel* of June, 1914, contains an article under the title of "Autotherapy," by Dr. J. J. Sellwood, of the Sellwood and Besson General Hospital Training School for Nurses. Dr. Sellwood says:

"The autotherapeutic technic we use is as follows: One teaspoonful of pus is thoroughly shaken with two ounces of water. The mixture is then passed through a Berkefeld filter and of the resultant filtrate, 1 c.c. is injected subcutaneously. The result is immediate and most gratifying, both to physician and patient. The method is of particular value both in acute and chronic sepsis.

"In this process of filtration, the infectious element of pus is eradicated and the free toxins used, just as when given by the mouth, the lymphatics digest the infectious element and set free in the general circulation the toxins, which develop antitoxins. The following cases illustrate the two methods of treatment.

CASE 27. "Otitis media and mastoiditis following measles. Boy eight years old—temperature 102° F., marked oedema over the mastoid, ear standing far from the head. Paracentesis tympani done with fair drainage and amelioration of the symptoms for two days, after which he became worse. Under local anaesthesia an incision was made down to the mastoid. The next day there was a free discharge of pus from the

incision. Five drops of this pus were well shaken in a half ounce of water, and one teaspoonful of this mixture was given every fifteen minutes for four doses. The next day there was a very scanty serous discharge, several drops of which was given as before. The next day the wound was dry and the patient quickly recovered with normal hearing. We are certain this patient would have needed a mastoid operation had the above treatment not been used."

"It is evident the area of this infection was walled off so that none of the infectious element escaped through the eustachian tube."

CASE 28. "The second case is of marked interest, tuberculosis of the knee joint in the early stages. An incision was made which by reason of severe necrotic area and patient's general condition resulted in post-operative infection. For a time it looked as if amputation might be necessary. For two months his temperature ranged from 102-104° F. at least once daily. After using the hypodermic method of Autotherapy described above the temperature became normal in four days. The injection was then repeated and the patient became normal."

Dr. Sellwood says further: "Many more cases could be cited. These are simply types not only of the cases, but the results."

CASE 29. Dr. J. M. Curtner, of Vincennes, Indiana, reported the following case: "Patient had a severe pyogenic infection of the hand following an injury by a tack. The discharge disappeared on the third day after treatment, and the patient was discharged on the fifth day. But one treatment was given."

CASE 30. The writer reports the following cases:

Patient, male, age 45 years, carpenter, Mr. Yachmuck, injured the little finger of his right hand, following his vocation, as a carpenter. The company's physician treated him for a few days but the infection grew steadily worse and he changed to a private physician. His finger continued to grow progressively worse until the physician recommended amputation

as the only means of saving his hand and possibly his life. He changed again to a third physician. He was not ready to submit to amputation and talked the matter over with several of his friends, one of whom happened to be a former patient of the writer. He came to the writer with absolutely no confidence that his finger could be saved. When seen the first time the finger was enormously swollen; there was an opening in the finger two-thirds of its length the result of an incision by one of the physicians who had attended him; the hand was puffed and lymphatics streaked past the elbow. The culture of the microorganisms revealed almost pure culture of staphylococcus pyogenes aureus. The patient said he had not slept for two weeks. His tongue was coated and he had no appetite. Treatment: About ten drops of pus were obtained from the wound and the gauze. This was placed in an ounce of distilled water. This was thoroughly shaken and half of it colored with liquid peptonoids was given to the patient to drink at one dose. The other half was placed in an ounce bottle and filled with ethyl alcohol and this was given him with instructions to take 10 drops every four hours. When the patient was told he would have a good night's sleep (that night) he frankly admitted that he did not believe it. The wound was dressed merely with sterile gauze. When seen the next day he was loth to admit that he slept from 7 o'clock P.M. until 9 A.M. without waking. The wound was much improved and he was without pain. He made an uneventful recovery and was discharged at the end of the sixth day as so far recovered as to require no further treatments.

CASE 31. Six months after the above patient had recovered, Henry Segal, a neighbor of Yachmuck's, presented himself for treatment for an infected finger. Segal had gone through much the same treatment as had Yachmuck and when four physicians recommended that his finger be amputated, Yachmuck referred him to the writer. The third finger was severely infected following a frost bite; there was a burrowing superficial cellulitis over two-thirds of the whole finger and the tip end of this was where the infection had centered. His finger had been lanced and he had been suffering greatly for over three weeks. The microorganisms of this pus showed a mixed infection staphylococcus and streptococcus. However

there was so little exudate that the writer was compelled to employ the washings from the superficial skin that were removed from the finger, together with the small portion of stained gauze directly over the wound. The whole finger was then wiped off with small pledgets of cotton that had been dipped into distilled water. The finger-nail was attached only by superficial skin. The superficial skin, the nail, the small portion of stained dressing and the half an ounce of distilled water used in washing the finger, and the pledget of cotton were placed in an ounce of distilled water and thoroughly shaken. One-half of this was decanted and given to the patient to drink at one dose. The bottle was filled with ethyl alcohol 95 per cent. and well shaken. The decanted fluid was given him with instructions to take 10 drops every four hours. The finger was dressed with sterile gauze only. The patient said he had not slept for over ten days. The following day he reported that he slept soundly until four o'clock A.M., and when he awoke there was some pain in the finger. This drop treatment was continued for six days when the patient returned to work. He was told to report every other day for a week when the case was discharged as cured.

CASE 32. Patient, female, age 35, stuck her finger with a pin and severe infection followed. This proved to be due to streptococcus. She was given the washings from the dressings and a few drops of thin pus from the wound by the mouth in one dose, and the finger dressed in sterile gauze. She slept well during that night. Within forty-eight hours after the treatment, a plug of necrotic tissue about the size of a pea was removed through a small opening in the end of the finger. This was placed in an ounce of alcohol, thoroughly shaken and given her to take in doses of 10 drops, three times a day. At the end of the fourth day the patient was discharged as having so far recovered as to require no further treatment. She was told to take 10 drops once daily for several days longer.

CASE 33. Patient, male, age 36, had come from St. Mary's Hospital, Hoboken, where he had been treated for four weeks for a severe infection of the right index finger. The writer had often amputated such fingers before he discovered Autotherapy and was interested to see just what the latter would do in a condition of this kind, where the life of the tissue

adjacent to the distal phalanx seemed to have disappeared. The patient was given about five drops of pus by the mouth and the finger thoroughly cleansed with distilled water and dressed with sterile gauze. Examination of the pus showed a mixed staphylococcus and streptococcus infection. Improvement was prompt. The patient seemed better, ate better, the pain was not so severe but the wound did not seem to heal as it should. At the end of four days under ethyl chloride, the small opening was enlarged with the scalpel. The color of the tissues improved showing there was still vitality. At the sixth daily dressing a probe in the wound disclosed the fact that the distal phalanx appeared to be separated from the tissues. With a small pair of artery clips the bone was firmly grasped, the patient jerked his hand away and the phalanx was removed completely. The finger then healed promptly and at the end of ten days from the time the patient first presented himself, he was discharged as cured. This patient received a drop or two of pus every day during the treatment.

Cases like these could be cited almost indefinitely from the surgical dispensary where the writer, as visiting surgeon, attended daily, for the purpose of accumulating data that would be convincing to physicians who would read his medical articles and this book.

Case 34. Dr. William H. Freeman, of East New York, had the following experience with an infection that the writer has duplicated several times; his case was as follows:

Patient, policeman, who came to him suffering from a felon. He gave him the usual autotherapeutic treatment of a few drops of pus by the mouth and was surprised to find the patient much worse, not having slept any the night following the treatment. Dr. Freeman recognized that possibly the dose had been too large and the pain and sleeplessness the night before was due possibly to severe negative phase, and he accordingly reduced the dose, giving him about ⅒ of a drop but still the patient complained of excessive pain and sleeplessness. The dose was then decreased to the sixth dilution

and given to the patient without knowledge of what he was taking, with the same aggravation of symptoms. I do not recall how Dr. Freeman finished the treatment, but in similar cases treated by the writer, he has found it necessary to properly control the condition, to resort to the thirtieth dilution and at times even higher. This class of patients presenting a severe form of anaphylaxis, are not common but they should be recognized when they are seen. It would be but natural for the physician unfamiliar with the treatment of anaphylactic cases to interpret the treatment to a failure in this case. It is for this reason that attention is drawn to it at the present time. In treating patients suffering with purulent infections and those suffering with other infections as well, there are two things to be kept in mind. *First,* they will not improve as they should if we do not give them sufficient medication. Then we should be careful we do not give them too much for a severe aggravation or negative phase will set in—this is usually to be avoided—a patient suffering with a severe aggravation will appear to be worse to one inexperienced with this method of therapy—when this is severe, resort to active elimination immediately, as hot tubbing, purging with calomel and salts. If the aggravation is very severe, ¼ grain of morphine should be given. When medication is again continued, a much smaller dose should be administered, although as explained in the chapter under the title of "The Filtrate," another dose should not be given until the amelioration of symptoms under the former dose has about ceased.

The writer reports the following case:

Case 35. Patient, male, age 36 years, ambulance driver, applied for the correction of an exaggerated Roman nose. It was not of the distinct commercial or Hebrew type, but was more of a beak or prominence in the middle of the bridge. Having corrected many of these deformities with no macroscopical evidence resulting from the operation, he was operated, having as the result of the operation, a Grecian type of nose. Before the wound healed he received an injury to the nose that opened the wound and infected it. The wound was closed and drained from the inside of the nose and at the end of

twenty-four hours a filtrate was made from the exudate that had soaked into the drain. Two injections were all that were needed to cause the wound to heal promptly.

Dr. A. S. Boyce, Professor of Gynecology, New York Medical College and Hospital for Women, has been kind enough to select this case from many she treated successfully by means of Autotherapy, for the benefit of the readers of this book.

Case 36. "Mrs. R., 68 years of age—pyemia patient, ill about three weeks. We had opened and drained fifty small abscesses and several large and deep-seated, necessitating the use of gas anaesthesia for incision and drainage. We were rather hopeless of the recovery of the patient at the time and decided to use Autotherapy. A powder composed of pus mixed with sugar of milk, making about the 6 X trituration was given every eight hours for three doses. Then once daily for three days. In forty-eight hours we were unable to obtain more pus, and the patient left the hospital in a month's time. I have always hesitated to report this case and others because it sounded too spectacular. However the fact and the patient still remain."

The quick cessation of pain and the immediate reduction of swelling are characteristic of this treatment. The more virulent or aggressive are the infecting microorganisms, the quicker will be the response and cure. The pain usually leaves within a few hours as if by the action of morphine. Free drainage and autoseptic technic will cause almost any purulent infection to heal quickly. The diagnosis of the infecting microorganism is often unnecessary as far as a cure is concerned. Use nothing on these wounds but normal saline (boiled water will do) and sterile gauze (boiled gauze will do). The technic of the application of the autotherapeutic principle varies within wide limits, and if the technic outlined is closely followed, there is no danger in its use, or at

least no more danger than in the use of the vaccines. Children should receive proportionately smaller doses.

Metastatic Boils

In recent years many cases of metastatic boils have been reported, especially in connection with paranephritic abscesses. By means of Autotherapy we are often able not only to treat boils successfully, but to immunize the patient to the micro-organisms in the deeper foci of infection.

Facial Furunculosis

In facial localization, in connection with boils on other parts of the body, Autotherapy comes to the rescue of the surgeon for if those on the remote parts are treated autotherapeutically, those on the face will seldom or never come to maturity.

Times without number have boils in one part of the body been treated successfully autotherapeutically, and simultaneously boils on other parts of the body would tend to dry up, as on the face. Even when those on the face are about to rupture they tend to dry up with a final evacuation of a tiny plug of inspissated pus. The appearance of carbuncles in connection with diabetes may be but an external manifestation of an internal infection. The writer has had but little experience in treating furunculosis in connection with diabetes, but it would appear that these patients require exceedingly small doses of their unmodified toxins, for the system is not in condition to react properly to a material dose.

We should not be misled in making a wrong diagnosis of glycosuria in connection with carbuncles, for it is often but of a transitory nature and will clear up quickly when the carbuncle is treated autotherapeutically. For treatment of Glycosuria see chapter under the title of "Serum Therapy."

Captain B. V. Nesfield of Agra, British India, F.R.C.S., Local Chemical Examiner, a former pupil of Wright, states in the *Indian Medical Gazette* of August 1, 1913, page 307; and in 1915, page 471, that he had discovered a means of treating septic conditions by injecting sterilized pus; he also states that as he had had *miserable* results from the autovaccines, he was minded to sterilize pus and inject it directly into the tissues. He first used heat but changed to carbolic acid 1 to 40; he developed an elaborate technic and claims permanent results along lines advocated by the writer several years previous. He states, "The reason for using sterilized pus in the place of autogenous and other vaccines, is, *first,* the simplicity and cheapness; *second,* the pus is truly autogenous. This is not so when the vaccine is prepared for organisms grown on artificial media, for the organism is changed by such growth; *third,* besides bacteria, pus contains toxins and antibodies, both extremely useful for therapeutic inoculations." He claims to have cured a large psoas abscess in six weeks; a multiple deep pyogenic abscess in a girl seven years old, well in two months. In empyema, in a septic breast case, the suppuration ceased as if by magic. He claims also he has cured and ameliorated several cancers. He winds up his article by stating, "Pus for therapeutic inoculation seems to me to open a very large field for practical therapeutics. I have found it more beneficial than vaccines, etc., etc."

Those who read the writer's articles published in the *Medical Record* and the *New York Medical Journal* or any one of twelve other medical articles published in other medical journals on the subject years previous to Dr. Nesfield's published articles, cannot fail to find a repetition of the writer's ideas, in almost his words. Not only this but his prophecies as to the future use of this work are in places, almost identical with the words employed by the writer.

If after the proof given in the preceding pages as to the great therapeutic value of Autotherapy, still greater confirmations is required, it is supplied by Dr. Nesfield, a wholly independent observer, in a different part of the world, who has verified completely the writer's work. His position is high in the medical world and for this reason his statements cannot be doubted.

Acne Vulgaris

The treatment of patients suffering with acne vulgaris up to the present time, too frequently has been disappointing, and we have often been mortified to find our treatment apparently made the condition grow steadily worse. This last statement refers particularly to patients treated with vaccines.

Acne is a chronic disease and experience leads unmistakably to the conclusion that the patient is often suffering with anaphylaxis; that is, he is extremely sensitive to the toxins; so sensitive in fact, that when the toxins and vaccines are given in material doses, the condition becomes aggravated. In the early stages of the development of Autotherapy, this condition of aggravation was noted in a number of cases in which the patient was treated by a subcutaneous injection of the filtrate made from a dilution of pus from the pustules, or when the crude material was given by the mouth in the manner described in the chapter on "Purulent Infections."

As stated in the chapter under the heading, "Filtrate," anaphylaxis is often controlled by exceedingly small doses of the sensitizing agent.

Illustrating the autotherapeutic treatment of acne by means of the small dose, it may be well to report one of the earlier cases treated in this manner, together with the conditions that were present and reasons for employing it. We have as a precedent for giving the small dose, not only the minimum

dose of Pasteur, but the use of the well-known minimum dose employed by homoeopathic physicians.

Case 37. Mrs. S., age 32, applied for treatment suffering with a severe case of disfiguring acne. The pustules were all over the face but were particularly severe on the forehead and chin where they were larger and coalesced, apparently, in the deeper subcutaneous tissues. Pressure on one part of the forehead would cause pus to exude from several minute remote openings—the same statement applied to the chin. About five drops of pus were triturated with an ounce of sugar of milk; of this she was given five grains every four hours for three days. When she returned at the end of the fourth day, her condition was pitiable indeed. Her whole face was a mass of indurations and newly formed pustules, and the old ones were pouring out pus freely. Recognizing the value of the small dose, the writer decided to make a test in this case and see what effect a minute dose of the same material that caused the symptoms would have on the course of the disease; accordingly he prepared the 6th c.c. dilution, in the following manner:

Six sterile ounce bottles were placed in a row. Five were filled with distilled water and the last with alcohol. In the first was placed five drops of pus; the mixture was thoroughly shaken and allowed to stand for twelve hours with occasional agitation, at room temperature, in order that the water would thoroughly dissolve the soluble toxins—some of the microorganisms would probably be destroyed by this treatment and their toxins would then go into solution by autolysis. At the end of this time five drops of this mixture were placed in bottle No. 2 and twenty raps on the palm of the left hand was given—this was dilution No. 2. Five drops of dilution No. 2 were then placed in bottle No. 3 and shaken, and so on until the 6th bottle; the 6th dilution being made with alcohol would keep. The patient was instructed to take ten drops of this dilution in a little water before meals and at bedtime. In twenty-four hours a distinct improvement was noticed; there was no more pus but the face was still red. At the end of seven days from the time treatment was begun, the patient had

practically recovered. She came once a week for the following six weeks. At each visit she was given three small doses. There has been no return for over five years.

Case 38. Dr. Charles L. Ireland, of Columbus, Ohio, reports having treated a number of patients suffering with acne vulgaris, successfully, in a similar manner. Dr. Ireland expressed the pus from one or two small pimples and caught it on cotton. He placed this in about an ounce of alcohol and shook it thoroughly. He poured a few drops of this over a small vial of pills made of sugar of milk and gave this to the patient with instructions to take two pills three times a day. He reports being successful in treating a number of patients.

Case 39. Dr. David Trumbull Marshall, Hollis, L. I., reports the following case: Patient, female, had been suffering with acne of the face for ten years. Several pus pimples were lanced with a bistoury and the pus was rubbed with fine sand, it was then mixed with two drams of water for thirty minutes, then filtered. She had one intravenous injection of 30 minims on July 12th and on July 17th, and 23rd. On the 27th, she was given 30 minims subcutaneously. The patient did not return till September 7th. The reason given for not returning was that her face had been free of pimples. The filtrate was again given in the manner before described which completely cleared up the case.

There had never been a time for ten years that her face was clear of a disfiguring acne. The reactions were never severe save after the intravenous injection.

Dr. Clement A. Shute, of Pottstown, Pa., in a Symposium on Autotherapy in the *Western Medical Times,* October, 1916, reports the following case:

Case 40. "The first experience I had with Autotherapy was in a case of acne in a young man 18 years of age. I had read an article by Dr. Charles H. Duncan under the title of 'Autotherapy,' and was anxious to test it. I secured the discharge from several pimples on the face and back (about two grains) and triturated it with an ounce of sugar of milk for fifteen minutes; of this I prescribed five grain doses every

three hours, both before and between meals. At the end of the first week there was marked improvement, and in five weeks there was scarcely a blemish left. The face remains clear to this day (four years later)."

* *Report of Veterinary Physicians*

CASE 41. Gray gelding of the draft type, having a large fluctuating fistulous abscess on the right side of the withers. Two doses of heated pus were administered subcutaneously, the first given on October 18th and the second on October 22, 1911. The discharge took on a sero-sanguineous aspect the day following the first injection. The animal made a complete recovery within two weeks. No microscopical examination was made of the discharge.

CASE 42. Bay gelding showing a very severe infection of the fore point of the fetlock on the off fore leg. Microscopical examination revealed the presence of necrophorus bacilli, streptococci and staphylococci. Multiple abscesses were forming around the joint and extending to the knee. Animal in great pain, places no weight on limb, temperature very high, the condition going rapidly beyond control. Four doses of the heated pus were injected subcutaneously on December 10, 12, 17 and 24, 1911, respectively. The improvement was remarkable after the second dose; and the animal was ready for work in a month. Following the second dose the parts were actually bathed with lymph that had the appearance of liquid vaseline.

CASE 43. Black gelding having a generalized necrotic abscess formation around the coronet and in the hollow of the fetlock due to a puncture wound in the frog. Five doses in all of the heated pus were injected, covering a period from December the 21st, 1911, to January the 12th, 1912. After the first dose the parts took on a flushed appearance and began to heal rapidly. Unfortunately the flexor pedis tendon had necrosed before the treatment was begun and had rup-

* The first twelve cases are abstracted from an article under the title of "Autotherapy," by D. J. Mangan, D.V.S., that appeared in the *American Veterinary Review*, July, 1912.

tured. Although healing was complete the animal was destroyed. The microscope showed the same infecting agents as case No. 42.

Case 44. Gray gelding. Microscope shows the same microorganisms as in case No. 42, and clinically and etiologically is the same as case No. 43; receiving five injections of heated pus, making a complete recovery in six weeks.

Case 45. Dr. W. J. Magee's case. Bay gelding, showing a profound infection of the off fore foot and large necrotic areas. Microscope showed the smear covered with necrophorus bacilli, streptococci, staphylococci, and what happened to be the bacillus pyocyaneus. This case was treated with the heated pus and Dr. Magee was favorably impressed with the results after the first dose, although the animal died. Dr. Magee attributes the death to the too frequent injections, bringing on a permanent "negative phase."

Case 46. Buckskin gelding; the microscope showed a streptococci infection of a wound on the hind quarters, that had become infected by using the same syringe in injecting it that had been used on a distemper abscess on another horse. This animal at the time of the treatment was in a prolonged "negative phase," showing numerous abscesses in different parts of the body. The injection of heated pus in small doses did not influence the course of the disease and the animal died from sepsis.

Case 47. Bay gelding, brewery draft horse, suffering from a nail prick that had caused a separation around the coronet, great pain, high fever, no weight on foot. No microscopical examination of the discharge was made. This case took four doses of the heated pus before recovery became complete in five weeks.

Case 48. Bay gelding; coronet, pastern and fetlock, one suppurating mass due to a punctured wound in foot. Discharge of purulent synovia from original wound. No microscopical examination made. This case was fed with the purulent discharge from the leg and all the suppurating and necrotic areas began to heal. The parts were perfectly healed in five weeks, except a slight discharge of non-purulent synovia from the bottom of the hoof. All the digital articulations had become ankylosed and the animal was destroyed.

Case 49. Gray gelding, a deep punctured wound reaching down to the coxofemoral articulation; yielded very rapidly to the administration of the crude pus per os.

Case 50. Gray gelding, of a large heavy draft type, cellulitis of the entire right hind leg, apparently starting from a calloused area on the anterior surface of the pastern. The part was washed and hair clipped and a moist antiseptic dressing applied for twenty-four hours. Then the callus was raised off completely and the pure pus caught in a wide-mouth bottle. A pure strain of streptococci was shown under the microscope. This discharge was filtered through a Berkfeld filter and only two injections were necessary to bring about a cure.

Case 51. Gray mare (green), had been suffering from a very severe attack of influenza of the fulminating type. The attack under the regular treatment ran a very tedious course, until finally the temperature remained stationary at 102° F., pulse 60, and the animal refused to eat or drink and was in this condition for three days, when small petechiae appeared in the left nostril; eight distinct petechiae were counted. In the right nostril there were not so many. Along the abdomen were several oedematous patches about the size of a man's fist. The symptoms were undoubtedly those of purpura hemorrhagica in the initial stage. The animal was injected subcutaneously with 2.5 c.c. of the filtrate of the discharge from case No. 50. The next day the condition of the animal was wonderful, temperature normal, petechiae and oedematous swellings completely disappeared. Animal drank a pail of water and ate one quart of oats. A second dose was given four days later and the animal made a rapid recovery.

Case 52. Dark gray gelding, having a fistula of the withers of four weeks' standing. The parts were washed with plain tap water and the next morning two tablespoonfuls of pus were collected and enough water added to make 12 ounces of the mixture. One ounce was given in the mouth every hour, until four doses were taken. By mistake the same number of doses was administered the next day but without any harm being done. The day following the first treatment, the discharge had changed to a decided bloody serous exudation and about two drachms were all that could be expressed from the

fistulous tract; the second day only a few bubbles of the discharge could be forced out, in comparison to the two ounces on the morning on which the treatment was commenced. The animal made complete recovery in three weeks. No microscopical examination was made of this discharge. Four treatments were all that was necessary in this case.

Mangan states further:

"Strong antiseptic and astringent solutions are contraindicated, as a rule, when the autogenous antigen is being used, because such agents retard the outflow of lymph and blood which follow their use.

"Generally speaking the more severe and systemic the infection the smaller should be the dose of antigen employed. Where very small doses are given, they may be given more often; in some cases daily minute doses being employed. When large doses are given the intervals between them should be lengthened. Finally too much should not be expected from this treatment and it should not be considered as a cure-all."

Case 53. Dr. Jay Macdonald, D.V.S., Veterinary of the Carroll Sales Stables, 24th Street, New York City, reports the following case:

Vanderbilt coaching horse from London. Chestnut gelding 9 years old, 15 hands high, very shy. Shied at auto and cut fetlock joint wide open. Severe purulent infection set in. The inguinal glands were involved. The leg was enormously swollen, high temperature, etc. The case appeared to be hopeless and the animal would under other conditions have been destroyed.

Treatment.—Twenty c.c. of pus were placed in a quart of water and thoroughly shaken; of this two ounces were given every two hours for twelve hours. In twenty-four hours the horse was better in every way. He had but one other treatment, and in three weeks he was well.

Dr. McDonald further states:

"I have used this treatment on many other cases just as severe with equally good results, and am convinced nothing else would have saved these animals."

CASE 54. Dr. R. S. Mackellar, D.V.S., 351 West 11th Street, New York City.

Severe case of fistulous withers. "I judge this case would not recover in less than three months, and it would in all probability have to be operated to recover. Pus was copious, thick and yellow."

Treatment.—One ounce of pus was placed in six ounces of water and thoroughly shaken. Of this one ounce was given by the mouth every hour for four doses. In forty-eight hours the discharge was less, thinner and mixed with blood. In ten days the wound was nearly closed, but there was a little pus. In order to obtain sufficient I made a curettage from the side of the wound, using the crust or scab also. I then gave another four doses in the manner described above. In ten more days' time from beginning treatment the wound had healed. The horse was put to work but the collar rubbed again and the surface broke down. One more dose was given and that was the last of it.

CASE 55. Dr. Mackellar, D.V.S. "Acute synovitis of the coronary joint, very severe. I gave the same treatment as in the case above and in three weeks the horse was well. The pus in this case was also markedly less in forty-eight hours, became thin and bloody and then gradually stopped. I have treated many more or less severe cases successfully in this manner, and am using the method in my practice where I am able, to the exclusion of all other medication."

CASE 56. October 23, 1912, Wm. A. Duffin, D. V. S., reports the following case:

Bay mare suffering with fistula of the withers, caused by rubbing of collar. The pus ran down the side of the animal's fore leg to the floor. At a conservative estimate six ounces of pus were discharged from the wound daily. A half ounce was placed in six ounces of water and an ounce of this mixture was placed in the animal's mouth with a syringe. One

week after the first dose there was only a drachm of pus that exuded daily. Another dose was given. At the end of the second week there was no pus at all, the wound was healing by granulation tissue. Another dose was, however, given when the animal made an uneventful recovery. The wound was dressed with normal salt solution only.

Dr. Duffin states further:

"Animals in the condition of this one are always operated and occasionally they have to be operated several times, to clear up a deep burrowing case such as this one. I have used Autotherapy successfully many times and am satisfied nothing else would have saved this animal from an operation. I believe the Duncan Natural Toxins are the best biological preparation we have at our disposal in the treatment of diseases.

"I am using it to the exclusion of any other biological preparation in my practice."

Case 57. Dr. Geo. J. Goubeaud, Flushing, Long Island, N. Y., Veterinary to the Department of Health, the Long Island Kennel Club and the First Cavalry, reports the following case: Gray mare, ten years old, broke through a barbed-wire fence and was severely lacerated on the forelegs and both hocks, with exposure of the synovial membrane and the loss of the synovial fluid. The leg was torn over a wide area and deep into the muscles. There was an extensive laceration of the skin of the thighs over an area of about fifteen inches in diameter. When first seen the animal was down and unable to rise. I managed to put her in a sling and made an attempt to cauterize the wounds and sutured the muscles with catgut and the skin with silk. Three days afterward I decided to destroy the animal, for her general condition showed that she would not recover. Before doing this, however, I thought of Autotherapy and decided to try it. Two ounces of blood and pus were collected from the severely infected wounds which were very fetid. A dilution of the pus was filtered, obtaining thereby four ounces of filtrate; 2 drachms of which were injected hypodermatically and a teaspoonful given by

the mouth. Both night and morning the wounds were cleansed daily with warm water. No antiseptics were applied. In three days her temperature was normal and the animal appeared to be fairly comfortable. In three weeks' time the animal was taken out of the stall and allowed to walk around the paddock. Aside from two large scars caused by the skin sagging, there was left a large gangrenous area, which eventually detached itself. In six weeks flies began to annoy her and she became irritable and did not eat. At one part where the bone was still exposed, pus again made its appearance. A fresh supply of filtrate was made and at the end of two weeks nothing remained but the scars. Up to this time I had destroyed animals that were in this condition. I do not now destroy them but usually save them by means of Autotherapy.

Case 58. Dr. W. J. Raynor, Cushing, Neb., reports the following case: Last month my collie dog was bitten at the base of the ear in a fight with a bulldog, and I decided to make a test and prove or disprove your assertion that " the only place a dog ever has a severe infection, is on the head, where for anatomical reasons he cannot lick." The wound became infected and in a few days full of pus. The dog was placed in a screened room and continually grew worse. I was intensely interested in watching him rub it with his paw every little while and then lick his paw. Nothing was done for him, and in four days from the time the wounds were clean and dry. I told a ranchman with a valuable horse who had suffered with poll evil for over a year of this treatment. He scraped out of the ear on a stick about a drachm of pus and placed it on the horse's tongue. He did this five times at two or three days' interval and promptly cured the case. These cases are usually most obstinate and refuse to heal.

Dr. W. J. Magee, D.V.S., New York, N. Y., reports the following cases:

Case 59. Gray gelding received a kick from a stable companion on July 16, 1912, and I was called three days later to treat him for it, and found the animal upon three legs, so to speak, and in great pain. Temperature 104° F., and unable to place the foot of the injured leg upon the ground. A piece

of burlap was tied about the hock, and they had been keeping it wet with hot water. Upon examination I found that the ergot or wart of the near hind hock had been cut across, and half of it had been entirely removed, and the wound itself had penetrated the joint, from which a flow of the synovial fluid was escaping and dropping from the hair at the ankle to the floor. The wound was cleansed and a dressing of powdered salicylic acid with collodion applied under the bandage, and similar dressings were used three times at intervals of two days, with no improvement in the animal's condition. On July 26, ʒiij of the discharge were collected and made up with water from the faucet to ʒvi with the directions to give one ounce every hour until all was used (6 doses in all); the wound was dressed with tr. iodine and phenol 95 per cent., equal parts and powdered salicylic acid, collodion and cotton as before. This dressing was not removed until three days later, when the animal was walked from the box stall placing the toe upon the ground and dropping back upon the heel with but little lameness. Temperature 101° F., and upon removing the dressing I found I could not collect enough discharge for another treatment, nor was it at all necessary. The wound was dressed as before at two consecutive visits, when a blister was applied and the animal returned to his usual labor, August 19, 1912, none the worse for his experience.

Case 60. Bay gelding with an opening on right side of shoulder from a fistula of the withers, with a discharge from it flowing down the elbow. Upon probing, I found that the tract extended across the shoulder, and I could feel the end of probe under the skin of the opposite side. This had been under treatment for a period of from seven to nine weeks by another veterinarian with no improvement in his condition, and the owner requested me to cut it all out. I informed him that if it had to be cut, the animal would have to be cast or placed on the operating table, for he was a very vicious brute and could not be secured in any other way for operation. I collected ʒiij of the discharge and made it up to ʒvi with water from the faucet, with directions to give *one ounce* every hour until it was all used. I did not see the patient again for a period of six days and then found that the appearance of the discharge had changed and was less in quantity. This

treatment was continued at intervals of from six to eight days, from October 19, to November 27, 1912 (six treatments in all), and during this time as the discharge became less in quantity, it was always made up to ʒvi with water, for it appears to me as if the patient will, and does, regulate his own dosage. The animal did not miss a day's work, except on the days that he received his medicine, and nothing was injected or inserted into the opening or tract after the first examination; but the discharge was washed off every day, except for twenty-four hours previous to my visit, when it was allowed to remain for my collection.

Dr. James Law, M.D., D.V.S., Ex-Dean and Professor Emeritus of New York State Veterinary Medical College at Cornell University:

"Dear Doctor Duncan:

Medicine has passed through many varied experiences. Any endeavor to trace its history would lead us into paths that would be anything but complimentary to its doctrines and its practitioners. But when we come up against Autotherapy, we are at once reminded of certain truths as venerable as the race of man, and in some sense a matter of common knowledge. *1st.* Who has always been the great Healer? Is it not the Great Creator? Before medicine had a name or substantial reality, sick and wounded men and beasts largely recovered from their morbid conditions by what would be called the defensive action of Nature. No thinking man can close his mind to the obvious fact that every recovery is a triumph of the living being over the malign conditions and cause that besets it. Had the evil influence continued with unabated force in a system that could get up no greater resistance than at first a fatal outcome would have been inevitable. The repair of the wounded tissue has been expected and looked for. The counterpart in the repair of deeper and more obscure tissues of deranged function in cells, metabolic processes, etc., was equally to be looked for through the corrective efforts of Nature's loom. *2nd.* Contagious diseases even in the gross ignorance of the dark ages produced an explanation of the transference from one victim to another of

the morbid agent which in place of losing its power through dilution from a sequence of victims constantly measured its evidence of increase by the number of its martyrs, and added to its potency as it met victims that had lessened power of resistance. The *materia morbi* was not as yet called a germ but all the properties of a living and self-propagated germ were already conceived in the mind of the observer. In non-contagious diseases were manifest triumphs of the defensive powers with which the Creator had endowed the victim. *3rd.* This view was early availed of by utilizing these unknown defensive elements for the purpose of fortifying the system against a prospective or prevailing epidemic. The Arabian and Chinese Medical men used the virus of small-pox to produce a benignant and non-fatal form of the disease and to render their patients immune from the malignant lethal type. Finding this so in Constantinople, Lady Mary Montague introduced it into England to the great benefit of those that took advantage of it in days of prevalent small-pox. Seventy years later came Jenner with his small-pox inoculation since, unless contaminated as in Pearson's experiment, etc., it practically never produced small-pox nor failed to give immunity from it. A provision of the as yet unsuspected antitoxin or alexin might almost be inferred from the practice of Theile, Roberts, Brachet and Bouchacourt in mixing cows' milk variola (small-pox) exudate and employing for inoculating against small-pox. Ceely, Martin and others went further inoculating small-pox virus in cows and using the serum from the resulting vesicle to vaccinate the human beings. This has been largely followed in the United States and there has often been disseminated a repulsive eruptive disease often masked under the name of pemphigus, no less contagious and often scarcely less threatening than a mild variola. I recall no actual deaths from this but I have seen much unnecessary suffering and a wide extension of the malady.

"In other diseases of lower animals there is a like tendency. In 1850 when lung plague of cattle prevailed widely in Europe, Louis Williams inoculated the tips of the tails of sound cattle with the exudate taken from the affected lung and found as a result in fifteen days (the usual period of incubation) an active inflammation with considerable exudate in the seat of the

wound; he found moreover that the subjects when stabled with diseased animals and even when inoculated with the virus direct, showed no reaction even in the seat of inoculation. It is interesting to note in this connection that the lungs of the inoculated animals remained unaffected throughout, and that inoculation in other regions having much loose connective tissues was followed by widespread inflammation with enormous swelling and often proved fatal. The extreme mildness of the disease in the tip of the tail depended on the great lack of loose connective tissue there and on the fact that the germ does not live and propagate in the circulating blood but is confined strictly to the seat of insertion and its immediate surroundings. Williams had unconsciously hit upon a means of using the toxins, antitoxins, alexins, etc., on the system at large (in the absence of the living germ) and thus producing a satisfactory immunity. This has been used all over the world wherever lung plague prevailed and has shown a splendid success in protecting exposed and affected herds. It is not unobjectionable, in view of what was accomplished by the propagation of the germ in the animal treated, which infection may extend to other unprotected animals more or less directly (by contact through visitors, fodder, manure, etc.), and start a new center of disease. To avoid this peril in 1880, I inoculated some with liquid expressed from the encysted sequestrum left in the lungs of a recovered victim of lung plague, and others with a heat-sterilized exudate from the lungs of an animal killed in active stage of the disease, and got no local reaction in any case, but I did get a potent immunity as witnessed by entire insusceptibility to reaction of direct inoculation of the living virus and to a subsequent exposure in two infected herds and places. This bears directly on Autotherapy or self-healing. In the same year, 1880, I inoculated swine with sterilized hog-cholera virus and found that a good measure of resistance was thereby acquired. (Department of Agriculture Report, 1880, Veterinary Medicine, Volume 4, page 69.) In 1884 I drew blood from an anthrax cow, heated it to 212° for thirty minutes, dissolved out the toxins, endotoxins, antitoxins, etc., in boiled water and injected from two to four c.c. in each member of the herd, except one and this untreated animal alone contracted the disease though kept in the same

infected pasture. Since that date I have used this method on every herd where opportunity offered, with similar success. (*Veterinary Medicine,* Vol. 4, page 281.) Others claiming to have used the same remedy have reported failures, but one was on cows on full milk and lactic acid, which greatly enhances susceptibility, was possibly to blame (phloridzin and doubtless other agents have a similar effect.) The Pasteur inoculation for rabies is another case in point. There the infected medulla is hung in an aerated vessel until the germ is incapable of producing the disease when lodged in the living tissues. But it is not the debilitated germ alone but also its toxins, antitoxins and other defensive products still retained in the medulla. I am tempted to quote a number of more recent observers (Burden, Requel, Von Behring, Chauveau, Toussaint, Arloing, Bouley, Sanderson, Koch, Ehrlich, etc.), but I must forbear.

Toussaint came near to the use of the defensive products for immunization but was discredited (I suspect unjustly) by the outcome of the experiment at Alfort. Koch had the idea correctly enough and exploited his *tuberculine* as a cure for tuberculosis but ignored the fact that this disease is not absolutely self-limited, will continue in a chronic form through a lifetime. Von Behring, like Koch, kept his treasure a secret in order to profit by its sale. Coming back to the present day we can say more for it than in the past. We have of course had our examples of survival of a rock-bound past. We have a great rank and file of *conservatists* to whose mind nothing finds a ready entrance, with them, anything that is not time-honored and *classic* is to be suspected and excluded. They are, however, much less dominant than in former times. Indeed the ambitious practitioner of today is rather inclined to pose among the latest and most advanced thinkers and to accept whatever comes with any reasonable appearance of truth. Do not therefore be discouraged nor disappointed because of the tardiness of appreciation. Autotherapy is a system having a basis in the irrefragable truths of biology and is predestined to a growing recognition and practice. Its main danger is in the advocacy of its value irrespective of our ever-changing conditions. Any logical mind studying it in the light of the cases submitted by yourself and co-workers, must admit that

the underlying principle is a sound one, for the striking, speedy amelioration of case after case though previously obstinate and intractable would be otherwise unexplainable. Cases that still remain irremediable under Autotherapy, must be explained under the difference of conditions, and in this complex world it is no easy matter to recognize and obviate all such. If a milch cow attacked by anthrax may be doomed because of the formation of lactic acid, we must allow the possible occurrence of one of the other million slips and recognize our defeat. This does not alter the meaning of your splendid succession of successes and above all it does not invalidate the principle on which Autotherapy is founded. I think you are worthy of the highest credit for the way you have recognized the truths of Autotherapy, and no less for your steady adherence to the doctrine through evil and good report. Whether or not you receive now the recognition for the good work you have done, that work will live and the esteem of humanity will be a future reward.

"With best wishes, I am,

"Very sincerely yours,

"JAMES LAW, M.D., D.V.S."

Daniel J. Mangan, D. V. S., Chief Veterinary of the Department of Street Cleaning of New York City, states:

"It gives me great pleasure to testify regarding the inestimable value of Autotherapy as devised by Dr. Charles H. Duncan of New York City. In 1911 I was attracted by his writings published in the *Medical Record,* and by applying his principles to septic conditions in the lower animals, particularly the horse, I was delighted to find that the results obtained confirmed his findings, as outlined in the treatment of like diseases in man. In July 1912, I wrote an article on the subject which was published in the leading Veterinary Journal of North America—*The American Veterinary Review.* It was reprinted in several European Veterinary publications. Autotherapy has been adopted by a large number of Veterinarians throughout the United States and has become one of the most effective methods of treating septic diseases. A recitation of the many cases in which this treatment proved successful

could not be given here, but I may group the different diseases to which it is applicable:

"All pyogenic infections, acute and chronic; influenza and catarrhal states of equines, distemper, lobar pneumonia of equines, contagious equine pneumonia. In many diseases the therapeutic exudate gives brilliant results when used in diseases of similar character. The following are the microorganisms concerned in which Autotherapy is used: Streptococci, staphylococci, necrophorus, streptococcus equinus (distemper), bacillus coli, bacillus bipolaris equisepticus, etc.

"Too much credit and honor cannot be given Dr. Duncan when we consider that Autotherapy has not only been a boon to the human race, but it has extended its usefulness to suffering dumb animals."

NOTE.—It is with pleasure that the writer records the able assistance given him by the nurses at the hospital in the early development of Autotherapy. Prominently among these faithful assistants who recorded the progress of patients and assisted in dressing their wounds and giving the medication, was Miss Monica Moore, the supervising nurse.

A number of patients at the hospital owe their lives to Miss Moore, who by ways known only to nurses succeeded in having them placed under the author's surgical supervision.

The Veterinary Medical Association

of New York City

at it's regular February 15, 1914 meeting
unanimously passed the following resolutions:

In view of the fact that, every veterinary physician has had an opportunity of benefitting by Dr. Duncan's teaching,
In view of the fact that, veterinary physicians in all parts of the world are curing diseases in animals by his method,
In view of the fact that, we owe a great debt of gratitude to Dr. Duncan not only for his method of relieving and curing sick animals, but for humans as well,

In view of the fact that, his method of treating disease he calls AUTOTHERAPY will endure for all time and that there is apparently no limit to the possibilities of it's development;

In view of the fact that, the principles that underlie the cures made by autotherapy are everlasting and immutable,
In view of the fact that, Dr. Duncan has been wholly altruistic in placing his method of curing disease before the medical profession that all may be saved from suffering and death from localized diseases, that human and animal life may be lengthened by the application of the principles he has discovered;

In view of the fact that, he has despised money and the grosser things of the world and has been prompted by the highest motives of love and sympathy for man and beast, that he has enthusiastically given his method of treating disease freely to all;

In view of the fact that, his name will always be in the hearts and on the tongue of men in grateful appreciation and acknowledgement of this, his great work in AUTOTHERAPY;
In view of the fact that, his Autotherapy marks another mile-stone in the history of medicine;

Be it resolved Mr. President, that we, the veterinary physicians constituting the Veterinary Medical Association of New York City, express our acknowledgement and appreciation to **Charles H. Duncan M.D.** *in a fitting and suitable manner by electing him an*

Honorary Member of
The Veterinary Medical Association of New York City.

Be it further resolved that a copy of these resolutions be suitably engrossed and presented to him as a testimonial of the high esteem in which he is held by his brethern in medicine, the Veterinary Physicians.

PRESIDENT *Wm. J. Gamble V.S.*

SECRETARY *Walter S. MacKellar V.S.*

We seek to—

"Pluck the lustre from the stars and lose the jewels at our feet."

CHAPTER VII

*ACUTE GONORRHEA IN THE MALE

In every scientific discussion we should be guided by facts and not by sentiment. There is no room in medicine for the physician who would refrain from giving his patient curative medicine, on account of its not being pretty, or of associations in his own mind that make it abhorrent. A physician is justified in giving his patient anything that will cure him.

Dr. Elbert Hubbard aptly said of Autotherapy: "We move from the complex to the simple and the obvious is the last thing we learn." More correctly speaking he should have said, "Some of us move," for there appears to be a certain percentage of physicians to whom the word "move," in a therapeutic sense has no meaning.

The stock vaccines, inaccurate at best, are woefully deficient in this infection, and are not endorsed by many of the best authorities.

There is a distinct place in therapeutics for any curative

*The writer conducted a genito-urinary clinic at one of the large hospitals in New York City, for several years for the purpose of developing the technic of the application of Autotherapy to genito-urinary infections.

agent that will even mildly affect the course of this infection.

We are led to believe that a patient seldom recovers from a severe gonorrheal infection. Statistics tell us that the proportion of young men having gonorrhea is appalling, and a very large percentage of all major operations on the female pelvis may be traced either directly or indirectly to gonorrhea. The infection is deep in its erosive action, much deeper than we formerly believed, and far reaching in its effect; of this we will speak later.

Either male or female patients suffering with acute gonorrhea may be successfully treated by Autotherapy provided the treatment is properly instituted sufficiently early along the lines suggested.

In Autotherapy we autoimmunize the patient, i.e., immunize him to his own unmodified infecting microorganisms. When we can do this before the infecting microorganisms burrow too deep into the urethral tract, and thus begin a kind of trench warfare, as it were, we are fortunate.

The writer is well aware that exceptions may be taken to the method of treating gonorrhea he suggested originally, in medical articles dealing with the subject, not because it lacks therapeutic value but because of associations in our own mind which make it abhorrent. Original investigations are carried out by beginning first with a principle then, step at a time, investigating the various avenues of thought that open. In other words we must crawl before we walk and walk before we run. The exception taken to this treatment is because many do not get beyond the first step and emphasize the means the writer made use of in developing this treatment.

Now let us stop right here and have a mutual understanding lest any one should utterly forget the scientific nature of the principle involved and thereby suffer his sensibilities to be shocked.

If men and women will expose themselves to gonorrhea, they are in no position to object to any effective treatment that may be suggested.

The autotherapeutic technic for treating the male that was originally made use of in the early stages of the development of this treatment is as follows: Irrigate the urethra twice daily with distilled water and give it to the patient to drink, disguised if necessary for psychic effect, with grape-juice just previous to its administration.

It appears that from many hundred tests that have been made that it is difficult to give the patient too much of his own discharge in this way. It also appears that the greater number of live autogenous pathogenic microorganisms they take, the more quickly will be manifested the curative effect, namely,—reduction of the acute inflammation, lessening of the discharge and the subsidence of buboes, etc. In order that more microorganisms may be given, subsequent partients were given three condoms in which to collect the discharge between treatments.

There may be and probably are limits to the number of live gonocci taken in this way, but the writer has never seen any ill effects manifested by giving all the discharge he was able to obtain. It is a perfectly safe procedure and no fears need be entertained by following the above technic.

In order that the unsavory nature of the technic might be eliminated and the treatment be robbed of features which are objectionable to many, the following technic was instituted: Collect the discharge for twenty-four hours before treatment is begun (in condoms). One-half drachm of this is mixed with an ounce of water—this is allowed to stand for twelve hours at body temperature, with occasional agitation; after which time it is filtered through a Duncan Autotherapeutic Appa-

ratus and the bacteria-free filtrate is injected subcutaneously, in proper doses and intervals between doses. The average dose is from five to twenty minims—from two to five days apart; but we should always treat the patient according to his needs and not the disease.

It will be readily seen that there are advantages and disadvantages in each of the above methods of treatment. One advantage of the oral method is—the treatment is begun early—no time is lost. This is no mean advantage when one realizes the deep erosive action of the microorganisms and how quickly they may at times burrow beyond the reach of local application. The advantages of the second are as stated above that the treatment cannot be objected to even by the most fastidious as the filtrate is perfectly transparent and odorless. One of the disadvantages of the second method of treatment is that valuable time is lost before the treatment is begun. In order that the best results may be obtained the writer frequently combines these treatments. The microorganisms are caught in condoms for twelve hours, at the end of which time the oral method of treatment is instituted—during the time the oral or buccal treatment is given, the filtrate is prepared—this usually takes from twelve to twenty-four hours; at the end of which time the first hypodermic injection is given. After the first hypodermic injection is given, of the bacteria-free filtrate, the oral method is discontinued. The reason for this is plain and it is well for those who inject the nonpurulent serous fluids of the body back into the body without filtration to mark this step in the technic. After the first treatment is given the antigenic spur of the toxins remaining in the body is altered, and the aggressins in the subsequent exudate employed therapeutically are then not so aggressive or curative as were the toxins developed in the body before any treatment of the kind was instituted. For this

reason the writer obtains the discharge before any treatment is given and preserves the toxins by filtration. If it is properly filtered, that is, if all the microorganisms are removed, under strict aseptic technic, the filtrate will keep for several weeks or months, and is rich in aggressins. Its elective affinity or tropism is unaltered by any culture media. The treatment should be given early. If not the microorganisms lodging in some crypt or follicle, destroy by their erosive action the continuity of the mucosa and burrow deep, safely away from local irrigation and antiseptics, etc. The methods of dislodging the invaders from their recently installed residence, or of destroying them are not within the province of this discussion. When the resistance of the patient is lowered for any reason, the microorganisms from their intrenched position pour out their toxins, and these give rise to many symptoms. The tissue changes incident to the prolonged inflammation tend towards stricture and render the locus of infection more or less inaccessible to the blood stream and its immunizing antibodies.

In considering a new method of treatment and one that departs so widely from accepted methods, there are important questions that must be satisfactorily answered before skepticism is replaced by confidence. A fair trial has convinced many hundreds of physicians of the great therapeutic value of this method of treatment and answered other burning questions relative to the autotherapeutic treatment of acute gonorrhea. The first question that naturally arises is—Is it not dangerous? The second question is—Is there any curative effect manifested after this treatment is instituted? Until the first question is satisfactorily answered we are in no position to consider the second.

It is for this reason that the first is answered fully in the succeeding paragraphs. With the first question settled, there is

no logical reason why tests should not be made by the practitioner regarding the second. If tests are made on a series of cases, all fears will be allayed, and doubts as to the great therapeutic effect of this treatment will vanish. The writer wishes to be distinctly understood as offering autotherapeutic treatment of acute gonorrhea simply as an adjuvant and supportive treatment which in no way interferes with effective methods now in use, except that antiseptics should not contaminate the discharges that are to be employed.

The beauty or homeliness of a method of treatment has nothing to do with the subject from a scientific point of view, so we will dismiss this phase of the discussion at once. Any one who has practiced medicine for even a few years has heard of, and seen personally a number of cases of gonorrheal ophthalmia. The oculist has seen many cases. If gonorrhea is infectious through, or by the mouth, we would have seen more infected mouth cases than eye cases, for the hands go to the mouth many times when they go to the eyes but seldom. Especially is this true if the patient is warned to keep his hands away from his eyes. We never warn them to keep them away from the mouth. Gonorrhea of the urethra often causes frequent micturition, and in the various toilets visited during the day for that purpose there is often no means for washing or cleansing the hands after the cotton or bag has been removed and replaced. Truck drivers, laborers, young men and those of the lower classes are not always cautious in this particular. They often do not know the meaning of asepsis, they more frequently take a chew, or light a cigarette or even eat their meals, after perhaps merely wiping their hands on their overalls; yet we rarely see gonorrhea of the mouth in these individuals. Gonorrhea is highly infectious to the eye, but the writer has yet to hear of a case of infection of the mouth and throat following an infection of the eye.

The tear duct drains the infected eye into the nose. The gonococci hence must come in contact with the nose, posterior nares, pharynx, mouth, larynx and stomach, and in some few cases these regions would have become infected if gonorrhea is infectious to these membranes. Now the fact that we seldom see or hear of infections of the latter leads one to believe that gonorrhea is not infectious to the unbroken mucous membrane of the mouth, throat and alimentary canal. Whether the nasal secretion or the saliva, or the inhibitory action of the mucosa of the nose and throat is the cause of the immunity from infection of these cavities is a subject that will bear investigation. It is the ratio of infections after exposure to the escape that is our best guide in determining the relative chances of an infection taking place. If this ratio is very small, or fractional, or scarcely heard of, it may be considered as negligible, and need not be taken into consideration. Gonorrhea appears to be no more liable to infect the unbroken mucous membrane of the mouth than the staphylococcus and streptococcus.

The writer did not discover a single case of gonorrhea of the mouth in a large G. U. Clinic conducted by him for several years for the purpose of developing this method of treatment in a district where if it were prevalent, he believes he would have seen it. He then made it a point to go with a company of physicians into the darker section of New York for the purpose of obtaining knowledge of it at first hand, from the people who are exposed to gonorrhea of the mouth many times during a single night. These people scout the idea of its being infectious by the mouth.

Abundant observations conclusively prove that about all prostitutes are gonorrheal carriers, but we rarely see this disease to recognize it in the mouth. It appears in the light of these investigations, that having the gonococcus in the mouth

renders them more or less immune to vaginal infections even with the multitude of gonococci in the vagina. There is no doubt that many of these women at times have gonococci in the mouth as well as in the vagina. Men at times kiss these gonorrheal carriers, and if it were infectious by the mouth our young men and boys would have become infected in the mouth at least occasionally, but here again we rarely see the disease. The only conclusion that can possibly be drawn from the above observations is that the possibility of gonorrheal infection of the mouth is so slight as to be practically disregarded.

The next question to be answered is: will there be a curative reaction in the tissues if the autogenous gonorrheal pus is placed on the buccal cavity? The microorganism of gonorrhea is of the coccus family. Now the writer has proven beyond all shadow of doubt that two members of the coccus family, namely, the staphylococcus and streptococcus, are miraculously curative in the extra-alimentary and extra-pulmonary diseases caused by them if the live autogenous microorganisms are taken by the mouth. That is, the healthy tissues with which the microorganisms come in contact by way of the mouth, being remote from the seat of infection, develop specific antibodies to the disease. These pass on in the circulation to the seat of infection.

This method of preventing gonorrhea may be at times helpful in preventing those fearful family tragedies we all have seen in general and hospital practice where the husband or wife infects the consort.

Case 61. Patient, female, semi-prostitute, had marked evidence of clinical gonorrhea; both Bartholinian glands were swollen to the size of the thumb. There was an extensive excoriation of both thighs. The whole vulva was swollen and pouty. The labia majora and minora were inflamed and rigid.

From the majora the inflammation had extended to the cuticle on the mons veneris and the crease of the groin. The discharge was thick, yellow and copious and came from the urethra. About half a teaspoonful was collected from the cervix and vaginal walls. Upon being told she had gonorrhea, she said she had two male friends whom she had exposed to the infection a few days before. One of these was her employer, a married man. Could the writer give him some medicine that would prevent his having it? He had noticed that morning an uneasiness or a tickling of the urethra, and having previously had gonorrhea several times he knew the symptoms, and was under the impression he had the disease at this time. He said he noticed a small morning drop. I told him if he would follow my instructions I would do what I could to stop it, and that I believed I could. This was the fourth day after exposure. I mixed the discharge from the female patient with about an ounce of powdered sugar as a menstruum. It made a thick paste. Of this I gave him about one cubic centimeter by the mouth and told him to hold it there for five minutes before swallowing it. In half an hour I gave him a second dose; and again in half an hour I gave him the third and last dose. I cautioned him against getting it in the eye, but told him to place any and all discharge he was able to obtain from his urethra on his tongue, and to return the next day. He reported the next day the tickling in the urethra did not stop; there was just barely a morning drop; there was no staining of clothes or evidence of discomfort. On the tenth day he told me there was no tickling or abnormal sensation and no evidence of gonorrhea that the writer could in any way discover except a few shreds in the urine. In other words the disease appeared to have been forestalled. The writer upon close questioning obtained the bit of interesting information that the patient had been drinking on an average of three glasses of whiskey and beer daily. The patient was enthusiastic over the treatment; he did not mind it. "Would it cure?" was all he wanted to know. Satisfied in this, he was anxious to go the limit. Four weeks afterwards, when there was no apparent evidence of the disease and when he said he had entirely recovered, I gave him three more pills in a man-

ner similar to the first three. The next day he said the disease was coming back, the irritation and moisture had returned. He said he had gonorrhea again, but he did not; it was the aggravation of the negative phase resulting from the medication. It cleared up in a few days. The writer believes this is proof that this medication taken by the mouth has a direct action on the urethra. He bases his conclusion of cure of this patient on the lack of demonstrable lesions, the history of the case and the pronounced characteristic and other toxic manifestations of the disease both in the female and in the other male consort.

Case 62. Patient, male, L. T. R., who appeared for treatment February 15, 1912. Was exposed nine days previous. The first indication of gonorrhea was on the sixth day. There was a free discharge, the meatus was pouty and red, tingling on urination. Gonorrhea pronounced positive microscopically by Dr. Henry T. Brooks of New York City. The patient was instructed to place the discharge on the tongue. February 16, no change. He took the discharge several times. February 17, very much less discharge, inflammation subsiding, patient better in every way. February 18, a clean bag was put in place at 9 o'clock in the morning and there was but a small amount of staining at 6 o'clock at night. No tingling on urination or other discomfort. February 22, the bag was just barely stained after twenty-four hours. This is a typical case and illustrates what can be expected of this treatment. In two weeks the discharge had stopped altogether.

Case 63. Patient, married man, aged forty years, who appeared at the clinic December 5, 1911. He had practically all the symptoms of acute gonorrhea, following an exposure ten days before. Microscopical examination was positive. He had exposed his wife and was anxious that the writer should treat her also. I told him to send her to me as soon as possible. She came the next day, I placed some of his discharge in an ounce of water and shook it up well. She was given this to drink in divided doses. I saw her at the end of one, two and three weeks, and could discover no lesion or evidence of the disease in any way that could lead to even a suspicion of gonorrhea.

The result of all my observations of many cases, indicates that when the crude gonorrheal pus from an infected urethra comes in contact with the lymphatics of a buccal cavity it will tend to act in a curative manner. If the live virulent microorganisms be given early enough the treatment will often forestall severe infection. If it is given two days after the discharge first makes it appearance, the microorganism will often disappear from the discharge in from twenty-four to forty-eight hours, the discharge itself will lessen, and usually disappear in from seven to ten days. When acute gonorrhea is treated by this simple method there is less chance of sequelae in the shape of strictures, buboes, etc., than by any other form of medication for the inflammatory stage is usually checked early. Experiments in treating gleet by this method have not been always successful, although there have been no bad results.

A treatment so contrary to experience, so new and radical is bound to create more or less adverse criticism and yet as we consider it in its various aspects the rational basis of this method appeals to the medical mind as agreeing practically with all we know of biological therapeutics. The writer would suggest to those who are disposed to criticise this method adversely to withhold giving expression to their opinion until they have given it a fair trial.

Surely its simplicity must appeal to every one and it is within the power of practically every physician to test it for himself. If there is danger in placing crude gonorrheal pus on the patient's tongue the writer has never seen it. He courts investigation of this method of treatment by any one who will give it a thorough trial. The clinical symptoms are a good guide in determining whether the medication should be pushed or withheld. The writer believes that when the remarkable curative effect of this exceedingly simple thera-

peutic measure becomes widely known it will be used extensively.

In gonorrheal ophthalmia a solution of the discharge should be filtered and the filtrate injected hypodermatically in the manner described.

If anything can be done to help wipe out the "social scourge" even to taking gonorrheal pus by the mouth, it will be a blessing for which humanity has long waited. Now let us see what other criticisms can be made, and what grounds there are for these. The first criticism is based on the prevailing opinion that the cocci are solely endotoxic in character. I wish to make a protest against this misleading text-book teaching. The dead bodies of the cocci are undoubtedly toxic; in fact we believe there is more endocellular toxin than extracellular toxin in the staphylococcus and streptococcus, yet the writer has proved that sufficient extracellular toxins may be washed out of them with a small quantity of distilled water and that when this is passed through a Berkefeld filter, the filtrate may be injected hypodermatically and will manifest a curative and abortive tendency. There are sufficient toxins of the gonococcus obtained in the filtrate to autoimmunize the patient, and if the dose and the interval between doses are properly regulated, this treatment will aid materially our present accepted methods.

Non-specific acute urethritis is treated in a similar manner.

Case 64. Patient, male, age 26 years, exposure two weeks previous. He was in the acute inflammatory stage of the disease and was despondent, as are all patients suffering from gonorrhea in this stage—not from psychic effect, for despondency is a characteristic symptom of gonorrheal toxins. The discharge was collected in the usual manner for twenty-four hours, and two ounces of filtrate were made; to each ounce of filtrate three drops of tricresol were added. The urethra

was irrigated with an ounce of tap water, to this was added about a drachm of grape-juice. It was given the patient to drink in one dose. This oral treatment was kept up daily for eight days. At the end of twenty-four hours he knew he was decidedly better, the discharge was much decreased and the inflammation was subsiding. At the end of the fourth day there was very little staining of the cotton in the bag, at the end of the eighth day there was not more than a drop or two in twenty-four hours. He was then placed on a urethral tonic composed of kava-kava, etc., and copaiba tablets, two after each meal and two at bedtime and given a hypodermic injection of five drops of filtrate mixed with 2 c.c. of distilled water. But little cutaneous and constitutional reaction followed, and in two days he was given 15 drops of the filtrate mixed with 4 c.c. of distilled water subcutaneously. In five days the discharge stopped altogether. He was kept on urethral tonics, however, for a week longer when the case was discharged, with usual precautions as to diet, drink, etc. If this patient's urethra had been irrigated every two hours for the first ten days when awake, with 10 per cent. argyrol, the recovery would have been more rapid. In about one case in a hundred this treatment will aggravate an old pyorrhea alveolaris; when this occurs scrubbing the teeth briskly with listerine every four hours stops the infection of the gums within forty-eight hours. In treating cases of acute urethritis by means of Autotherapy, do not miss a day in the oral treatment.

Case 65. Patient, male, age 32 years, exposure seven days previous; there was no discharge, but the patient having had gonorrhea seven times, knew the symptoms. His partner in copulation was found to be suffering with acute gonorrhea positively identified under the microscope. He was given about three drops of mucus from the cervix in water by the mouth and in twenty-four hours a hypodermic injection of 1 c.c. of the filtrate made by mixing five drops of a sample of the same mucus with an ounce of water and prepared in the usual manner. He was given this injection every three days, for twelve days. Aside from a few shreds in the urine there was no evidence that this man had ever had gonorrhea. Many cases have been treated with similar results.

Case 66. Patient, male, age 22 years. After seven days exposure a small drop was noticed in the morning. He was given 1 c.c. of the filtrate obtained from Case 64, mixed with 2 c.c. of water hypodermatically. He was given four of these injections two days apart. He was placed on urethral tonics in the usual manner for ten days, when the case was discharged. There were still a few shreds in the urine.

Case 67. Patient, male, age 28 years, travelling salesman—two weeks after exposure applied for treatment. There was a copious discharge, phimosis, and two lymphatic involvements in the groin that were exceedingly painful. The urethra was irrigated with an ounce of distilled water. The patient was given a condom to be worn during the succeeding six hours when the urethra was again irrigated in a similar manner. The condom contained about half a drachm of pus—the same treatment was again instituted and in six hours another half drachm of pus was obtained—the pus was mixed in the ounce of irrigations and thoroughly shaken, when it was filtered in the usual manner. One c.c. of the immunizing filtrate was injected subcutaneously. At the end of twenty-four hours the swelling of the glands and the phimosis were distinctly better. The buboes were markedly improved. The patient was given 10 per cent. solution of argyrol with instructions to irrigate the urethra every four hours, holding it each time in the urethra for five minutes by the clock. The patient received hypodermic injections of the filtered toxins on the 1st, 3rd, 5th, and 7th days of treatment, at the end of which time there was scarcely any evidence of discharge. He was then placed on urethral tonics and eventually recovered. The microscopical examination revealed large colonies of the diplococcus of Neisser both intra-cellular and extra-cellular.

Case 68. Patient, male, age 36 years, a sailor, applied for treatment three weeks after exposure. The discharge was thick and copious—the glans much inflamed and the corpus spongiosum was hard and indurated its full length. There was some pouting of the lips and the prepuce edematous. The urethra was irrigated with an ounce of distilled water and he was given a condom and told to return in twelve hours. At the end of this time considerably over a drachm of pus was

obtained. This was mixed with the irrigation, well shaken in a bottle and filtered at once. 2 c.c. of the filtrate were injected subcutaneously over the biceps muscle and the microorganisms that failed to pass through the filter were poured off and given to him in about one ounce of water. Within twenty-four hours marked improvement had set in. The glans had receded to its normal size with corrugations on its surface, the result of its rapid reduction in size. The discharge was not more than one-fourth what it had been before the treatment was instituted. This patient received hypodermic injections on the 4th, 7th and 10th days. At this time there was scarcely more than a drop or two of discharge present. He was then placed on urethral tonics.

Case 69. Patient, male, 42 years, applied for treatment on the 16th day after exposure. There was burning on urination, priapism and a thick creamy discharge. Prostate was large and tender and the patient was called upon to void urine every half hour to an hour. He was in much distress and his appetite was seriously impaired. He had pains all over his body and particularly in the knees, necessitating his walking with two canes. His eyes were bloodshot—his left testicle and cord exceedingly tender. Half a drachm of pus was obtained in a condom in the usual manner, a filtrate made and of this he received a hypodermic injection of 10 drops daily for three days. At the end of this time the patient had so far improved that he was able to attend to his business. This patient had daily irrigations of permanganate of potash of a light pink color. At the end of two weeks he was so far improved that Autotherapy was discontinued and he was given the usual method of treatment for these conditions. The improvement in this case was quick and striking; the analysis came back from the pathologist stating—gonorrhea positive.

The writer reports the following cases:

Case 70. Patient male, chauffeur, age 34 years, residing in the country, had a characteristic discharge five days after exposure and applied for treatment at once. Microscopic examination showed microorganisms, both intra-cellular and extra-cellular. The patient was instructed to catch all the discharge possible on the tip of his finger and place it in his

mouth; he was also instructed to take a bath daily and open his bowels with divided doses of calomel followed by saline. In ten days the discharge ceased. At no time during the treatment were there more than two or three drops daily. At the end of thirty days the shreds in the urine had disappeared.

Case 71. Patient, sailor, on United States battleship, 24, applied for treatment to his medical officer for acute gonorrhea, six days after exposure. Having had it several times, he knew the symptoms. The diagnosis was confirmed by the medical officer who gave him the prescribed treatment; but instead of taking the medicine, he placed all the discharge he was able to obtain in his mouth, unknown to the medical officer. The latter was much surprised at the promptness with which he recovered. Within two weeks there was no evidence of gonorrhea, other than a few shreds in the urine.

Case 72. Patient male, age 30 years, unusually intelligent, was exposed to gonorrhea, June 1, 1912. On the 5th, the characteristic early morning evidence of discharge was noticed. Realizing the fact that the urine would wash out any minute products of inflammation in the urethra, even to the extent of a small fraction of a drop, he was instructed to catch the first ten drops of urine, at each urination, in a small wine glass and drink it; and to attempt to void every two hours or oftener. He had no other apparent symptoms, no appreciable inflammation, no burning or other evidence of the disease than the one symptom mentioned above. In five days this had disappeared.

The diagnosis of gonorrhea was made from a microscopical analysis of the secretions and other manifestations of gonorrhea in his consort. She had the characteristic discharge of blood and mucus from the cervix and an infected Bartholinian gland. A microscopical examination showed microorganisms in every field—both intra-cellular and extra-cellular.

Returning again to the patient, there never was more than a fractional drop of discharge that made its appearance at any one time. Examined daily in the office and at times twice daily, the writer was able only twice to squeeze out enough of the discharge to be seen. At the end of three weeks the urine was clear. This treatment has been given to many patients

with the same results, in the Genito-Urinary Clinic, conducted by the writer, between the years 1910 and 1914, for the express purpose of studying the application of Autotherapy to genito-urinary infections.

Case 73. Dr. D. J. M. reports the following case: Patient male, age 24 years, came to me with specific urethritis of five days' standing. A drachm of mucus was collected in condoms, from which the following prescription was prepared.

Rx.
Urethral discharge ..... ʒ j
Alcohol 95 per cent. q.s. ad. ..... ℥ iv
M. Sig. Teaspoonful three times a day.

In ten days the discharge stopped.

No antiseptics should contaminate the discharge that is to be employed autotherapeutically. When it is possible the patient should be placed in bed and an ice-bag placed over the urethra continuously for several days. Local antiseptics are not contraindicated, provided the precautions previously mentioned are taken.

Case 74. Dr. Harvey D. Morris, Port Arthur, Tex., reports the following case. Acute gonorrhea, patient given usual treatment, i.e., ten drops of pus were shaken up with four ounces of water, and given in divided doses. In one week's time patient reported at office as free from discharge and pain, and up to date no return of symptoms.

Dr. E. Milton Brown, of Mt. Kisco, states: "I have used Autotherapy in purulent infections and in acute gonorrhea for the past four years. No treatment equals it; I have seen no bad results."

Dr. F. E. Mills, of New York City, states: "I have used Autotherapy in about two hundred cases at the South Third Street, Brooklyn Dispensary. I have had but few failures and no bad results. I value the treatment highly in gonorrhea."

Dr. John B. Campbell, of Brooklyn, N. Y., reports very marked beneficial effect in gonorrhea by the autotherapeutic treatment.

"Nature is the True Healer, The Physician Her Servant."
—Hippocrates.

CHAPTER VIII

GYNECOLOGY AND OBSTETRICS

The vast majority of derangements of the female pelvis are due either directly or indirectly to pathogenic microorganisms. In the light of modern biological investigation the obvious treatment is to develop within the patient's body antibodies specific to the invading microorganisms or to autoimmunize the patient. Acording to the autotherapeutic biological principle previously enunciated, there are two methods of doing this, namely—Injecting the filtrate of the causative microorganisms subcutaneously or by buccal immunization, i.e., giving the live causative microorganisms or their toxins by the mouth.

Abundant clinical observation has demonstrated that in gynecology the *scalpel is laid aside as an instrument of rare utility by physicians who treat their patients autotherapeutically.* For this reason gynecology should be considered a *medical* and not a *surgical* specialty.

Autotherapy in gynecology and obstetrics speaks for itself incontrovertibly in *results.* It is results that count.

We will not enter into a discussion of the merits or demerits of vaccine treatment in its relation to gynecology, but will refer the reader who may be interested in the subject to the chapter

dealing with "Vaccines" in which is a general discussion of the subject. On account of the superior advantages Autotherapy offers to our present therapy in gynecology, it has been welcomed by the profession with cordiality and open-mindedness; it needs no defense and but little explanation and has been tested as it were by fire, *1st,* by those who welcome anything that will do good; *2nd,* by those who desire to prove the futility of anything that is not time-honored and classic. It has stood these tests and received high medical endorsements, for the principle on which cures made by its use rests, is basic and in accord with the modern conception of biological therapeutics. Autotherapy is a distinct advance in biological therapeutics and is especially welcome in its application to gynecology. The technic is superlatively simple—the results usually dependable.

Up to the present time the surgeon and pathologist have been consulted as to the proper time to operate in acute endometritis, salpingitis, etc. Various operations and methods of combating shock have been devised but the main question we have endeavored to answer is—How, and When shall we operate?

In asking this question we take it for granted an operation is usually necessary, but, with the advent of Autotherapy the question asked is,—Why operate? In asking this question, we take for granted that an operation is usually unnecessary, unless a very good reason be given for doing so. Without doubt, very good reasons can be given in a small percentage of cases, but in the vast majority of cases, there is no medical reason why an operation should be performed for these acute conditions, and many good reasons why it should not be performed.

To patients suffering from a catarrhal endometritis, ovaritis, salpingitis, etc., Autotherapy is a blessing, relieving the pain quicker and better than anything modern medicine or sur-

gery has yet offered. It is a revelation in therapeutics to those unfamiliar with its use, to see how the induration and thickening of the broad ligaments subside and disappear under its judicious use, and a more or less solid pelvis often loosens under but two or three treatments. This method is no longer an experiment—it has come to the physician's hand to stay.

Autotherapy stimulates the bacterial elements of the blood to combat infecting microorganisms only; it is not expected to cure when surgical intervention is demanded. With Autotherapy there is not so great urgency for surgical intervention, for by its use the patient may often be cured in instances where surgical intervention was formerly demanded. In lacerated perineum or cervix, in anteversion and retroflexion and other conditions mechanical interference is often demanded; on the other hand these conditions are at times accompanied by infection. When this is so, Autotherapy will then often make life endurable in those who refuse operation.

Rarely do we fail to obtain the exudate (and therefore the natural unmodified autotherapeutic remedy) directly from the cervical canal.

In chronic infections the autotherapeutic treatment is often equally as effective as in the acute.

A strong nourishing diet is given while the patient is undergoing the reactions and especially is this so in chronic conditions where the treatment will at times have to be continued for some weeks or months. It is desirable that the patient exercise but little during the reactive period of the medication. If the chill following the treatment should be pronounced the patient should be placed in bed, covered up well and given a hot drink.

The discharge taken from a patient who has been taking morphine or many other forms of hypnotics or anodynes is often worthless for autotherapeutic purposes, for morphine ap-

pears to destroy or remove the antigenic properties of the toxin; or it has some action on the toxins as yet not explained, that nullifies their curative properties, or inhibits the reactive powers of the patient in the development of antibodies on which the improved condition of the body depends.

Reasoning backwards from the above observations the writer was led to give morphine to patients who developed a severe reaction following the hypodermic injection of the toxins. The results were gratifying. Calomel in ⅒-grain doses and iodine in the 2nd centesimal dilution, given in repeated doses to stimulate glandular activity are also found to be occasionally useful when an unusually severe reaction follows. No antiseptics should contaminate the discharge that is to be used autotherapeutically. It is always advisable to give several treatments after all symptoms subside, at weekly and fortnightly intervals, to be sure the opsonic index is raised considerably above normal. Both local and constitutional reactions will usually subside within twenty-four to forty-eight hours.

It is the writer's custom to treat patients suffering with chronic diseases and particularly those with chronic infections of the pelvis, or infection of gastrointestinal origin in the following manner:

A hot bath daily or as often as the patient can stand it—the temperature of the water being from 108° F. to 112° F. The usual instruction and precautions are given regarding staying in too long—brisk rubbing following; cloth wrung out in cold water may be placed on the forehead, etc. Sea salt or epsom salt may be placed in the water. The patient is especially warned not to have the surface of the body chilled after coming out of the water.

The patient is instructed to see that the colon is thoroughly cleansed at least once daily, with warm water to which there is often added with benefit, baking soda, a teaspoonful to the quart. For the purpose of insuring a high enema, the writer

recommends the *metal spiral enema tube*—the cost is nominal and the results are eminently satisfactory.

We seldom see acute gonorrhea in the female from the fact that she often does not know she has it until the infection is well advanced; but when we do treat it early, the response is usually gratifying.

Broadly speaking, the treatment is quite similar to that of the male, but from the fact that a larger area of mucous membrane is infected, more of the discharge is obtained than it is necessary to employ for therapeutic purposes.

The toxins obtained from patients suffering with chronic gonorrhea, are at times quite toxic, but there is no danger in the treatment, or at least, no more danger than there is in the vaccines or tuberculine now in daily use among us.

If the technic outlined is closely followed, Autotherapy offers much to women suffering with deep pelvic inflammations, forestalling many operations.

The oral treatment is seldom manifested by severe reactions. In very acute conditions treatment is often given at intervals of from three to five days. It should be given more frequently in acute than in chronic conditions, but in all cases we should *treat the patient* according to the clinical reactions and not the disease.

We speak now of chronic infections—if the patient is slow to react to the toxins, or has a chill or slight fever following their administration, do not repeat till three or more days after the chill or fever subsides. The return of pain and the aggravation of other symptoms are indications that the dose should be repeated. Where there is no apparent constitutional stimulating reaction or benefit derived from the administration of the remedy there may be a negative phase present and another dose given before it is needed may result in your not being able to discover whether the patient has received

more than is required, or not sufficient medication to develop the reactions desired. Under these circumstances wait for several days before repeating the dose. The third decimal alcohol dilution or trituration of the filtrate may often be given per os without developing a prolonged negative phase.

The pelvic pains in otherwise healthy individuals, will usually cease within twenty-four or forty-eight hours after the first treatment is given. After the patient has been under treatment for a time and the inflammation is under control, the pain should return in ten days; this interval of time should be recorded, and subsequent treatments given periodically at intervals of eight or nine days, covering a period of several weeks or months. The patient, however, should come to the office for observation about every three or four days. In treating the female, as in the male, the filtrate should be prepared before any treatment is given.

Contrary to the usual method of developing antitoxins in the animal in the preparation of commercial antitoxins, the toxin administered for therapeutic purposes should usually not be given in increasing doses after the patient has developed an appreciable reaction. The first injection often appears to sensitize the patient, and it is for this reason the second treatment is often more effective than the first. But there are no set rules that will govern all conditions; each patient should be treated as an individual. Merely follow the simple instructions given in the succeeding paragraphs, study the individual, and you will have little trouble, and often will be amazed at the cures you have made; your patients will be most grateful.

The cases have been selected from many hundreds, and are given simply as types, not only of the technic but of the results that may confidently be expected.

The patient treated autotherapeutically usually knows she is better; she feels better and is glad to tell you of it.

The Autotherapeutic Technic for Gynecology

Technic No. 1. The mucus is drawn into a glass tube to which a rubber bulb or siphon is attached. This is inserted through the speculum to the cervix; from one to five drops of mucus is usually collected in the tube. The mucus is mixed in an ounce bottle, with two ounces of alcohol and thoroughly shaken, and this given the patient per os in divided doses. Ten drops in a little water every hour for ten doses.

Technic No. 2. Patient is instructed to take a cleansing douche before coming to the office; then a tampon of about five grains of cotton is placed directly against the cervix: in twenty-four hours this is removed and placed in a four-ounce bottle with two ounces of distilled water, thoroughly shaken, and the decanted fluid is given to the patient to drink.

Technic No. 3. Place five drops of the mucus collected by pipette in an ounce of distilled water; the mixture is then thoroughly shaken and allowed to stand for twenty-four hours; after which time it is passed through a Duncan Autotherapeutic Apparatus and five to twenty drops of the autoimmunizing bacteria-free filtrate are injected subcutaneously, over the biceps muscle or elsewhere.

Technic No. 4. Grind the mucus collected by pipette as in Technic No. 1, in a mortar with about one-half ounce of finely powdered glass; then it is mixed in a bottle with an ounce of distilled water, thoroughly shaken, and allowed to stand for three hours; after which time it is passed through a Duncan Autotherapeutic Apparatus and five to twenty drops of the immunizing bacteria-free filtrate are injected subcutaneously.

Technic No. 5. Mix the mucus collected by pipette as in Technic No. 1, in a mortar with one-half ounce of sugar of milk. Grind thoroughly for at least ten minutes, do this two

mornings in succession before treatment is begun, and you will have about one ounce of triturated toxin-complex; an amount sufficient to carry on the treatment—dose twenty grains by the mouth hourly for from four to ten doses. This may be repeated every other day for a week, and then every third day for another week, then every four days until the physician is satisfied the patient is cured. In very acute conditions this treatment may have to be given more frequently, in chronic infections very much less frequently. Treat the patient according to her needs and not the disease. Some patients do not require another dose for three weeks.

The great advantage of technics No. 3, No. 4, and No. 5, is that the toxins will keep for all subsequent treatments.

Technic No. 6. If the infection has not extended to the cervix, the mucus should be caught on pledgets of cotton, by gently wiping the external parts. This may be placed in two ounces of alcohol 95 per cent., to be given as in Technic No. 1.

The writer reports the following cases:

Case 75. Mrs. R., age 26 years, gave birth to a ten-pound child four years ago. There was some laceration of the cervix and vaginal outlet. Since the birth of the child she has had more or less constant pain in the left tube and ovary. When seen by the writer, October 1, 1913, there was a rather constant discharge of bloody mucus from the os. She said that this had been present for three years. During the previous week she had to give up work (bookbinding), on account of the pelvic pain. There was a spherical mass two inches in diameter at the junction of the left tube and uterus, with tenderness. There were several opaque blisters on the cervix, which was hard and pouty. Under the usual treatment, she gradually improved, but the swelling did not recede to an appreciable extent, and she still had pain in the back.

This treatment was continued until October 20th, when having decided to treat her autotherapeutically, she was instructed

to take a douche before coming to the office. A piece of cotton the size of the end of the little finger was spread over the mouth of the cervix. She was told not to molest it and to return the next day. The following day this was removed and placed in an ounce bottle of water. It was then agitated and allowed to stand for twenty-four hours, at the end of which time the solution was passed through a Berkefeld filter, and ten minims of the bacteria-free filtrate injected into the loose cellular tissues over the biceps muscle. The next day the greater part of the upper arm had the appearance of an extending cellulitis. The writer had previously warned her she might be sick the night following the injection and the arm would be sore, but not to be alarmed, as the vaccination was taking effect. She had a headache and some nausea. Within twenty-four hours the constitutional reaction passed away, as did the pelvic pain. Her appetite then improved and the drawn expression of the face relaxed. She knew she was better, and said, "If I will only stay so." She has had no more pelvic pain. At the end of a week she was given another injection of ten minims. She had some reaction, and some pelvic pain immediately following the injection; these, however, were but transient. She has had four injections one week apart, and has had no more pain since the first, except the transient pains immediately following each injection. She has had no other medication since this treatment was begun. She was back at work in a week, and gained five pounds in weight. There has been no appreciable discharge of mucus and no blood since forty-eight hours after the first injection.

Case 76. Patient 28, had leucorrhea for nineteen months, beginning one month before her child was born. Since then she has been under the care of two other physicians who treated her locally, with only temporary relief. When first seen the discharge from the cervix was thick, copious and slightly yellow. She said it was formerly greenish in color and streaked with blood. It excoriated the thighs, compelling her to wear a napkin. Her physical condition was bad and mentally she was in great distress. A small tampon of cotton was placed over the cervix and was allowed to remain twenty-four hours. It was then placed in four ounces of water. This was thoroughly shaken, allowed to stand for twenty-four hours,

filtered, and twenty minims of the filtrate were injected hypodermatically. In twenty-four hours the discharge lessened. Two more injections four days apart completely cleared up the case. The pain disappeared, the discharge stopped, and the excoriations healed. In two weeks from the time treatment was begun, the patient was apparently well.

CASE 77. Dr. Eric Von der Goltz, of New York City, reports the following case treated by Autotherapy: Patient, multipara, went to him suffering with a hemorrhage from the uterus. He discovered that she had pus tubes and an enlarged uterus. There was a mucopurulent discharge coming from the cervix mixed with much blood. He collected some of the discharge and gave a weak, watery dilution by the mouth. The bleeding stopped twelve hours after the first dose. Under the continued use of this medication, the infiltration of the broad ligaments subsided; the tubes apparently became normal, and the uterus much reduced in size. In three weeks after the treatment was begun the patient was apparently well, and has remained so for nine months.

CASE 78. Dr. A. L. Ridge, of Ogden, Utah, reports the following case cured by Autotherapy. Girl, 18 years, infected with gonorrhea one month before seeking medical aid. When first seen August 13, 1913, one Bartholin gland was infected and distended. The cervix was discharging characteristically. The microscopical examination confirmed the clinical diagnosis of gonorrhea. About half a drachm of the discharge that was free from antiseptics she had been using was placed in six ounces of tap water, and thoroughly shaken and given to the patient to drink, in tablespoonful doses. August 29th, no microorganisms were found in the discharge after a careful examination. During this interval a small amount of mucus was given her in the same way from time to time. March 21, 1914, there had been no return of the symptoms. The bladder tubes and ovaries were not involved. At the time the case came to me, I had no Duncan Autotherapeutic Apparatus, hence the crude method.

CASE 79-84. Dr. O. F. Curtis, Vincennes, Ind., reports five cases of severe leucorrhea cured by Autotherapy, by making a filtrate from a dilution of the discharge and injecting it hypodermatically at intervals of several days.

Case 85. Dr. O. F. Burrows, of Plainwell, Mich., reports: Miss E. B., age 17 years, came to me in November, 1912. She had been told that she had gonorrhea six months before. There was some endocervicitis and profuse vaginal secretion, but I did not believe it specific. I gave local depleting treatment for some time without effect. Then I decided to treat her according to the Duncan method. Accordingly I placed some of the excretion, about twenty drops, in four ounces of water and let it stand for twenty-four hours. It was then filtered according to his method and injected, twenty minims under the skin. In twenty-four hours there was a nice reaction, both local and constitutional. The local reaction consisted of an area of redness around the point of the needle; the constitutional one was manifested by a slight chill lasting for a minute. This one injection effected a complete cure.

Case 86. Patient, widow a year, age 23 years. Indefinite pains in the pelvis for over two years. Three months before treatment was begun the pain became severe. Two weeks before, the pain became very severe, compelling her to give up work. Examination revealed the following condition: Discharge of sanguineous mucus from the cervix. Induration of the right broad ligament and some induration and tenderness on the left side. During menstruation she complained of knife-like pains over the pubes. The uterus was large and the cervix pouty. There was some laceration of the cervix from confinement two years previous. Five drops of mucus were collected from the cervix. This was mixed with an ounce of water and given by the mouth. There was a constitutional reaction manifested by a chill. Then she felt feverish with dry lips. This continued all that night and part of the next day. Treatment was given on February 26, 1915; on the 27th, she did not go to work, but on the 28th, she felt much better, returned to work and has been working ever since. She has had no pain since March 12th, when menstruation began. These were not severe and but transient. She had oral medication on March 3rd, 6th, and 9th; and a hypodermic injection on the 17th. Since then she has had no pain and is apparently well.

Case 87. Patient female, age 22 years, was confined May 1, 1914. During November, 1914, she contracted gonorrhea.

When seen two months later there was a profuse discharge of pus, which was thick and yellow. The inflammation caused much pain when sitting. She was given an injection of the immunizing bacteria-free filtrate. At the end of five days she was given another injection. She did not complain of chill or fever after this but concluded she was well and did not return for treatment. Two weeks later she moved her household effects in the rain and stayed in damp clothes for several hours. She then came down with a severe inflammation of the pelvis, temperature 104° F. Peritonitis was present. The writer again found mucus streaked with blood coming from the cervix. A small piece of cotton was inserted and the mucus from the cervix wiped off on it. This was placed in an ounce bottle of water, thoroughly shaken and the decanted fluid given her to drink. In twenty-four hours her temperature was 99° F., and she felt better; in forty-eight hours her temperature was normal. She was given a similar dose every five days—six doses. She is now apparently well and complains of no pain or discomfort of any kind (1918).

Case 88. Patient female, age 24 years, applied for treatment for pains in the pelvis. The history showed her husband had gonorrhea six months previously. She had had some leucorrhea during this period. About two months previous to her visit to the office she noticed the first pain; since then they have been growing worse until the past week when they became unbearable. Examination revealed a thickening of the broad ligament on the right side, with tenderness over both tubal regions. During her last period she suffered more than she had ever done before. Five drops of mucus from the cervix were placed in an ounce of water and thoroughly shaken. The fluid was then given her. The pain stopped immediately and did not return for two weeks. When it returned she came to the office and the same treatment was given her as before. The pains again stopped within twenty-four hours and did not return for three weeks, when she came for another treatment and was encouraged to come regularly. Four similar treatments five days apart, completely cured the case. She is now free from pain and menstruates as she previously did.

Case 89. Dr. Horace P. Gillingham reports the following

case: Patient, female, age 27 years, presented herself for treatment October 10, 1913. A physical examination revealed: meatus red, swollen and painful; the urethra sensitive to the touch of examining finger, through the vagina. Under the usual treatment for such conditions, she improved and passed out of my hands October 30, 1913. When seen again, December 19, 1913, I found there had been a relapse, for the right tube was considerably swollen and painful. July, 1914: During the interval since her last visit, she had been operated upon and the appendix removed. The other organs did not appear to the surgeon to warrant excision. October 9, 1914, she again came under my medical supervision. Diagnosis: Microscopical examination revealed gonorrhea, confirming my former findings. She was placed under the usual treatment for such conditions till October 30th, with but a slight improvement. On this date after a cleansing douche, I placed three grains of cotton over the cervical opening and allowed it to remain twenty-four hours, after which time it was removed and placed in an ounce of distilled water, and I allowed it to remain for twenty-four hours, with occasional agitation. It was then filtered through a Berkefeld filter and ten minims of the unmodified toxin-complex injected subcutaneously over the biceps muscle. Within twenty-four hours she had a slight rigor and a cutaneous area of redness about three inches in diameter. Both local and constitutional reactions disappeared forty-eight hours after the injection. She had five injections from five to seven days apart. After the second and third the same reaction occurred as after the first. After the fourth and fifth a local reaction only was apparent.

She had no medication for this condition after October 30th. The pain left after the first injection, and, with the exception of transient pains immediately following injection, she has had none since. She was apparently well after the third injection but the others were given according to Dr. Duncan's technic, to ensure no return. May 31, 1915: there had been no return and the patient has no more symptoms either objective or subjective. Dr. Gillingham further states: "I have treated many cases of gonorrhea in the female, that yielded to Autotherapy as quickly as this; some yielded much more quickly. The striking feature of this case is, that it would not yield to

other methods, and yet it yielded absolutely satisfactorily to Dr. Duncan's unmodified toxins."

A review of these cases shows that a diagnosis is often unnecessary as far as a cure is concerned.

Case 90. Dr. R. W. Rose, of Brooklyn, N. Y., reports the following case: Patient, female, age 21, has been suffering from leucorrhea for several months. March 13, 1917, was attacked with what seemed an acute endometritis, severe abdominal pains and swelling of the uterus. Upon entering the cervix with a cotton wrapped applicator a very profuse discharge of pus was vented. Collecting some of this discharge I prepared a toxin and proceeded to administer hypodermic injections—the treatment started with ten minims and on the next day, August 18th, she received 20 minims, and 25 minims August 29th. On April 10th, she reported that she was as well as ever.

Professor Horace P. Gillingham of the New York Medical College and Hospital for Women, reports that he has cured and saved from operation several obstinate infections of gonorrhea in the female with Autotherapy, when every other means at his command had utterly failed. An interesting series of cases which he treated at the Metropolitan Hospital present unusual features that are far reaching in their effects. He had under his medical care nine little girls infected with acute gonorrhea, ranging in age from ten to twelve years. He asked the writer over the 'phone if there was anything that Autotherapy offered for these little patients? He was instructed to proceed as follows: Have the nurse give each little girl a vaginal douche, with a small rubber tip syringe, of about an ounce of water, and place this in the milk and give it respectively to the little patients from whom it was obtained. This treatment was carried out daily for one week. They each reacted to the medication, and developed a temperature from 99° F. to 100° F. In one week's time the discharge in eight cases had stopped entirely.

Professor D. E. Coleman, of New York City, reports that he received a letter from a Medical Missionary from the Philip-

pine Islands stating: "I am saving the women from operations following gonorrhea by means of Autotherapy."

Dr. Addisone S. Boyce, Professor of Gynecology in the New York Medical College and Hospital for Women, read a paper before the Queens County Medical Society on the subject of "Autotherapy in Gynecology." She stated that she would hesitate before making a complete report of the remarkable cures she has made by means of Autotherapy for fear she would be charged with prevarication. She states that she has seen many cases where the pelvis was solid with indurations and inflammation, thickening of the broad ligaments and adnexa, completely loosen in two weeks with no apparent tenderness, under autotherapeutic treatment.

Time and space forbid giving case after case similar to these, from the records of the clinic and those of private practice. These cases have been selected simply to illustrate not only the autotherapeutic technic of gonorrhea, but also the results that may confidently be expected to follow its use.

Obstetrics

The most frequent cause of death following delivery and abortion is infection. In the chapter under the title, "Autotherapy in the Treatment of Purulent Infections," it is stated: "Aseptic and antiseptic surgery may practically be thrown to the winds and rarely or never does severe infection follow accidental wounds when Autotherapy is properly employed."

Autotherapy presupposes infection in wounds and utilizes the unmodified product of infection to build up antibodies or immunize the patient, or fortify the tissues against a further invasion of the microorganisms in the locus of infection.

The parts of a recently delivered female are practically an open wound and should be treated as such.

We will repeat here briefly for the sake of clearness the technic advocated in the treatment of wounds that is given in the former chapter:

"If the exudate or a dilution of the exudate from any fresh wound is filtered through a Berkefeld filter and the filtrate injected hypodermatically at proper intervals, purulent infection will be aborted." A corollary to this general rule that is often more convenient in the application of this principle may be stated as follows:

"If the discharge from an extra-alimentary or extra-pulmonary fresh wound is placed in the mouth at proper intervals purulent infection will be aborted."

Obviously the parts of a recently delivered female are extra-alimentary and extra-pulmonary and for this reason puerperal infection may be treated by the above general autoseptic surgical rule, or its corollary.

It is only when strict aseptic technic is employed during labor that any woman escapes puerperal infection.

Aside from the flood of light modern biological investigations throw on this subject, the beneficial effect of this treatment is obvious when we consider that the lower animals are able to cure themselves or forestall severe puerperal infection by simply licking the lochia.

In general surgery, autoseptic technic has been found successful as an additional element of safety, when other methods of wound treatment have been employed. In accidental wounds which always contain some pathogenic microorganisms, *autosepsis* alone if properly carried out will invariably lead to the wound healing by first intention. Since this is so in accidental wounds, then there is no earthly reason why it should not also be employed in surgical wounds as well, as it will correct faulty surgical aseptic technic if properly employed; for this reason the writer urges that the *autoseptic* technic be employed in all obstetric cases.

In the absence of retained secundines, *autosepsis* properly employed will reduce the loss of life from puerperal infection

to a minimum; hence it is not only practicable, but advisable to employ Autotherapy as an *additional element of safety* in all labor cases and in abortions.

Autosepsis in obstetrics has come to the physician's hand to stay and the physician who does not employ it as an adjuvant both in the prevention and cure of puerperal infection is not using the most powerful weapon we have at our command in fighting infection, both in labor cases and those of abortions. Given a reasonably healthy mother and autoseptic technic at the time of delivery, in the absence of other complications, there is no need of death from puerperal infections.

The rationale of this treatment appeals to the medical mind when it is remembered that *autoseptic* treatment not only increases the power of the patient to resist infections that at times occur at the time of delivery, but protects her from the encroachment of invading microorganisms that might gain entrance in the parts through subsequent careless handling. An additional advantage of autosepsis in all labor cases is that if ophthalmia neonatorum occurs the *autoseptic* treatment of the mother will tend to cure by *autogalactotherapy* the child. The mother in developing antitoxins to the toxins of her own infecting microorganisms tends to cure herself by active immunity; now these antitoxins are the antitoxins of the toxins active in the child, and the former passing to the child through the mother's milk tend to cure the child quickly by passive immunity. The writer believes Autotherapy should be employed in all cases of labor, not only as a prophylaxis to ophthalmia neonatorum, but as a protection to the mother. (See chapter on Autogalactotherapy.)

* Dr. F. W. Sumner, British Surgeon of Saharanpore, India, reports the following case, in the *Indian Medical Gazette,* No-

* For the injection or ingestion of bacteria-free and unmodified toxins I owe my thanks to a paper by Dr. Charles H. Duncan, of New

vember 14, 1914, in an article under the title of "Prevention of Septic Wounds of Warfare":

CASE 91. At 9 P.M. one evening a woman was brought into the Dufferin Hospital, Saharanpore, in labor. Labor pains had commenced in an adjoining village, four days before. The hand and forearm of the child were hanging out of the vulva; the village midwife had been pulling at it hard for some time (probably at least twenty-four hours, as is the custom with those grossly ignorant and superstitious people), and given it up as a bad job. As a rule such cases are always moribund when they are brought in. I took several swabs in holders and mopped out one c.c. of the discharge from the vagina, placed them in the flask with an ounce of saline solution, left it for twelve hours, occasionally shaking well, filtered it, and at 9 A.M. (the day after admission) injected four c.c. of the filtrate. To go back, I had to remove the child by decapitating, the shoulder being firmly wedged in the brim and the uterus in a state of spasm. At the time of the injection the woman looked ill, tired, face drawn, and with rapid pulse. That evening her temperature went up to 104° F. Next day her condition was much better. A free grumous discharge was coming from the vagina. She rapidly recovered but got a large vesico-vaginal slough and fistula, which was to be expected. Later this was repaired but the patient left the hospital against orders.

Dr. Glass Davitt, Medical Missionary, stationed at the British Corlies Memorial Hospital, Baptist Mission, Yachow, West China, reports the following case in a letter to the writer:

CASE 92. A woman, primipara, had been in labor for two weeks; three dirty midwives had used all their means to produce something and they finally called me. Woman unconscious; pulse 180. At first I refused to touch the case but they argued that they knew the woman would die, and if I could

York City, in the (London) *Practitioner*, April, 1914, under the title of "Autotherapy."

use any plan to get the baby, hoping it was a boy (the father of the family had no boys and they must have one), they would be glad to let me do what I pleased. After bumping their heads on the floor several times, and crying for me to do something, I applied the forceps, even though I knew she would come out with nothing but a complete tear—enough for the details of this end of it. After delivery I gave her the usual treatment for such conditions, and left that night, hoping against hope that she would be alive the next day. They called me so seldom to treat their women that one does not like to have a case go bad, even one like this one. Of course she was infected after all the punching and pounding of the midwives, and the manipulation of the instruments taken from my bag without sterilization. Well the next day I found her alive and conscious, temperature 104° F., pulse 140; I removed the pad which had an odor of exceedingly rotten pus, and which was soaked with a blackish brownish material. I took this home and soaked it in two quarts of river water for an hour and decanted sixteen ounces, which I sent to the patient to be taken three tablespoons every hour till it was gone. I repeated the above procedure every day until the tenth day, when I stopped entirely, and the only other treatment this patient had was diuretics. On the 19th day the pad was soaked with a straw-color material which showed but few pus cells and which had the odor of normal menstrual flow, and in twenty-one days she was up and around preparing the meals and refused to let me examine her further.

The writer reports the following cases:

Case 93. Patient, age 28 years, was sent into the hospital by a midwife. There had been a breech delivery, as the body of the child was born, but the arms were locked at the side of the head. How long she had been in this condition was not known; the internes had tried to deliver the child for half an hour, without success. They then 'phoned the writer who arrived half an hour later, and the child was delivered quickly. Assuming this case was infected, he immediately began the autoseptic treatment for the prevention of severe infection. Accordingly, at the next dressing, six hours later, a square inch

of the vulva pad most stained was cut out and placed in a four-ounce bottle of water. This was well shaken and a teaspoonful of the decanted mixture given every four hours for four doses. The treatment was repeated every day for five days, always making a fresh supply for the day's medication. The patient recovered without apparent infection.

Case 94. Mrs. F. A. C., age 31, was delivered of a nine-pound child, June 22, 1912. The delivery was normal and everything progressed favorably till the eighth day, when the temperature suddenly shot up to 103° F., pulse 120, the discharge was foul smelling, face red, abdomen tender. About a square inch of the vulva pad was placed in four ounces of tap water. It was well shaken and a teaspoonful of the decanted fluid given every hour for three doses. The next day the temperature was 99° F., and on the following day it was normal.

Case 95. Patient female, age 28 years, primipara, was in labor for eighteen hours. She had been assisted by a woman who had an open boil on her right hand. The child was delivered with the aid of forceps, with some laceration. The writer assumed that the case was infected, and began autotherapeutic treatment. Accordingly the nurse was instructed to save the vulva pad every morning so that it could be examined. A square inch of the most stained part of the pad was cut out, and placed in a four-ounce bottle of water. This was well shaken and allowed to stand for an hour. The fluid was then poured off and mixed with sufficient cocoa to disguise the bloody color. Of this she was given a tablespoonful every four hours. This treatment was carried out every day for six days. She had no apparent infection.

Case 96. Patient, ignorant Russian Jewess, age 28 years, had a retained placenta after the delivery of her second child, which was manually removed in small pieces. The writer explained to the ignorant attendant carefully, how to put the vulva pad in place. At his next visit he was horrified to find the attendant rolling the gauze around unsterile cotton in the form of a cornucopia and inserting this in the vagina to keep the blood from soiling the bedding. Autotherapy as a prophylaxis to severe infection was begun immediately. Accordingly, the writer visited the patient twice daily thereafter, taking the vulva pad with him at each visit. The stained part of each pad

was cut out and placed in a pint bottle with two ounces of water. This was thoroughly shaken and allowed to stand for twelve hours. The fluid was then expressed from the gauze and passed through a filter. Twenty minims of the transparent bacteria-free filtrate were injected hypodermatically, and the remainder was given her to drink, in three divided doses, three hours apart. There was a good cutaneous and moderate constitutional reaction following the injection. She was given the filtrate, however, every day by the mouth, prepared in the manner described above, twice daily. There were no complications. The patient was out of bed on the tenth day.

Professor Wm. H. Freeman reports the following case:

Case 97. The patient had an excoriating leucorrhea during gestation, for which she would not be examined or treated. Following labor, puerperal infection developed. Placed one c.c. of the lochia in four ounces of water, and gave a teaspoonful every hour for four doses. In twenty-four hours her temperature was normal, and she had an uneventful recovery.

Amniotic fluid as a therapeutic agent. Amniotic fluid has a distinct and decided action on the uterus. It hastens natural contractions and expulsion, and the recuperation of the patient; and stimulates the mammary glands to an increased production of milk in the recently delivered. For this reason it should be used in all cases of difficult labor where it is possible to obtain it. Especially should it be kept in mind in the multipara where the history shows that in former labors the recovery was not rapid and the quantity and quality of milk were not all that could be desired.

If the amniotic sack has ruptured before the patient is seen, sterile gauze placed within the cervix will often absorb sufficient amount to be employed satisfactorily therapeutically.

The writer has invariably employed the oral method of administration, using about 20 drops, in divided doses a few minutes apart. There are apparently reasons to believe that

the injection of a few drops of the filtrate would be equally efficacious. The only apparent objection to giving the filtrate is the inconvenience it might afford at this critical time: however, with trained assistance there is no obstacle on this score but that can be overcome.

Case 98. Patient, multipara, age 23 years, had been in labor for eighteen hours; there was little dilatation and the labor pains that were formerly a few minutes apart had subsided until they were not more than fifteen and twenty minutes apart. They were not severe and the patient was gradually approaching that condition where we usually resort to the forceps. By means of a speculum and suitable instruments the membranes were ruptured and the fluid caught on absorbent cotton; from one of these about 20 drops were expressed in about 4 ounces of water; of this the patient was given a teaspoonful every ten minutes and the pains started again, after the second dose. The child was born at the time of the eighth dose.

Case 99. Patient, female, age 42 years, was passing through an abortion, at about the end of the third month. She sent for the writer thinking she was dying. There was considerable bleeding and some mucus. A piece of sterile gauze was placed in the vagina where it was allowed to stand for an hour; this gauze was placed in a glass of water and thoroughly stirred. Of this she was given a teaspoonful every ten minutes. A digital examination made at the time the gauze was placed in position showed a hard rigid os, with slight dilatation. At the time the tenth teaspoonful of fluid was given the fetus arrived. There was so much mucus present that the writer believed the case was infected. Twenty-four hours after the fetus was born a piece of sterile gauze was placed in the vagina and allowed to remain about one-half hour. This was removed and placed in two ounces of water to which was added two ounces of 95 per cent. alcohol. The first day the patient was given twenty drops of this every two hours. After this she was given twenty drops three times a day and told to continue it for a month. The writer kept in communication with the family over the telephone. She made an uneventful recovery.

The writer does not know the cause of this abortion.

The writer has employed this treatment in many cases during the past five years and has seen no bad results while in every case where it was used it hastened normal contraction both before and after delivery.

Menstruation is considered by many as a toxemia or the periodic throwing out of the body of toxic substances. It is often extremely difficult to differentiate between a pathogenic exudate and the normal menstrual discharge.

The writer believes he is venturing nothing in stating that the toxic substances thrown off at the menstrual period either in the discharge from the uterus or from the skin eruptions that often occur at this time, will in the future be utilized in the treatment of many conditions that are associated or concomitant with menstruation, as pain, headaches, malaise, etc., etc. For certain it is he has treated many symptoms successfully in patients suffering with hemorrhagic discharges by hypodermatically injecting a filtrate of a dilution from the discharge. Blood or blister-serum from the patient injected subcutaneously, at proper intervals, in certain instances, also has proved beneficial. These latter have proved to be decidedly beneficial in relieving many troublesome symptoms arising during gestation. Do not forget it.

* A New and Powerful Galactogogue

In treating a case of mastitis by means of Autotherapy, that is, by injecting subcutaneously the filtrate of the discharge from the nipple, it was noticed, in addition to curing the mastitis quickly, that the quantity of milk rapidly increased

* Abstracted from an article appearing in the *New York Medical Journal,* January 6, 1917—by the writer, under the title of, "A New and Powerful Galactagogue."

until it became more than the patient, a multipara, had ever previously produced. The question arose—Was it the milk in the exudate that caused the stimulation of the mammary glands? Several tests convinced the writer that it was, and he appended a footnote to several articles on the subject of Autotherapy, mentioning this fact; this was some years ago. At the present time the writer is pleased to report that these tests have been confirmed in several independent quarters, both in this country and in France. It is the desire still further to disseminate the knowledge of this simple treatment that suggested the present chapter. This treatment is particularly applicable in cases where the delivery has been recent and in which the supply of milk becomes quickly diminished.

The technic consists in injecting 1 c.c. of the mother's own milk into her subcutaneous tissues, under strict aseptic technic. In two days repeat again. Under ordinary conditions the results are sure.

Dr. A. J. Nossman, of Pasoga Springs, Colorado, reports the following cases:

Case 100. A typical case. Primipara, aged 35 years, in very bad condition. Milk failed on the third day, so I had difficulty in obtaining the twenty drops to inject. There was a slight chill in twelve hours. The milk came in thirty hours. She is now at nine months still nursing her baby.

Case 101. Milk failed in about two weeks. The injection brought on a temporary increase. This patient did not want to nurse her baby.

Case 102. Milk failed in three months. Injection negative.

The criticism offered to Dr. Nossman's technic is that he did not repeat the injections in the two latter cases. Had he done this, it is probable that the second patient would have been able to nurse her child, and a bare possibility that the

third one would; for as stated above, the treatment is indicated particularly in the recently delivered.

Dr. Harvey D. Morris, of Port Arthur, Texas, says: "The injection of mother's milk into herself will stimulate the mammary glands when all other known methods fail." He reported several cases treated successfully.

Dr. Alexander L. Blackwood, of Chicago, author of several widely used medical text-books, and Dr. Clement A. Shute, of Pottstown, Pa., and other physicians and veterinarians in the United States vouch for this treatment.

R. Becerro, in the *Revue de Thérapeutique Médicochirugicale,* reports favorable results in two out of three cases of sudden cessation of milk, "a condition before which the practitioner is frequently helpless. Dietetic measures, and the administration of thyroid and placenta extract, as advised by Hertoghe and Bouchacourt, are available where there is merely a slow diminution in the milk secretion, but of no value where there is a sudden decrease or complete cessation of the mammary function." Becerro recommends 10 c.c. of the milk injected subcutaneously. He states, "A single such injection in the majority of cases is followed in thirty hours by an abundant secretion of milk." The writer prefers the smaller dose repeated in two days and again if necessary repeated in eight or ten days.

It appears that here is a fertile and unexplored field for experimental work of the most valuable kind. Since milk is found to be a stimulus to the mammary glands or removes the inhibitory factor when employed in the manner suggested by the writer, it may be possible with further elaboration of the technic that it can be employed successfully in animal industry.

This is merely one of the almost innumerable problems that open up as the result of the writer's initial studies in Autotherapy that demand immediate investigation of the most

searching character. Lack of laboratory facilities alone has prevented this work being carried to its therapeutic conclusion. It is not known whether a cow or other animal is supplying her full quota of milk until after the treatment is given. If she is, there is no evidence that harm will result, if the treatment is judiciously employed. If she is not, this treatment under ordinary conditions will speed up quickly the activity of the glands until they reach their maximum capacity. Some animals may not require three injections, others may not require two. Each animal should be individualized according to its needs.

The attention of veterinarians is directed particularly to the simple method of treating mastitis mentioned in the opening paragraph of this chapter.

Case 103. Mrs. O., aged 32 years; ten days after delivery of her second child, her breasts became flabby and the milk was markedly diminished. The child cried most of the time when at the breast and sucked its fists. The breasts were cleansed with boric acid solution and sterile water, and by gentle massage 1 c.c. of milk was obtained with difficulty, in a sterile receptacle. Under strict aseptic precautions this was injected subcutaneously in the gluteal region. Within twenty-four hours the breasts became so distended that milk dropped freely from both nipples. She had no difficulty in nursing her child. This patient received two other injections in the manner indicated.

Case 104. Patient aged 28 years; on the fifth day after her second child was born, her supply of milk became greatly diminished. She received two injections, two days apart, and as a result nursed her child with no further trouble. The child was soon very fat.

Case 105. Patient, Mrs. O., age 32 years, primipara. Milk failed on the seventh day after delivery. She was then injected with 2 c.c. of her own milk subcutaneously. Within twenty-four hours the breasts became surcharged with milk to such an extent that it dripped freely from the nipples. She

was injected again on the ninth day. Since then she has had no trouble in nursing the child. The child does not cry all day but sleeps most of the time.

Case 106. This is a test case and is not offered as having been thoroughly tried out but to show the lines along which tests are being conducted. The patient, Mrs. B., had a scanty supply of milk on the third day. She was instructed to take a teaspoonful of her own milk previous to each nursing. This she did, and the supply daily increased so that she no longer had trouble in this direction.

What impresses us today is the ever-widening scope of autotherapeutic range, embracing practically all of curative medicine and much that lies entirely without its border. Particularly is this natural galactogogue interesting, for the pathogenesis of the condition is obscure.

Since the above was written Dr. J. H. Wilms, of Cincinnati, Ohio, reports he has treated many cases of suppression of milk successfully by reinjecting a few drops at weekly intervals. In one case the milk failed thirty-five days after delivery. He read a paper on the subject before his local County Medical Society.

Many other physicians who now employ this treatment, are enthusiastic over its use.

"One by one science is cutting the links in the chain that binds the human mind to the rocks of ancient belief until now one of the most ancient and cherished relics of the past, our ideas of medicine, has been smashed by the conception of a new thought embodied in autotherapy."

CHAPTER IX

* AUTOGALACTOTHERAPY

The mortality among nursing infants during the summer months is considered from two aspects, namely, preventive and therapeutic. An incomparably better method of treatment than those previously employed, is the unmodified antitoxin treatment previously advocated by me.

In this chapter we will take up this new method of combating disease with the unmodified antitoxins or with the substances antidotal to the action of all of the toxins pathogenically active in the patient's body. This method I call Autogalactotherapy or Unmodified Antitoxin Therapy.

That innumerable pathogenic microorganisms enter the body daily is well known. Myriads enter with the inspired air. They are taken into the system in massive doses, at every meal and in other ways. Many of these are constantly being destroyed by the protective agencies or fluids of the body. During their destruction, their toxins go into solution by autolysis. In response to the action of these toxins the

* Abstracted from an article by the writer that appeared in the *New York Medical Journal,* September 4, 1914, under the title of "Autogalactotherapy." This was reprinted in the *American Veterinary Review,* February, 1915, under the title of, "A New System of Therapeutics."

healthy tissues produce protective agents—the antitoxins. These are found in the various fluids of the body, as the milk, blood, etc. The process of producing antitoxins in the body is continually going on, as the supply of microorganisms is continuous and varied. For the same reason the lower animals also produce antitoxins in their blood, milk, etc. Besides the antitoxins continuously produced in our bodies in response to the invading microorganisms, we take into the body the antitoxins produced in the animal, by eating the meat, and drinking the milk of the animals. It is probable that many of the antitoxins in the meat are destroyed by heat. As the results of many tests made in Autotherapy, I hold that the mouth is the natural channel through which the live microorganisms pass into the healthy tissues and there safely establish immunity. The opsonic index is quickly raised when many varieties of live pathogenic microorganisms are taken into the comparatively healthy tissues through the mouth, i.e., the staphylococcus, streptococcus, colon bacillus, etc. This has been conclusively proved daily in the clinic by many thousands of tests by myself and hundreds of other physicians. The writer was the first to successfully employ the live pathogenic microorganisms as a therapeutic agent.

By taking into the mouth the unmodified antitoxins produced by the animal, we acquire passive immunity. This in the past has been done in a haphazard manner during the regular process of taking nutriment. It is the object of the writer to show how this haphazard process may be controlled in a measure, i.e., placed on a scientific basis and utilized in a very simple manner, both in prophylaxis and in the cure of disease.

Experimentally it has been shown by MacClintock and others that a guinea-pig will absorb in an empty stomach, in one hour, sufficient antitoxins to protect it against five lethal doses of the corresponding toxin. It is believed the heterogeneous

antitoxin will cure more cases of the corresponding disease than a heterogeneous toxin or vaccine of that microorganism will cure. That is to say, the antitoxin does not have to be so individualized to act therapeutically as does the toxin. We believe the antitoxin tends to be curative in practically every patient having the corresponding disease and that it is more general in its application as a therapeutic agent than the toxin or vaccine. To be more certain of cure, the toxin or vaccine must be taken from the patient's body. The range of cure of the toxin, therefore, is narrowed down to the individual from whom it was taken, unless it cures by accident.

Milk is the food that has ever been held in the highest esteem by all civilized people in all ages for the convalescent, the invalid, and the very young. For these it stands alone, the food supreme. It is seldom contraindicated and is usually borne well, by even a weakened stomach. It is the natural food the mother supplies to her offspring. But as Nature seldom does things by halves, we find that it has another important function that may be utilized, that of transmitting the immunity of the mother to the child. Understanding in a measure how this is done, as the results of many clinical tests on human subjects, I take advantage of the principle that underlies the immunization of the young through milk, and employ it in immunizing both the mature and the young.*

It has been beautifully designed by provident Nature, that the psychic affection and love manifested by the mother in nursing her baby, physically transmits through her milk to the child, substances that protect it against bacterial invasion. The human mother does not always as effectually protect her offspring against bacterial infection by the antibodies contained in her milk as do the mothers of the lower animals. The reasons for this will be pointed out later. It is then clearly

* *American Practitioner,* October 1, 1913.

the duty of the physician to enter on the scene of the life struggles of the infant and make up the deficiency, where possible, by adding those protective agencies, the unmodified antibodies, to the human mother's milk in which it is deficient. One method of doing this is illustrated in the following tests.

Case 107. Patient, female, nursing baby, ten months, was presented for treatment, suffering with a severe bronchitis. There seemed also to be present an associated rhinitis, for mucus flowed quite freely from the nose. The condition had persisted for about ten days. As to treatment the mother was instructed to collect during the morning upon small pledgets of cotton as much as possible of the mucus flow from the nose and to place these in a bottle and bring it to the office. There were about twenty pieces in an ounce bottle. The latter was filled with water and allowed to stand for twenty-four hours with occasional agitation; after which time the contents were expressed and passed through a Berkfeld filter. Two c.c. of the bacteria-free filtrate were injected subcutaneously into the mother and a drachm was given to her by mouth. The mother said she had a slight headache the next day, and was somewhat feverish. The cutaneous reaction was about the size of the palm of the hand. Forty-eight hours after the injection, however, the baby was distinctly better and progressively recovered without any other medication. This test has been repeated successfully many times.

Case 108. Patient, M. M., a nursing baby seven months old had been crying the greater part of the night for about a week. He would nurse but little, had frequent green slimy stools, and a discharge from the right ear. The latter was cleansed with warm boracic acid solution. The mother was instructed to place a small piece of absorbent cotton into the ear, with sterile fingers, every two hours, and when she had about twenty pieces saturated with the discharge to bring it to the office. She returned the following day. The bottle, filled with distilled water, was allowed to stand for twelve hours with occasional agitation. The fluid was decanted and the cotton squeezed to get all of the fluid possible. This was mixed with equal parts of alcohol and given the mother with

instructions to take ten drops by the mouth every half hour for ten doses. In forty-eight hours the baby's ear stopped discharging. There has been no recurrence for four years.

Case 109. Baby Constable, 2 years old, was suffering with running ears following scarlet fever contracted a year previous. The mother was instructed to bring in about twenty pledgets of absorbent cotton saturated with this secretion; these were placed in a bottle of distilled water and allowed to stand for twenty-four hours with occasional agitation; after which time it was filtered through a Duncan Autotherapeutic Apparatus, and the filtrate was ready for use. The mother having a 5-months-old nursing baby, was injected with 1½ c.c. of this filtrate. She encouraged the patient to nurse one of her breasts while the baby nursed the other. At the end of forty-eight hours the discharge ceased. The nursing babe was also rendered immune to this infection.

Case 110. Patient, age 31 years, a multipara. The husband contracted gonorrhea during her period of gestation and probably infected her, but this was not known to the writer at this time. Four days after delivery she developed the classic symptoms of puerperal infection. To combat this she was given a cubic centimeter of lochia in eight divided doses an hour apart. The writer does not desire to lay stress on this well-known autotherapeutic method of treatment as so much has previously been written on the subject. It is the treatment of the child upon which he desires at present particularly to focus attention. The child at this time developed a severe infection of both eyes, the conjunctivae of both lids were congested and inflamed and pus flowed freely from both inner canthi. It is altogether probable the treatment given the mother would cure the child by autogalactotherapy: but the writer was not satisfied in treating the mother alone, trusting that the child would be cured by the antibodies developed in her body and passing to the child through her milk. For it is well known that most infections are mixed and while the child probably had the same causative microorganisms as the chief etiological factor, there might be microorganisms complicating the infections of the child that were not present in the locus of infection of the mother. So to be certain of saving the eyes of the child the author caught the pus on small pledgets of absorbent cotton.

This was washed with sterile water in a bottle, by vigorously agitating it and the decanted fluid given the mother in divided doses. The child's eyes were cleansed with boric acid. The mother was instructed to lie on her abdomen a few minutes every hour when awake, to promote free drainage. Nothing more was done, both improved quickly and at the end of a week's time they had practically recovered. The mother was given a few subsequent treatments as a matter of precaution, and has had no return now for two years. The treatment is applicable to practically all local infections of the child, as bronchitides, rhinitides, tonsilitides, palatal ulcerations, infection of the umbilical stump.

The baby in case No. 107 received the unmodified antitoxins to its own toxins developed in the mother and passed to the child through the mother's milk. It is well known that the young can present but little resistance to an invasion of the pathogenic microorganisms. Nature designed that the mother should acquire resistance to infections for it. In the light of Autotherapy, this cure is plain when we recall a common every-day occurrence, and perceive it in the light of scientific reasoning. In the lower animal families, as in the cat and dog species, the mother constantly licks any and all of the discharges that adhere to the orifices of her young. She seems always to be employed in this loving watchful care, and in the colitides, bronchitides, sore eyes, etc., that often appear in the very young, she, by this practice, quickly elaborates in her body antitoxins to the toxins of the microorganisms pathogenically active in her offspring. These transmitted antitoxins not only cure the one infected, but immunize the remaining young to the bacterial infection in question. Following out this line of thought, we are forced to conclude that since the antitoxins of commerce are developed in animals in response to the injection of filtered toxins, if a cow, she-goat, or other female lactating animal, is injected with filtered toxins from which

a given patient suffers (e.g., bronchitis, enterocolitis, purulent infection, etc.), the injected animal should develop antitoxins to all of the toxins active in the patient. The patient drinking the milk of such an immunized animal would thus receive substances antidotal to all of the toxins active in his body; and this, too, without extra tax upon his strength or danger of calling forth anaphylaxis. The patient is thus cured in the quickest and easiest manner possible, for there would be no systemic disturbances, such as rise in the temperature, chill, headache, fever, etc. Every one may have an animal to withstand the strain incident to the development of substances directly antagonistic to the disease or antidotal to the toxins in a given case. In fact several of my patients have lactating goats for this purpose. They are as conscientious almost in looking after the goat's interests, as if it were one of the family.

All that is necessary to do is to filter the exudate from the patient's body properly and inject the bacteria-free immunizing filtrate subcutaneously into the animal. In many instances we may simply give the exudate to the animal by the mouth. After developing active immunity in the animal, the animal's milk is given to the patient to drink when nourishment is required. In this way the patient takes the unmodified antibodies into the empty stomach where, as previously stated, it has been found that they are readily taken up by the tissues, thus rendering the patient able to resist the action of the toxins active in his body. A healthy lactating woman would be ideal for this purpose, for then we should have the ideal substance for combating disease—the human antitoxins. But the danger of infection from a woman, who may have previously contracted some disease, might be a factor that would militate against the general adoption of this agency. The blood of a human being bearing the burden of the disease may be used

to convey the antitoxins to the patient, by transfusion. Animals' blood may be given per os.

Case 111. Patient, male, age 40 years, chronic catarrhal condition of the respiratory tract. The filtrate of his sputum was injected periodically into a lactating goat. He was then given the goat's milk to drink on an empty stomach. He gained two pounds a week for six weeks. His cough and sputum gradually lessened. At the end of two months he claimed he was well.

Case 112. Patient, male, age 35 years, has had a chronic catarrhal condition of the respiratory tract for several years. He applied for treatment August, 1915. The patient smoked on an average of twenty to forty cigarettes a day. A filtrate of sputum was prepared in the usual manner and eight hypodermic injections were given periodically with but little benefit. At the suggestion of the writer he took the milk of a goat that had been immuned by the periodical injections of the filtrate of his sputum. The improvement was slight. He was then told that if he did not stop smoking, it would be useless to continue the treatment. He then stopped smoking and was instructed to take a hot bath and an enema daily for ten days and to report for treatment. A fresh sample of mucus was obtained and the goat was injected subcutaneously with a filtrate from this at intervals of four days. The patient progressed and at the end of two months he had entirely recovered.

It is but a very short step from the animal mother in the care of her young, to the human mother in the care of her young. The remarkable feature is that there are few mothers who would not as a last resort cure their babies, no matter what the cost might be to preconceived ideas. One said that she would do it if it was necessary, that there was nothing about her baby that was abhorrent or revolting to her. It was part of her body, she nourished it with her body, why should she not save its life in the same way? The mother will rarely be called upon to lick the moist gangrene from

the umbilical stump, or the palatal ulceration of the new-born, or taste the pathogenic discharge from the colon, or the mucus from the nose, or pus from the eyes, for the physician is usually at hand to administer the more elegant preparation in the manner suggested. The life of an heir means much at times, both to the present generation and to posterity; it always means much to the mother. In such cases, no power within the scope of human endeavor would be overlooked to save the life of the offspring; anything that would do this would be frantically welcomed. To be sure, other means often cure these conditions, but the method here presented appears to be a very certain cure in many maladies, if the treatment is not too long withheld.

Enough has been said to indicate that no mother with motherly instincts would hesitate to take the discharge if she was convinced that it would save the life of her baby. Should the physician hesitate to give the effective medication simply because it is not aesthetic or palatable? the case may be urgent and time an all-important factor. The physician may not have the Duncan Autotherapeutic Apparatus or it may be impossible to obtain one. From a therapeutic point of view the method of licking the discharge is the natural method bequeathed by old "Dame Nature" for the protection of the life of the young by its mother; its natural protector its life-giver, now its life-saver. Oh! the beauty and completeness of Nature and her ways. The next case was in a very poor family:

Case 113. Patient, male, nursing baby two weeks old. The delivery was normal, and everything progressed apparently satisfactorily. The writer was called. He found an extensive excoriation of the gluteal region around the anus. Both folds were inflamed, very red, with much induration. He prescribed the usual remedies for this condition and left word to be called if there was no improvement. Two weeks later he was

again called. At this time he found the inflammation had apparently extended over the whole body in the form of small pustules. There were many on the head and legs. On the following day the mother had a large boil on the mons veneris, showing she too, had a lowered index to the infecting pyogenic microorganisms. On the following day the boil was opened and a drachm of pus was liberated. Microscopically, this was diagnosed to be streptococcus, short chains, pneumococcus moderate, occasional bacilli. She was given five drops of this, mixed with an ounce of water, by the mouth, in divided doses, an hour apart. Within twenty-four hours a distinct change came over both mother and child. The mother had no pain and was comfortable. In forty-eight hours the pus had dried up, leaving only some redness to mark the site of the furuncle. The baby went on quickly to recovery. Its temperature became normal, the pustules dried up, and it stopped crying. Four days afterwards, the child was apparently well, with smooth, soft, healthy baby skin.

The unmodified antitoxins developed in the mother and passing to the child through the mother's milk, is the main factor upon which the resistance of the child to bacterial infection depends. This, then, is the reason why the bottle-fed infant is more prone to bacterial infections than a breast-fed baby. The bottle-fed infant acquires immunity to the microorganisms to which the healthy cow is exposed. It is possible that the cow under normal conditions does not take the microorganisms to which the infant is commonly exposed, in sufficiently large amounts from her food, as grass, hay, etc., to cause a very great amount of acquired immunity in the human patient drinking her milk. If the cow is systematically immunized with the unmodified toxins of the pathogenic microorganisms that infect a given patient in sufficient amounts, she will produce a relatively large amount of antibodies to the injected toxins respectively, an amount sufficient to give passive immunity to the corresponding microorganisms to the

human being drinking her milk. For it must be remembered that the nursing infant or invalid would take the antitoxins in the milk, on an empty stomach in comparatively large amounts and that continuously. This method of treating the patients appears to be far reaching, and its importance is hard to estimate at the present time.

For many years the writer has never given a nursing babe a cathartic or laxative. He gives it to the mother, and the results are positive and apparently better than when given to the child. Calomel given to the mother is especially effective in moving the baby's bowels. In view of this fact, I ask myself the question: "Is it not possible that some of the intestinal disturbances in the bottle-fed babies are due to intestinal disturbances of the cow, manifested by her loose stools, caused by the food she eats, some particular kind of plant, or grass, or weed that acts on her bowels as a cathartic?" If intestinal disturbances of the bottle-fed infant are due to infecting microorganisms, or to diarrhoea in the cow, what becomes of the highly complex formulas or percentages for infant feeding worked out for these cases? It appears that percentages of infant feeding in these specific cases should be employed simply as adjuvants. It seems that if more attention was given to the feeding of cows, there would be less intestinal disturbances during the summer in the bottle-fed infants. It appears that if the cows were immunized to the microorganisms that commonly infect the bottle-fed infant, there would be even fewer disturbances of this kind.

It is well known that the strong mental impression of the mother often affects the nursing infant seriously, through the toxins so generated in her body; these reaching the child through her milk. Carpenter's physiology mentions several cases where death occurred in the nursing infant by the transmission of toxic substances that were generated in the mother

by a strong mental impression to the child through the mother's milk.

Case 114. During the early spring of 1914, Professor Wm. H. Dieffenbach, of New York City, was severely poisoned with poison ivy while working on his farm. His ears swelled to three times their natural size. His face and arms were covered with blisters. He became so acutely sensitive to the poison that he would have another attack by even riding through the country in his automobile. He has had six distinct attacks during the spring and summer. In fact he could not go into the country without having an attack. He tried over thirty different remedies without effecting a cure. Having read a paper by the author on the subject of Unmodified Antitoxin Therapy or Autogalactotherapy, he decided to test it on himself as a patient. Accordingly he had his hired man give one of his cows the leaves of the poison ivy for several days. He then drank about a quart of this cow's milk. In a few hours the stinging, biting sensation became less and the painful itching gradually subsided. He improved and made an uneventful recovery. He has been up to the farm several times with no sign of recurrence. The cow apparently thrived on the leaves.

In view of the extreme sensitiveness or low resistance Professor Dieffenbach manifested to the toxic principle of poison ivy, and the quick response he made to the antisubstances in the milk, I ask myself the question: would several patients whom I have formerly treated with the filtered toxins from their own infecting microorganisms, and who had extremely low resistance to them, have been benefited by the antitoxins of these toxins that were generated in an animal and transmitted to the patient through the milk or blood? The affirmative answer it appears, we are bound to give, opens up therapeutic possibilities of value. The writer has never seen any appreciable systematic disturbance following the use of unmodified antitoxins in milk.

It seems as if large firms making a business of supplying

milk for infant feeding, could add immunizing qualities to the milk without in any way interfering with the percentages of the composition of the milk. They could possibly supply the antitoxins in the milk that would tend to combat or antidote the pathogenic microorganisms or the etiological factors of some forms of dysenteries, diarrhoeas, bronchitides, etc. They could place a certain number of cows aside to produce milk that would combat infections caused by the staphylococcus, streptococcus, colon bacillus, etc., and use this milk for infant feeding, both as a prophylactic and therapeutic agent. At my suggestion, one large milk laboratory is making tests along this line.

Let us assume for the sake of discussion that an epidemic of typhoid fever breaks out in a community. If this treatment is effective in typhoid fever, the authorities will see that the community is immediately supplied with antityphoid fever milk, or milk from cows that have been immunized with the toxins of typhoid fever. The patient will purchase, or be supplied by the Department of Health, with antityphoid fever milk. Thus the whole community will be quickly and safely immunized to typhoid fever by employing the most common necessary article of food, and that without any danger. Carrying this conception still further, we might possibly anticipate or antedate an outbreak of an epidemic, by supplying antidotal milk before the time statistics indicate that it is liable to occur. We now largely control the conditions under which the supply of milk is obtained and its passage to the consumer.

It would take a somewhat more rigorous regulation in the supply of milk, to be sure, but this is not a problem that could not be worked out scientifically and comparatively economically. This is the age of preventive medicine.

The physician knowing that a woman who is about to be confined will be exposed to infection, could, after taking the

usual aseptic precautions, place her on antipyogenic and antitetanic milk, both before and after parturition. By so doing he could be reasonably certain that infection would not take place, even though his aseptic surgical technic was faulty. He would be even more certain that severe infection would not take place if he employed * Autotherapy of labor at the same time.

The following case illustrates the author's combined unmodified toxin and unmodified antitoxin method of treatment as a prophylactic to purulent infection. Let us assume for the sake of bringing out the various phases of the discussion clearly, that an important man of the nation sustains a compound fracture of both bones of the leg with extensive lacerations. His leg and life must be saved if possible. The writer believes that the following treatment would prevent infection almost every time. Either of these alone would probably be effective, if the treatment is properly carried out. Beginning on the day of the accident, the patient is instructed to lick the wound thoroughly once daily or oftener. When this is done, the wound will heal without evidence of infection. However, the patient may not be able to get the wound in his mouth, or he may object to this method of treatment on the ground that it is not appetizing or aesthetic. Then in treating the patient autotherapeutically, the physician has the choice of two other methods of treatment. He may give the patient one-half of the discharge from the wound daily by the mouth in divided doses, without his knowledge, at both morning and evening dressings, or the discharge from the wound may be passed through a †Berkefeld filter and the bacteria-free filtrate

* See "Autotherapy in Gynecology and Obstetrics," *Medical Times*, May, 1914, article by the writer.

† *Practitioner* (London), April, 1914, article by the writer, under the title of Autotherapy.

injected hypodermatically in proper doses daily, according to the technic given in previous chapters on the subject.

One-half of the discharge is employed daily to immunize a goat or other lactating animal. On the day following an injection of the animal, the patient is given the goat's milk to drink when nourishment is required. By employing the discharge from both morning and evening dressings, we should be certain of obtaining the microorganisms as early as possible. The patient treated by this method would be developing active immunity to his infecting microorganisms or autoimmunity, while the animal would be developing immunity to the microorganisms pathogenically active in the patient at the same time. The patient would thus receive nourishment, and at the same time be taking antibodies specific to all of his infecting microorganisms. If the wound is clean this treatment will do no harm. The regular preparation of a patient for an operation usually includes a diet of milk, both before and after the operation. There appears to be no reason why this milk should not be antipyogenic milk, or milk containing substances antidotal to pus formation, or antagonistic to pyogenic infection. that at times follows an operation.

We may be able to forestall some operations by having the patient drink antipyogenic milk, or milk from cows that have been immunized to the common pus producing microorganisms. This is an exceedingly quick method of immunization. It lends itself readily to many conditions. In a few hours we may be immune to one or many infections. It is the least harmful method of immunization. In fact the patient may not know he is being immunized. It taxes the system less than any other method, making it a boon to the very weak and enfeebled, also the very young. It interferes with no established method of treatment, but offers an additional element of safety when the treatment is properly carried

out. There is no anaphylaxis, no serum sickness, no tax on the heart. The advantages of my unmodified antitoxin method of treatment are many and will readily suggest themselves to the reader familiar with the subject of immunity.

It is believed that the very young have little power of reaction to toxins of the pathogenic microorganisms, and for this reason we should seldom attempt to produce active immunity by giving children medication that depends on reaction for cure, but we should immunize the mother if possible, when it becomes necessary to immunize the nursing baby, for she is usually stronger and better able to withstand the strain incident to the development of antibodies that are the result of the reaction. When we immunize the mother to the microorganisms, pathogenically active in the child, there are developed in the mother antibodies specific to all of the microorganisms that infect the child, both causative and complicating; hence the cure is more rapid than it would be, had the mother or child been immunized in any other way. A diagnosis is often unnecessary as far as a cure is concerned when this method of treatment is employed. It is a simple office or bedside procedure.

The mother who does not nurse her babe, robs it of the protective agencies against disease that belong to it by inheritance, that are bequeathed to it by Nature. Heretofore we have been immunizing against the more or less rare infections and have practically overlooked or neglected to immunize as a prophylactic against the most common pathogenic microorganisms with which we have to deal, i.e., the staphylococcus, and streptococcus. There appears to be no good reason why we should not immunize against these as well, and many good sound reasons why we should immunize our patients against these at stated intervals. These cocci cause and complicate more diseases than all of the other pathogenic microorganisms

put together. The advantages of immunizing against these microorganisms are apparent when we understand that "they are found," as Mittman says, "in seventy cutaneous diseases." They also cause, or complicate, nearly every form of respiratory infection, as bronchitis, tonsilitis, sinus involvement, rhinitis, pharyngitis, laryngitis, pneumonia, pulmonary tuberculosis; also boils, abscesses, furuncles, rheumatism, appendicitis, cholecystitis, endometritis, salpingitis, etc. Being immune to these cocci, it is probable that infections in which they often act as a complicating factor would not be as severe as they would be had the patient not been immunized. If we include a very few other pathogenic microorganisms, against which we would periodically immunize our patients by giving them the unmodified antitoxins contained in milk from an animal immunized to these microorganisms, we should probably be able to forestall or keep our patients free from a vast number of the common infections to which human flesh is heir and prolong human life. Some physicians may prefer actively to immunize their patients to these cocci. It remains a matter of choice, but the writer prefers the passive immunization in the manner suggested.

During the summer months when the colitides, dysenteries, etc., are common in nursing infants, if we actively immunize the mother as a prophylactic to infections common in the nursing infant, as staphylococcus, streptococcus, colon bacillus, etc., it is probable that a great many summer complaints common in the young would not occur, and the mother herself would be immune to many of the diseases mentioned above, and there are strong probabilities that her health would be better and therefore she would secrete a better quality of milk. The writer has done this for several years. The question arises: What is the distinctive field of medicine which autogalactotherapy and Autotherapy are destined to occupy?

In all infectious diseases the improved condition of the body depends on the antitoxins or antibodies. The antitoxin is developed in the living animal tissues in response to the action of a toxin on these tissues. The antitoxin is the result of the reaction of the tissues to the action of the toxin. Not every person suffering with a toxic disease dies. The antibodies are the substances the tissues produce to neutralize or antidote the actions of toxin substances and hence to cure the disease. The antitoxins developed in an animal, to the toxins that are pathogenetically active in a given patient's body, are effective, if given to that patient. The antitoxin that is previously produced in an animal is more prompt in its action than the antitoxin the patient would be compelled to produce by the action of his toxins on his body tissues. But the immunity acquired by the use of heterogeneous antitoxin is of shorter duration.

There is little or no systemic disturbance in the patient after taking the antitoxins contained in the milk of an immune animal. There is always a local reaction after giving an unmodified toxin-complex hypodermatically, and if the dose is sufficiently large an apparent systemic reaction also follows its use. The range of effective doses of the unmodified toxin-complex is so very great, however, if it is given with a skilled appreciation of the nature of the infection and the response of the individual, the dose can usually be fairly accurately gauged and readily modified by experiment, so that there will be no appreciable systemic disturbance of any kind. There must always be some reaction, else no antitoxins will be developed. This reaction, however slight, might be a factor that would militate against its use in patients of very low vitality or reactive power. The antitoxin, therefore, may be given in preference to the toxin, to those patients who have little power of reaction, namely, the very young and very old,

and to patients with little vitality, or slight recuperative forces.

This latter class of patients are often found among those suffering with chronic diseases. By this it is not to be inferred that the unmodified antitoxin therapy is not applicable to acute infectious diseases, for it appears that it is. The acute onset of some infectious diseases is so rapid, however, that we may not always be able to employ autogalactotherapy as soon as desired, unless a lactating animal is always at hand ready for use. For this reason I believe it will be used more frequently in chronic diseases.

On the other hand, Autotherapy is especially applicable in all acute localized infectious diseases, curing them or abating them quickly, often within twenty-four hours, if given sufficiently early. It is often equally effective in chronic diseases. If acute diseases are cured quickly by means of Autotherapy there will be no chronic diseases for autogalactotherapy to cure. I believe that a judicious combination of both Autotherapy and autogalactotherapy constitute the most rational treatment of localized and possibly non-localized infectious diseases.

Résumé

Let us review briefly the advantages the writer's methods offer the mother and child.

1. Autotherapy reduces the loss of life from puerperal infection to a minimum.
2. Autotherapy hastens normal labor.
3. Autotherapy facilitates normal convalescence or recuperation.
4. Autotherapy increases the supply of mother's milk.
5. Autotherapy reduces the number of bottle-fed babies with the concomitant dangers, for this reason.

6. When Autotherapy is employed there will be fewer sleepless nights for the mother with a consequent conservation of her health.
7. Autotherapy is useful in ophthalmia neonatorum.
8. The danger to the child from infection (coughs, colds, pneumonia, etc.) during its nursing life is reduced to a minimum.
9. The advantages Autotherapy offers the mother extend beyond the period of parturition, for when an infection at the time of labor is properly overcome, there will be no ensuing pelvic infections with the undermining of health and tendency towards barrenness.

In connection with the hypothetical case mentioned on pages 188 and 189, the following treatment may also be employed—A healthy individual may also be immunized to the toxins active in the patient's body by receiving periodically hypodermic injections of the filtrate of the microorganisms that infect the patient, and the blood of the individual now highly bactericidal to these microorganisms be transmitted to the patient by intravenous transfusion.

In the light of Autotherapy,
The despised drop of mucus becomes a ministering angel of mercy bequeathed by provident Nature to cure the patient.

CHAPTER X

RESPIRATORY INFECTIONS

* Hippocrates insists that,—" Observation rather than speculation is the true instrument of progress." In the last analysis the ultimate object of all laboratory investigation is, therapy.

The danger to the patient and the grave responsibility of the physician in his relation to his patient suffering with an infection of the respiratory tract, has never been brought so forcibly to our attention as the study of Autotherapy reveals; for we have never so well understood the direct relation of respiratory infections to so many diseases. Autotherapy makes it clear that it is but a very short step from a " common cold " to many of its lineal descendants, namely sinus involvements, otitis media, hay fever, asthma, rhinitis, influenza, pneumonia, appendicitis and many other infections of the deeper structures of the head, chest, abdomen and other parts of the body.

In chronic infections of the respiratory tract, the resistance

* Abstract of an article by the writer that appeared in the *New York Medical Journal,* December 14 and 21, 1912, under the title of " Autoimmunization, or The Unmodified Autogenous Toxin-complex in the treatment of Diseases," and from the *Medical Record,* September 5, 1914, by Charles H. Duncan.

of the tissues is often lowered, and the tissues then offer a fertile field for other infections, and air-borne contagions, namely, pulmonary tuberculosis, measles, mumps, whooping-cough, cerebrospinal meningitis, diphtheria, etc.

In order that it may not be overlooked, the writer will state, that in this discussion we are dealing principally with diseases uncomplicated except by bacterial infections. Many bacterial infections, especially those of the nose, pharynx, larynx, etc., are so closely allied to bacterial infections of other parts of the respiratory tract that from an autotherapeutic point of view it is often unnecessary to made a differential diagnosis to treat them successfully. Ordinary common colds are a mixed bacterial infection, and should be treated as such. This was pointed out by the writer in the *New York Medical Journal,* December 14 and 21, 1912, in an article under the title of "Autotherapy."

There he states, "acute or subacute bronchitis, may usually be checked in twenty-four hours and chronic bronchitis is often cured in a few weeks by injecting the patient hypodermatically with the filtrate from his own sputum at proper intervals."

A physician who represents the progressive element of the profession and who is a close student of Autotherapy, remarked as he spat mucus from a catarrhal condition, "*There* goes my remedy!" And he was right! That mucus did contain his remedy, especially fitted or adapted to his individual needs, as was no other. It only needed to be properly filtered, and his remedy, * specific for his condition, uncontaminated and unmodified by laboratory technic, would be at hand ready for use. It could not be duplicated. His condition usually

* The word "Specific" has lost much of its true meaning. One commercial house has labelled its products "Specific medication." Nature alone offers the true specific for bacterial infections in the de-

need not be diagnosticated in order that the remedy might cure him. In the light of Autotherapy, the despised drop of mucus becomes a priceless heritage bequeathed by Provident Nature to cure the patient.

The writer would emphasize that the speed, certainty and comparative freedom from danger with which nearly all acute infections of the respiratory tract may be treated successfully by means of Autotherapy, make it imperative on the part of the physicians to treat the patient (not the disease) autotherapeutically, if he would cure the patient in the quickest and best manner possible, and prevent or forestall the sequelae in the shape of chronic inflammation or a migration of the microorganisms or their toxins to distant parts of the body with resultant pain, increased temperature, and further sequelae in the shape of indurations, fibrous tissue changes, adhesion, pain, etc.

Since acute inflammations of the respiratory tract or the so-called "common colds" are cured quickly by means of Autotherapy, many of the long category of chronic inflammations resulting, are forestalled. This triumph of magnitude and importance opens up therapeutic possibilities that are apparently endless.

The writer has employed the filtrate of sputum successfully in some conditions he could not diagnose, for example——

A patient with a catarrhal condition of the respiratory tract was unable to walk in a straight line but constantly veered to the right. A few injections of the filtrate of sputum quickly cleared up the whole condition. But few physicians other

fensive substances elaborated in the patient's body in response to the action of the patient's own toxic substances.

Other than the natural autotherapeutic remedy, the Autogalactotherapeutic remedy is probably more often a true specific than any other remedial agent we have at our command in fighting disease.

than a brain specialist are sufficiently familiar with the brain to diagnose accurately the part affected. A diagnosis is usually unnecessary for the patient to respond to the treatment. It makes little difference what portion of the anatomy is affected for the injected toxin of the causative microorganisms by tropism has elective specific action on the focus of infection or on the tissues of the body on which they proliferated. As the homing pigeon flies straight to its cote, so the toxins developed within the patient's body act promptly on the infected part by natural elective affinity.

How often we have seen patients suffering from a toxic disease supposedly foreign to the lungs, die from pneumonia that quickly developed. We are all familiar with this occurrence. The question that engages attention in this connection is, had the bronchial condition been recognized early and the filtrate from sputum containing the specific microorganisms been therapeutically employed, might not the life of such patient been spared?

In acute appendicitis, cholecystitis, acute peritonitis, etc., and other infections, inquire closely regarding the sputum. If it can be obtained and therapeutically employed, it will often forestall a major operation.

This work was never mentioned in medical literature till the writer proved it experimentally on human beings in the clinic. It is only a question of bringing it properly to the attention of the profession, to insure for it a wide field of usefulness.

The formula given below will often have to be altered somewhat to suit the individual needs of the patient. The following technic should be closely followed: Sputum, 1 drachm; distilled water, 1 ounce; temperature 98.6° F. Mix in a two-ounce bottle with glass beads, shake well and allow to stand from twelve to twenty-four hours. Filter through a Berkfeld

filter. Inject the bacteria-free filtrate into the loose cellular tissues over the biceps muscle, in doses suitable to the needs of the patient (the average dose in acute conditions in the robust adult is twenty minims). Give no further injection until the patient ceases to improve under the preceding dose. In acute cases this will often be from the third to the fifth day, although the condition of the patient should always be the guide as to the time when another dose is needed. In very weak patients, and in very chronic cases, proportionately less should be given and the intervals between doses may have to be materially lengthened. One or two injections three to five days apart will, however, usually cure an acute or subacute respiratory infection quickly. But a single injection is at times all that is required.

There are various modifications of this treatment that are at times useful, but the therapeutic value of none of these has been proved to be greater than that given above. For example, the writer uses the following method in treating desperate cases in which it is necessary to hurry medication. This method is used also, when it is impossible to see the patient again. It is useful mainly because it saves time. The interval elapsing between the time of obtaining the sputum and that of giving the injection may be materially shortened by thoroughly grinding a drachm of sputum in a mortar with powdered glass, or with very fine sharp clean sand previous to mixing it with water. When this is done the mixture should be thoroughly agitated in a bottle of distilled water, at blood temperature for ten minutes or more to dissolve the soluble toxins. When the microorganisms are destroyed, their toxins go into solution by autolysis; the fluid is then filtered through a Duncan Autotherapeutic Apparatus, and twenty minims of the bacteria-free filtrate are injected at once. This technic is employed only in acute infections.

The writer has found it impossible to make the toxin-complex for acute bronchitis too toxic by following the formula and precautions given above. The formula is well within safe limits. It is not dangerous or no more dangerous than the use of the vaccines or tuberculines now in daily use.

There is at times a slight chill following the injection. This is the apparent systemic reaction. After the chill in acute conditions it is often unnecessary to give another injection, but to make assurance doubly sure, the writer gives several others at intervals of from seven to ten days. Always make sufficient filtrate to last till the patient has arrived at the stage of convalescence where it is impossible to obtain more mucus, or when the patient has been almost cured (½ ounce of filtrate is amply sufficient). The writer usually employs the same filtrate for subsequent injections. Do not allow the mixture of sputum and water to stand longer than twenty-four hours before filtering, for it then becomes exceedingly toxic and less therapeutic. Twelve hours in summer.

The following cases have been selected from thousands that have been treated in a similar manner that might have been reported. They illustrate not only the technic but the results that may be confidently expected to follow when the technic is properly employed.

While the writer has had wide experience in treating rheumatism by means of Autotherapy, he feels that the time has not yet arrived to incorporate the technic in book form. The same may be said of pulmonary tuberculosis.

Recognizing the sad experience physicians had at first with Koch's tuberculine, the writer believes that the best interests of both the patient and the physician will be conserved by making progress slowly in this direction. These infections require a special knowledge of individualizing the patient, namely, to regulate the dosage and the interval between doses

with accuracy and to treat the patient according to his needs.

Volumes possibly, could be written with profit on these infections treated autotherapeutically. This being so, it has been deemed wisest to withhold, at present, a discussion of these two infections.

Acute Bronchitis

Dr. Alexander Vertes, of Louisville, Kentucky, reports the following case:

Case 115. "Patient, male, age 9 years, had acute bronchitis for ten days. There was a dull pain in the chest under the sternum and a painful cough that came in spasms. One injection relieved the pain in twelve hours. He made a rapid and uneventful recovery."

Dr. Vertes states further:

"I am using Autotherapy when it is applicable, to the exclusion of all other medication, because it gives me results that no other medication has ever given. An acute congestive bronchitis usually has a 'crisis' or resolution set in within twenty-four hours after the first injection."

Dr. C. E. Fenner, of Sacramento, California, reports the following case:

Case 116. Patient, Mrs. M. A. F., age 67 years, on November 24th took to bed with a hard cold and congestion of the lungs. I prepared the autogenous toxin-complex from the sputum and gave the following doses: November 27th, I gave her a hypodermic injection in the left arm, and there was a light local and constitutional reaction. About twenty-four hours after the first dose the cough stopped and the excretions were much lessened. By the third day all excretions had stopped. I, however, gave two more doses on the 2nd and 10th of December, for good measure. There has been no return of symptoms, although she is subject to chronic catarrh of the throat and bowels. She claimed that this treatment

stopped a noise in the ears that had been present constantly for many years.

The writer reports the following cases:

Case 117. Patient, female, age 36 years, an actress; applied for treatment at 7 P.M., suffering with severe bronchitis and laryngitis. She did not feel able to leave the city with her company that night. Temperature 101° F., pulse 110. A drachm of mucus was obtained and prepared in the usual manner. Of this she was given a subcutaneous injection of two c.c., her bowels were opened with calomel and she was instructed to go with the troupe, with the assurance that within twenty-four hours the troublesome cough would stop. A most grateful letter received two weeks later stated that the prophecy had been fulfilled, as she had lost no time, and believed what the writer believed, that what usually would have been a most troublesome condition, was cured promptly.

Case 118. Patient, Dr. Bailey, Surgeon of United States Navy, attached to the Training Ship, "Granite State," called the writer at 3 A.M., believing he was developing pneumonia. I found him with a sharp stabbing pain in the mid-sternal region—he was suffering with a severe acute bronchitis; temperature 100° F., pulse 96. A drachm of mucus was obtained and prepared in the usual manner, and two c.c. of the filtrate were injected subcutaneously at eight o'clock the next morning (this was Friday). Sunday evening at eight o'clock he walked into the office stating the cough he had had for two weeks previous had entirely disappeared and that he had fully recovered.

Case 119. Patient, male, age 32 years, applied for treatment suffering with acute bronchitis, with a deep-sounding and exhausting cough. He was given an injection of 2 c.c. of the filtrate of sputum prepared in the usual manner, and that night coughed but little. In forty-eight hours the cough had entirely disappeared. There was no return.

Case 120. Patient, male, age 28 years, professional violinist, took a heavy cold at rehearsal and believed he was coming down with a sick spell that would necessitate his giving up work. Forty-eight hours after the injection, the patient claimed he had entirely recovered. He was so pleased that he

sent for his brother in Boston to come to New York to be treated for a most rebellious bronchitis of four weeks' duration. His brother was treated in a similar manner, but his cough returned in three days. On the fourth day he received another injection which completely cured the case.

Case 121. Patient, male, age 29, applied for treatment June 15, 1911. He had been suffering with a severe bronchitis for a month. The principal and most troublesome symptom was that of a weight over the middle of the sternum accompanied with a slight cough. There was very little expectoration and that was difficult to raise. His appetite was impaired and he was in such a weakened condition he was compelled to give up his business. He failed to improve when treated with the usual remedies for this condition. He was treated autotherapeutically and within twenty-four hours was distinctly better and made an uneventful recovery.

Case 122. The writer reports the following case:

Patient, male, age 60 years, fell from a ladder breaking his left arm and straining the ligaments of the left groin; he was also severely bruised over the shoulder, head and legs. The abdomen was tender and the pain from an old inguinal hernia was intensified. A bronchitis he had previously became aggravated, and within forty-eight hours he complained principally of severe pain incident to coughing. A drachm of sputum was placed in an ounce of water and allowed to stand for twenty-four hours with occasional agitation, at the end of which time it was filtered and twenty minims of the filtrate were injected into the loose cellular tissues over the biceps muscle. In two hours he felt better and stopped complaining. In twenty-four hours his coughing ceased entirely.

Case 123. Patient, Mrs. Daly, age 32, applied for treatment suffering with severe laryngitis and bronchitis; she described her throat as being raw as a beefsteak and her chest was sore from frequent coughing. The condition had been present two weeks. The usual household remedies proving ineffectual, she sought the services of the writer for the reason that he had cured her nephew quickly of articular rheumatism. She received an injection of the filtrate of the mucus on the 10th of January. When seen on the 15th, she stated that the relief of her sore throat was prompt but she still spat up large

quantities of mucus. Her chest was no longer sore. On this date she received another injection of 1½ c.c. On the 25th, in response to her telephone call, she said she had been well for a week.

Case 124. Patient, Mrs. Lord, age 30, called at 10.30 in the evening, suffering from severe bronchitis caused by exposure and wet feet two days previous. While passing the office on business she became so weak that it was necessary for her to have assistance, for fear of falling in the street. She called on the nearest doctor who happened to be the writer, who found her rapidly approaching pneumonia. He obtained a drachm of mucus while in the office, ground it in a mortar with fine powdered glass, which was mixed with an ounce of distilled water, at blood temperature and thoroughly shaken for about ten or fifteen minutes, at the end of which time it was filtered and 2½ c.c. injected subcutaneously. When seen a year later she claimed she had never seen a severe cold broken up so quickly. Within forty-eight hours she claims she was well.

Case 125. Patient, Mrs. D., age 35, during the severe cold weather when the government prohibited the free use of coal, contracted a severe laryngitis and bronchitis. She had coughing spells that would last up to ten minutes, that racked her whole system. Her tonsils were inflamed as were the lymphatic glands running down both sides of the neck. Temperature 102.5° F. She was alarmed at her condition, fearing she would die. Two c.c. of the filtrate of the sputum were injected, which relieved her promptly. In five days' time this was repeated; whereupon the symptoms were all promptly relieved for two weeks, when the cough and sore throat again returned. She was given another similar injection of 2 c.c. which promptly cured her.

Case 126. Patient, male, age 65 years, suffering with severe bronchitis of five days' standing. The usual treatment of hot baths, purging, etc., failed to give relief. Two c.c. of the filtrate of sputum were injected subcutaneously and ten hours afterwards he had a chill lasting for upwards of half an hour. After this his symptoms were relieved. In forty-eight hours he was practically well and there has been no return.

Case 127. Patient, female, age 18 years, got her feet wet

going to business. When seen two days later she was a fit subject for the hospital, under ordinary conditions. Her eyes were suffused and the phlegm from her nose excoriated the mucous membrane until the nose itself became swollen and painful. The posterior nares, larynx and tonsils were inflamed. A drachm of mucus from the nose was prepared and filtered in the usual manner and 1½ c.c. were injected subcutaneously. Relief was immediate and she was able to continue work the next day. In five days another injection was given which completely cured the case.

Case 128. Dr. P. T. Geyerman of Our Lady of Lourdes Hospital, Hot Springs, South Dakota, reports the following two cases:

Female, age 49, American. Chronic cough and expectoration for the past seven years. General condition fairly good. Many coarse and fine rales over both lungs. No rise of temperature. Pulse 80. Examination shows many organisms, mostly diplococci. No culture made. A filtrate of the sputum was made in the usual way. Injections were made at five-day intervals with complete cure in four weeks. This case was treated in February, 1913, with no recurrence (1916).

Case 129. Patient, female, age 19, chronic cough for the past four years following an attack of measles. No loss of weight. Fairly well nourished but has not been strong since present illness began. Tuberculosis was suspected but no tubercle bacilli could be found in the sputum. X-ray plates of the chest were negative except for some enlargements of the bronchial glands. She had been operated on for chronic appendicitis a year previous with complete recovery. She was put on usual medical treatment and was given autogenous vaccines for a period of four months with some improvement, though she still coughed considerably with very little or no diminution in the amount of sputum. At this time a filtrate was made in the usual way and administered at five-day intervals. She began to improve after the second injection and was completely well at the end of eight weeks. No recurrence of the trouble after eighteen months.

Case 130. Dr. C. E. Fenner, of Sacramento, California, reports the following case:

Patient, A. M. F., female, age 27 years, nurse. She was

subject to sore throat and colds in the chest. Had a cold and sore throat on nearly every case she nursed. I collected the expectoration from an acute exacerbation and prepared the autogenous toxin-complex from it. I gave her from five to fifteen minims injections on November 28, December 8, 19, and 30, and on January 14. Since the treatment was begun she has been working steadily and has had no further sign of cold or sore throat. She says that to her surprise and gratification, her digestion was greatly improved.

CASE (131) The following letter appearing in the *New York Medical Journal,* November 1, 1913, is self-explanatory:

"LOS ANGELES, CAL.
2915 So. Vernon Ave.
October 13, 1913.

"To the Editor:—In the December 14 and 21, 1912, issues of the *New York Medical Journal,* Dr. Charles H. Duncan published an article under the title of 'Autotherapy.' In this article he stated that he was able to cure acute and subacute bronchitis within twenty-four hours, and a chronic bronchitis within two weeks. I determined to try it on myself as a patient. My father had bronchitis for forty years, and I have had it for many years. I am now 54 years old. The chief symptom in my case is a severe coughing spell almost every night; these usually lasted from a half-hour to forty-five minutes. I mixed one part of sputum with five parts of water and allowed it to stand for twenty-four hours, with occasional agitation, and then filtered it through a Berkfeld Filter. I had Dr. Carl Johnson, of Los Angeles, give me an injection in the lumbar region. I coughed none that night. The second night I coughed five minutes. On the third day I had another injection. I have had four injections altogether, each four days apart. My bronchitis has been cured or abated for I now cough not at all. The only symptom I have at present, if it can be called a symptom, is that on rare occasions there is a slight effort at coughing, wholly unlike my previous cough. I can truly say it has been 'magical.'

"I do not know Dr. Duncan; I never heard of him before; I read his article and I merely write that others who are similarly afflicted, may know of this grand treatment. I shall try Autotherapy out in all its various phases." L. C. Toney, M.D.

Facts speak louder than words, and could those unfamiliar with Autotherapy witness the results the writer is obtaining day after day, and then compare these results with those obtained by the usual methods of treating infections of the respiratory tract, they would be astonished and incorporate it immediately in their armamentarium. The prompt control of the cough of acute bronchitis by means of Autotherapy is one of the most certain things in medicine.

Time and space alone prevent reporting many similar cases both from my own records and from those of hundreds of physicians. The cases given should not be considered "picked cases," for they are taken more or less at random from my case books. Some physicians report they have treated successfully as high as six hundred infections of the respiratory tract by this means; and many report having used Autotherapy successfully for several years. A number of physicians have from two to six filters in their office in more or less constant use. All who have employed Autotherapy judiciously are enthusiastic over the results.

Case 132. Dr. R. W. Rose, of Brooklyn, N. Y., reports the following two cases:

Patient, male, age 69 years, subject to bronchitis, the present attack severe and long lasting. Former attacks were so troublesome that he was obliged to seek a warmer climate in order to obtain relief. On December 14, 1915, I collected some sputum from which I prepared the "toxin-complex." He was given an injection of twenty minims. After the third injection had been given he was restored to health. The treatment lasted ten days.

Case 133. Female, age 53 years, father died of throat trouble, two sisters died of tuberculosis. Until 18 years of age she was afflicted with enlarged tonsils, which were enucleated; takes cold easily, which leaves her with a chronic cough difficult to get rid of. At the age of 45 she received a fright causing suppression of menstrual function. The shock produced a

complete cessation from which time she has suffered from chronic bronchitis which no medicine could benefit. Various examinations of the sputum proved negative. She was treated according to Dr. Duncan's method of Autotherapy, from April 4 to November 8, 1916, clinical cure following.

Case 134. Patient, male, age 32, robust and powerfully built; had never had a physician attend him except for children's diseases. Four weeks before applying for treatment he obtained a position in a plant that manufactured nitric and sulphuric acid. He states it is impossible for a man to work at this position more than a few months on account of the damaging effect of the fumes from the acids have upon the respiratory tract. When first seen by the writer he had a severe laryngitis and bronchitis owing to the irritating effect of the fumes he inhaled following his vocation. The obvious treatment would have been to remove the cause, that is to insist that he change his position; as he had been idle for some months previously and the wages were high, he did not care to do this. He was treated with the filtrate of his sputum in the usual manner. Three injections, four days apart, cured the case. He worked for four weeks longer before giving up his position.

It appears from these and similar cases that a bronchitis or coughing spell following an operation may often be benefited or cured quickly by this simple treatment. There are normally myriads of pathogenic microorganisms in the lungs. When the vitality of the patient is lowered for any reason, as after an operation, or where there is irritation in the lungs due to the anaesthesia, or other cause, these microorganisms tend to proliferate, and a true bronchitis or infection of the lungs tends to develop. This Autotherapy tends to cure quickly.

Case 135. Dr. C. L. Moore, of Cleveland, Ohio, President of the Grace Hospital Medical Board; Chief of the Good Samaritan Dispensary, Lecturer of the Theory and Practice of Medicine and Physical Diagnosis, reports the following case:

Patient, M. S., schoolgirl, age 16 years. Never robust. Family history negative. Whooping-cough at four and measles at eight. Good recovery. Tonsils and adenoids removed two years ago. Department of Health diagnosis, sputum negative. Physical examination: Poorly nourished; cervical glands enlarged on the left side; temperature 99° F.; pulse 104; respiration 32; blood pressure 100; dry râles. Treatment: Hypodermic of filtered sputum. I gave her four injections between January 22, 1914, and March 26th. At this writing the patient is in better health than in five years. This case had bryonia tincture, drop doses, three times a day from the 5th to the 18th of March.

Continuing, Dr. Moore states:

"I consider Autotherapy the most satisfactory therapeutic agent with which I am familiar. I recently read a paper on the subject of Autotherapy before the Physicians' Hospital Association. I am using Autotherapy extensively in my practice and have been successful in practically every case that has been treated according to your teachings."

Case 136. Dr. J. L. Barge, Newman, Ga., reports the following two cases:

Patient, Mrs. F. W., age 30 years, three children. Is frail and thin. Had an ugly cough for several years. On February 10, 1913, she had a severe attack of bronchitis and on the 17th, there was no improvement. On this date I administered ten minims of the filtrate of sputum according to the Duncan Autotherapeutic method. February 19, 1913, the bronchial symptoms had subsided. On the 20th of February, no cough and health much improved. January 14, 1914, general health still good, no cough.

Case 137. Patient, J. T. A., male, age 35 years. Severe cough and expectoration of several months' standing. Cough so troublesome he could not sleep at night. This debilitated him to such an extent he was unable to work. April 6, 1913, gave him twelve minims of the filtrate. April 12, 1913, gave him fifteen minims. He did not think it necessary to take further treatment, although he still coughed. At this time he went

to work and has been working ever since. October 22, 1913, cough somewhat troublesome on retiring at night and on waking in the morning. I gave four more injections about ten days apart. The patient at this time was well and hearty and has so remained.

Case 138. Dr. J. Wilford Allen, Professor of Medicine, New York Homoeopathic Medical College and Flower Hospital, President of the Homoeopathic Medical Society of the County of New York, reported the following case before the Committee appointed by the Homoeopathic Medical Society of the County of New York to investigate Autotherapy, in 1914:

Patient, female, came to him from the hands of two other physicians, suffering with chronic cough and bronchitis. She spat up a pint of mucus daily. After unsuccessfully employing every means at his command to alleviate her condition, Dr. Allen applied to the writer over the 'phone asking if Autotherapy offered anything that would help her. After receiving instructions, he filtered the mucus without dilution, through a Duncan Autotherapeutic Apparatus, and injected 2 c.c. of the bacteria-free immunizing filtrate subcutaneously. To his utmost surprise the patient slept well the following night without being troubled with the cough—something she had not done for many months previously. A few more injections several days apart completely cured the case.

Case 139. Dr. August K. Detwiler, Omaha, Neb., states: "I take great pleasure in reporting four cases of old chronic bronchitis of from eight to twelve years' standing that have made good recoveries under Autotherapy. I reported these and many other cases in a paper before the Nicholas Senn Medical Society of Omaha. I assure you I prefer your unmodified toxin-complex to Wright's autogenous vaccines—these latter surely do not meet all of the indications."

A patient suffering with acute or chronic respiratory infections may often be materially benefited if the filtrate from sputum is given in small doses repeatedly by the mouth. This treatment is not as positive in its action as injecting the filtrate in the manner described but that it does cure in a certain percentage of cases is a fact that must be acknowledged.

The writer seldom employs this method of treatment except in patients who are suffering with an excessively virulent type of infection, and in some chronic diseases, because he believes it is not as reliable as injecting the filtrate subcutaneously. Buccal immunization, however, is reliable in local infections in no way connected with the alimentary tract or respiratory system.

Tonsilitis

The writer has cured quickly many patients suffering with tonsilitis by means of Autotherapy. The results have been so uniformly positive that he believes it little short of a crime not to treat these patients autotherapeutically. He uses this strong language with the full knowledge that exceptions might be taken to it by those who are unfamiliar with the application of Autotherapy in acute tonsilitis, but when we pause to realize the possible sequel, namely, rheumatism and heart disease, nephritis, etc., and then the fact that Autotherapy usually cures acute tonsilitis quickly and puts an end to the vicious cycle that so often follows this acute infection, he will possibly be pardoned for these assertions. The writer has treated every case of acute tonsilitis that came to him in the past six years successfully, by means of Autotherapy. Many other physicians report having done the same thing.

Tonsilitis should be treated early if the best results are to be obtained. Even if quinsy supervenes the infecting microorganisms can be obtained in virulent form either from mucus from the tonsils or the pus from the lanced peritonsillar tissue. In a number of cases where rheumatic pains, and pains in the heart occurred within twenty-four hours after the throat became sore, the destructive process has been halted promptly, and the process of repair instituted in its place,

often within a few hours after the first injection of the filtrate from sputum. It is especially important that young people and children should be treated autotherapeutically, for this is the class of patients in which the disease too often quickly leaves in its trail a damaged heart or kidneys, etc. In young people it is often necessary to obtain the infecting micro-organisms by swabbing the tonsils several times with small pledgets of cotton. These are placed in distilled water and the mixture allowed to stand from twelve to twenty-four hours at room temperature, with occasional agitation, the dilution being then passed through the filter.

Case 140. Dr. R. W. Rose, of Brooklyn, N. Y., reports the following case:

Patient, female, age 28 years, has been subject to tonsilitis. Physicians advised her to have the tonsils removed which she refused to do. July 1, 1916, she was referred to me. Examination revealed the fact that both tonsils were enlarged. She had an acute pharyngitis and laryngitis that was very painful; I learned also, that her menstrual function was complicated with a discharge before and after her periods and also with a very troublesome vaginitis. I treated her with a toxin prepared from the sputum, and later a toxin prepared from vaginal secretion, under which treatment she made an uneventful recovery. At this writing, one year later she remains perfectly well.

Case 141. Dr. R. L. Rierson, of Dixon, Cal., reports the following case:

Patient, F. C. Tonsilitis. Autotherapy. One dose cured. I have had no failures when the infection is treated early; and I have treated many cases.

Acute and Chronic Laryngitis

Case 142. The writer reports the following case:

Patient, female, age 23 years, schoolteacher, had suffered with a catarrhal condition of the nose and throat since she was eight years old, when she had scarlet fever. She had running ears for several years afterwards. In recent years she had

been subject to recurrent bronchitis. She would scarcely get over one attack before she would come down with another. The present attack came on September 21, 1913. When first seen on the 28th, she had a deep cough which caused great pain under the sternum. She did not have to give up her school duties, but attended to them with great difficulty. She had coughed practically all night for the past week. On September 30th, she was given an injection of the autogenous toxin-complex made from the sputum. The pain in the chest left within twenty-four hours. She coughed none after the injection. On October 6th there was a return of the pain in the chest and a slight cough, but she could scarcely raise enough sputum from which to prepare the toxin-complex. On October 7th, she was given another injection. This cleared up the whole condition quickly. She has had no recurrence; now five years.

Pharyngitis

Case 143. Dr. George W. Mackenzie, of Philadelphia, Pa., reports the following case:

Patient, Dr. R. I., age 40 years, came to me January 18, 1917, having had a cold in his chest for six months, associated with heavy coughing—sometimes dry and other times loose. During the last month he had had asthmatic attacks nightly—there has been more or less of a catarrhal condition for the last two years, and a hemorrhage previous to his coming to me which appeared to the patient to indicate that there was possible tuberculosis infection. The patient was referred to me because it was thought an ethmoid might be a predisposing factor in the asthma. Examination of the nose revealed an S-formed deviation of the septum, mucous membrane moderately turgescent, but no gross evidence of sinus disease. Examination of the throat showed a secondary catarrhal pharyngitis and relatively small tonsils containing no deposits. The patient was given an autotherapeutic injection on the left arm, and at the same time a specimen of the sputum was sent to the Philadelphia Clinical Laboratory, the report of which was that the sputum contained a few short chains of streptococci, a few gram-positive diplococci; pus present in abun-

dance; tubercle bacilli not found. The patient was seen again on January 18th, when he reported that on the night of the injection he had marked reaction and felt as though he was developing the grippe. The next day (the 19th) he felt much better; however, during the night he had considerable asthma. An autotherapeutic injection was not repeated. On January 23rd, the patient reported that he was feeling markedly better and had had only two coughing spells during the preceding night, lasting about fifteen minutes. The temperature had been normal, patient's report. A second injection was given, and no other treatment. On January 27th, the patient reported that he was decidedly better and had very little coughing at night. At this time no injection was given. On January 29th, the patient says he is getting along very nicely, the cough is less and he feels better generally; however, he claims to have felt tired for about three days after the last injection. An autotherapeutic injection was repeated. From this time on the patient reported continual improvement until between the middle of February and the middle of March he had a slight return of asthma, when he was given another injection; and from this time on there have been no symptoms of cough or asthma. On April 11th, the patient reported to me with a so-called "pink eye." An examination of the secretion from the left eye revealed, according to the report from the Philadelphia Clinical Laboratory, an infection from the Morax-Axenfeld bacillus. This, as is generally recognized, is a very obstinate infection. The patient was given an injection prepared from the secretion of the eye on April 11th, reporting again on the 14th, when the eye did not seem to be any better. On the 17th, the infection was less intense and the patient was given a second injection. On April 21st the eye looked and felt much better,—no apparent reaction after the last injection. On this visit he was given a third injection and he reported on the 24th, that there had been no reaction and the eye was decidedly better. He was given a fourth injection on this visit. On the 28th, the patient felt that he had a very pronounced reaction following the last injection, which was followed the next day with very remarked improvement in every way; the eye condition had practically cleared up.

Chronic Rhinitis

CASE 144. * Dr. C. F. Fenner says: "After carefully reading and studying the principles involved in Autotherapy, I decided to make a thorough trial of it upon myself as a patient."

I had been troubled for many years with chronic rhinitis which had progressed and spread in spite of many approved methods of treatment that had been instituted, including removal of tonsils, adenoids, etc. The condition had become systemic, extending to the stomach and intestines, and was accompanied by a chronic catarrhal inflammation of the middle ear with impairment of hearing. In September, 1913, I purchased a complete Duncan Autotherapeutic Apparatus and started treatment. Without going into details as to the dosage, repetition of dose, reactions, etc., I will state that the results were quick and decisive, far greater than anything I had ever tried before. The inflammation in the head cleared up within three weeks. The hearing improved 75 per cent. by tests and has remained so. The slight impairment of hearing still remaining is due to the thickening or structural tissue changes. It would be folly to expect any medical agent to change this condition except by improving the circulation through the parts, and that is very slowly but surely being done. But what surprised me most of all was the effect this treatment had on the bowels. The improvement of my obstinate constipation was wonderful. This gave me the idea of using it for patients with catarrh of the bowels and bile ducts."

Dr. Fenner says: "My experience with Autotherapy in respiratory infections, especially bronchitis, has been most pleasing to both patients and physicians. It is a rare case indeed that does not yield quickly to this treatment. From two to four doses usually stops the cough. I employ an incubator to keep the pabulum at blood temperature for from six to twenty-four hours before filtration and therefore sterilization. If I am to keep the filtrate for further use I make the

* Dr. Carl Fenner, Sacramento, Cal., in a Symposium under the title of "Autotherapy," *Western Medical Times,* October, 1916.

filtrate with one-half per cent. phenol as a preserving agent, and I never give more than five minims as the initial dose.

"After four and one-half years' experience in the use of Autotherapy, I have not had a case that showed any form of injury from the treatment; on the contrary, I have had almost without exception, good results. Many who were formerly subject to repeated colds are now practically immune to such attacks and this last statement applies to my own case."

CASE 145. The writer reports the following case:

Patient, male, age 52 years, had a catarrhal condition of the nose and throat for the past two years. During the past six months he had difficulty in concentrating his mind on his business. Was drowsy and apathetic and his sexual powers were markedly diminished. He came for treatment for his mental condition. It was then that the catarrhal condition, above mentioned, was discovered. He did not complain of spitting mucus in the morning. This was learned during the examination. He was given an injection of the autogenous toxin-complex, prepared from the sputum. After the third injection he had a chill, and all of his symptoms disappeared and have not reappeared (in over two years). No other medication was given.

Ozena

CASE 146. The writer reports the following cases:

Patient, Mrs. C. E. G., age 26, applied for treatment suffering with dull frontal headaches in the region of the antrum of Highmore on the right side. History of the case shows that since she was a very young girl she had had an infection of the posterior nares—the chief symptom of which consisted in the formation periodically of large plugs of mucus in the form of a crust, completely covering the whole nasopharynx; these plugs would be blown from the nose once or twice daily, and were accompanied by *a foul smelling breath*. She has had at the present writing, ten injections, five days apart; the odor disappeared after the second injection, at which time the

pain ceased and has not returned. There has been no return now in over a year.

Case 147. Patient, male, 34 years, lawyer, applied for treatment suffering with an exceedingly foul breath and some deafness. A drachm of mucus was placed in an ounce of distilled water with about fifty small beads—this was thoroughly agitated; after which time it was passed through a Duncan Autotherapeutic Apparatus and 1, c.c. of the filtrate injected subcutaneously. The patient's bowels were opened with calomel in divided doses. Calomel has elective affinity for the eustachian tubes and will frequently relieve an acute catarrhal deafness. At the end of the week the odor had entirely disappeared, when he received another injection. This patient had two weekly injections for eight weeks after which there was no longer any mucus present. He was discharged as cured. There has been no return now (five years). The diagnosis of this patient could be made by any one six feet away with his eyes closed from the terrible offensiveness of his breath.

Case 148. Dr. R. S. Rierson, of Oakland, California, reports the following case:

Patient, G. D. V., age 34 years, cement worker, suffering with ozena and chronic bronchitis of years' standing. So foul was his breath that he would be avoided by people talking to him. There was also a pterygium on the left eye. He was treated with sputum according to the Duncan Autotherapeutic method, April 25, 1913, and received three other injections four days apart, with a cure of the ozena and bronchitis. The pterygium was diminished two thirds in size. After this an injection was given occasionally. The patient was satisfied with the result.

Dr. Rierson says, in a letter dated January 11, 1914: "In all I have treated more than one hundred and ten cases with Autotherapy—boils, rheumatism, etc., with results that have been a revelation to me and to my patients. Eight cases out of ten so treated were cured. This included those who would not allow me to finish the treatment. I believe Autotherapy has a great future and that it will relieve more suf-

fering than anything else that has come before the medical profession."

Nasal Accessory Sinuses

Case 149. The writer reports the following cases:

Mastoiditis and Sinusitis

Patient, Mrs. J. W., age 32 years, applied for treatment October 10, 1916. Family history negative; patient had always been in robust health and had not consulted a physician for fourteen years. Six weeks previous to her first visit at the office she complained of severe pain in the left mastoid region. She had lost in weight during this period and had a temperature of 101° F. The pains had been unbearable for the past few days and she explained that every beat of the heart was like a blow from a hammer. The history of the case, as far as the present trouble is concerned, dated to the previous February, when the patient had an acute attack of la grippe. There had been a catarrhal condition of the nasal region since that time. The patient was given a sterile bottle with instructions to collect at least a drachm of mucus from the nose and throat. This was prepared in the usual manner and the following day the patient was injected with 1 c.c. of the filtrate subcutaneously over the biceps muscle. The pain was increased for about two hours after the injection, after which time it disappeared as if by the action of morphine. That night the patient slept better than she had for weeks. She reported daily for observation, and at the end of four days there was a slight return of the pain. The patient received another injection of 1½ c.c. There was some return of the intense pain immediately following the injection, but this passed off within an hour. She had eight injections four days apart. She was discharged cured. There has been no return of the pain up to the present time. The inferior turbinates were removed as they closed the air passage.

Case 150. Patient, female, age 28 years, a sister of Dr. Reeves Turner, of New York City, presented herself for treatment, suffering with an infection of both frontal sinuses, both antrums of Highmore and mastoid cells. She had been

troubled for about three weeks and had been under the care of a celebrated nose and throat specialist in New York City. A few days before applying to the writer for treatment, the specialist had treated her by endeavoring to empty the sinuses by means of a suction. For some reason this treatment affected the heart and she became cyanosed and unconscious. Her family was notified, Dr. Turner sent for, and together they worked over her for twelve hours before she was able to leave the office in an ambulance. She was treated with the filtrate of mucus from the naso-pharynx by the usual auto-therapeutic method, every five days, for about six weeks. She then came every two weeks for three more treatments; then, believing herself well, she discontinued treatment. There has been no return now nine months.

Dr. Lee W. Tindale, Olean, N. Y., reports the following case:

Case 151. Patient, baby, age twenty-eight months. On December 21, 1915, I operated for mastoiditis (right) which came as a complication during the first week of scarlet fever and bronchial pneumonia. The wound was dirty and my suture sloughed out. During the dressing there was a free flow of pus both from the wound and the external canal. On January 3, I took 5 drops of pus from the wound and mixed it with 6 ounces of water and gave it in four divided doses an hour apart. The following morning the wound had improved very materially in appearance and the pus was much diminished. Since then there has been steady improvement.

The writer makes a careful rhinoscopic and oral examination of all cases treated by him. At times the patient will state that there is no mucus in the nose or throat when the writer sees it dropping from the naso-pharynx. It is imperative that the air passages are free.

Case 152. Patient, male, age 32 years, applied for treatment November 1, 1914, suffering from mastoiditis on the left side. He was operated during the preceding April for mastoid infection on the right side. He lay in the hospital for three months, and at one time the physicians despaired of his life.

When the pain began on his left side about October 20th, he went to the same surgeon, who told him he had an infection on his left side and that he would have to be operated on this side also. He was unwilling to submit to an operation again, believing he would not survive. He then applied to the writer for autotherapeutic treatment. On November 3rd he received his first injection of the filtrate of mucus from the posterior nares. He reported at the next visit what several patients had previously reported when treated in the acute stage of this infection, namely, that a dull peculiar sensation crept up quickly from the point of injection to the site of the infection in the mastoid region and there caused a terrible pain lasting for several hours. At the end of this time all pain suddenly left. There had been no return. He received two other injections on the 8th and 13th, respectively. The writer would have preferred to give this patient three or four other injections, but he moved to the country and was not seen for several weeks. He claims to be well and there has been no return of the pain up to the present time (May 9, 1918).

Case 153. Dr. R. W. Rose, Brooklyn, N. Y., reports the following case:

Patient, male, age 60 years, had been suffering with chronic rhinitis with sinus involvement for several years. At the age of twenty-four he had sixteen hemorrhages from the lungs. He was apparently cured by the internal administration of fresh bullock's blood taken at the slaughter house twice a week for six months. An attack of la grippe February, 1913, left him with the above mentioned trouble. Medical treatment for three years gave him no relief. I prepared the Duncan unmodified toxins from the nasal discharge and gave him twenty minims hypodermatically. It was necessary to follow this course of treatment for six months. He is now practically well.

Case 154. The writer reports the following case:

Patient, female, age 19 years, had been troubled all her life with a catarrhal condition of her nose and throat. She had always been in poor health and the history of the case developed the fact that she had had three operations on the nose. When seen by the writer she was pale, anemic and weighed eighty-two pounds, and she suffered excruciatingly

from otitis media. The surgeon at one of the Brooklyn nose and throat hospitals told her it was necessary that she undergo an operation on the mastoid. The writer having previously cured her sister of an offensive ozena and infection of the frontal sinuses, she was referred to him for treatment. The tympanum was pale and bulging. It was lanced and the discharge that seemed to be under pressure was caught on cotton as it spurted from the ear. This cotton was placed in an ounce of distilled water and allowed to stand, at room temperature, for twelve hours, after which time it was filtered in the usual manner and 1 c.c. injected subcutaneously. She was instructed to cleanse her ear thrice daily with peroxide of hydrogen, then with 25 per cent. argyrol, and finally to place in the ear a few drops of olive oil. These were placed in the ear as hot as could be borne. There was absolutely no improvement; if anything, the patient became temporarily worse. While the patient was able to obtain a few hours' sleep previous to the operation, she was unable to obtain any sleep following this treatment. It was then realized that the injection had been too large. The local treatment was continued and the patient instructed to take a hot bath and colonic irrigation of warm water, daily. At the end of five days there was some improvement. At this time the writer made the 10th dilution of the original filtrate. This was done by placing 10 sterile bottles and corks in a line. Each bottle, excepting the last one, contained one ounce of water and this one contained alcohol. In the first bottle was placed 5 drops of the filtrate—succussed thoroughly. This was the first dilution. Five drops of the first dilution was then placed in bottle No. 2 and then succussed. This was dilution No. 2. This process was continued until the tenth bottle was reached. The tenth dilution being mixed with alcohol would keep. She was given this 10th c.c. dilution with instructions to take ten drops three times a day. Following this, improvement was marked and continuous. The patient gained one pound a week for three weeks. At the end of the third week the patient was discharged, cured.

Case 155. Dr. Francis E. Park, of Stoneham, Mass., reports the following case of sinus involvement. "Abscess of the frontal sinus with marked inflammation; it appeared that

the cavity would have to be opened. I made a Duncan toxin-complex from the pus and injected twenty minims of the filtrate hypodermatically, with marked relief. I gave two other injections but the case was cured by the time the last was given." Dr. Park says further, "You have given the medical profession another weapon of great power against disease."

Case 156. Patient, Mrs. C. O. R., age 30, had been troubled with severe headaches over the region of the frontal sinus and the antrum of Highmore, for about three weeks. When seen she was in bed with a temperature of 103° F., and complained of chills every few hours, for two days. She had taken aspirin and many other headache powders with no relief. She was given a hypodermic injection of the filtrate of mucus from the nose and throat, and in four hours experienced a slight chill; in six hours she went to sleep and slept for twelve hours —the first good rest she had had since the trouble began. The pains returned slightly in three days; she received another injection of 1½ c.c. She then had eight injections, four days apart, and there has been no return of the pain now, for two years.

Chronic Otitis Media

Case 157. Dr. C. E. Fenner, Sacramento, Cal., reports the following case:

Patient, male, G. E. F., age 30 years, had an old chronic catarrhal otitis media, coupled with nasal and pharyngeal catarrh. The hearing gradually became dull during the summer of 1910, and very much worse from December, 1911, to November, 1912. At the end of this time he could not hear his watch tick at all. Average tone conversation could not be heard. In October I received your autotherapeutic apparatus, and prepared the Duncan toxin-complex from the excretions from the nose and ear and gave him injections on the following dates: November 1, 4, 10, 18 and 29, December 10, 15, and 27, and on January 2, 9, 17 and 30. At this later date I had difficulty in obtaining enough excretion to prepare the filtrate. The most severe reaction was after the injection given November 29. Cutaneous reaction was seven by three inches. Temperature 102° F. Immediately after this injection, the patient could hear a small clock ticking in the office.

He then steadily improved, and can now hear preaching. The discharge from the ear stopped after the fifth injection. I consider this case most remarkable as nearly everything known to medical science had been done for the patient previously without relief.

Dr. Fenner adds: "After two and one-half years' experience in the use of Autotherapy, in many varieties of infections, I have not had a case that showed any form of injury from the treatment. On the contrary, I have had almost without exception, good results. I have had far better success with Dr. Duncan's Autotherapeutic toxin-complex than with any of the stock vaccines now on the market, or with the autogenous vaccines. My success in checking acute inflammations and aborting operations has established confidence in its use. Autotherapy is practically harmless when judiciously employed and the results are most pleasing to both the patients and myself."

Case 158. Dr. Bardes, Newman, Georgia, reports the following case:

Patient, female, age 4 years, had suppurative otitis media for three years and ozena for quite a while, all very offensive to the smell. February 25, 1913, I made the Duncan toxin-complex from cotton saturated with the excretions from the nose and ears. I gave five minims hypodermatically. The suppuration lessened and the improvement was marked and progressive for about eight weeks. It then appeared to come to a standstill. The suppuration had ceased from the nose and one ear and the odor was very slight. May 15, I gave five minims of fresh unmodified toxin-complex in the same manner. The patient went right along to recovery and is well and "as fat as a pig."

Case 159. Dr. C. E. Fenner reports the following case:

Baby born March 9, 1913, age nine months, always weak and sickly, never played or laughed, appetite poor, digestion poor, frequent bowel disorders, cried constantly, chronic bronchitis.

The mother was a neurotic, and had been under treatment for various disorders. On December 8, 1913, I was called to see the child. I found him suffering with a severe cold on both lungs and head. The ears had been running pus and serum for several weeks, but my summons was on account of a large abscess in the right parotid gland about the size of a small orange. Right cervical glands enlarged with very hard scaly strumous areas over the right ear and occipital region. There were also seven large ulcerous spots scattered over the face. I instructed the mother to catch on cotton and save all the secretions from the nose, ear and throat during the next fifteen hours. Just twenty-one hours afterwards I gave the first dose in the right arm of minims five. There was a strong local and fair systemic reaction, and in seventy-two hours after the first dose, the excretion from the ears had stopped. The swelling of the parotid gland was almost normal in size and only one cervical gland was enlarged and the child coughed but little. In five days the whole condition had cleared up except some râles in the bronchial tubes, and shadow spots under the skin where the ulcers had been. The mother said a week later, the child was beginning to play and laugh with the other children of the family, something he had never attempted to do before. I gave two more doses of five minims each to be certain of no return of the condition. January 14th, the father said, "Doctor, that medicine you gave my baby certainly did wonders for him. I can almost see him grow, and he is lively and playful, he is getting to be a hearty child."

Case 160. The writer reports the following cases:

Patient, Ida R., age 13 years, was referred by the principal of her school with the statement she was backward in her studies and was troubled with running ears that dated from scarlet fever, five years previous. The odor from the ears was extremely offensive which caused her to be avoided by the other pupils. About twenty pledgets of cotton saturated with excretions were placed in an ounce bottle of distilled water and allowed to stand twelve hours with occasional agitation; after which time it was filtered through a Duncan Autotherapeutic Apparatus, and one c.c. injected subcutaneously. She had five of these injections, five days apart, when she considered herself well and discontinued treatment. The discharge had

ceased at this time and there was no odor present and she looked and felt better in every way. About four months later she returned in much the same condition as when first seen. The toxin from the first treatment was given 1½ c.c. subcutaneously, every five days. After six treatments she again considered herself well and discontinued treatment against the advice of the writer, who has not seen her since.

Case 161. Patient, male, age 8 years, has been suffering from an abscess of the middle ear. Ear drum was punctured by specialist who informed parents that unless an operation was performed he would not get well of the discharge. I obtained some pus from the ear and administered it by the mouth, giving four doses in all. He improved at once. In two weeks' time the discharge ceased and he has had no further trouble now for four years.

Case 162. Dr. Lewis J. Muthart, Jermyn, Pa., reports the following:

"On January 17, 1916, case of otitis media with profuse discharge showing many staphylococci. I gave the usual autotherapeutic treatment. The discharge ceased in twelve hours after the first dose of the unmodified toxin-complex. Five days after my first visit the condition was cured."

Case 163. Dr. Wm. T. Jenkins, former Health Officer of the Port of New York, reports the following case treated by means of Autotherapy:

"Patient, male, age 9 years, had a discharge from both ears for ten days following an exanthematous discharge. There was also an involvement of the scalp, with many pustules, both large and small. I collected the pus from the ears and from the scalp—about 6 drops—and triturated with an ounce of sugar of milk, and of this I gave the patient about 10 grains, once daily. There was a slight increase of the discharge after the first day or two, but this gradually ceased and the patient made an uneventful recovery."

The author's criticism of this treatment is that medication should have been stopped after the second dose, for this was clearly the negative phase, and the beneficial effect of these two doses should have been allowed to continue and almost

cease before another dose was given. There is danger of doing harm when the treatment is given after the patient is made temporarily worse, or after the negative phase has set in. However, the dose given by Dr. Jenkins was so small in this instance the patient recovered.

Deafness

The subject of deafness is so often intimately associated with catarrhal conditions of the naso-pharynx and naso-accessory sinuses that it is said the majority of cases of either the milder or more pronounced types whether acute or chronic, are due to catarrhal conditions usually in the faucial tonsils, the naso-pharynx or the nasal fossa. In the correction of deafness our efforts are directed either through surgical or medical measures to correcting the catarrhal condition.

It goes without saying that Autotherapy will not correct conditions where there is a mechanical obstruction, as deflected nasal septum, or bands of tissue in the naso-pharynx, etc. But when deafness is dependent upon a catarrhal condition alone, either in the tonsils, naso-pharynx or the cranial sinuses Autotherapy is distinctly indicated, and will often correct the condition. Autotherapy will often clear up conditions where an operation was formerly thought to be demanded, forestalling the operation. Where Autotherapy is properly employed there will not be so great urgency for operation on the tonsils, turbinates, adenoids or polypi, for in overcoming the infections by means of Autotherapy the cause of common deafness will often be removed. For this reason Autotherapy should always be employed before surgical operation is undertaken.

When the patient is under autotherapeutic treatment it takes, at times, some weeks for the tonsils to assume their normal condition or for the enlarged turbinates to recede to normal

bounds. Where free drainage is necessary surgical measures are indicated, but as stated previously by the proper use of Autotherapy, many conditions that were formerly supposed to demand surgery, are abated and operation forestalled.

In otitis media, Autotherapy should always be employed for since Autotherapy raises the opsonic index to the infecting microorganisms, the question as to whether it should be permitted is not debatable.

If used before the formation of pus in the middle ear it will often render paracentesis tympani unnecessary. By overcoming the infection more accurate results are obtained in the closure of drum perforations; the experience of well-known laryngologists all over the country, particularly in Philadelphia and New York City, indicates that it is considered by them that it is the surgeon's duty to employ Autotherapy for many conditions. When the focal infection is eradicated by means of Autotherapy, whether it be in the middle ear, or those germ breweries, the ethmoidal sinuses, or elsewhere; many conditions formerly considered disassociated with the nasal or buccal accessory tissues or sinuses, are cured quickly by means of Autotherapy, namely, as appendicitis, ulcer of the stomach, cholecystitis, nephritis, typhoid fever, etc.

Acute and Chronic La Grippe

Case 164. Dr. B. F. Burroughs, Plainwell, Mich., reports the following case:

"Patient, Mrs. T. N., had an influenzal infection of both ears. Rupture occurred on the fourth day after the attack. On the eighth day I placed some of the discharge from the ears in about two ounces of water—let it stand for twenty-four hours, at the end of which time I filtered it through the Duncan Autotherapeutic Apparatus and injected twenty minims of the filtrate subcutaneously. A moderate reaction followed. In five days I repeated the process which was followed by a complete cessation of the discharge from both ears. There

was some sense of fullness and distention in the ears for a few days after, but a complete recovery followed. I have been using Autotherapy in my practice now for over three years with great satisfaction; in all kinds of localized infections almost invariably with success."

Case 165. The writer reports the following case:

Patient, Dr. Warren B. Rush, of Lake City, Florida, age 64 years, had been suffering with an influenzal infection of the larynx since 1893. During this interval he had several acute exacerbations that threatened his life and at other intervals he was unable to attend to his practice. The infecting organism was diagnosed microscopically many times during this period, as the influenza bacillus. He has long suffered with pain in the joints, and often when the temperature was only 50° F., he was not able to leave the house on account of suffering from the cold. After an acute exacerbation during July, 1913, he came to New York, and placed himself in the hands of the writer, for autotherapeutic treatment. The following report is in the words of the doctor himself: "On August 10, 1913, I went to New York City, and placed myself under the care of Dr. Duncan. On August 11th, I received my first injection of the filtrate from the sputum. Between this time and September 20, 1913, I received five other injections, and thanks to the skillful administration of his autogenous toxins, I am a well man today, September 25, 1913. The microorganisms in the sputum grew gradually less and less after each injection. After the fifth none could be found. I made these microscopical examinations myself, at the New York Post-Graduate Medical College and Hospital where I had gone to take a course in microscopy for the express purpose of learning how to diagnose my infecting organisms. The pain and coldness have entirely disappeared. Since beginning this treatment I have gained ten pounds in weight, and feel better than I have felt in years. I am glad to give Dr. Duncan credit for this grand cure. Autotherapy has done for me what apparently no other medication could do. It means that my usefulness in life has been restored. March 14, 1914, there has been no return."

Hay Fever and Asthma

The studies of Dunbar seem to bring forward necessary proof that the pollen of some plants or weeds is often the inciting cause of hay fever, but the fact that asthma often follows and that the mucosa furnishes a rich bacterial flora, leads to the belief that a bacterial infection either accompanies or follows the onset of the disease. That Autotherapy often relieves the symptoms, allowing the patient to pass through the acute stage with little discomfort, is no longer doubted by many competent physicians employing that method. It must be conceded that the application of Autotherapy in hay fever and asthma is of value,—just how much value cannot be stated at present, for it is necessary that a very much larger number of cases be treated before it can occupy a definite place in medicine; for certain it is that the course of this infection has been shortened and the symptoms relieved by a number of competent physicians working independently in different parts of the country.

It is the writer's custom to operate on patients suffering with hay fever or asthma where there is an obstruction of the nasal passage. At times there is a nerve that is more or less exposed, or stretched over some bony prominence, the removal of which is important in the treatment of the condition.

Dr. George W. Mackenzie, an eminent eye, ear, nose and throat specialist of Philadelphia, and for many years editor of the *Journal of Eye, Ear, Nose and Throat Diseases,* states in an Editorial appearing in the April, 1918, issue of the *Journal of the American Institute of Homoeopathy,* under the title of, Autotherapy: "Is It Worth a Trial?"

"Dr. Duncan's claims in the opinion of conservative people, border on the extravagant and for this reason his method of treatment is less likely to receive the consideration due it than if more moderate claims were to be presented by some one else

qualified to speak on the subject. It is for this reason, coupled with a desire to see the method thoroughly tried out, that I venture an opinion after an experience of three years with this form of treatment covering several hundred cases. I am not as yet prepared to report as fully as I hope to later. Like many others, I began to use the stock vaccines from the very beginning when they were first put on the market (Sherman's was the brand). I gave them what I considered a fair trial at considerable cost in money. I failed to obtain any beneficial results in the treatment of chronic abscesses of the middle ear or accessory sinuses. This was discouraging, especially in view of the claims made by others as they appear in the literature and quoted in the book published by Sherman & Co. In the acute conditions I obtained apparently favorable results in a sufficient number of cases in my earliest experiences to feel encouraged and therefore gave the stock vaccines a more thorough trial than I would have, had these results been less favorable. In the long run, however, my conclusions, based on what I considered a fair trial, were that the stock vaccines, if they accomplished any good whatever, were effective in the acute conditions only; and in these it was difficult to determine positively if the results might not have been quite as good without their use. In the chronic conditions, where I placed my greatest hope, not a single instance can be recalled of a cure that could be placed to the credit of stock vaccines. My results indeed were so out of keeping with those obtained by others that I felt some hesitancy in venturing an adverse criticism, but nevertheless, I did so on more than one occasion. About this time or perhaps a little earlier, when Parke, Davis & Co. were launching phylacogen, I began trying it and with apparently good results in at least two desperate cases of streptococci infection of the meninges. Both of these cases were reported. However, the high cost of the

preparation rather deterred me from using it to any great extent. I mention my experience with the phylacogen, as I feel it is the nearest kin to Autotherapy and leads up to what I may have to say later.

" Feeling, like others, that the autogenous vaccines might fit my cases better than the stock vaccines, I gave them a trial wherever circumstances permitted, probably using them in as large percentage of cases as any one else called upon to treat pyogenic infections of the ear, nose and throat. My results were perhaps a trifle better than they were with stock vaccines, in the acute cases apparently favorable, in the chronic cases no results. The failure to obtain results in chronic cases may possibly have been due to faulty preparation or lack of proper technic, but I fail to see that either of these cases was responsible after having studied carefully the teachings and experiences of others. Attention to drainage, to latent constitutional disturbances, obscure foci of infection, proper feeding and sanitation, and ignoring vaccines brought far more favorable results than dependence upon vaccines to the neglect of the other factors.

" The too free use of vaccines, stock or autogenous, is the lazy man's way of practicing medicine. There is a wealth of material in the study of a single case which is lost to him who puts too much dependence in a single form of treatment, no matter what that treatment may be.

" When Dr. Duncan began to publish articles on the subject of Autotherapy, I became interested and began trying it out, at first with rather indifferent results, but its continued trial began to bring results that had not been obtained from either the stock or autogenous vaccines. The most favorable results appeared to be in the acute conditions, the subacute a little less favorable, while in the chronic conditions, there was some question excepting in one notable case, which I hope to report

at some later time. In that case there can be not the least question of a doubt. What the results might have been with the use of an autogenous vaccine, there is no way of determining.

"The favorable results obtained thus far with the use of Autotherapy, stimulate me to try it further. I can recall several odd cases in which the results were little short of marvelous. For instance, a doctor was referred to me by another doctor for a troublesome asthma which had lasted for several months. The patient had regular nightly attacks which kept him sitting up and awake a good part of the night and as a result his general health was considerably below par. After the first injection he improved. After the fourth injection the condition cleared up entirely. Many cases quite as striking could be cited, which I will not take the time to dwell upon just now, for I hope to make a complete report at a later date and include in it some cases in which I have also been disappointed with the result. When making a complete report I hope to include the bacterial findings, complete physical examination, the size of dose and the frequency of its use, besides giving my reasons for believing there is more virtue in the filtrate according to Dr. Duncan's method of preparation than in the stock or autogenous vaccine.

"I wish to call attention briefly to the use of the filtrate in the treatment of hay fever. Hay fever, as is generally recognized, is due to the irritating influence of certain pollen upon the mucous membranes of those susceptible. My present belief based upon a fair experience is that there is no method of treatment which compares in efficiency to Autotherapy in the treatment of hay fever. I have witnessed very prompt results (within 20 minutes) in a few cases where the secretion in the nose during the attack was filtered and diluted very high (equivalent to the 30x). I have seen pronounced

aggravation from strong doses (1x). When using the higher dilutions I have found it necessary to repeat the dose at closer intervals (24, 36 or 48 hours). With the stronger doses occasionally a case has been spoiled, the more so if repeated at too close intervals. Autotherapy for hay fever is useless in any case before the patient presents any symptoms, for until the symptoms appear there is no toxic material in the nose to collect.

"I believe my results have been better in the treatment of ear, nose and throat infections since adopting its use than previously. In some few cases the results have been so striking that I do not hesitate to attribute the benefit almost if not entirely to its use. In many cases, though I do not credit Autotherapy as having been the sole agent, at least it has contributed materially to the results. In a minority of cases I fail to see that it accomplished anything. I feel that it is worth trying out by those who have not yet used it, with one caution. Do not begin with the strongest solution and do not repeat at too close intervals."

It has been said that the discoverer of a new method of treatment often obtains better results than others who have employed his methods. In view of Dr. Mackenzie's indorsement in the preceding editorial and that of many other men of national reputation mentioned in these pages, this criticism cannot be made of Autotherapy.

To those who insist that a microscopical examination and diagnosis be made of the infecting microorganisms of every case reported—and that a cure is worthless in regard to the scientific value unless this is done, we would suggest that there is no unanimity in regard to the etiological microbial factor in hay fever, yet Dr. Mackenzie states, "There is no method of treatment which compares in efficiency to Autotherapy in the treatment of hay fever." A microscopical diagnosis of

the causative microorganisms in hay fever is considered impossible and unnecessary as far as the cure is concerned.

Case 166. Dr. P. T. Geyerman, of Our Lady of Lourdes Hospital, Hot Springs, South Dakota, reports the following case:

Hay Fever and Bronchial Asthma. Patient, E. E. B., had bronchial asthma of five years' standing, following an attack of pneumonia. Patient had a great deal of dyspnoea, which was worse during wet weather. The diagnosis was confirmed by physical examination. There was a large amount of sputum, of a frothy nature, and almost a continual cough. The patient had some nasal surgery done two years previous to this without benefit. He had also received a great many doses of phylacogens something over a year previous to coming here, with no results except that his general condition was weaker than before taking it. He was rather skeptical as to taking any more vaccine treatment but readily consented when the nature of the treatment was explained to him. The filtrate was made from the sputum in the usual way and administered in rather large doses; after the first three, as there was no response to treatment, it was given at five day intervals and there was no perceptible change until after the fifth injection, when the patient began to improve slowly. Practically a complete cure followed in three months. There was left an occasional light attack of asthma, when weather conditions were very unfavorable, but other than this the patient had absolutely no annoyance whatever. No other treatment was used as the patient had taken a great deal of medicine previous to this.

Case 167. The writer reports the following case:

Patient, female, age 36 years, had been suffering with chronic asthma for fifteen years and the usual remedies for this condition had been given with only temporary relief. She had consulted specialists in Boston, New York, Philadelphia and Chicago; the only thing that would give her any relief at all was adrenaline chloride and this was, of course, but temporary. She was given an injection of the filtrate of sputum, prepared in the usual manner, and after the third injection the improvement was marked. She continued to improve all the time she was under treatment—three months.

She was extremely irregular in coming to the office and there frequently were lapses of two weeks during this interval when she had no treatment. When treatment was discontinued, the morning coughing spells and the difficult respiration lasted but a few minutes, when before, they had lasted most of the forenoon. She could walk upstairs with no difficulty and work in the garden with no effort in breathing. This is the only treatment she ever experienced that gave such profound relief.

CASE 168. Dr. J. L. Bardes, Newman, Ga., reports the following case:

Patient, J. J. B., male, age 50. Injured in a street car wreck in 1906, completely fracturing three ribs at the junction of the spinal vertebrae. Since this date he has bronchial asthma, with exacerbations, rendering him unable to be about, and bronchiectasis had been induced. September 20, 1913, he had a severe attack which failed to yield to the usual medical treatment. On October 13, 1913, I gave him twelve minims of the Duncan toxin-complex hypodermatically, and repeated in four days. Improvement was decided from the first. In two weeks a third dose was given. On this date he seemed to have completely recovered. April 4, 1914, he appears to be well.

CASE 169. Dr. Curtner, of Vincennes, Indiana, reports the following two cases:

Patient, B. N., male, age 40 years, had hay fever and asthma for the past ten years. Administration of Autotherapy September 23, 1913, one-half c.c. September 24th, patient had a good night's sleep but woke up about 4 A.M. and was choked up a little; he felt good through the succeeding day. September 25th, the patient slept well all night, the next evening when going uptown he had a slight coughing spell. September 26th, slept well, no trouble whatever. September 27th, slight sneezing this P.M. Autotherapy one and one-half c.c. September 28th, slight cough about 5 A.M. September 29th, slight cough and wheezing at 5 A.M. September 30th, about the same, Autotherapy one c.c. October 14, 1913, about 6 P.M. had shortness of breath for about twenty minutes; after this he had no symptoms of the disease. This is the first time the patient had been free of the asthma and hay fever for five years. This patient had a slight recurring attack in the Fall, 1915, but he has not been bothered since.

CASE 170. Patient, L. A. F., male, age 56 years, has had hay fever for the past twenty years. This man came under my care last Fall; and I also found that he had a tape-worm. I removed this and then gave him Autotherapy for the hay fever; after the third injection he stopped taking the treatment, saying he was all right. However, I may get him next Fall in hay fever time.

Dr. Curtner adds: "I have had several other cases of hay fever and asthma of over two years' duration that I have treated by Autotherapy, that have not as yet, had a recurrence of the trouble." He also states he has treated three cases of otitis media by means of Autotherapy with good results, and one of lobar pneumonia with immediate and excellent results.

CASE 171. Dr. C. A. Sturtevant, Manchester, N. H., reports the following three cases:

"Patient, female, age 68 years, suffered with bronchitis and asthma for years. The only relief she could get was by taking some patent medicine. She spat up almost a pint of mucus every morning, which was thick and albuminous. I prepared Dr. Duncan's toxin-complex from her sputum and injected twenty minims subcutaneously. Her cough was relieved in a day or two, and apparently cured within a week or ten days. She had no other medication."

CASE 172. Dr. Sturtevant: "Patient, female, age 60 years, has suffered with bronchitis and asthma all of her life. She has an associated valvular regurgitation with intermittent pulse and dilatation. I gave her an injection of your autogenous toxin-complex from the sputum. Immediately following the injection there was some cyanosis and labored breathing with palpitation, which lasted for an hour or so. I did not see her again for two weeks; at the end of this time she said her cough was practically cured."

CASE 173. Patient, female, age 26 years, suffered with asthma practically all her life. A culture of the sputum revealed the staphylococcus aurius, and a microorganism morphologically similar to the micrococcus catarrhalis. Immediately following the first injection of ten drops of the filtrate diluted with three c.c.'s, of distilled water, she improved for ten days. She had a cutaneous reaction of six inches, but no chill. Upon the return of symptoms she received a similar

injection. She had seven injections during three months when she was apparently well.

CAUTION.—Be sure the case is a true *asthma*. Many hay fever cases require an operation before they can be permanently relieved. Autotherapy is not supposed to cure when surgical operation is demanded. Autotherapy merely raises the bactericidal elements of the blood to overcome the infecting microorganisms.

When a patient has a severe aggravation following an injection wait for the amelioration or the positive phase, if this is deferred, be patient. A high dilution is often indicated in subsequent treatments.

The following communications will doubtless be of value in assisting the reader who is endeavoring conscientiously to understand the Autotherapeutic technic in its application to chronic diseases.

Excelsior Springs, Mo., March 2, 1918.

DEAR DR. DUNCAN:—

Some time ago I purchased from you a Duncan Autotherapeutic Apparatus and have been treating my own self for bronchial asthma. I took five hypodermic injections of the filtrate of mucus, and the first four did me a world of good; I then took a larger dose 2 c.c. and had a fearful reaction—chills, fever and intense aching all over like la grippe, I have not been so well since. I wish to know if one could take too large a dose, and your opinion regarding its action. I will thank you for this information as I have much faith in Autotherapy and want to give it another trial.

Fraternally yours,
W. J. JAMES, M.D.

Charles H. Duncan, M.D., 2612 B'way.
New York City, March 6, 1918.

DEAR DR. JAMES:—

Your letter at hand and contents noted. You did wrong in taking another dose as long as improvement followed previous

doses. You compounded the injury by taking a larger dose. The severe reaction you mention—chills, fever and intense aching all over the body—is a severe aggravation of your symptoms caused by taking a dose before it was needed, and as stated above, "compounding the injury by increasing the dose." Do not take another treatment until the aggravation or negative phase has passed and the amelioration or positive phase has set in. That is, do not take any until the improvement that follows the subsequent treatment has ceased. It may be well, in fact I would advise you to overcome this intense aggravation to make a dilution—for example, the 30th dilution of the filtrate—take three doses of five drops each by mouth every two hours, then stop and watch for aggravation and amelioration; as long as you improve do not take any more; when improvement ceases, take three more doses of five drops each, an hour apart. If you are not in position to make the dilution I will run it up for you by hand, at a nominal price. Do not be in too much of a hurry to get well; you did not contract the disease quickly and as long as you improve, be satisfied with it.

With best wishes, my dear Dr. James, believe me I remain,

Sincerely yours,

CHARLES H. DUNCAN, M.D.

Pneumonia.

The pneumonias have become the most fatal acute infections the physician is called upon to treat. The policy of "masterly inactivity" or "armed expectancy" has long been recognized as inadequate. Our inability to successfully cope with the diseases has been forcibly thrust upon our attention during the past year. The pneumonias are divided into two great classes,—Lobar pneumonia, caused by one of the diplococci pneumoniae, and bronchial pneumonia, caused by microorganisms other than the above. Both of these classifications are subject to still further subdivisions. The subdivisions of the former are recognized by their reactions, of which there are four types,—types 1, 2, 3, and 4. The latter bronchial pneumonias, may be divided into many different subdivisions,

depending upon the etiological or causative microorganism. The principal pathogenic microorganisms responsible for bronchial pneumonias are the Friedlander bacillus, bacillus influenzae, streptococcus pyogenes, streptococcus mucosa, staphylococcus aureus. Then there may be mixed infections with combinations of the staphylococcus aureus, Friedlander bacillus, bacillus influenza, streptococcus pyogenes, streptococcus viridens, and pneumonia from undetermined pathogenic microorganisms. Pneumonia should be considered as a group of diseases. It is difficult at times to distinguish between the various kinds of pneumonias, since the clinical picture of the same type may differ widely in different individuals and that of different types be quite similar, for this reason we should consider each case of pneumonia as a *distinct clinical entity*. Since the light is beginning to break through the clouds of our former overshadowing, much that was obscure is made plain. We now understand why the treatment of pneumonia has been said to be the crucial test of any new therapy or method of healing. The reason so many failures are recorded in the past, lies in the fact that we have failed to recognize pneumonias are a group of diseases and to sufficiently individualize the patient.

In reference to the serum treatment of pneumonias: The pneumonia sera are divided into four different types, types 1, 2, 3, and 4. It is stated that the pneumococcus serum, type 1, gives excellent results in infections of type 1. It is claimed that type 1 and type 2 together give rise to over 60 per cent. of all cases of lobar pneumonia. Type 3 is the pneumococcus mucosus and gives the lowest incidence in diseases of the different types of pneumonias. Type 4 is really not a type at all but is responsible for all the other types, not included in the first three, and for about 20 per cent, of all cases of lobar pneumonia. Although the incidence of cases due to these

organisms seems to vary somewhat in different localities, it is estimated that the serum treatment is applicable to about three-fourths of all cases of lobar pneumonia. Types 2, 3, and 4 appear still to be more or less in the experimental stage of development.

While a systematic comparison of the relative number of deaths occurring from lobar pneumonia and bronchial pneumonia has not been made yet in looking over the statistics for the past few years (not including the Fall of 1917, and the Spring and Winter of 1918) it appears that there have been as many deaths from bronchial pneumonia as there have been from lobar pneumonia. The recent army epidemic was almost entirely of the bronchial type, and caused mainly by *streptococcus*. In some camps the mortality reached as high as 80 per cent., so in considering the mortality during the past year the death rate from bronchial pneumonia is much higher than that from lobar pneumonia.

On the basis of the fifty-fifty assumption the serum treatment is applicable to one-half of 75 per cent., or is about three-eights of all cases of pneumonias the physician is called upon to treat. Let us remember the serum treatment is available only to those who have access to a limited number of laboratories. During the present trying times a great emergency has arisen, our soldiers are dying in unprecedented numbers, it is of utmost importance then that we discuss the method of therapy that offers a definite treatment for this many sided disease; and that the technic of this *definite treatment* be made easily accessible to all. This treatment is found in Autotherapy; for Autotherapy considers each case of pneumonia a distinct clinical entity and treats it as such. The autotherapeutic remedy individualizes the patient as does no other therapy or method of healing. Autotherapy tends to immunize each patient to his own infecting microorganisms, and

is applicable to all types and classifications of pneumonia. The autotherapeutic technic of treating pneumonia consists in grinding the mucus in a mortar with finely powdered glass—dissolving the soluble toxins in distilled water 98.6° F., filtering through a germ-proof filter and injecting the filtrate subcutaneously, in doses according to the needs of the patient. This has been done continuously and successfully for the past seven years, as opportunity afforded. The principal objection that has been raised to this method of treatment is, that there are only two known pathogenic microorganisms that give extracellular toxic substances, namely the Kleb's-Loeffler bacillus and the Bacillus Tetanus. This criticism has long since been exploded, for Autotherapy has proved that practically all pathogenic microorganisms, including the streptococcus, have toxic substances that may be employed therapeutically when the microorganisms are treated in the manner described.

If there is still doubt in the reader's mind as to the great therapeutic value of this new method of treatment these should vanish, when it is known that the Department of Health of New York City and the investigators at the Rockefeller Institute now employ the antigen in the patient's sputum to give the specific precipiten and agglutinen reactions with the antipneumococcic serum corresponding in type to the organism with which the patient is infected. The deep sputum is centrifugalized and the super-natent fluid containing the antigen is employed; therefore we see after years of doubt and indifference on the one hand and a splendid series of successes on the other there is no basis for doubt for it is experimentally demonstrated. These laboratories are proving the truth of the writer's assertions made several years previous, namely—*the antigen is present.* They are employing the antigen in the patient's sputum daily for diagnostic purposes.

If the best results are to be obtained the pneumonias should be treated early—within twelve or twenty-four hours after the initial chill. If this is done the crisis will usually set in wthin the ensuing twenty-four hours. Space alone forbids giving a large number of interesting cases treated successfully both by the writer and many other physicians. The technic given is for a robust adult, as this is the type of patient in which pneumonia is most frequently fatal. This also is the type of patient in which Autotherapy is most successful. In the fearful epidemic that is still going on in our army, we are called upon to face grave conditions, conditions that demand our best endeavors. It is time prejudice is thrown aside. Autotherapy tends to act in a curative manner in every case of pneumonia where it is properly employed, for the average soldier is young, robust and in good physical condition, his power of reaction is at its maximum, he may usually be treated within twelve or twenty-four hours after the initial chill.

It is extremely interesting to students of Autotherapy to find in a "Monograph" issued by the Rockefeller Institute, under the title of "Acute Lobar Pneumonia," the following statement: "Patients suffering with acute lobar pneumonia excrete in their urine at some stage of the disease a soluble substance of pneumococcus origin. This substance gives a specific precipient action with antipneumococcic serum corresponding in type to the organism with which the individual is infected." The writer was the first to employ urine as a therapeutic agent and successfully demonstrated years ago that it may be employed successfully in therapy in many infections. In other words he demonstrated by actual clinical tests on human beings that the antigen or curative properties of many infections may be found in the urine. Thus we see day by day the drift of modern medical thought is unmistakably in but one direction and that is towards Autotherapy.

In reference to pneumonia the writer is pleased to relate an incident that influenced his work materially in the early stages of the development of Autotherapy:

In the early Spring of 1910, when the writer was making initial tests in Autotherapy and had been successful in treating patients suffering with pyogenic infections by buccal immunization, Dr. George F. Laidlaw read a paper before the local county society on tests he was making in treating pneumonia, by aspirating a few drops of fluid from a consolidated part of the lungs and injecting it under the skin. Dr. Laidlaw stated he was surprised to find how many drops of this excretion were sterile.

About this time the writer was endeavoring to make a more elegant autotherapeutic preparation; and it occurred to him that he could sterilize the toxins by filtration. Dr. Laidlaw's experience in curing a few cases of pneumonia by injecting material obtained from the lungs without sterilization encouraged the writer to go on with his tests and to filter the mucus in the manner already described. The writer believes it is due to Dr. Laidlaw to mention this fact, not that the writer's work was dependent alone upon the tests of Dr. Laidlaw but that the writer felt encouraged by the latter's tests to extend the usefulness of Autotherapy to respiratory infections.

The writer desires to thank Dr. Laidlaw not only for the encouragement in the paper just mentioned, but for the kind words of encouragement he has ever extended to him when many of his associates were hostile.

Dr. Laidlaw, Dr. Wm. F. Dieffenbach and Dr. Henry T. Brooks were the first physicians who saw the great possibilities of Autotherapy, and it was these kind friends upon whom the writer leaned for moral support when it was most needed.

Case 174. Patient, Mr. W., age 44. Came down with a severe chill Sunday afternoon at 4 o'clock. The writer saw him at eight o'clock that evening. He found the patient with a temperature 105.6° F. His whole face and head were intensely congested and a tentative diagnosis of erysipelas was made. He had severe pains over the middle lobe of the right lung at every breath. Diagnosis, erysipelas and pneumonia. About the time the writer made his diagnosis, the family physician, Dr. F. C. R., of New York City, came in and made the same diagnosis the writer had previously made—we both realized the gravity of the situation. During our conference it was mutually agreed that the writer should treat the case autotherapeutically, and Dr. R. would call in daily for consultation, if needed. Upon requesting a sample of mucus from the respiratory tract the patient said he had none, but on being told that possibly his life depended upon getting this sample within a few hours, he succeeded in raising about half a drachm—this was thick and tenacious and streaked with blood. This was ground in a mortar with one-half ounce of the finest powdered glass and was then mixed with an ounce of distilled water and allowed to stand at body temperature, with occasional agitation, for two hours, at which time it was filtered in the usual manner and 3 c.c. of the filtrate injected subcutaneously. Moist applications of aluminum acetates were kept constantly on the cutaneous inflammation. In forty-eight hours he received a second injection—at this time his temperature was 99° F., having gradually been reduced by lysis. On Thursday he received another injection, the improvement was steady and continuous, and by the following Sunday he was out of bed.

The erysipelas inflammation, twenty-four hours after it was first seen was so great that both eyes were closed and both ears were of large proportions. At this time the writer punctured several small blisters on his face and ear with a hypodermic needle and obtained about 10 drops of serum. A filtrate was made in the usual manner. This filtrate was mixed with the filtrate of sputum previously made—and the subsequent injection was made with the combined filtrates. This patient had a partial left-sided facial paralysis resulting, from which he gradually recovered in about three months; he

has been entirely well for more than a year, with no return.

CASE 175. Patient, male, age 54 years, had a chill January 12, 1915, at six o'clock P.M. That night he had difficult and painful breathing accompanied by headache. When seen by the writer the next morning, at 8 o'clock, he had a temperature of 103° F. Pulse 120. There was consolidation over the middle lobe of the right lung. His face was flushed. A drachm of bloody sputum was placed in a mortar and thoroughly ground with powdered glass. It was then mixed in a bottle with an ounce of distilled water at 100° F. It was thoroughly shaken and allowed to stand for half an hour. It was then filtered, and two hours after obtaining the sputum, twenty minims of the filtrate were injected. In six hours the temperature dropped to 98° F. and the pain ceased so that he breathed freely. He progressively but slowly improved and at the end of two weeks he left the house. He has been well now, for two years. This patient had four injections, two and three days apart.

CASE 176. Patient, female, age 7 years, came down with pneumonia. As it so frequently occurs in children I was unable to obtain sufficient mucus from the respiratory tract to employ autotherapeutically, so I was forced to use other means to autoimmunize the patient. I rolled the child in two blankets, the only place exposed being the face. A slit was cut in the side of the blankets through which I could place my hand to feel her pulse. A rubber sheeting completely protected the bed. The blankets were kept saturated with water 104° F. With my hands on the child's pulse I sat by the bedside for several hours or until I felt the pulse fluctuate slightly. The blankets were then removed slowly, first one arm was rubbed with equal parts of alcohol and water and dried, then covered with dry blankets; then the other arm was treated in a similar manner; then the legs in turn; then the anterior surface; then the back. After this the child slept practically for eighteen hours except when she awoke for nourishment. At the end of this time her temperature was 100.2° F. In forty-eight hours after this its temperature was normal. This child was autoimmunized or immunized to its own infecting microorganisms by relaxing the body by means of the hot packing; some of the unmodified toxins escaped from the locus of

infection into the healthy tissues—this was manifested by the fluctuation of the pulse; this is no less an autotherapeutic cure than the usual method of injecting the filtrate of sputum hypodermatically.

Case 177. Patient, female, age 45 years, was under autotherapeutic treatment for acne vulgaris by the writer, in May, 1913. She called at the office and said while in the subway a few minutes before, she had a severe chill. There was great pain in breathing. She had the characteristic "pneumonia grunt." Temperature 103° F. A little blood-streaked sputum was raised with difficulty, accompanied by stabbing pains. There was consolidation over the middle lobe of the right lung. Her face was flushed and she was evidently weak. A drachm of sputum was obtained while in the office, and within two hours she was given a hypodermic injection of the filtrate. Two hours later her breathing was much easier, and the next morning the temperature was normal, but the patient was weak. In forty-eight hours after the first injection, she was given another of the same filtrate. In four days after the initial chill she was up and around the house, but still weak. She made an uneventful recovery.

Dr. P. T. Geyerman, Surgeon to Our Lady of Lourdes Hospital, Hot Springs, South Dakota, says:

*"The process by which Dr. Duncan's Autotherapeutic filtrate is prepared and the fact that nothing foreign is introduced into the patient, appealed to me and I determined to try this new method of active immunization. It must be clear that if we can obtain the specific infecting organism, its value as an immunizing agent must be greater than shot-gun mixture that does not contain this product. The sending of inoculated culture tubes to a distant laboratory that an autogenous vaccine might be made, is practically of no value. I believe this will be concurred in by almost every laboratory technician not

* From a Symposium on "Autotherapy" that appeared in the *Western Medical Times*, October, 1916.

engaged in the commercial laboratory. The greatest objection that can be found to the auto-filtrate at present is that we have no accurate method of standardization. However by following the rules given by Dr. Duncan one need not fear any untoward results. We have never had any unduly severe local or general reaction, nor any abscess follow an injection. We have treated a number of cases in this way and our results have been encouraging; for at times we have obtained good results where the autogenous vaccines have failed.

"The auto-filtrate is available to all, it is easily and cheaply made and can be used with the utmost confidence that it will do good where a vaccine is indicated. The fact that it is quickly and easily obtained, is to my mind an asset.

"That Autotherapy is a cure-all or ever will be a cure-all for every infection is not to be expected or looked for. When we take into consideration the various methods the animal organism must use to protect itself from invasion by foreign proteins, one is astonished at the large number of favorable results obtained by any form of vaccine treatment. That these results are obtained, is no longer denied, especially for immunization purposes and early treatment. On the other hand, vaccine treatment is not so valuable as some would like to have us believe, especially the manufacturers of stock vaccines. When Von Behring first brought out his diphtheria antitoxin it seemed but a short step to the production of an antitoxin for all known infections. With one or two exceptions it still remains the only antitoxin of value or likely to be for some time to come. The reason for this is quite clear now that we have been taught more of the fundamental principles of bacteriology. Vaccines have gone through much the same process of elimination, but there seems to be less chaff and more wheat, so that we might be thankful for one more method of value in the immunization of the body—how much I do not know. But

that Dr. Duncan's Autotherapy is of value we must concede.

"In reporting the following cases I have selected four of the respiratory tract, and one infection following abortion, as being typical cases. Infections of the respiratory tract seem to lend themselves readily to the auto-filtrates; since it is rather difficult to get a pure culture from these cases for the making of Autogenous vaccines."

One infection of the respiratory tract reported by Dr. Geyerman, is the following case of pneumonia:

Case 178. Patient, A. E. S., age 36, male, American. Unresolved pneumonia. Duration seven weeks. Original focus in the left lung, posteriorly. Temperature 104° to 105° F. Early in the course of the disease there was considerable cyanosis. At the end of two weeks the evening temperature was 100° to 101° F., pulse 96 to 105. At the end of three weeks an autogenous vaccine was made and given at three days' intervals, with very little improvement at the end of three weeks more. At this time an unmodified filtrate was made from the sputum, using about one drachm of the sputum and one ounce of distilled water, and allowing it to stand for twelve hours before filtering. Ten minims were injected under the skin, which was followed by a rather severe local reaction with a little further rise in temperature. At the end of forty-eight hours there was no noticeable change in the condition of the patient when another filtrate was made and of this twenty minims were injected, followed by some local and general disturbance. In twenty-four hours the temperature dropped to normal and pulse to 86. After three days another injection of the same filtrate was given which was followed by a slight rise in temperature, falling to normal in twelve hours. No more injections were given after this as the patient's condition was such that it was not considered necessary. The patient left the hospital at the end of another week feeling well.

Case 179. The writer reports the following cases:

Patient, male, age 24 years, had been sick for five days. On the day the writer was called he began to spit blood and

mucus. Being alarmed at this he sent for the nearest physician and it happened to be the writer. He was found to be suffering with pneumonia—temperature 103° F., painful respiration with consolidation over the lower lobe of the left lung. There was a history of a chill four days previous. About two square inches of cantharides plaster was placed over the abdomen, and the mother, a trained nurse, was instructed to catch the serum in a sterile bottle, and to mix with this about ten parts of sterile water. At the end of ten hours she collected the serum and four hours afterwards he was given a subcutaneous injection of 2 c.c. of the filtered fluid. In thirty-six hours his temperature was 97⅘° F. He made an uneventful recovery. Circumstances prevented the writer from making a filtrate of the mucus in the usual manner. Many physicians report prompt cures of acute infectious diseases by employing blister-serum in this manner.

Case 180. Patient, male, A. P., age 17 years, was taken with a chill on Tuesday, while at school; he came home complaining of not feeling well; five days later the writer was called and found the patient with a temperature of 104° F., with congestion over the middle and lower lobes of the right lung. I obtained about 2 c.c. of mucus streaked with blood from a sputum cup. This was carried to the office and mixed with an ounce of distilled water at 100° F. and thoroughly shaken; after which time it was passed through a Duncan Autotherapeutic Apparatus. At twelve o'clock, 1 c.c. of the filtrate was injected subcutaneously. Monday at 6 P.M., his temperature was 101° F. At noon the next day temperature 96.6° F. He made an uneventful recovery. In addition to the above treatment the patient was given an enema and wrapped in hot blankets, and was given bryonia and phosphorus. In five weeks he gained seventeen pounds.

Case 181. Patient, E. B., age 22 years old, had been suffering with pulmonary tuberculosis for the past three years and for the past eighteen months has been under the writer's care. He has had no elevation of temperature for six months; in fact he has so far recovered from the disease that there were no clinical manifestations of it. As chauffeur he was exposed during the early part of February, 1918. The following night he became alarmed at the pains in his chest, severe coughing

spells and general debility. The writer was called in at 2 o'clock Tuesday morning; he found the patient in a grave condition; there were râles all over his chest and he was becoming rapidly weaker owing to the severe paroxysms of coughing; his temperature was 103.5° F., with pleuritic pains under the right shoulder blade. He was restless, his face was red and he breathed with difficulty. He had a severe chill on Monday morning at 9 o'clock and many chills throughout Monday and Monday night.

A drachm of his sputum was mixed with an ounce of distilled water at 100° F., in which was placed a drachm of glass beads; this was thoroughly agitated for ten minutes, after which time it was passed through a Duncan Autotherapeutic bedside apparatus and 1 c.c. of the filtrate injected subcutaneously. When seen Wednesday at 7.30 A.M., the patient's temperature was normal. It appears that one hour after receiving the hypodermic injection the patient quieted down and went to sleep and did not waken until 7 o'clock the next morning. He had had a restful day, on Wednesday, and was hungry, but weak; the cough had been checked almost instantly and the pain in his chest left six hours after injection. The writer had never seen a chest in such bad condition, in a patient who recovered. When seen the following Saturday morning, the temperature was 97.6° and the patient was convalescing nicely. He made an uneventful recovery. He called at the office the following Tuesday, one week after the writer first attended him. His tuberculosis was improved.

CASE 182. Dr. L. N. Klove, Wanamingo, Minn., reports the following case:

DEAR DR. DUNCAN: I have had two serious cases of bronchial pneumonia where I brought on the crisis in less than six hours by means of Autotherapy. One case was in a child three months old—the other in a child two years old. I never could have faith in the vaccines although I have made use of them to some extent. In my hands Autotherapy is far superior to either stock or autogenous vaccines.

Captain B. V. Nesfield, of Agra, British India, F.R.S.C. Local Chemical Examiner, a former pupil of Wright's, states

he cured nine consecutive cases of Indian pneumonia (which by other methods of treatment has a mortality of about 50 per cent.) by means of Autotherapy—injecting the exudate from the lungs, sterilized by heat, subcutaneously.

Pleural Effusion

Case 183. Dr. Edgar F. Moffat, Orange, N. J., reports the following case:

Patient, boy 15 years old, had double croupous pneumonia, due to the influenza bacillus. There was delayed resolution, temperature approaching normal, but on the fourteenth day of the disease, I found the posterior half of the left lower lobe, and a large area of the right lung, still solid—flat on percussion with bronchial râles. Breathing was normal—no cough or expectoration. I applied a square inch of fly plaster to the pectoral region and drew about ten drops of the serum into a syringe that already contained 2 c.c. of water and injected the contents through a smear of iodine over the biceps muscle. In forty-eight hours the lungs were practically clear, and in twenty-four hours more, all physical signs were absent over the affected area. It cleared up by absorption, but there was very little cough or expectoration during the period.

Case 184. Reported in April, 1913, by Dr. Borrows, Plainwell, Mich.

Mr. M., patient, came to me stating that during the previous October he had had an attack of pleurisy and that he had apparently recovered. During the last three weeks he had severe night sweats and wanted to know why. Upon examination I found the pleural cavity to the fifth rib filled with fluid. After explaining to him the possibilities of a long treatment of the case by medicine, I proposed to him that I withdraw some of the serum and use it as a therapeutic agent, explaining to him the reasons I had for trying it. He acquiesced, I removed about thirty minims and injected this under the shoulder, and told him to come again in forty-eight hours. He reported with a perfectly dry cavity. Five punctures failed to find any fluid.

Acute Appendicitis and Acute Cholecystitis

It is often difficult to determine accurately the exact condition within the abdomen before it is entered. But we often have an hour to spare without undue danger to life. In fact, these patients are usually not operated upon till several hours have elapsed. During this period they should be treated autotherapeutically. If there is serious doubt that the patient will not survive twelve hours without an operation, operate. But very often at the end of twelve hours the patient is so far improved that the operation is forestalled. Autotherapy should be employed in all cases of appendicitis whether the abdomen is entered or not, for Autotherapy tends to immunize the patient to his own infecting microorganisms. Surgery does not. Many physicians do not believe in operation for these conditions. Without entering into a discussion of the relative merits of these beliefs, we would suggest that Autotherapy is more effective in forestalling a laparotomy for acute appendicitis than anything we now have at our command. Some patients will not be operated upon; to these Autotherapy will often prove a blessing. This subject is treated more fully in a former chapter.

Case 185. The writer reports the following case:

Patient, female, married, age 45 years, was first seen in December, 1911, suffering from an inflammation of the gall-bladder. Under the usual treatment she alternately improved and relapsed several times during the following year. On January 21, 1913, she became very much worse. Her condition pointed unmistakably to pus in the gall-bladder. She had pain over the region of the gall-bladder that extended to the back; the least movement, even talking or deep breathing, causing severe pain. She vomited at 7 o'clock on the morning of the 21st, and at 11 o'clock P.M. she had a chill.

The next day Dr. George F. Laidlaw was called in consultation to see the case. With merely an introduction he diagnosed the case cholecystitis,—the same diagnosis the writer

had previously made,—and recommended an operation within forty-eight hours.

The writer elicited the further fact that the patient had been suffering with a catarrhal condition of the respiratory tract, the beginning of which coincided with that of the pain in the region of the gall-bladder. Autotherapy of bronchitis and catarrhal conditions of the respiratory tract having previously proved so successful in the hands of the writer, it was decided to make a test of this case to see whether the treatment of the catarrh, with the filtrate of sputum, would have any effect on the conditions of the gall-bladder. Accordingly four c.c. of the sputum were placed in an ounce of distilled water, and allowed to stand for twenty-four hours, with occasional agitation, after which time it was filtered. On January 22, at 10 P.M. twenty minims were injected hypodermatically in the loose cellular tissue over the biceps muscle. The next day she reported that within ten minutes after the injection the pain became very much worse and continued to be very severe until 3 A.M.; after which time she went to sleep and did not wake until seven o'clock the next morning. When seen the next day the patient was comfortable, though there was still some soreness in the region of the previous pain. She gradually improved, however, and did not have another pain for two weeks. These pains were dull and aching in character, not as sharp and severe as they were before. However, the patient became frightened and feared the old trouble was returning. Another injection of the same filtrate was given, when the pain again disappeared within a few hours. The injections were repeated every five days as long as the catarrhal condition lasted, that is, until March 20th.

She has had no pain since the second injection. On March 20th, she reported that she had no more catarrhal conditions. The sputum had been gradually diminishing since the first injection. The patient was discharged on this day, but told to return if she had any more pain, or if the catarrhal condition returned. She came to the office in response to a telephone call, but a physical examination did not reveal any soreness or tenderness over the seat of the former pain. She said she was in good health and apparently she was. As stated above she has had no pain since, except immediately after

each injection; at such times she usually had some slight pain lasting for five or six hours. At one injection, February 10, she was given one c.c. of the filtrate. Immediately after this injection she said she was very sick and had considerable pain, but it passed off within six hours. The last two injections caused no pain.

* In considering the Autotherapy of cholecystitis and appendicitis many important questions arise. One is: In how many diseases may the causative microorganisms be obtained from the sputum? It has, as far as the writer knows, never been asserted that in a disease apparently as remote from the lungs as cholecystitis, the toxins may be obtained from the sputum; but as shown in this case it apparently was possible to obtain the toxins from the sputum. Is it not possible, yes even probable, that the microorganisms are brought to the lungs with inspired air and enter the respiratory tract at a point where the continuity of the mucosa is interrupted, or at some microscopic foramina? May not the microorganisms proliferate here, some being expelled with the sputum, others or their toxins passing into the circulation and reaching distant parts, thus producing constitutional disturbances, such as pain, increased temperature, etc.? How often have we seen patients suffering with a toxic disease supposedly foreign to the lungs die from pneumonia that developed quickly? We are all familiar with this occurrence. The question that engages attention in this connection is "had this bronchial condition been recognized early and the filtrate from the sputum containing the specific microorganism been therapeutically employed, might not such patients' lives have been spared?" How far this therapeutic measure may be extended to other affections considered as dissociated with the

* Abstract from an article by the writer under the title of "Autotherapy versus Operation," that appeared in the *American Practitioner*, July, 1913.

respiratory tract can only be conjectured at present. Heretofore catarrhal conditions often accompanying toxic diseases had been accounted for on the basis of impeded circulation. A question still to be answered is—How many acute, subacute and chronic affections known or suspected to be toxic in nature are at times accompanied by a catarrhal state of the respiratory and other tracts? Thought instinctively turns to many diseases. Is it not probable that occasionally we may be able in some of those diseases to obtain the products of the causative microorganisms from the sputum and successfully employ them in therapy? If the above theory regarding the etiology of disease is correct, surgical operation may often be forestalled. Surgical operation, however, does not remove the underlying cause of the surgical condition, it simply removes some of the effects. The causative microorganisms, proliferating in the lungs, may again migrate to distant parts of the body, and set up constitutional disturbances, such as pain, increased temperature, etc. In this connection it is interesting to inquire how many diseases have the same causative microorganisms as their chief etiological factor? Autotherapy tends to remove the cause of the disease, surgical operation too often removes merely some of the effects. There is no doubt in the writer's mind that by Autotherapy many conditions supposedly demanding operative measures may be cured, and the operation avoided. Just how many clinical tests alone will tell. The present indications are that there will be many more than the writer would care at present to predict. It is the condition behind and deeper than the operation that Autotherapy often removes. Diligent search of the patient for the toxins of the disease, wherever they may be found, or by what avenue they may be eliminated, is a main consideration. In acute conditions a speedy relief may be expected, but in chronic conditions the treatment may have

to be extended over a number of weeks or months. A diagnosis is often unnecessary as far as a cure is concerned.

Case 186. Dr. Fenner of Sacramento, California, reports the following case:

Miss O. H., age 29 years, had been treated by three other physicians and in several institutions for three years. She complained of spasmodic recurring pain in the stomach and in the region of the gall-bladder. After a careful examination and an analysis of the stool, by the city laboratory, I diagnosed the case as catarrh of the bile duct and bowels. After I had given my diagnosis she said that this was the diagnosis of three other physicians who had been treating her. I prepared the Duncan autogenous toxin-complex from the excretion from the nose and gave the following doses: November 26, 1913, five minims hypodermatically. There was a strong local and slight systemic reaction. She was given six other doses about six days apart, at the end of this time she was greatly improved. She has had no pain and can eat almost anything. On February 27th, she said she was better than she had been in a great while, although she had been under a great mental strain (not dependent on the disease). She could eat and had been eating at hotels. She got wet twice and took no cold nor had she any return of the trouble.

Case 187. The writer reports the following cases:

Patient, male, age 35 years. Both his lodge and family physician diagnosed his condition as acute appendicitis, and recommended an immediate operation, which was refused. The writer not knowing their diagnosis also pronounced it appendicitis, and operation was still refused. In questioning the patient it was discovered that he had a catarrhal condition of the respiratory tract. A drachm of the sputum was obtained, and in three hours he was injected with the unmodified filtrate. In six hours all pain disappeared. He was given two more injections, two days apart and a week later went to work. Three months later he had a return of the pain. He was then operated upon. The appendix was found to be full of pus with many adhesions over the abdomen. He had been subject to recurrent attacks of these pains for several years. He was then treated autotherapeutically with the pus from

the wound and made a rapid recovery. He cites these cases mainly to show what can be expected of Autotherapy in treating those patients who refuse operation. The causative microorganism in the above case was staphylococcus pyogenes aureus.

Case 188. Patient, male, age 65 years. The diagnosis of acute appendicitis was made by the family physician who referred him to a surgeon; he applied to the writer whom he knew. He believed he would die if he was operated upon, and refused intervention. He was given an injection of his toxin-complex made from thick sputum, five hours afterwards. In six hours after the injection the pain left as if by the action of morphine. He was given five injections, four days apart. There has been no return of the pain now nearly a year.

Ulcer of the Stomach

Case 189. The writer reports the following case:

Patient, male, age 53 years, had been suffering with chronic indigestion for many years. He finally arrived at the point where he could retain but little on his stomach without severe pain following in a half hour. He had fallen off in flesh, and three well-known physicians of New York City, after treating him in succession for some months were able to benefit him but slightly. The last one suggested that a change of climate might benefit him and he went out on a large farm to live with relatives. He lived here for three years with some improvement. At this time he came under the writer's medical supervision. A pipe was continually in his mouth and he smoked many hand-made cigarettes.

Treatment.—The patient was instructed to stop smoking immediately, to flush the colon daily with a metal spiral enema tube (the writer will pause to state this is the only satisfactory tube he has ever seen). He was also instructed to take a hot bath daily, temperature 108° F., into which was to be placed one pound of epsom salts. A diet of milk was given in the following manner,—one-half a glass of certified milk every half hour. In this way he took about three quarts daily. Orange juice ad libitum, sweetened if desired with a little sugar. He kept up this régime for two weeks, at the

end of which time he reported for treatment. While he felt somewhat better, he still spat up about four ounces of mucus daily. He was given a hypodermic injection of the filtrate of sputum, prepared in the usual manner; at first in five-day intervals this was gradually extended to two-week intervals. At the end of three months he had gained fourteen pounds in weight, and said he did not know he had a stomach. He coughed up a little mucus about once every two days. Realizing when this patient began treatment that it possibly would be extended over a long period of time, the writer prepared an ounce of filtrate to which he added three drops of tricreosol. At present, one year afterwards, the patient apparently is as well as he ever was in his life.

Infections of the Eye

The application of Autotherapy to infections of the eye had never received serious consideration by the writer till his attention was directed to the subject by Dr. J. Ivimey Dowling, of Albany, N. Y. In looking into the subject he was surprised to find very many infections of the eye have their origin in the nares. This being so it appears that all such diseases of the eye are readily amenable to Autotherapy.

Dr. Dowling after making many tests is enthusiastic over his results in Autotherapy, and states he is apparently treating "glaucoma" successfully, a disease before which the physician is practically helpless.

"I do not doubt for a moment the evidence Dr. Duncan has placed before the profession in cases of bacterial infection, nor am I in the least disposed to despise demonstrated results because they do not seem to coincide with the doctrines and theories of men who may temporarily be in exalted positions and assume the rôle of virtuous infallibility. I have already outlived the creeds of too many who have arrogantly assumed that everything outside of their own-little-private-flower-bed is incredible and impossible. Until we know all possible changes that may transpire in complex organic chemistry and biology, it is becoming that we be more humble and broad-minded."

Dr. James Law, M.D., D.V.S., ex-Dean and Emeritus Professor of New York State Veterinary Medical College at Cornell University, on Autotherapy

CHAPTER XI

URINE AS AN AUTOTHERAPEUTIC REMEDY

* Wood says, "Dysuria, or painful urination is one of the symptoms of disease most frequently met with in general practice, and because of the fact that the disease is located in or about the bladder, or urethral mucous membrane, it is impossible to utilize the principle in its treatment of physiological rest. Its pathogenic significance as far as the gross lesions are concerned may be slight, but its clinical importance must not be lost sight of. I know of no symptoms which will more quickly undermine the health of either man or woman, than a bladder irritation, sufficiently great to give rise to a frequent desire to empty the organ with coincident tenesmus." In this discussion we are dealing not with adventitious growths

* Abstract from the able work on "Urinary Diseases," by James Wood, M.D.

as cancer, polypi fungoid growths, etc., nor with those conditions requiring surgical measures. Primarily we are dealing with conditions due either directly or indirectly to bacterial infections. There are conditions difficult to trace to bacterial origin that respond promptly to Autotherapy.

One of the strong indications for the use of urine as a remedy, is *frequent urging accompanied with burning and tenesmus.* These are not the only symptoms, however, that call for urine as a therapeutic agent, for it has been found frequently useful in conditions that are not associated with pain and discomforts, namely, as *nocturnal enuresis.* There is also another symptom where urine may frequently be found to be useful; even though urine alone may not always be able to cure the patient, and that is in hematuria.

In giving urine as a remedy we should be guided as to single and repeated doses by the needs or requirements of the patient; there are no set rules governing all conditions we are called upon to treat. However, there are general rules that are more or less difficult for the beginner to understand and use properly which become useful in the hands of the prescriber, as he accustoms himself to examining the patient from the autotherapeutic point of view. It may be generally stated that acute conditions require a larger dose than chronic conditions. While this in the main holds true for adults, yet there are exceptions to the rule. Dr. Deachman's patient obviously was suffering with a chronic condition and as such required exceedingly small doses. Many patients treated by the writer with the dilution of urine were cured when apparently nothing else would cure them.

There are in the pathogenic exudates toxic substances to which the patient must develop resistance in order that a cure may be instituted. In other words, in Autotherapy the patient has the right toxic substances within his body and it

remains for the physician to find it and determine the proper dose and the interval between doses so that the local tissues may develop resistance to them.

In giving the autotherapeutic remedy it is not the power of the remedy *per se* that is increased or decreased by dilution; it is the responsive power of the patient that determines whether the dose be given in a weak or concentrated form.

The further we get away from the dose and study the individuality of the patient the better will be our position to treat the patient successfully, for *there is no standard dose any more than there is a standard individual.* There is no dose or potency that has maximum efficiency but the one which the individual requires.

In conditions where the causative microorganisms can be obtained readily there are no objections to using the opsonic index as a guide if the physician so desires, but many authorities now believe that this is usually unnecessary, for with a skilled appreciation of the nature of the infection and the response of the individual, the dose can usually be selected with sufficient accuracy to meet the requirements of the patient. The opsonic index is not as accurate a guide in marking the interval between doses as was formerly supposed. There are usually more than one pathogenic microorganism in the locus of infection that must be taken into consideration in treating the patient. The opsonic index repeated for each microorganism is obviously opening the door for complications which are far beyond the average clinician, if not the average laboratory facilities.

It is difficult at the present time to state how far the autotherapeutic treatment of diseases may extend, for many conditions apparently requiring operative treatment have been materially benefited when urine as a remedy was properly employed.

There is scarcely a pathogenic condition which does not affect the urine contents. Our gross chemical and microscopical analyses do not interpret the finer delicate shadings nor differentiations that arise. It may be said that urine is like a weather vane, sensitively registering any change in the patient's condition, be it great or small. Many pathogenic conditions which give rise to an excess of uric acid, calcium oxalates, sodium urates, etc., are quickly cured by the therapeutic employment of urine alone. Whether it will tend to cure all pathogenic conditions that cause an excess of these substances in urine, is more or less in the nature of conjecture at present but it is significant, indeed, when Clark's Materia Medica gives many conditions in which *uric acid* and *urea* have been proved to be therapeutically effective. In the *New York Medical Journal* of December 14 and 21, 1912, and in the *Therapeutic Record* of January, 1914, the writer reported that he was employing urine successfully in the treatment of many conditions. This is the first mention made in modern medical literature of urine being employed successfully in the treatment of disease; since then it has been employed successfully both by the writer and many other physicians in treating patients suffering with a great variety of pathogenic conditions.

Crockett in the *Medical Record* cites three cases of bladder and prostatic troubles that were cured by autotherapeutically employing urine alone—a complete substantiation of the writer's previous work.

Many symptoms apparently of the bladder are but reflex symptoms from the kidneys. Where tuberculosis of the kidney is suspected, the sediment, collected by centrifugalization, should be diluted and allowed to stand and filtered in the usual manner, and the filtrate employed. The filtered urine of other conditions may at times also be employed, diluted or not, to suit the needs of the patient.

CASE 190. The writer reports the following cases:

Patient, male, age 30 years, applied for treatment for cystitis that developed after a long drive in the rain. At night he had to void every hour or two. There was burning tenesmus and almost constant desire. A teaspoonful of early morning urine one-half hour before meals completely cleared up the case within two days.

CASE 191. Patient, Hebrew, travelling salesman, age 38 years, had gonorrhea three months previous while travelling. He consulted various physicians who succeeded in stopping the discharge, but there were many threads or tripperfaden remaining and he held his urine with difficulty. He had had no sexual desire since his infection. He was placed on sediment of urine one part, alcohol two parts, colored with cocoa, with instructions to take a teaspoonful three times a day before meals. In four days' time the strings in the urine were very few. In two weeks time he said he was well, as his sexual desire had returned. There were, however, still a few (very few) threads.

CASE 192. Patient, female, age 46 years, passing through the climacteric developed a severe cystitis with tenesmus and constant urging, etc. She passed only a small quantity at a time. There was no evidence or suspicion of gonorrhea. Her urine was filtered through a Berkefeld filter and five minims of the filtrate injected subcutaneously. This relieved all symptoms within twenty-four hours. She was given two subsequent injections four days apart; there has been no return now over six months.

CASE 193. Patient, male, age 23 years. During his second week of gonorrhea while under treatment developed an acute cystitis. The condition had persisted for about three days. A teaspoonful of his early morning urine three times a day before meals allayed the inflammation within twenty-four hours.

CASE 194. Patient, male, age 36 years, stationary engineer, has been healthy all his life. Two months ago he began to have serious domestic and family troubles. Since then on the occasion of great mental excitement, moisture and oozing from the penis was noticeable. The discharge was clear. There was no burning, nor was there a history of gonorrhea. He was given a bottle containing an equal part of sediment of urine

(pipetted after twelve hours' standing) and 95 per cent. alcohol colored with cocoa, with instructions to take a teaspoonful three times a day. In three days the discharge ceased. He said he felt stronger, and more vigorous generally, and particularly in the genito-urinary organs.

Case 195. Patient, male, age 54 years, applied for treatment suffering with urinary troubles which he described as follows:

Very uncomfortable when holding his urine for more than two or three hours. Gets up two and three times at night, and has constantly an uneasy feeling in the bladder, and troubled dreams. He noticed five years ago that his sexual powers were waning. When he applied for treatment, copulation took place at from two to four weeks' intervals, or more infrequently. An analysis of his urine showed there was a trace of indican and large deposits of sodium urates. After two hours' standing the sediment in the beaker measured about one-fourth by volume. It was thick and muddy in appearance. Specific gravity 1018. There were some pus cells, and very few squamous epithelia, no albumin or sugar. The prostate was enlarged and very sensitive. Treatment:—He was instructed to bring into the office a sample of his early morning urine. This was centrifugalized and the sediment from four such centrifugalizations washed with normal saline and again centrifugalized. The sediment was now collected and mixed with an ounce of distilled water and allowed to stand for twelve hours after which time it was filtered through a Berkfeld filter and ten minims injected subcutaneously over the biceps muscle. Within twenty-four hours the cutaneous reaction was 8 inches in diameter. There was no appreciable constitutional reaction. The cutaneous reaction was at its height within forty-eight hours when it began to recede. The bladder and prostate irritation became less. Eight days later he was given another injection in the other arm—same reaction took place. After this injection his symptoms cleared up and now he is apparently normal, having sexual relations regularly.

Case 196. Dr. F. W. Sumner, British Surgeon of Saharanpore, India, reported in the *Indian Medical Gazette*, of November, 1914, in an article under the title of "Prevention and Treatment of Septic Wounds in Warfare," the following case cured by Autotherapy:

"European, developed acute cystitis with a temperature of 102° F. daily, with most painful and frequent strangury. The urine was acid and contained bacilli coli; there was no urethral discharge or history of gonorrhea. Four days' treatment with cystopurin, etc., caused no amelioration of the symptoms. I then centrifugalized his urine and collected the sediment from several such centrifugalized tubes, added saline and shook the tube well, again centrifugalized, decanted the supernatant fluid, took six minims of the sediment, added an ounce of saline (the writer prefers distilled water) stood it for twenty-four hours, occasionally agitating it, and injected 20 minims of the filtrate subcutaneously. Considerable reaction both local and general followed, but the pain and strangury ceased at once, as if by magic. He then made an uneventful recovery; one injection only was given; the temperature came down by lysis; it lasted ten days from the commencement of the illness." Dr. Sumner stated further in commenting on the use of Autotherapy: "It is to be noted that pure unadulterated toxins germ-free are thus injected, and the results are incomparable with those of vaccine treatment."

Case 197. Patient, Dr. Clifford M. Pardee, applied for treatment, suffering with most severe tenesmus and constant urging. He suffered intensely with paroxysms of pain. This condition had prevailed for several months. As he had failed to improve under the usual treatment, he decided to see what Autotherapy could do for him. As he had been taking some anodynes, he was instructed to take no medicines for five days and then to bring in a specimen after a water-free diet for twenty-four hours. The sediments from three centrifugalizations were collected. This was washed in an ounce of saline solution, and again centrifugalized and the sediment placed in an ounce of distilled water, and allowed to stand for twelve hours with occasional agitation; after which time it was filtered through a Berkefeld filter. It was then ready for use—5 minims the subcutaneous dose. The doctor, however, decided he could not wait for the injection and began to take per os a drachm of urine in the following manner. He collected urine in four four-ounce graduates. After a few hours he pipetted off a drachm of sediment and took this. When seen in five days he was decidedly improved. The paroxysms were not so

frequent nor nearly so severe. An X-ray examination was then made that revealed two large calculi attached to the posterior wall of the bladder. This case is given to illustrate how Autotherapy will relieve the inflammation even though the condition is not cured by its use.

Case 198. Patient, male, age 50 years, applied for treatment suffering with inflammation of the bladder and prostate; this had been gradually developing after staying in bed for almost a year as the result of a fracture of both bones of both legs. Upon rising from a sitting posture it was necessary to void urine within a minute. He had to get up at night five and six times. There was burning and tenesmus and constant desire when on his feet. There was no sugar or albumin but a large excess of indican and colon bacilli and an excess of uric acid. The usual remedies for such conditions gave little or no relief. It was then decided to treat him autotherapeutically. He was instructed to take a drachm of early morning urine a half hour before each meal. Within twenty-four hours his improved condition was so marked that he became alarmed thinking recovery was too quick, and stopped medication. The pain and tenesmus returned; he continued the treatment and improved greatly. X-ray revealed three calcareous deposits (phleboliths) in the veins on each side of the bladder wall. He gradually improved and after five months his rest at night was not broken till five in the morning. The old urging has all but disappeared; he is apparently in good health; not well, but vastly improved.

Case 199. Patient, male, age 56 years, a high liver. As a morning-after penitent, he suffers with an irritable bladder manifested by burning and frequent micturition. It usually took a week to recover from these drinking bouts, and then he is compelled to stop drinking beer or other alcoholic beverages. Now whenever this condition prevails, he takes a teaspoonful of urine upon rising and once or twice during the day and is benefited within twenty-four hours. At the present time he is not always troubled with morning bladder irritation after drinking heavily the night before.

Case 200. Professor Robert W. Ellis, D.V.S., editor of the *American Veterinary Review,* reports the following case cured by employing urine alone:

"Patient, a high-bred Boston bull dog, 10 months old, suffering with a constant desire to void urine. There was loss of appetite, and he was emaciated. Urine came in drops and with great difficulty. Having had such excellent results in the autotherapeutic treatment of animals suffering with many other infectious diseases, he decided to make a test in this case to see if urine as a therapeutic agent would have any effect. Accordingly he catheterized the animal and obtained about two ounces. With a long-nozzled syringe he placed this down the animal's throat; improvement was immediate and continuous. The next morning he began normally to void urine; his appetite improved and he has not had a sick day since, now over two years. When accidentally seen six months after the treatment, he did not know the animal, for at this time he was strong, muscular and extremely active. But a single dose was given."

Our best information concerning the therapeutic value of many biological agents comes from animal experimentation. The animal doctors have the advantage of us in that they can be more free in the application of tests.

A leading veterinarian recently remarked that if he was compelled to give up all else in medicine or Autotherapy he would give up medicine and be more successful in treating animals suffering with infectious diseases.

Case 201. Dr. T. Wilson Deachman, of Chicago, reports the following two cases:

Patient, Mrs. B., age 39 years. Fourteen months ago she began to suffer frequent micturition, neuralgia, extreme nervousness and indigestion. Urinary analysis was as follows: Volume in twenty-four hours, 33 ounces. Day urine, 14 ounces. Night urine, 19 ounces. Specific gravity 1012. Reaction acid. Total solids, 50 grains. Albumin, 1.47 per cent. Microscopical findings, many renal cells. Squamous epithelial pus cells. She was compelled to void five or six times every night and was in a very depressed mental condition. I put her on a rigid diet and gave her the usual accepted remedies. She seemed to occasionally improve but

this was not lasting. I then gave the patient urine according to Dr. Charles H. Duncan's autotherapeutic treatment. The result was magical, the improvement very rapid following the first dose. The result following the second dose was what was least desired or expected. She failed to improve and became temporarily worse. I then reduced the dose by triturating the dose with sugar of milk; following this she became so much worse I was afraid she would go to another physician. I then placed her on sugar of milk tablets for about three weeks. After this I gave the 1000 c.c. dilution of urine run up by our local pharmacy. She then began to steadily improve with the results that she presented in a very short time, the very picture of health—with urine specific gravity 1018—normal in amount and color. She sleeps well the whole night through and has no urinary symptoms. She has continued to remain well now over six months.

Case 202. "Patient, male, age 49, was extremely nervous and irritable; he had wandering pains all over his body, headache and general lassitude. He complained of a great deal of pain in the lumbar regions and in the abdomen over the sigmoid flexure. The bowels regular but there was an exceedingly bad odor to the stools. He improved on nothing that I gave him. He had taken massage, osteopathic treatment and drank gallons of medicine at the hands of other doctors with no avail. The urine was a pale yellow, specific gravity 1020 to 1030, acidity 60 and up, passage in twenty-four hours, 20 to 25 ounces. Microscopic examination showed red blood cells, pus cells, renal cells and abundance of calcium oxalate crystals. The treatment consisted of a twenty minim injection of the urine diluted 1 to 100 with distilled water. He improved with this to a certain point but did not entirely recover until I used the higher attenuations, under these he made a prompt recovery. Two months after he was discharged, another analysis showed acidity 39, specific gravity 1020, absence of pus and renal cells, and volume of urine 1500 c.c. in twenty-four hours."

Continuing, Dr. Deachman says: "These are but few of the many cases I have successfully treated by your method, the

value of which I consider inestimable. I make this statement after a wide experience in treating many patients suffering with chronic diseases and particularly in the use of urine as an autotherapeutic agent. I am free to say that the results obtained are out of all proportion to the usual recognized methods."

Diabetes

CASE 203. The following abstract was republished in the *New Albany Medical Herald,* February, 1915, (C. G. Moore) from the *Archives of Pediatrics:*

"I find diabetes mellitus an uncommonly difficult disease for the general practitioner to treat. April 14, 1912, I was called to see a little seven-year-old girl. They gave me a history of her having felt badly for a few days and of having had some fever. On examining the child I found her to have a temperature of 102° F., but all my other findings were negative. I called the next day and found nothing present outside of the temperature, which was just the same as the day previous. In a couple of days they informed me her temperature was normal and she was feeling all right, but she was passing a large amount of urine frequently and it left a sticky spot on the sheet. I advised a strict diet but the parents refused to adhere to it. Having tried all methods of treatment on several other patients whom I have had within the past few months suffering with glycosuria, I decided to try Autotherapy, for I had known cases of icterus which had failed to respond to any medical treatment, but cleared up in a very short time when they were given their own urine to drink. I gave this little girl three ounces of her own urine three times daily (first masking taste and color) and then examined for the sugar percentage and found that when she was taking the urine, the percentage of sugar dropped, and that when it was withdrawn, the percentage increased. I could also see some improvement in her general condition. She did not urinate so often or so much; did not drink so much water; her skin was more moist, and she was not so nervous. She finally sickened of the urine and her parents did not continue the treat-

ment; since then she has been growing worse. The urine at the present time containing 15 per cent. sugar with traces of acetone."

The comment the writer would make on this case is as follows:

First, the dose was too large. *Second,*—the hypodermic injection of filtered urine much diluted should have been given after the patient refused to take it internally. From three to five minims of the third or higher centesimal dilution appears to be the dose for this child.

The writer has successfully treated many cases of bladder and prostate infections not reported. He believes that when urine, blood and cerebrospinal or other body fluid, etc., are to be given autotherapeutically, enough should be obtained and preserved before treatment is begun to last throughout the treatment. It appears that after the first treatment is given the microorganisms remaining in the body are affected by it so that their toxins no longer have the same therapeutic value as the toxins prepared from the fluid before any injection is given. Occasionally, however, a new specimen may be employed. There are no set rules that will fit all cases and each patient must be treated as an individual. The general autotherapeutic rule is to discontinue administering the toxins when the improvement begins. In this way the patient is allowed to react to the toxins and to continue to react as long as it is possible for him to do so. When improvement ceases and the aggravation of symptoms again sets in, repeat the dose. This gives the tissues another boost. After a time there will come a period when he will not need this assistance and will continue to remain free from symptoms. A dose or two more at the proper interval, determined by previous dosage in this individual case, is then given to increase further his resistance to the infecting microorganisms.

Case 204. Dr. Eric Graf Vondergoltz, of New York City, reports that he reduced sugar in a diabetes patient from over 5 per cent, to normal in two weeks' time by the use of urine per os.

Nocturnal Enuresis

Case 205. Patient, male, age 8 years, had been wetting the bed constantly all his life. He had been under the care of several physicians with no improvement. He was sent to a hospital where he was circumcised, but on his return the same old practice of wetting the bed continued without intermission. He was then sent to the country as a last resort where he remained till the present time. While in the country he was sent to school but remained for only a few days because his clothing was so impregnated with the smell of urine. Several mattresses had to be burned for the same reason. September 18, 1913, he came under the writer's medical care; it was then decided to see what autotherapy would do for him. Accordingly a pint of early morning urine was mixed with a pint of alcohol. Of this he was given a teaspoonful three times a day before meals, beginning with the dinner meal. He has not wet the bed since. By mistake the treatment was continued for three weeks but no harm was done. The trouble has not returned and the patient has gained progressively in weight, has now a good color, and sings, a thing he never did before.

Case 206. Patient, female, age 10 years, has been wetting the bed since she was a baby. She did not want to do this and cried at times on account of her soiling the bed clothes regularly. Her mother was instructed to give her a teaspoonful of her early morning urine before meals (a fresh supply every morning). This was sweetened with molasses just before taking. She stopped wetting the bed after the first dose. About six weeks afterwards she began again; during the interval she learned what she had been taking and her parents would not insist upon her taking it again.

In one of the large babies' hospitals in New York City where children are taken up to the age of 12 years, this method of treating nocturnal enuresis is found to be efficacious

in many instances. There were some cases that failed to respond and whether this failure is due to faulty technic or to the condition not being amenable to this treatment is not known but it is successful in a sufficient number of cases to warrant its being given a fair trial, at least in those conditions that fail to respond to the usual methods of treatment.

The etiology of this condition is obscure and the question presents itself—May not nocturnal enuresis be due either directly or indirectly to pathogenic microorganisms? It appears that bacteria located in or near the sphincter would either by direct or reflex action cause constant irritation that is the precursor of relaxation. This assumption is apparently borne out by the fact that the condition is frequently improved as are all extra-alimentary and extra-pulmonary infections when the etiological microorganisms or their toxins are taken by the mouth.

It is believed that broken-down products of normal metabolism taken in this way are not conducive of the best physical effect. When they are associated with pathogenic toxic substances as they often are in the urine, the amount of the former taken is comparatively small and the benefit derived from the latter is great. Ill effects, if any, are not appreciable.

Nephritis

In developing a new system of therapy as wide in scope as Autotherapy, it is not within the province of any physician, either in regard to time, clinical experience or effort to more than point out the way along many lines of investigation to others who have more opportunities from a clinical point of view, to develop the work along the line of their respective specialties.

The writer was as much surprised in treating his first case of nephritis at the good results he obtained, as was the patient

and the pathologist. Since then he has treated successfully a number of patients suffering with nephritis. He makes no claims for the autotherapeutic method of treating nephritis, other than reporting a few cases. A careful urinary analysis was made in every case and there is no doubt that these few patients improved. The albumen and casts became less, and at times disappeared. Whether a much wider experience would justify the autotherapeutic method of treatment in all cases of nephritis can only be conjectured at this time; however, since the process of destruction was arrested, and the process of repair instituted in its place in a certain number of cases that are not too far advanced; the cases should be reported, especially as the principle involved agrees with much that is already known to be true; the technic employed will be given under the case reports.

Case 207. Patient, Dr. D. A. McM., of New York City, age probably 70 years. The writer was called to see this patient by his brother, Dr. A. R. McM., and Dr. G. F. Laidlaw, who had been called in consultation. The patient was weak and suffering acutely with an exasperating cough that became worse upon lying down. There had been other physicians in consultation on the case, and it appears in spite of all they could do that the condition of the patient grew steadily worse. It was then realized that if something was not done to control the cough a fatal termination would probably ensue. It was then decided to see what Autotherapy would do for the condition. The writer ground a drachm of mucus thoroughly in a mortar with fine powdered glass and this was then mixed with an ounce of distilled water at the temperature of the blood, in a four-ounce bottle. The mixture was thoroughly agitated and allowed to stand at the temperature of the blood for four hours after which time it was filtered through a Berkefeld filter, and 2 c.c. of the bacteria-free immunizing filtrate injected subcutaneously at 7 P.M. The patient reported the next day over the 'phone that three hours after the injection he was able to lie down and had slept better than he had for over a week.

He received four hypodermic injections four days apart, when he had so far improved that the writer recommended that he go to the country. At his last visit Dr. McM. showed the writer a series of urinary analysis that had been made daily, since his treatment was begun. To the last one his pathologist had appended a footnote stating that the albumen and casts in his urine had improved so remarkably during the past four weeks that he would suggest the treatment Dr. McM. was receiving be continued. The pathologist did not know what treatment the patient was receiving.

Case 208. Patient, male, age 42 years, an Armenian, family history negative, presented himself for treatment July, 1914. The symptoms he complained of were swelling of the feet and legs, general weakness and frequent urination. A sample of his urine was sent to Bendinger & Schlesinger for analysis and the report showed that it contained granular and hyaline casts with a large amount of albumen. Specific gravity 1010, with an accompany diagnosis of acute febrile nephritis. The writer upon questioning him elicited the fact that he was suffering with a chronic catarrhal condition of the respiratory tract, and spat up a large quantity of mucus that was especially free in the morning upon rising. *Treatment.*—The patient was instructed to take a high colonic irrigation daily, and to be sure at each operation that the lower bowels were free from fecal accumulation. He was instructed to take a hot tub bath daily, and placed on the following diet: half a glass of certified milk every half-hour with orange juice ad libitum, with sugar daily in the form of a few chocolate caramels. A filtrate was made from the mucus from his respiratory tract in the usual autotherapeutic manner. He received a hypodermic injection of 1½ c.c. of the filtrate every five days and rapidly improved in every way, the swelling of his feet disappearing within ten days while the desire to urinate became less frequent. His color improved, he felt better in every way and at the end of thirty days another analysis of his urine was made and the latter found free from casts with but a slight trace of albumen. Specific gravity now 1016 with the quantity of mucus so diminished as to be hardly noticeable. After fifteen days more he stopped treatment, saying he was well again, and had resumed his work as a carpenter.

Case 209. Patient, female, age 14 years, came down with an acute attack of nephritis following measles, complaining of lassitude, high nervous tension and frequent call for urination. When first seen by the writer her feet were swollen to the knees and there were bags of swelling beneath the eyes. The urine analysis showed a high per cent. of albumen with granular and hyaline casts. The adjuvant treatment was the same as in Case 208—a milk, orange juice and sugar diet, with hot baths and high colonic irrigations daily. Within a week the swellings disappeared and there was less frequent urination. She received at weekly intervals six hypodermic injections of the filtrate of mucus from the respiratory tract and so far improved that the mother believing the child had recovered stopped the treatment (this was two years ago). She has had no treatment since and at the present time is apparently well.

Case 210. Dr. R. L. Rierson, of Oakland, Cal., reports the followng case:

" Patient, an old lady, age 83 years, had been suffering with Bright's disease for many years. Her legs were swollen, and with her other symptoms life was unbearable. By the use of urine, according to Dr. Duncan's Autotherapy, she improved, was made comfortable, and no longer wanted to die. She is not well and never will be, but it is certain that here is a new therapeutic agent with wonderful undeveloped possibilities."

CHAPTER XII

BLOOD AND BLISTER SERUM AND OTHER NON-PURULENT SEROUS FLUIDS

Within the past ten years much has been written on the subject of blood serum as a therapeutic agent.

Blood may be divided into two classes,—autogenous and heterogenous. The former will be considered only, as it alone demands our attention at present.

Dr. Frederick M. Dearborn, Professor of Dermatology of the New York Homoeopathic Medical College and Flower Hospital, say in an article under the title of "Autogenous Serum as a Dermal Therapeutic Agent" that appeared in the *North American Journal of Homoeopathy:* "The first use of blood in our own country was by Gottheil and Sattenstein, who reported in 1914, on the results of the use of autogenous serum. Since then a few definite reports have been made as the result of real painstaking labors (I refer notably to further reports of the same authors and of those of Howard Fox and Hilario), although blood had been used as a therapeutic agent in Europe much earlier. In the cases reported by the above authors, fresh autogenous serum was used. All of these contributions deal with supposed theories underlying the action of the serum and cite clinical cases treated, with the amount of serums used; also the frequency of injections and results in cases with external applications.

"In fact, chrysarobin ointment 2 to 10 per cent. had been used in practically all of the psoriatics. Gottheil reports on the satisfactory treatment of 3 cases of eczema, 6 of psoriasis and 1 of leprosy, and states that the aforesaid results from

serum treatment were more noticeable in psoriasis cases; and later that the results in 12 cases of psoriasis had been uniformly satisfactory. Howard Fox gave an interesting report of 28 cases varying in age from 11 to 54 years, 11 being in males and 17 in females; with the exception of 2, all were ambulatory and mostly dispensary cases. The duration of the disease varied from 2 to 45 years, the interval between injections two to five days, and in all but one case at least, three injections were given. He claims that the best proof of the virtue of the above serum and local treatment was seen in the responsive behavior of certain cases which had, at some previous time, been treated unsuccessfully with applications of chrysarobin alone. Fox's conclusion may be summarized by saying that he considered autogenous serum valuable as an adjunct to chrysarobin in the treatment of psoriasis, but of no value used alone; that the injections are harmless if the proper technic is used and that the latter is comparatively simple. Hilario reports 13 cases treated with fresh autogenous serum as follows: one of the hydroa aestivale, three of dermatitis herpetiformis, one of lichen planus, four of psoriasis, two of urticaria and one of epidermolysis bullosa. He delves into the theoretical basis of his good results and quotes liberally of the various theories. His conclusions are interesting in that he treated other diseases besides psoriasis and believes that autogenous serums are excellent as *antipruritics,* may spontaneously cause involution of actinic and neurotic dermatoses, as well as those proven to be irresponsive to chemical medication. Further he points out a safe technic with no clinical reaction. Concerning psoriasis he claims that the resistance of the psoriatic lesions is reduced to such an extent that the weak chrysarobin ointments (2 per cent. to 3 per cent.) work readily but the earlier their application the quicker the lesions will disappear.

"It must not be gathered from my review of Fox's and Hilario's reports that they alone are doing this work because a number of American dermatologists, as well as such a master as Neisser of Breslau, and others on the continent, have been actively engaged in it.

"This long preamble is necessary because the subject is only in its infancy and needs vigorous backing to explain my own experiments. These wholly concern clinical results and bear no relation to theories. My cases number first to last, 26, but six must be ignored because they discontinued treatment for one or more good reasons. These were treated at least three times at an interval of a week (in a few instances one day more or less), with an average injection of 20 c.c. of fresh autogenous serum. All the diseases treated ought to be termed chronic or at least persistently recurrent. They embraced one of pompholyx, two of pemphigus, two of dermatitis herpetiformis, four of urticaria, two of eczema, two of pruritus generalis, and seven of psoriasis (duration from 3 to 20 years). The last named all presented marked itching, due no doubt for the most part to the seborrheic involvement and further they were not cases presenting localized lesions but generalized (apart from the scalp). I discontinued all internal and external treatment for a period of two weeks previous to the serum therapy and during the treatment thereof. This procedure was in contradistinction to other investigators. The only external treatment employed during the period of injection consisted of castor oil, vaseline or ung. rosae, all non-medicated. Thus I believed it could be determined just what the autogenous serum is worth by affirmation rather than by negation, as in cases treated externally first and later subjected to both serum and external means. Since this series of experiments covering a period of six months further autogenous treatments have demonstrated the superiority of a

mild external application (not chrysarobin alone) in the cases of pruritus generalis, eczema and psoriasis, and of dietary regulations. All experienced relief of the varying and characteristic subjective sensations except one case of eczema and one of psoriasis. The lesions were not notably influenced *per se* but the patent fact of relief from scratching is no mean factor in the course of dermatitis herpetiformis, urticaria, eczema, pruritus and psoriasis. Correspondingly the appetite, sleep and general health were benefited, six of the cases increasing in weight, 4 to 10 lbs. in two months' time.

"Experience in giving intravenous injections is an aid to the technic which Spiethoff has sufficiently outlined. There is, however, a certain amount of elaboration possible and if this increases efficiency either as regards safety, rapidity or ultimate relief, it is well worth while.

"Everything must be perfectly sterile, the McCrae needle, the 50 c.c. cylindrical glass container, the 30 c.c glass syringe and the connecting rubber tube. About 50 c.c. of blood are drawn off from the cubital vein and electrically centrifuged until the serum is well separated from the sediment of corpuscles and fibrin. The number of revolutions per minute necessary to properly centrifuge will depend upon the apparatus used and the necessity for haste; I have varied it from 1,800 to 2,400 per minute, but the lower speed is preferable. I have mentioned the time necessary for the complete operation, but quickness should not be the main object. There are undoubtedly advantages in having the blood well coagulated before proceeding to centrifuge, because if desired, a greater amount of serum may be obtained and then there is little chance of mechanical hemolysis. The serum should be clear, greenish-yellow without precipitates, and if all aseptic measures are observed should not cause clinical reactions as noted by Mayer and Linser. I have not seen any of importance. It is possible a

short period of rest should be given after the injection of which ten to twenty minims is sufficient. It is not absolutely necessary, but those nervously inclined or apprehensive, enjoy the respite.

" Data concerning individual cases I purposely omit, because I do not wish to obscure the main object of this record of my clinical deductions, by adding unnecessarily to the length of the report. If it be permissible to draw conclusions from such a small number of cases, carefully avoiding reference to my later but unfinished experiments with the combined serum and external medical agents, I can offer the following."

Dr. Dearborn concluded his article by stating that this treatment is simple in its application and is safe if ordinary precautions are taken; that no recognizable reactions may be expected beyond an occasional erythema or a transient urticaria. The patient's general health may be markedly benefited as noted by improved sleep and appetite and increased bodily weight.

Autogenous serum should be considered for any itching dermatosis but Dr. Dearborn does not consider that it should be given preference over simpler means until the latter fail.

Dr. Dearborn has been quoted at length for several reasons,—first, on account of the high position he occupies in the medical world—he is known to be scientific and conservative. Second, he is bold enough to assert that he had obtained good clinical results and entirely disregarded the supposed theories underlying the action of the serum. His clinical observations will go far in substantiating the writer's work in the use of other unmodified body secretions and excretions and will tend to establish confidence in the minds of inquiring physicians.

Third, because the writer owes much to Dr. Dearborn for moral support in the early days of the development of Auto-

therapy when his friends were indifferent and his enemies made travesty of truth. It will be noted that Dr. Dearborn confines himself to the application of blood-serum in skin diseases alone. This is but natural since he is an eminent skin specialist. Blood-serum as a therapeutic agent, however, has a far wider usage than in skin diseases and the writer employs it successfully in a number of patients suffering with a variety of diseases due to bacterial infection. Many conditions diagnosed indifferently as autointoxication are amenable to this treatment.

The technic the writer employs in using blood as a therapeutic agent is as follows:

Under strictly aseptic precaution, about 30 c.c. of blood are drawn from the median basilic vein. The old-fashioned tourniquet is found to be most convenient in shutting off venous circulation it is tightened till the radial pulse ceases. It is then loosened just sufficient to feel the pulse at the wrist (the venous circulation having been stopped). Have the patient open and close his hands several times in succession; this will cause the veins to stand out prominently, facilitating the act of penetrating the vein.

Where centrifugalization is employed the fluid is caught in a sterile centrifuge container; it is covered then with sterile gauze and allowed to stand in a moderately cool place for about twelve hours; after which time it is centrifuged. If the physician does not possess a centrifuge the fluid is allowed to stand from twenty-four to thirty-six hours, when it is found that the clot will separate leaving a sufficient supply of serum. From 5 to 10 drops are added to 1 ounce of distilled water; this is thoroughly agitated; and is then filtered through a Berkfeld filter and the filtrate is ready for use. The dose is from 5 to 15 c.c. subcutaneously. The writer usually makes two or more ounces of this filtrate before the treatment is begun. Some patients will require very much smaller doses than this, even to the higher dilutions. When improvement does not follow when the dose given above is employed in conditions we know are usually amenable to Autotherapy, the 6th to the

10th c.c. dilution is then made—if it is decided to give it in pill form, the last dilution is made with alcohol—85 per cent. This alcohol may then be poured over sugar of milk pills and given to the patient according to his needs. One method of giving the pills is to give two of them every hour, for six to ten doses when the medication is discontinued for two or three days and the effect is watched. The best results are believed to be obtained when the filtrate used is made before any injection is given.

The advantages of the writer's technic in administering serum over the method now in use, is outlined fully in the chapter under the title of "The Filtrate." It may not be out of place to mention briefly here again, these advantages, for this technic based on scientific knowledge of immunity contrasts boldly with the present method of employing the serum, which needs only to be mentioned to have its advantages readily understood and appreciated. When any active immunizing therapeutic agent is given we expect reaction in the tissues. When a toxin or vaccine directed against microorganisms within the patient's body is given with the intention of modifying their activity, we expect to arouse forces in the tissues or antibodies that tend to develop resistance to them to check their further activity. We believe the toxins and the antitoxins of a microorganism in a patient's body are found in all of the secretions of the body. After the first therapeutic injection of an autogenous serum is given, the aggressins are checked by the development of antiaggressins, in the tissues, and the toxins in the patient's body, according to Buchner and Bail, are not as rich in aggressins as they were before any injection was given; consequently when given as a remedy they would not develop in the tissues the same quality of antiaggressins as would the toxins obtained before any injection is given, for this reason the writer obtains a relatively large amount of serum before any injection is given.

This is diluted with water and allowed to stand for twelve hours, for several reasons, namely, the serum alone will not pass readily through the filter. Second, the properly diluted serum in larger doses appears to be as efficacious as the non-diluted serum. Third, for the reason that the filtered dilution of the serum will keep for several weeks if strict aseptic precautions are taken. Let us repeat for the sake of clearness:—The sample of blood obtained before any injection is given, being rich in aggressins, will at each injection, tend to develop antiaggressins in the tissues. A serum obtained from the patient after several injections have been given, obviously will not be so rich in aggressins for these have been modified by previous injections and the antibodies developed in the tissues in response to them will not be so therapeutically active. This holds true for practically all of the autogenous serums and other autotherapeutic remedies. There are, however, additional advantages of no mean value that arise from this technic,—one is, its great convenience. The toxins are preserved in a sterile bottle on the shelf, thus rendering all subsequent injections far more convenient than the present method of obtaining and preparing the serums.

The *Hahnemannian Monthly* of September, 1914, contains an article by Dr. Donald McFarlan, in which he cites a number of cases of diabetes mellitus that were treated successfully, by the internal administration of a dilution of the patient's own blood; no other therapeutic measures were instituted, except that a moderate sugar and starch diet was given.

One of the great arguments in favor of Autotherapy is, so many have tried lately to incorporate it as their own; some have even gone so far as to give it a name. These have not been taken seriously, for by simply referring to the literature on the subject it is easily proved their claims were antedated by years.

Except in acute diseases, blood-serum appears to be more superficial in its action on the tissues than the filtrate of a dilution of the pathogenic exudate—only occasionally is the reverse of this statement true.

Blister-Serum

The serum made from a blister obtained from an ordinary cantharides plaster has also a wide range of therapeutic action. It appears to be similar in its action on the tissues to that of blood-serum.

The cases treated by the subcutaneous injection of blister-serum, are given under the heading of the various diseases where it has been employed. Slight mention will be made of this treatment at present, except that the technic of its application is given.

Blister-serum is an autotherapeutic remedy. This assertion is made because the writer believes blister-serum was employed first by him. In the final analysis all autogenous unmodified toxic substances successfully employed in therapy are autotherapeutic remedies, whether the writer was the first to employ them or not. The writer was not the first to employ blood as a therapeutic agent. The technic for the employment of blister-serum is as follows:

The patient should be placed in bed and a square inch of cantharides plaster placed over an area of the chest or abdomen that had been previously thoroughly cleansed with alcohol. When the blister contains sufficient serum, a hypodermic needle, under strict aseptic precautions is inserted into it and the contents of the bleb drawn into the syringe. A few drops of this serum is injected at once hypodermatically and the remainder (from 5 to 10 drops) is placed in an ounce of distilled water and allowed to stand for twelve hours, with occasional agitation; after which time it is filtered in the usual manner and the filtrate kept for further use. About 2 c.c. is the average dose to be injected subcutaneously.

The disadvantage of employing blister-serum lies in the fact that in some acute conditions the interval of time elapsing before the serum is available is so great that the patient may not, with safety, wait for the injection. The blood-serum can usually be obtained quickly by centrifugalization. This disadvantage may be partially overcome if some of the serum from the bleb is injected at once, and the remainder diluted and filtered in the manner previously described. The filtered dilution will keep for several weeks if strict aseptic precaution in its preparation is maintained.

The filtrate of both blood- and blister-serum prepared in the manner described in the preceding paragraphs, should be injected according to the needs of the patient. This usually is on every second or third day. From 1 to 4 c.c. is the usual dose.

Case 211. Patient, R. A., age 38 years, referred by Dr. Dieffenbach, was suffering with a most severe case of acne vulgaris on the chin and neck, with a few scattered pimples over the face. The condition was most troublesome and had resisted many forms of treatment for upward of a year. To hide the condition the patient had grown a beard over the chin and neck, and in the mornings there was a mat of hair and pus present that gave the patient a most unsightly appearance. *Treatment*—An ounce of blood was drawn from the median basilic vein and allowed to clot for twenty-four hours; after which time 2 c.c. of the serum was mixed with an ounce of distilled water and filtered in the usual manner. Of this he was given a subcutaneous injection of 2 c.c.. The improvement was immediate and striking. After three days he was given another injection of the same toxins. The improvement continued. In forty-eight hours the third injection was given. At the end of a week from the time the first treatment was given the patient had practically recovered, as there were no signs of pus and but few signs of induration and redness.

If the serum had not been filtered it would have decomposed and been unfit for further injection. The first injection might

have been given without filtration but to attempt to give a second or third injection with this unfiltered serum would have been positively dangerous, as the serum is a most excellent culture media.

A weak solution of the serum may be preserved in glycerine without detracting from its therapeutic qualities. If it is desired to give an alcoholic preparation of say the 30th dilution, hypodermatically, it should be run up on the centesimal scale two dilutions higher, with sterile water. Then if there is added to it sodium chloride sufficient to make it an isotonic or physiological solution it may be injected subcutaneously with the minimum amount of discomfort.

Case 212. Patient, female, age 45 years, applied for treatment through her husband and sister who led her into my office. She had always, previous to her present illness, been a healthy individual, was married and had three children, the youngest of whom was ten years old. About two years ago she moved from the country to the city and has never adapted herself to the new environment. There was no history of insanity or tuberculosis; her blood was negative. About a year ago she began to show symptoms of great nervousness; this has been gradually increasing up to the present time, in spite of the fact that she had been under the care of three physicians. When first seen by the writer she was in constant fear and dread of being murdered, although her husband and family were kind and indulging. On the street she feared any one who came close to her; she would stand in the doorway from the time her little boy went to school until he returned, fearing some one would kidnap him. Her features were set and she avoided catching the eye of any one. She would pick at imaginary specks on her clothes and in the air; and was afraid to sleep. She spoke only Italian and these symptoms were elicited through an interpreter. One-half ounce of blood was drawn from the median basilic vein, and she was told next day to bring in a sample of her urine. The blood was allowed to clot slightly and was centrifugalized. Two c.c. of serum were mixed with an ounce of distilled

water and allowed to stand at room temperature for twelve hours; after which time it was filtered and 4 c.c. of the filtrate injected subcutaneously, on the succeeding day. The sample of urine brought in on the second visit looked like a thick solution of mud. It contained an excess of indican and a marked trace of albumen. One-half ounce of this urine was mixed with equal parts of alcohol and colored slightly with liquid peptonoids; she was given this with instructions to take 10 drops in a little water three times a day, before meals. She was also instructed to take a hot bath and an enema every night. In forty-eight hours she returned; there was decided improvement, she having slept better and eaten better, and she smiled slightly, a thing she had not done for upwards of a year. She progressively improved in every way. At the end of ten days another sample of her urine was obtained. At the end of the fourth day she was not feeling so well, then the medication was withheld for twenty-four hours. She was then put on 10 drops, once daily. She received a hypodermic of blood in the manner suggested, on alternate days. The second sample of urine was a pale straw color, transparent, with little or no sediment after standing six hours. It showed much improvement. The patient claims she is well but will be treated in a similar manner for two weeks more. There was general rejoicing in the household, as the little girl sixteen years old said, "Mama has come back to us." It is too early to state that this condition will be permanent, but here is improvement of the most decided kind within ten days, in a patient who had resisted the treatment of three other physicians.

In the year 1912, Dr. Clement A. Shute, of Pottstown, Pa., reported he treated many patients suffering with infectious diseases successfully, by the use of serum obtained from cantharides plaster; since then many physicians report having used this serum successfully, notably in pneumonia and in eruptive diseases. In further substantiation of the claims of the writer as to the great therapeutic value of blister-serum, there appeared in the *Journal of the American Association,* of May

8, 1915, an article by Dr. William Lee Secor and Dr. E. E. Palmer, who report having treated several cases of pellagra successfully by the injection of serum obtained from a blister produced on the body of the patient by the use of cantharides plaster.

In an article appearing in the *Medical Record,* March 30, 1918, under the title of "Autosensitized Foreign Protein," Dr. Secor states: "Since then we have ourselves treated and received reports of treatment of hundreds of cases of pellagra with the most gratifying results. It is more potent therapeutically in pellagra, than any other foreign protein."

Autoserotherapy

Dr. E. A. Pierce, in the *Northwest Medicine,* of August, 1914, states in an article under the title of "Autoserotherapy" that "Dorland defines autoserotherapy as the *treatment of a disease of a part by serum derived from the part.* It was said originally to have been done by Gilbert of * Geneva in 1894, but the subject was apparently neglected. However, of late the medical press has been reviving it to a notable extent. I believe the time is coming for the formal recognition of Autoserotherapy as an efficient means of treating †*non-purulent effusions in serous cavities.* In the beginning Gilbert had thought only of applying this new method of treatment to pleurisy of a tuberculous nature but he has since found that all serofibrinous pleurisy is amenable to autoserotherapy, and the truth of these opinions has been confirmed by most physicians

* Gilbert's Technic.—Gilbert, in 1894, states: "In cases of pleural and peritonital effusions, small quantities (1 to 10 c.c.) of the serous fluid are aspirated and the needle is withdrawn as far as the subcutaneous tissues where the fluid is injected. The usual result is diuresis and a rapid absorption of the fluid and local reaction follows. The fluid usually disappears in from three to four days."—June 3, 1911, *London Lancet.*

† The italics are ours.

who have used this method. It is also applicable to effusions into other serous cavities. Besides Gilbert's methods of re-injecting the subcutaneous tissues there have been used methods of connecting the serous cavities directly with the venous circulation, or with subcutaneous tissues, resulting in either case in auto-drainage—a modification of autoserotherapy.

Pleurisy

"A most comprehensive article by Fishberg appeared early in 1913. He quotes Gilbert as stating, at the International Medical Congress in Rome in 1894, that since 1891, he (Gilbert), has been treating tuberculous pleurisy with effusion by subcutaneous injection of a small amount of the fluid withdrawn from the pleural cavity. He notes that within a few days the pleural exudate disappears and the patient recovers.

"This method seems to have been forgotten but during recent years various European clinics have been sending out reports which tend to show that it possesses great merit. Gilbert strongly urges its general adoption by the profession in properly selected cases. He reports that this method was based on researches made in 1890 and 1891 by Debove and Reymond. George Eisner has shown quite conclusively by recently performed animal experiments that this mode of treatment stands upon scientific basis. From Eisner's experiments it appears that it is the subcutaneous injection of the fluid that is responsible for the absorption of the exudate and that it is not due simply to the withdrawal of the fluid mechanically stimulating absorption."

"Fishberg reports twelve cases of pleurisy with effusion and while not claiming it is specific, he believes it has sufficient merit to warrant its more general adoption. Within twenty-four hours after the injections the general condition of the

patient improves; diuresis is increased and the dyspnea is less marked. A physical examination shows that the upper level of the fluid is lowered and within a week or ten days no fluid at all can be discovered. By the use of this method there is less likelihood of the formation of large fibrous bands so common after aspiration of fluid from the chest which lead to discomforts later in life. This method of treatment has apparently no effects on the original condition as the case continues to improve as if there had been no pleurisy. In many cases a single injection is all that is necessary to effect a cure; in others the procedure must be repeated several times before the fluid is completely absorbed; while in some few cases autoserotherapy appears to be of no use at all. No dangerous or even threatening symptoms have ever been observed by any one who has tried this method of treatment and it may, therefore, be considered altogether harmless.

CASE 213. "An interesting case was that of a young man of twenty-five, who came to Fishberg's office for advice concerning the suggestion given him by a physician, that he must leave for the mountains because of tuberculosis of the lungs. Physical exploration of the chest revealed an effusion, extending up to the sixth thoracic spine. This was immediately confirmed by an exploratory puncture. Fishberg did not completely withdraw the needle, but immediately turned it and injected the fluid contents of the syringe—about three c.c.—into the subcutaneous tissues at the site of the puncture.

"The patient's history was rather suggestive. He had been coughing for three months, had slight fever, malaise, and dyspnea on the slightest exertion. At no time had he any acute pain in the chest. He had lost 18 pounds in weight during the three months. Treated at first for bronchitis he was finally advised to go to the mountains to cure what was considered pulmonary tuberculosis. Fishberg's request that he call again within twenty-four hours was disregarded by the

patient, but he showed up again ten days later, telling him that he could not call upon the appointed day because he was too sick to leave his bed on a rainy day. But on the next day he began to improve, his strength showed signs of returning, his appetite was improving and the dyspnea had almost disappeared. While before the injection he could not sleep on the right side, he noted that during the last three days, one week after the injection, it made no difference to him on which side he reclined. His cough and expectoration increased, but he did not complain because, as he put it, he found it easier to 'bring up phlegm.' He gained four pounds in those ten days.

"Another puncture with reinjection of the fluid was made, and the patient was given a prescription calling for five grains of potassium iodide three times a day. Within four weeks his condition had improved to the extent that he could resume his work, that of a watchmaker. Fishberg examined his patient over one year later and found him in excellent condition, except for some defective resonance and faulty motion at the right base which remained as traces of his pleurisy.

"But not all of Fishberg's cases of Autoserotherapy were successful. In one patient with a large effusion in the right side the injection of 5 c.c. of fluid on alternate days, six times, did not relieve the condition at all. On the contrary, the amount of fluid in the chest increased in spite of the treatment, with a concomitant aggravation of the general condition, especially the dyspnea. The displacement of the mediastinum, liver, etc., was extreme, so that tapping of the chest had to be done. Thirty ounces of fluid was withdrawn on one occasion and twenty ounces on another, although at each tapping he reinjected about 10 c.c. of the fluid under the skin. He could not say that the eventual disappearance of the effusion could be attributed to the autoserotherapy in this case."

The question how autoserotherapy promotes the absorption of pleural effusions has been a source of speculation to various writers. And it appears there is no unanimity as regards the matter at the present time.

Pericarditis

"Jacobs and Chavigny report a case of tuberculous pericarditis with much effusion, in which autoserotherapy by means of pericardictomy cleared up the case and has apparently cured the patient. The incision in the skin was sutured without drainage but the incision in the pericardium was left untouched so that any further effusion might drain away of itself and possibly induce a kind of autoserotherapy.

Hydrocele

"Holt says that in some cases of hydrocele which do not disappear promptly simple puncture with the needle, allowing the fluid to drain off into the cellular tissue of the scrotum from which it is absorbed, is an excellent means of treatment.

"Caforia extols the simplicity, ease and harmlessness of autoserotherapy and the freedom from by-effects at the time or later. He found it effectual in 45 per cent. of the cases, in which he has employed the method, the outcome depending in large measure on the age of the hydrocele and the pathological process responsible for it. In four bilateral cases he aspirated a few c.c. of the fluid on one side alone and reinjected it with the usual technic and the hydrocele on both sides retrogressed, showing the general action of the procedure.

Case 214. The writer reports the following case:

Patient, age 55 years, a letter-carrier, reported for treatment for a large unilateral hydrocele that had been gradually developing since an injury three years previous. Under strictly aseptic precautions, 24 ounces of the fluid was aspirated and 4 c.c. injected subcutaneously in the gluteal regions. In three weeks' time the patient reported again for treatment, when ten ounces of the fluid were aspirated and 4 c.c. injected subcutaneously. In about eight weeks he applied for treatment again and it had about the same amount as at the last aspiration. The contracted scrotum had the appearance of being considerably over one-half an inch thick. No fluid

was aspirated but at this time an insertion of the needle into the cavity of the scrotum was made in six or seven different places with a view of allowing the fluid to escape in these various channels, into the subcutaneous tissue. At the end of six weeks the patient reported again with no fluid in the cavity and there has been none since.

Hydrocephalus

Pierce says further, " Payr states that in the last three years he has operated on fifteen cases of hydrocephalus by various technics, all aiming to drain away the excess of the fluid from the ventricle into the venous circulation. His patients ranged in age from six months to twenty years. Hydrocephalus was completely cured in 50 per cent. of the eight patients who survived in the first few months. The cases were naturally all of the severest types. In four he drained into the longitudinal sinus, in four into the jugular or facial vein. He regards the results on the whole as very encouraging, the failures being principally avoidable by improved technic.

" Heile reported last year his attempt to ensure permanent drainage of the cerebrospinal fluid into the abdomen in a case of spina bifida. He sutured a loop of small intestine, drawn out near the spina bifida, to the open dural sac, and the drain answered its purpose perfectly, but so much fluid was drained away abruptly that the child succumbed to this and the effects of the laparotomy necessary to draw out the bowel. To avoid these drawbacks he now drains the fluid into the abdomen by means of a wick of six silk threads, introduced into the dural sac at one end and carried through a subcutaneous passage into the side of the abdominal cavity, into which it protrudes near the costal arch. The minute incisions rapidly healed in the case reported. The two-days-old infant was kept lying on his back with the pelvis raised for a time to prevent too rapid drainage. The child has no further signs to date of the spina

bifida and hydrocephalus for which the operation was done.

"Marmion drains the lateral ventricle permanently into the parotid gland which he considers particularly adapted for rapidly taking up the fluid. He applied this method to an infant eight months old suffering with extreme hydrocephalus with good results. The infant in later months died of enteritis.

Ascites

"Audibert and Monges claim for themselves the credit of being the first to apply autoserotherapy in the treatment of ascites. They use a technic similar to that of Gilbert in tuberculous pleurisy. They describe a case of ascites of hepatic origin which was greatly benefited by the reinjecting of the patient's own ascitic fluid. Twelve injections from 3 to 10 c.c. were made at intervals of about six days. There was no local reaction and no pain, the main effect being a copious and persistent polyuria and the patient's general condition improved greatly as the ascites was drained away. In this case salt was withdrawn from the diet. These authors now apply autoserotherapy in all cases of recurring ascites.

"Franke has done omentopexy in five cases to drain away ascites and the result was an entire success in three. The last patient thus treated was a woman of 57 with syphilitic cirrhosis of the liver and the operation cured the tendency to ascites. His failures in the other cases and in a number on record constrained him to seek a better way and he thinks he has found this in diverting the fluid into the subcutaneous tissue. In the two cases in which he has applied this technic, the patients were permanently cured of the ascites, as was demonstrated in necropsy. One was a woman of 48 with ascites from cirrhosis of the liver, the other was a woman

of 71 with chronic serous peritonitis. He uses merely a loosely twisted wire of silver to keep the hole open. This operation permanently diverted the fluid from the abdominal cavity and the wire healed in place without any inflammatory reaction, but the process of the underlying disease rendered a permanent recovery impossible. He thinks that mild, chronic serous peritonitis might be cured by the measure and a number of other conditions materially improved.

"In the case reported by Stoney and Moorehead, the introduction of artificial silk lymphatics according to the method suggested by Sampson Handley in 1910, was followed by disappearance of the ascitic fluid. The existence of chronic fibrous peritonitis with hepatic cirrhosis was demonstrated at the operation. The authors do not claim that the improvement which occurred is necessarily the result of the lymphangioplasty, as ascites of the type here represented may disappear spontaneously (as occurred for a time in this case during the first stay in the hospital), or may disappear after a simple laparotomy. The fact, however, that some fluid reaccumulated after the operation, suggests that the mere laparotomy was not of itself the cause of the later improvement, but rather that the reaccumulation took place prior to the establishment of an efficient circulation via the silk lymphatics, and that once a sufficient circulation was attained no further transudation accumulated.

"Volarelli reviews the five cases on record in which the internal saphenous vein was implanted in the peritoneum in treatment of ascites. The outcome was a complete success in three cases in which the saphenous vein was of normal size and permeable. In the two other cases necropsy showed total obstruction or excessively small size of the vein.

"Is it not possible that to autoserotherapy is due the good effects of the exploratory operation in cases of tuber-

culous peritonitis, the serum being absorbed from the surfaces of the wound?

"Evler has applied to tuberculous ascites autoserotherapy after the principle of autodrainage. He produces a permanent fistula so that the fluid in the peritoneal cavity was drained into the subcutaneous tissue of the abdominal wall. Improvement was marked from the start. Ascites did not recur and the patient rapidly gained 25 pounds in weight. The peritoneal affection seemed to be entirely cured.

Cancer

"Krokiewiez reports thirteen cases of cancer in which he drew 6 c.c. of blood from the median vein and reinjected it at once into the subcutaneous tissue of the chest,—repeating the procedure at eight or ten days' intervals. In the advanced cases the pains and vomiting were favorably influenced. The patient slept and ate better and regained more energy. In some cases the general condition took a marked turn for the better. This was especially marked when this treatment was applied after excision of the cancer. Convalescence seemed to be materially promoted.

"McConnell in a paper before the American Association for Cancer Research, reports preliminary results obtained by treating cancer with ascitic fluid. He says that carcinomatous growths without doubt do undergo retrogression both spontaneously and after operations that do not completely remove the tumor. This may be due to the formation of connective tissue with necrosis and absorption of the cancer cell.

"Spontaneous disappearance is frequently seen in the tumors of mice. It often occurs in human beings, more often than realized.

"In the mechanism of protection against the invasion of foreign cells two factors are concerned—one the protective

ferments of the invaded body, the other the enzymes of the tumor cells capable of exerting an autolytic action. The regression of tumor nodules may be due to the setting free of autolytic ferments as the tumor cells die from imperfect nutrition.

"That recovery does occur is shown by the numerous reports of numerous observers. Beebe states that in 30 per cent. of cases considerable improvement locally and generally may be expected. In no instance have there been any results which would lead one to expect a cure. The favorable effects have been as follows: relief from pain, diminution of hemorrhage and secretion from the tumor mass when it has been located in a mucous surface, increase in weight and appetite, marked improvement of the general physical condition. In 25 per cent. of the cases there has been a cessation of growth on the part of the tumor and in a few it has appeared that the tumor has actually diminished in size. Serum has been given by subcutaneous injections in the flank and lumbar regions in doses varying from 10 to 125 c.c. The size of the dose and frequency of administration are determined by the reaction both local and general.

Elephantiasis

"Lanz was able to obtain a complete cure in a case of elephantiasis in a man of 49, whose right leg had been gradually enlarging in size for five years, without pain, the disfigurement and discomfort resulting from the enormous size of the entire limb incapacitating the patient at times. Lanz kept the man in bed ten days with the limb raised, and then incised the thigh down to the bone and bored into the femur at the lower middle and upper thirds. He then cut some narrow strips from the fascia lata and worked them into the three holes drilled in the bone, his aim being to induce a col-

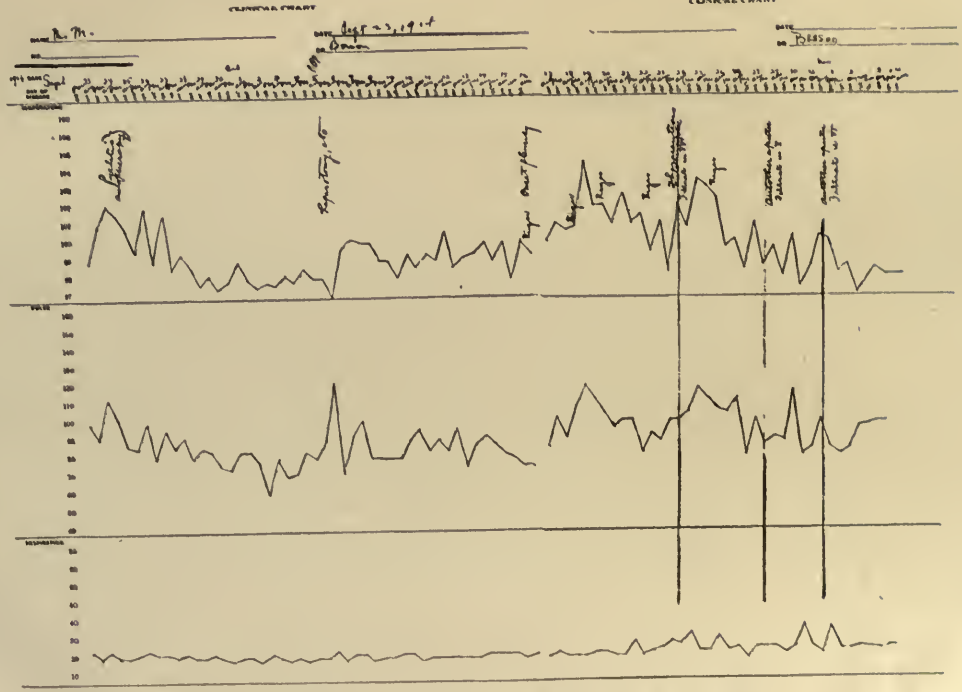
lateral circulation of lymph, opening a passage from the subcutaneous lymphatics into the intramuscular, subperiostal and narrow network of lymph vessels. Before suturing he made also a number of openings for drainage through the fascia lata. The silk suture the length of the thigh may also have contributed to the result. Relief was immediate and permanent.

"Now, three years later, no difference is apparent between the right and left leg, except that the skin of the right thigh seems a little thicker than the other. The fascia lata is an absolute barrier for the lymph routes, and by artificially opening passages through this barrier the whole trouble was cured. If the desired effect had not been attained he had intended to connect the lymphatics in the thigh with those of the seminal cord, pushing the latter over to the fossa ovalis.

Conclusions

"This résumé sets forth the practicability of using autoserotherapy in treatment of non-purulent effusions in any of the serous cavities of the body. I will not attempt to draw any conclusions as I believe that they are self-evident from a review of the authorities quoted. I trust that the profession will give consideration to this valuable method of treatment when suitable cases present themselves, bearing in mind that it is not a cure-all."

Dr. John Besson, of Portland, Oregon, states in the *Northwest Medicine* of November, 1914, in commenting on Dr. Pierce's article, "Dr. Pierce's conclusion establishing the practicability of autoserotherapy in treatment of non-purulent effusions, has my hearty commendation but I would ask, why not disembowel the term autoserotherapy and use *Autotherapy* which is applicable in purulent exudates, infections, etc., as well? His able article well shows that a specific antigenic



CASE 2. PLEURAL EFFUSION. DR. JOHN BESSON.

body resident in sterile exudates is the spur necessary to the lowered vitality for a cure of the cause of pleurisy. I am sure the principle is the correct one and its extension to purulent fields is readily attained by isolating the 'specific antigenic body' from purulent exudates and employing these therapeutically. Duncan of New York best does this by adding one part of the patient's pus to seven parts of water allowing it to stand with occasional thorough agitation of the mixture, and passing through the Berkfeld filter after twelve to twenty-four hours, when 1 c.c. of this filtrate is injected subcutaneously or the smallest necessary dose is indicated by the reactive strength and the condition of the patient.

"At the Sellwood Hospital, we have had wide and favorable experience with Duncan's teachings in many varieties of infection, even to long standing chronic bronchitis, and I have to refer you to his numerous writings that have appeared in the medical press, both in this country and on the Continent of Europe, under the title of 'Autotherapy, by C. H. Duncan, M.D.,' the most ingenious of autotherapeutists."

Case 215. Dr. Besson reports the following case:

"Patient, Mrs. M., age 23 years, came to the Sellwood Hospital, on September 22, 1914, with a diagnosis of pyosalpinx with severe abdominal pain and dysuria. On the 24th, the cystoscope demonstrated pus pouring from both ureters. Temperature 102° F. The kidney pelves were irrigated with silver nitrate and the patient given two drops of pus from the urine by the mouth. During the next three days her temperature gradually dropped to a normal range. Examination now disclosed a bilateral chronic pyogenic infection of both fallopian tubes (the result of an acute attack a year previous), and a right cystic ovary the size of a hen's egg, which one week later had become larger than a goose egg; this ruptured easily at the operation on October 5th, and contained a sero-sanguineous fluid). The operation consisted of a double salpingectomy, right oophorectomy with partial resection of the left ovary, a

left inguinal herniotomy, and a double tonsilectomy. Time one hour and forty minutes. The patient experienced a fairly comfortable post-operative course and was able to sit up in bed with a back rest ten days later. This was followed by a series of chills, a septic temperature with vomiting and coughing spells, although between chills the patient felt well enough to be out on the sun-porch. One week later came the onset of what eventually proved to be pleurisy; physical signs of fluid in the right chest were found.

"Six ounces of a very turbid fluid were aspirated but no attempt was made to evacuate thoroughly the cavity. A drop of this under the microscope showed innumerable leukocytes in every field, as we would commonly expect to find in any seropurulent material. A filtrate was prepared and m xv, administered hypodermatically at once. This was followed by two or more doses during the succeeding week which resulted in the recovery of the patient. This treatment is of intense interest when reviewed in the light of the article and bibliography by Dr. Pierce."

Dr. Besson states in a later number of the *Western Medical Times:* "In my communication that appeared in the November, 1914, issue of the *Northwest Medicine* commenting on Dr. Pierce's article, I agreed that the principle was sound and suggested that it could readily be extended to purulent fields as well by isolating the 'specific antigenic body' from purulent exudates by Dr. Duncan's technic.

"Contemporaneous with my communication, an article appeared in the October, 1914, issue of *Surgery, Gynecology and Obstetrics,* by A. C. Burnham, under the title of 'Post-operative Pleurisy with Effusion and Empyema,' showing that post-operative pleural effusion is not uncommon in these conditions and concluding that a clear serous exudate in the right chest is not necessarily a serious complication, as such cases usually recover.

"This is in sharp contrast with his conclusion that the

prognosis is unfavorable in all cases of purulent or turbid fluid in post-operative pleurisies. No patient recovered of the six cited.

"He (Burnham), believed that a turbid exudate meant that the condition would ultimately terminate in pus formation and death.

"In Mrs. M.'s case, the septic temperature and the appearance of the fluid warned us of the gravity of the situation, and we resorted to Autotherapy with confidence that was born of successful usage for four years in almost every patient presenting an exudate or discharge. In addition to all other indicated therapeutic and surgical measures we owe it to the patient to give him the benefit of this most accurate therapeutic measure:—Autotherapy."

Autotherapy in Cerebrospinal Meningitis and Acute Poliomyelitis

Whatever may be said of the merits or demerits of the local use on the nasal and pharyngeal surfaces of the lactic acid bacillus against the meningococcus of Weichselbaum, it tends to act in the nature of an antiseptic, locally destroying the microorganisms.

When the excretions from the pharyngeal or nasal surfaces can be obtained they should be employed autotherapeutically in a manner similar to the technic employed in otitis media, mastoiditis, rhinitis, etc., as the meningococcus is apparently found in the naso-pharyngeal surface; by injecting the filtrate from the mucus subcutaneously, we tend to build up the bactericidal elements of the blood to overcome the invading microorganisms. While this has never been attempted by the writer in cerebrospinal meningitis, there is still no reason why the toxins from these microorganisms should not be employed

autotherapeutically. Lack of opportunity alone has prevented these tests from being made. There are, however, other autotherapeutic measures that apparently are able to control this malady, if the treatment is not too long withheld. The technic is similar to that of treating poliomyelitis, given in the following abstract, from a paper by the writer, under the title of "Autotherapy in Poliomyelitis" which appeared in the *New York Medical Journal* for August 19, 1916.

In view of our apparent helplessness in the presence of an epidemic of poliomyelitis, I suggest that the autotherapeutic method of treatment be given a fair trial. It is especially worthy of consideration since cerebrospinal meningitis, and other toxic neuritides, appear to respond readily to this treatment.

During the Spring of 1910, Dr. C. C. Howard, of New York City, cured a case of cerebrospinal meningitis by tapping the spinal canal and injecting intramuscularly the spinal fluid thus obtained. Recognizing this treatment as autotherapeutic, he asked Dr. H. C. Sloat, then of New York, to read a paper, under the title of, "The Relation of Autotherapy to Homoeopathy," before the Homoeopathic Medical Society of the State of New York, at its annual meeting held in Albany, February 22, 1911. During the discussion that followed, Dr. Howard reported the case of cerebrospinal meningitis mentioned above, and Dr. George F. Laidlaw, of New York City, stated that he had cured many cases of cerebrospinal meningitis by this autotherapeutic method. Time and space forbid giving more than that part of the discussion which relates to the injection of the spinal fluid:

Case 216. Dr. C. C. Howard stated that last Spring (1910) a patient with cerebrospinal meningitis entered the Metropolitan Hospital. The man was an Italian laborer about thirty-nine years of age, and in a state in which one would expect a

speedy death. He was cyanosed, his pulse was erratic, he was bathed in a cold sweat, rigidity was marked, and there was loss of all reflexes. The case approached so near death that the speaker decided to see what result would follow injection of the spinal fluid under the skin. He made a spinal puncture and drew off quite a large amount of fluid and injected some of it into the muscles of the back. In the course of three or four hours, the temperature fell from 105° F. to 102° F. Four injections were given at intervals in a similar manner. The man had absolutely nothing remaining as the result of the attack and was perfectly well when he left the hospital.

Dr. George F. Laidlaw, referring to Dr. Howard's case of meningitis, thought he was the grandfather of this treatment, Dr. Sloat the father, and Dr. Howard their lineal successor. He thought he was the first to draw the fluid in a spinal meningitis case and inject it under the skin. Within the past year he had been puncturing the spinal cord quite liberally.

He had been surprised at the number of apparent cases that had a sterile spinal fluid, in which prompt improvement might follow its injection under the skin. One striking case he treated about a year ago; another he saw in Scranton, in November, 1910; a third in Flower Hospital. Others he had seen about New York at different places. All the symptoms were those of meningitis; rise of temperature, stupor, flexor spasms of the knee, retraction of the neck, etc. In all cases he punctured the spinal canal and drew off a fluid free from pus and bacteria. Those patients seen at different stages of the disorder were injected with about ten drops of spinal fluid and within ten hours were so much better that he was forced to conclude that the injection of the spinal fluid had some influence on the improvement. The bacterial cases he had had the misfortune to see late in the disease, ended fatally. Dr. Howard's patient was the only one of this type that he had seen recover.

It seems altogether probable that if the spinal fluid was passed through a Duncan autotherapeutic apparatus before injection the results would be more certain, in some instances at least.

It is altogeher possible that in advanced stages of poliomyelitis, as in cerebrospinal meningitis, the spinal fluid may contain, in addition to the etiological factor, pyogenic microorganisms which, of course, would be removed by the filter. It is possible, also, that much the same condition prevailed here as in purulent hydrothorax, etc.

This patient of Dr. Howard's made an autotherapeutic cure, pure and simple, and it is freely acknowledged as such by Dr. Laidlaw, Dr. Sloat and Dr. Howard. If it had not been sufficiently pointed out that autotherapy is especially applicable in poliomyelitis, it must have suggested itself over and over again to those who do their own thinking, that Autotherapy is particularly applicable to this infection. Being a toxic myelitis, with the evidence before us of the effectiveness of Autotherapy in cerebrospinal meningitis and other toxic affection of nerve centers, it would be only a slight mental effort to conclude that Autotherapy might also be applicable in this form of myelitis.

Case 217. Patient, male, aged two and a half years, was taken sick July 22, 1916. The case was not seen until the 24th. There was vomiting, stupor and temperature of 102° F. The patient slept with his eyes open and rolled up. There was marked twitching of the muscles of the legs and arms. On the 25th, there was a partial left-sided facial paralysis and partial paralysis of both legs. On the evening of that day the spinal canal was punctured and about 10 c.c. of fluid withdrawn, and 1 c.c. injected hypodermatically. Within twelve hours the stupor disappeared and the temperature fell to 99° F. He was sent to the hospital where several 5 c.c. injections of spinal fluid were given. At the present writing, August 7, 1916, temperature and pulse are normal. January 1, 1918, this patient has fully recovered.

Since the onset of the paralysis is so sudden and the condition is often not diagnosticated till partial paralysis is manifest, it is altogether probable that the value of this autothera-

peutic treatment is more apparent when the patient is treated early. If the patient is treated sufficiently early, it will often check the progress of destruction and institute in its place the process of repair. The partial paralysis will often, as in the case above cited, be overcome in the course of time. The writer suggests that tests be made in treating tetanus and other toxic affection of nerve centers by the autotherapeutic method.

Many tests were made in the contagious hospitals of Brooklyn during the epidemic of 1916, by treating patients by this method. The results, while not very encouraging, are believed by the writer to lie in the fact that the patients treated at the municipal hospitals were not seen sufficiently early for the best therapeutic effects to be obtained. The patients received there usually come from the hands of practicing physicians and the destruction of the cord had usually been going on from two to three days or more before this treatment was given. The destructive process is so quick in its action that unless treatment is instituted within a few hours after paralysis makes its appearance, the best therapeutic effect will not be obtained.

Autotherapy "need not all be believed to leave a shocking residuum of undoubted truth."

CHAPTER XIII

*AUTOTHERAPY IN IVY POISONING, ANTHRAX

In the *New York Medical Journal* for September 23, 1916, was an editorial reviewing an article by Dr. J. M. French that appeared in the August, 1916, issue of *Clinical Medicine,* in which the writer stated that ivy poisoning may be cured or prevented by chewing the young leaves of the plant and swallowing the juice. The writer acquiesces in every respect with the editorial comment on this method of treating ivy poisoning which was as follows: "The remedy appears to be in accord with the theory and practice of Dr. Charles H. Duncan, who will pounce upon this case report as a fine example of his beloved Autotherapy."

In the *New York Medical Journal* for December 14 and 21, 1912, the writer stated in an article under the title of Autotherapy: "Disease is the proving of one or more toxins. Symptoms are the expression or the language of toxins. The cure of disease is brought about by placing a small dose of the exact toxins that cause the symptoms in healthy tissues." This method of treating ivy poisoning is nothing more nor less than treating the symptoms with the substance that caused

*Reprint from an article under the title of "Autotherapy in Ivy Poisoning" that appeared in the *New York Medical Journal,* November 4, 1917, by Charles H. Duncan, M.D.

them, or an autotherapeutic procedure, and has long been known and employed successfully by the writer, as in other forms of anaphylaxis.

In Fairmount Park, Philadelphia, it was the custom a few years ago upon hiring park hands to instruct them upon clearing away poison ivy, first to chew a few leaves of the plant as a preventive to the well-known cutaneous eruption. Last Spring this autotherapeutic method of preventing ivy poisoning was introduced in Bronx Park, and several of the workmen employed it as a prophylactic. It is noteworthy that no one who chewed the leaves suffered afterward from poisoning.

Case 218. C. V., male, living in the country, one evening when defecating in the woods was unfortunate enough to select a spot that was covered with poison ivy. When seen three days later, he presented the most terrible spectacle of ivy poisoning the writer had ever seen. The cutaneous manifestation was severe, covering the whole scrotum, penis, groin, rectal and gluteal regions. Each testicle appeared to be the size of the fist, and the penis several times its natural size, puffy and edematous. He was instructed to return to the spot of evacuation and to select a leaf from this particular plant, a part of which he was instructed to chew and to swallow the juice. This he did. There was a reduction of the swelling and the symptoms of itching and burning rapidly subsided, so that within three days he was able to resume his duties as butler. The reason for instructing him to return to the spot and chew the leaves of this particular plant was that there are several species of ivy and in attempting to treat the patient with the tincture from the fresh plant there might have been given him a tincture of some ivy other than the one with which he had been poisoned.

The species of Rhus that are common throughout North America are Rhus glabra, Rhus venenata, Rhus toxicodendron and Rhus aromatica; the last is the least poisonous.

The writer did not know the species of Rhus to which this patient was exposed but that the patient was cured is an established fact. It makes little difference which of the species of Rhus he came in contact with, each would tend to be curative in the dermatosis caused by contact with the plant.

Instances of cures of this nature have been recorded sporadically in all parts of the world and in all ages.

A medical missionary from China states that when people are poisoned by the leaves of a poisonous plant that grows in that locality, their old women will give the patient the juice of one of the berries mixed with water as a curative agent.

This method of treating ivy poisoning has long been known and employed by homoeopathic physicians, who considered the cures resulting from the treatment as homoeopathic cures, till the writer pointed out the fact that it was not a similar remedy, but the exact or the autotherapeutic remedy, for it treats the symptoms with the exact unmodified substances that caused them, and not a substance that causes a similar set of symptoms. Their failures which they do not always record, may result from giving, as the remedy, a tincture of Rhus other than the one with which the patient was poisoned.

In the same way phosphorus poisoning may often be cured by giving the patient small doses of phosphorus. The failures in this instance may have been from the same cause, but the percentage of cures has been such as to cause it to be widely employed. The remedy given may not be of the exact chemical composition as the poison, often an impure product, while the substance given as the remedy may be, and usually is, the pure product.

Other cures of a similar nature could be cited where the exact unmodified substance that caused the symptoms is employed in minimum doses as the curative remedy.

This is the principle upon which Autotherapy rests.

Anthrax

Anthrax is an acute infectious disease so fatal in man that anything which affects its course even mildly, or that throws light on the subject will be welcomed by the profession. The writer believes there is much of value that can be said on the subject from an autotherapeutic point of view.

The therapeutics of anthrax is so interwoven with the history of Autotherapy, that the recital here of work done by one of its pioneers in the early part of the last century, may not be out of place.

Lux, a veterinary physician, living in the early part of the last century, published many articles, describing a method of treating disease with the exudate of disease, which he called "*Isopathy.*" He knew nothing of the value of immunizing the patient to his own infecting microorganisms, or of the *auto* element we now know that enters as an all-important factor in therapeutics; for this reason Isopathy failed when put to the official test and passed into history.

Autotherapy is the culmination of Isopathy, just as Autotherapy is the culmination of vaccine therapy. Lux accidentally found for a time the key to the situation but lost it eventually because he did not recognize the value of the auto element. He claimed that disease carried with it its remedy; we know now it is not the disease that necessarily does this but the patient. Practically the same thing may be said of Swan and Burnett. These men had no clear conception of the auto factor that enters into the therapeutics of active immunization. For this reason they are classed as pioneers who helped to blaze the trail to a fuller understanding of the subject.

Lux did not recognize pus as pathological but considered it as physiological or as necessary for wound healing. Lux called pus, as did all of his contemporaneous physicians, "laudable pus," or "praiseworthy pus," so that he cannot be

credited with curing a disease he did not recognize as such.

The writer has proved that unmodified autogenous pus by the mouth is curative in purulent infections and thus opened the doors for the quick and certain cure of many diseases.

It is said by physicians contemporaneous with Lux that he carried more bottles in his medicine case than any physician of his day. He attempted to cure boils with an alcoholic dilution of pus from boils from other patients. He also attempted to cure running ears in children with alcoholic dilutions of pus from the ears of other patients. He attempted to cure anthrax in both man and beast by an alcoholic dilution of the heterogeneous toxins of anthrax, etc., etc. He gave these remedies high-sounding names as Otorhinum, Anthracinum, Scarlatinum, Hydrobinum, etc., etc.

In the years 1902 and 1903 when the writer was a medical student, the writings of Lux, referred to by a lecturer in Materia Medica, attracted his attention. About this time the studies of Wright with his autogenous vaccines occupied the center of the therapeutic stage. The writer being much interested in therapeutics, then as now, determined to learn everything that was possible to be known regarding these two methods of treatment; and with this object in view, resurrected the writings of Lux and had translations made. One of the first articles of Lux that attracted attention, was the recital of his experience in the treatment of Anthrax.

He states, "I picked a phlyctenule from a sheep's ear that was suffering with anthrax, made an alcohol dilution of it and gave it to the sheep by the mouth in repeated small doses. This not only cured the sheep quickly but it cured also other sheep of the same flock, suffering with anthrax, and immunized the remainder." He kept this remedy in his medicine case for future use, and labelled it *anthracinum*. Thus Lux was the father of modern stock vaccine therapy, and we under-

stand today, that is, those of us who understand something of bacterial therapy, why he failed so frequently. When he gave one bottle of "anthracinum" and failed to cure, he then gave a sample of stock "anthracinum" from another bottle gathered from another source, etc. It remains for modern stock vaccine therapeutists to mix the various strains in one shot-gun prescription, trusting if one did not cure, another one would: ignoring the fact, since all the strains could not prove effective, that those that were ineffective, would tend to be harmful at the very time when the patient needs all of his reactive forces possible in developing resistance to the one (if there was one in the combination), that might prove curative.

There is no doubt, however, that Lux was successful at times, even as stock vaccines are occasionally today.

In articles on the subject of Autotherapy, the writer frequently states, "The more virulent the infecting microorganisms, the quicker will be the response and cure of the patient." The anthrax bacillus being so excessively virulent, the writer sees no reason why anthrax may not be treated successfully by means of Autotherapy. The method suggested here as probably being efficacious is either to employ the exudate from the phlyctenule by catching the discharge on small pledgets of absorbent cotton and washing the virus from it with distilled water, in a bottle, before filtration and injection, in the manner suggested under the treatment of purulent infections, or by employing the patient's own blood or blister-serum in the manner similar to that given in the treatment of other infections.

It may be interesting both from a scholastic point of view as well as from a practical clinical application to inquire still further into the relations of Isopathy and Autotherapy. In an earlier chapter the subject of Elective Affinity or tropism of microorganisms or their toxins for the tissues on which they

grow, was mentioned. Referring again briefly to one of these tests for the sake of keeping clearly in mind the meaning of "Elective Affinity or Tropism." It is stated that a "culture of microorganisms from an eczema of the right shoulder injected into the veins of an animal, caused the animal to develop an eczema of the right shoulder." From this and other tests it is stated, "microorganisms have elective affinity for the tissues on which they grew." Obviously Lux's "Isopathic" remedy (stock exudate) has its elective affinity unaltered by the culture media, heat or preserving chemicals. It is obviously not the autogenous substances of any patient but the one from whom it was taken. It, however, is possibly far more potent and curative than the stock vaccines of today, for as yet they have not been selected with any reference to the elective affinity of the microorganism in question. If stock vaccines for otorrhea contained several "otorrhinums" or even contained cultures from microorganisms causing otitis there is little doubt but that they would be more therapeutically effective.

It may be well at this point to refer briefly to a paragraph that appeared recently in *The Journal of the Allied Medical Association,* for it not only assists in a correct understanding of the action of the Isopathic remedy but at the same time it offers a clear distinction or differentiation between the Isopathic and Autotherapeutic remedies.

"A physician treated a boy, six years of age, suffering with smallpox. He took some exudate from the skin eruption and diluted it with ten parts of alcohol, the patient receiving 2 drops every hour, and did well" (*British Journal of Homoeopathy*).

The editor of *The Journal of the Allied Medical Association,* referring to this stated, "This is variolinum." This is not "variolinum" for variolinum is a stock preparation, nothing

more nor less. Lux is credited by modern historians as being the father of stock vaccine therapy. Isopathy in the hands of Lux was discredited by physicians of his day, even as its lineal descendants, stock vaccines, are discredited by many physicians today on account of their frequent failures as therapeutic agents.

The physician treated this patient with the autotherapeutic remedy or the toxic substances developed within the patient's body by the action of the infectious agent on his body tissues against which the tissues react in a curative manner.

As a prophylaxis there is no doubt but that the Isopathic remedy should occupy a high place in medicine. In all infectious diseases we believe the improved condition of the body depends on the antitoxins or antibodies. The antitoxin is developed in the living animal tissues in response to the action of the toxins on these tissues. The antitoxin is the result of the reaction of the tissues to the action of the toxins. Not every person suffering with a toxic disease dies. The antibodies are the substances the tissues produce to neutralize or antidote the action of toxic substances. As a prophylaxis to disease the heterogeneous toxin is proved to be effective, but as a therapeutic agent the experience of Wright and his followers clearly demonstrates that the patient should be individualized and immunized to his own toxic substances. In other words to be most successful in treatment the patient must develop in his tissues antitoxins to his own specific microorganisms.

We will not go further in elaborating this phase of the subject at present, for it is discussed fully in the chapter of the book dealing with "Autoimmunization."

There are few of us who would think of employing Wright's autogenous vaccines as a prophylaxis to disease, although it may be employed at times, successfully; the difference be-

tween the autogenous vaccine and stock vaccine is quite similar to the difference between the Autotherapeutic remedy and the Isopathic remedy: as the autotherapeutic remedy offers many advantages over the autogenous vaccines, so the Isopathic remedy offers many advantages over the stock vaccines. The advantages of the autotherapeutic remedy over the autogenous vaccine are discussed fully in the chapter dealing with the "Limitations of Autotherapy." But it may not be out of place to state here in passing that one of the principal advantages of the autotherapeutic remedy over the autogenous vaccines is that the former are unmodified by the culture media, heat and preserving chemicals. The Isopathic remedy has practically the same advantage over the stock vaccines.

"Let us hear the conclusion of the whole matter, Revere Nature and sustain Her laws, for this is the whole duty of the physician."

CHAPTER XIV

MISCELLANEOUS

In considering the rôle of Autotherapy in the treatment of disease of the respiratory tract, important questions arise, some of which appear to be answered satisfactorily by the proper use of Autotherapy.

The diseases mentioned below cannot all be said at present to have been proved to be amenable to Autotherapy, but there is much that leads us to believe that careful tests might prove that at least some of them are amenable to it. Lack of opportunity alone prevented the author from treating a sufficient number of cases to cause them to be of scientific value. He mentions them at this time for the reason that many other diseases treated successfully by means of Autotherapy, presented themselves first as possibly amenable to Autotherapy

as these at present might appear to be. He mentions them also for the additional reason that others who have more opportunities might make investigations along the line of their various specialties and carry out these tests to their clinical conclusion.

Syphilis

Syphilis often attacks the nasal septum. The spirochaetes are found in all of the secretions of the body. The question arises—Can they be found in sufficient quantity in mucus from the nares and their toxins obtained in the filtrate in sufficient quantity as to render them therapeutically effective? A paper by Dr. G. A. Stevens, published in the *British Medical Journal,* of April 5, 1913, states that a number of cases of syphilis were cured or benefited by the hypodermic injections of rather large quantities of sterile water. (See chapter under the title of "Autoimmunization" under a sub-heading of "Autotherapy by Sea Plasma.")

Within the past few years the medical press has teemed with various methods of treating a patient with syphilis with his own blood. Several authors claim they have had most excellent results by injecting salvarsanized blood-serum into the patient's spinal canal. Others claim that equally good results are obtained by injecting the blood-serum into the spinal canal without having previously administered salvarsan to the patient. This latter procedure is distinctly autotherapeutic.

It is well known that a woman who has given birth to a child often escapes infection. The writer has seen two instances of this in his practice.

Many patients have been treated by a variety of autotherapeutic methods in the genito-urinary clinic conducted by the writer for some years, for the special purpose of studying the application of Autotherapy to genito-urinary diseases.

There is no doubt that some patients improved under Autotherapy—some apparently did not. Just why this is so, he does not know.

The filtrate made from pus from the chancroid is remarkably effective therapeutically. It should be employed in connection with other surgical and medical means that are now at our disposal, in the deep burrowing infections, when a sufficient virus can be obtained.

Snake Bite

I would suggest here as a point of investigation as to whether the efficacy of the universal custom of sucking the snake bite, when possible (as has been supposed), is due alone to the sucking out of the poison. It is well known that not every person bitten by a venomous snake dies. The mortality in India is about 35 per cent. Snake bites are usually received on the legs or arms thus facilitating the act of sucking the wound. The solution of the question as to whether those bitten within the range of the mouth show a larger percentage of recoveries than those bitten out of the range of the mouth might prove of great value. That resistance to snake venom is developed within the body tissues goes without saying, if we accept such recognized authorities as Noguchi, and of C. C. McCullough, formerly Curator of the Army Medical Museum, who recommends *antivenin* as a prophylactic and therapeutic agent for some varieties of snake venom.

The venoms from poisonous snakes are albuminous in character and in this respect they are somewhat similar; but that the antivenom of one snake poison should prove curative in another snake poison, as recommended, appears to be taking too much for granted; and Calmette's *antivenin,* is, according to Noguchi, ineffective against the rattlesnake bite; so Noguchi recommends that we should have Noguchi's serum

at hand in places where one is likely to be bitten by snakes.

It appears to be altogether probable that snake venoms should be individualized in some such terms as Autotherapy individualizes pathogenic microorganisms. By sucking the wound from snakes' fangs the patient will develop or tend to develop anti-substances specific to the injected venom. It is well that we remember in this connection that we know a reaction sets in, and antibodies develop in the tissues when a relatively small amount of the virus of the rattlesnake, viper, lachesis, moccasin, etc., is injected hypodermatically. But to give the anti-rattlesnake and anti-moccasin sera to antidote the effect of a copperhead venom (although they are all of the viperine family) appears to be irrational.

It is established then that antibodies are developed in the tissues to snake venom. This is evident if we accept Calmette's *antivenin* or the anti-rattlesnake and anti-moccasin sera of the Rockefeller Institute. It is not unreasonable then to conclude that only the lack of experimentation precludes development of sera of the other snake venoms. The question then to be answered in connection with Autotherapy appears to be will the anti-substances be developed with sufficient rapidity after one is bitten to cause curative reaction to ensue. Nature usually compensates and as the action of the snake poison is rapid, the development of antibodies may also be rapid; and the constriction that is usually applied—shutting off the circulation of the arms and legs, may give the system an opportunity to develop sufficient antibodies to the poison in question before it gets into the general circulation. With this understanding it may be that the universal custom of shutting off the circulation and sucking the wound may account for the low mortality in the United States that attends the bites of venomous snakes, which is about 10 per cent. of those

bitten. There are no objections in this connection to the use of other remedies of known, or supposed value, as the hypodermic injections of ten minims of a 1 : 1,000 solution of adrenalin, to stimulate the vaso-motor centers in cases where it is depressed; or the use of nicotine as suggested by Sir Lauder Brunton for theoretical considerations; or surgical precautions against the advent of septicemia from sloughing; or the rubbing in of permanganate of potash or chloride of gold; or the use of 10 per cent. solution of chloride of lime. The only objection the writer has ever heard advanced to sucking the wound is that the procedure is probably dangerous if there is any abrasion present in the mouth. In this connection the writer is reminded of the danger that was thought to be present in the autotherapeutic method of sucking the wounds containing the staphylococcus and streptococcus. It is now known to be a well-established therapeutic procedure and is recognized as such, and these criticisms are no longer advanced. How much has been kept from us all these years by the statement, "It is really *thought* by the best authorities to be dangerous." In the swamps in South Carolina and in Florida, negroes invariably suck their wounds. After diligent inquiry the writer has failed to discover a single instance where an infection of the mouth followed sucking the bite of a venomous snake.

The conclusion then seems warranted that it is not ordinarily dangerous to suck the poison from the wound, and there is much to warrant this procedure.

Livingstone tells us that in some portions of Africa the natives have long immunized children to the venom of the snake by giving them from early infancy, small doses of snake poison by the mouth; this is kept up till the age of puberty when the individual goes through a ceremony before being admitted to the tribe, one feature of which is to cause the

individual to be bitten by a snake. If he dies, he is considered unworthy. If he survives, he becomes a member of the tribe. It is believed he then can traverse the swamps with impunity and henceforth be impervious to the bites of the snakes that infest that region; in other words that he is immune and that he became immune by taking the venom by the mouth.

Typhoid Fever

Can typhoid fever be benefited or cured by employing the filtrate of mucus from the respiratory tract as a therapeutic agent? There is much that leads us to believe that it can.

The acute inflammation of the respiratory tract that accompanies typhoid fever is one of the diagnostic symptoms of the disease. It occurs with such regularity that it has been called in the past, by many, *Typhoid Pneumonia*. Several physicians claim they have cured numerous cases; especially will I mention Dr. Eric Vondergoltz, of New York City, who claims that he has cured several cases of typhoid fever quickly, by injecting the filtrate of sputum in the early stages of the disease.

This agrees with the original investigations of several Swiss authorities, who advance the theory of parenteral infection. (See index for parenteral infection.)

Calcification of the arteries, hardening of nerve tissue, etc., are regarded by Metchnikoff as the effect of chronic toxemias of bacterial origin. Hunt diligently for eruptions or skin lesions with a pathogenic exudate with the object in view of obtaining the causative microorganisms and the results will often repay you for the labor involved. Skin eruptions are often the attempts of the tissues to rid the body of the toxins and microorganisms within, or an external manifestation of an internal trouble.

Mittman mentioned in his work, seventy-eight different forms of cutaneous bacteria, of which number fifty-six are

some forms of the cocci, and we have proved when the staphylococcus and streptococcus are placed in the mouth in infections not associated with the alimentary canal or respiratory system the reactions are strikingly prompt and curative.

Some of the most common and stubborn skin affections are known to be due to these cocci, as furuncles, carbuncles, impetigo contagiosa, coccigenous sycosis, pemphigus, erysipelas and some forms of eczema. The writer has cured several of these diseases by means of Autotherapy and sees no reason why other forms due to other microorganisms may not be cured in a similar manner, if it is possible to obtain enough of the discharge for therapeutic purposes. There are several methods by which these may be obtained, although each patient should be studied carefully with this end in view. We may be compelled at times to make a culture of the offending microorganisms; when this is done, the writer believes it is advisable to inoculate from six to ten tubes at once, and utilize a drop or two of the liquid media collectively from each tube. In this way the elective affinity or the tropism of the microorganisms for the parts on which they originally grew, is altered as little as possible by the culture media. The microorganisms so collected may either then be mixed with alcohol and given in repeated doses by the mouth, or a filtrate may be prepared in the usual manner to be injected subcutaneously, according to the needs of the patient. Another method that may be occasionally employed where it appears impossible to obtain sufficient amount of the toxin for therapeutic purposes, is to place over the lesion a small piece of sterile absorbent cotton, or gauze, every day until sufficient of the excretion is obtained by it soaking into the dressings. Then place the collection of these small pieces of cotton or gauze in a two-ounce bottle of distilled water, to be well shaken and allowed to stand for a few hours, when

the soluble toxins may be employed in the manner previously described. It is always advisable to preserve some of the toxins for a return of the trouble. In chronic skin infections we may often resort to the method of giving extremely minute doses in the manner similar to that explained in the chapter under "Acne Vulgaris."

Original and ingenious schemes may often have to be employed in obtaining the causative microorganisms in the various infections. A novel means to this end was employed successfully in one case of dry cough where the writer was not able to obtain sufficient sputum for therapeutic purposes. Emetic doses of apomorphin were followed by bronchial congestion and the development of sufficient sputum for use in the manner described.

Sleeping Sickness

Reports come to the writer from two separate sources in India, that patients suffering with this disease have been cured by injecting subcutaneously the patient's spinal fluid.

The technic employed by a Medical Missionary was as follows: One drachm of spinal fluid was mixed with an ounce of distilled water; this was allowed to stand twelve hours with occasional agitation; after which time it was passed through a Berkfeld filter and 1 c.c. of the fluid injected subcutaneously at proper intervals.

The other physician withdrew a drachm of the spinal fluid and mixed it with an ounce of water, then without filtering injected it in small doses subcutaneously. The writer does not endorse this technic.

The writer has had no experience in the treatment of this disease, but gives these tests first, to illustrate how the principle underlying the cures made by Autotherapy may be extended, and second that those who come in contact with this

disease may know the experience of others and be stimulated to carry out the tests along this and other lines of endeavor.

Whooping Cough

The New York State Department of Health gives the following advice regarding whooping cough:

"Don't consider whooping cough a trifling matter. In New York State it killed in one year more than scarlet fever, nearly as many as typhoid."

"Guard children until six years old with greatest care. The fatality of whooping cough is six times as great under five years as between five and fifteen."

Whooping cough is an infection of the respiratory tract, the autotherapeutic treatment of which is similar to that of other infections of the respiratory tract, namely, as in coughs, colds, bronchitis, etc., etc.

The glairy mucus is caught as it comes from the nose or throat on small pledgets of cotton or swabbing from the throat which are placed in distilled water and prepared in the usual manner. The dose for very young children is from three to five drops of the filtrate subcutaneously.

Dr. Francis E. Parks, of Stoneham, Mass., who has used Autotherapy successfully in treating a number of patients, was so pleased with his results that he states in a letter to the writer, "If Autotherapy has done nothing else, its use in whooping cough is sufficient to make it a great blessing to humanity."

Dr. Eric Vondergoltz speaks highly of the use of Autotherapy in whooping cough.

Autotherapy will modify the cough and shorten the duration of the disease, if it is given at any stage. If given early and at proper intervals, it will tend to cure the disease quickly.

To those accustomed to treating these patients autotherapeutically the question arises persistently, "How did I ever do without it?"

Measles, Scarlet Fever and Diphtheria

Can measles, scarlet fever and diphtheria be treated successfully by means of Autotherapy? The writer has been compelled to send patients suffering with these diseases to the contagious hospitals, so that he has had but little experience with Autotherapy in these contagions.

In scarlet fever and in measles we know one of the early signs is discharge from the nares, and a common sequela in the former is running ears. It is believed by many that the streptococcus plays an important rôle in these infections and that possibly it is the etiological factor.

Autotherapy might prove to be an extremely valuable adjuvant to our present method of treatment, and the writer suggests that those who have opportunity to make tests along autotherapeutic lines in these contagions give this treatment a fair trial; he would suggest that the filtrate be made from mucus collected from the nose or throat on pledgets of cotton, adding from five to twenty drops of mucus to an ounce of distilled water. This should be allowed to stand for twelve hours, with occasional agitation; after which time it is filtered and from five to ten drops of the filtrate injected subcutaneously, according to the patient's requirements.

In diphtheria the line the writer would suggest to those who are immune to the disease, is to place a swabbing from the tonsils in an ounce of distilled water, allowing this to stand twelve hours; after which time it should be filtered and the filtrate further diluted with distilled water to about the 2 X dilution, before injection.

The reason the small dose is recommended in this acute

disease is the well-known fact that the Kleb's-Loeffler Bacillus is one of the few microorganisms that have a relatively large amount of extra-cellular toxic substances.

Diphtheria offers a most promising field for autotherapeutic treatment.

Eczema

CASE 221. Patient, male, age 56 years, had eczema on the back of both hands and wrists. The exudate was transparent and of the consistency of honey. It formed crusts when dry and there was intense itching. When first seen the parts were cleansed with surgeon's soap and warm water and peroxide of hydrogen and covered with a double layer of sterile gauze. He was told to return in three days. At this time the gauze was stuck to the parts and was removed with difficulty, leaving many bleeding points. The gauze was placed in 4 ounces of distilled water and allowed to stand for twelve hours, with occasional agitation, after which time the fluid was passed through a Duncan Autotherapeutic Apparatus and 1 c.c. of the filtrate injected subcutaneously, every five days. There was distinct improvement after each injection; and after the fifth injection the patient was discharged cured.

CASE 222. Patient, female, age 50 years, had very severe eczema on left leg and ankle; the itching was so severe, it kept her awake at night. The parts were cleansed with warm water and covered with sterile gauze. This was removed after forty-eight hours and the stained portion of the gauze cut out with scissors and placed in 2 ounces of distilled water. At the end of 12 hours, 2 ounces of alcohol were added to this. Five drops of the decanted fluid were placed in 4 ounces of tap water; of this she was given one teaspoonful every hour, for ten doses. Within twenty-four hours she was distinctly better, the itching having disappeared. She was then given one teaspoonful three times a day for ten days, which cured up the case.

These two cases are given from many that might be cited. They illustrate not only the technic but the results that might

be confidently expected to follow the application of Autotherapy to this form of eczema. The writer distinctly recalls from memory a refractory case of eczema in the right shoulder of some years' standing in a man who was cured quickly by following the technic of case No. *222*.

Several cases of eczema of the scalp, hands and legs have responded quickly to this treatment. In fact, the writer does not recall an instance of ever having failed to cure eczema quickly by means of Autotherapy when he was able to obtain sufficient exudate.

Erysipelas

Dr. Clement A. Shute, of Pottstown, Pa., and several other physicians, as well as the writer, have treated a number of patients suffering with erysipelas successfully, by the following technic:

The blebs were punctured with a hypodermic needle and as many drops of serum as possible, up to ten, drawn into the syringe; this is mixed in an ounce of distilled water and allowed to stand for a few hours with occasional agitation; after which time it is passed through a Duncan Autotherapeutic Apparatus and from 1 to 4 c.c. of the filtrate injected subcutaneously.

In none of these cases, however, of which I have record, have local applications been dispensed with.

The local application the writer prefers is:

Rx.
Adrenalin chloride 1-1,000 ..... ℥ ss.
Ichthyol ..... ℥ ss.
Glycerine q.s. ad ..... ℥ iv
M. Sig.—Apply locally and cover with a thin layer of cotton.

Riggs Disease

Riggs Disease is a condition about which much has been written and up to the present time comparatively little offered

of therapeutic value. It appears that Autotherapy has something to offer in this condition; just how much, time and clinical experience alone will tell. But certain it is the few patients treated by this method, both by the writer and other physicians and dentists, have apparently recovered. It is generally believed that Riggs Disease may be caused by pathogenic microorganisms including the amebae. There is little doubt that in infections at the roots of the teeth, caused by pathogenic microorganisms; autotherapy would prove most beneficial. At the present time, however, little can be said of its application to these conditions caused by the amebae, for the reason that as far as the writer knows, no autotherapeutic tests have been made, where the amebae are known to be the causal factor.

The technic the writer employs is to place over the gums (for example of the upper teeth) a flexible rubber covering that fits closely, in the center of which is a small tube or opening to which a suction pump is attached by means of rubber tubing. There is a trap in the tube leading from the mouthpiece to the pump which catches any material passing down the tube. Using this apparatus for the first time, one is usually surprised to see the large amount of débris, blood, pus, etc., that is caught in the trap. At either end of the mouthpiece or at either side near the position of the wisdom tooth, is a similar tube that is an integral part of the mouthpiece, these are closed with pinch cocks. When a partial vacuum has been maintained around the teeth for a few minutes, first one and then the other of the little tubes at the extremity of the mouthpiece are placed in a small glass of warm water. The water passing on down the mouthpiece between and around the teeth, to the exhaust opening or tube, in the middle, washes out the accumulated débris which is caught in the trap. The water in the trap, which should not

be more than an ounce or two, is allowed to stand for twelve hours, with occasional agitation; after which time it is passed through a Duncan Autotherapeutic Apparatus, and a few drops, from five to ten minims, with 2 c.c. of sterile water, are injected subcutaneously, preferably over the biceps muscle. Encouraging reports have come from time to time regarding this treatment although the writer has had but few cases under his own personal observation and treatment; these cases have all improved markedly within a week.

Dr. Edgar V. Moffat, of Montclair, N. J. reports the following case:

CASE 223. "A case of pyorrhea alveolaris was referred to me by a dentist. Under his local treatment all of the teeth improved but one section of the gum where the roots and sockets were so badly infected that he considered it incurable. I obtained the toxins from this area by suction and gave her a stiff dose of the filtrate. There was a sharp reaction following each treatment, and when she returned to the dentist, to use his own words, 'He found the condition miraculously improved, and well under control.' She soon recovered."

Powdered Glass

In developing a new system of therapy many problems arise that require solution. Among those that have presented themselves in the discovery and the development of Autotherapy is, How to obtain glass in a sufficient state of subdivision as to render it most useful in grinding and destroying the smaller microorganisms and their spores? By the following method we are able to obtain ground glass in any state of subdivision, at least fine enough for all practical purposes. The method of procedure is as follows: Sterile bottles are broken and thoroughly ground in a sterile iron mortar with an iron pestle. An ounce of this mixture is placed in a sterile quart bottle full of distilled water and this is thoroughly agitated and allowed to

stand. The heavier particles sink to the bottom quickly, and the glass in a fine state of subdivision will be slow in settling. The top part is poured off into a sterile basin, and the fluid is evaporated by heat; then the ground glass is collected in the shape of a fine powder. It is evident it will take longer for the finer particles to settle than the larger or heavier ones, and a bottle that is allowed to settle for one minute will have glass in a finer state of subdivision and fewer large particles in it than one that is allowed to settle for ten seconds. Within limits, the longer the contents of the bottle is allowed to settle the more certain we are of removing the relatively larger granules. For practical purposes one-half minute will suffice; although in performing some very careful tests it may be allowed to settle for two or three minutes before it is evaporated in the pan and the fine glass dust collected.

A COURSE IN AUTOTHERAPY FOR PHYSICIANS

Recognizing an idea is grasped easier and retained longer from an ocular demonstration than from printed matter, the writer announced in August, 1915, a Summer Course in AUTOTHERAPY for Physicians. Fifteen (15) were enrolled. The Course consisted of lectures and practical demonstrations. By this means the theory and practice of AUTOTHERAPY were studied, the students preparing and administering the toxins and watching the progress of patients while under treatment, managing them under the guidance of the author. The anaphalaxis and recuperating power of the patient compared, interpretation of their reactions and their clinical significance recorded. In fact the practical application of AUTOTHERAPY was reviewed as far as it had been developed.

It appears almost superfluous to state the application of the principle is not complete; it is possible it never will be, for even yet the subject is developing along many lines of thought as the ever-widening scope of its application is being advanced by specialists. For example,—the study of the sporadic outbreaks in different parts of the country last winter of "Influenza," "LaGrippe," "Colds," and "Sore Throats" would yield much if studied from an autotherapeutic point of view. The treatment of patients suffering with Scarlet Fever, with their own blood, is particularly encouraging. Hodgkin's disease, regardless of our present accepted theory that it is a true tumor formation of the nature of a sarcoma, has apparently yielded in some instances to AUTOTHERAPY. "Trench Nephritis" is interesting when studied autotherapeutically, since the streptococcus has been suggested as an exciting influnce. Acidosis is believed now to be a symptom of many infections and, as such, yields readily to AUTOTHERAPY. When we come to the modern conception of allergy, the hypersusceptibility of patients suffering with Hay Fever, Asthma, etc., to certain foreign protean substances and the cutaneous reactions diagnosing the remedy, it is highly important to review the relations of this new therapy to AUTOTHERAPY, since we are treating the patient with the substance that causes the symptoms. The writer's definition of disease should be recalled in this connection. Disease is the proving of toxic substances, and symptoms are the result. Symptoms are the expression or language of toxic substances in the patient's body.

The cure of disease consists in immunizing the patient to the substance that caused the symptoms. It is intensely gratifying to students of AUTOTHERAPY to observe the increased degree of attention that is being directed to these and many other autotherapeutic lines of thought.

In the Course of lectures described above, it is self-evident that many points of value are discussed that otherwise could not be obtained except by wide reading and extensive clinical experience. In these lectures the writer exhibits many patients undergoing active treatment for Rheumatism, Pulmonary Tuberculosis, Sinus involvements, pelvic infections, etc., with comparisons and analysis of resistance offered by the patients.

Since the 1915 Class many physicians have availed themselves of the opportunity of taking this Course. Instruction is adapted to the needs of the specialist and to physicians with limited time at their disposal. The students are taken either singly or in groups. In this way, physicians from New York and neighboring cities, missionaries from China, physicians from South America, and those who take the Summer Course at the Post Graduate and Polyclinic Medical Colleges were enrolled. Some physicians take their summer vacation in New York for the purpose of receiving instruction in AUTOTHERAPY. The advantages of this Course are apparent, for by this means only can the physician become familiar quickly with the practical application of this new therapy and be in a position to readily utilize his knowledge in his practice. The students have access to all of the writer's case reports.

When it is realized that AUTOTHERAPY covers practically the whole field of curative medicine, and much that lies entirely without its borders, it is not surprising that practically every student has stated that any one lecture is worth more than the price paid for the entire Course.

The Course includes six (6) lectures and practical demonstrations, and is open at any time.

INDORSEMENTS

The Briton Corlies Memorial Hospital
(West China Baptist Mission)
Yachow, West China, June 10, 1916.

DEAR DR. DUNCAN:—

During my last year in medical school (Yale) I became interested in your work in Autogenous Toxin Therapy, and at that time I did a little work along the line suggested by you in your article in the *Medical Record,* September 6, 1911. Because of the opposition to the theory I was not permitted to do much and therefore had little that would be of interest to you. However, since that time I have come out here (2,000) miles inland from Shanghai, to take charge of the above mentioned hospital. It has taken about two years to get the plant in any shape with the result that I have just opened up. Have been running a dispensary daily, connected with the hospital, however, for some months. Now there are two things I am trying to get at in this letter. One is that I want to assure you that there is a world of truth in what you have to say about your work. The other is I would like to have any reprints you may have or reports made by you or others, on the subject of Autotherapy, since 1911. I have been asked to read a paper before the medical conference of the medical men of this province, at Chengtu, this coming Fall. Would like to add my results here to yours, and present them to the conference.

It will interest you to know that all of the men I have met out here seem to think the theory and practice absurd. On the other hand, I have been able, I think, to demonstrate to some of them whether the theory is correct or not; the practice is a real factor in many cases. The nature of my work so far demands that all patients go home from day to day. Shall not go into detail about cases in which I know the treatment suggested by you has helped; but shall simply note one case to show you how I treat my patients:

Patient, male, has been having a series of boils for months, came to me with one on the back of his neck as large as a hen's egg, which he said was the twenty-fifth he had had, and certainly his anatomy proved his assertion. Without even washing the skin with water, I lanced the boil and secured two teaspoonfuls of thick greenish pus. This I placed in 100 c.c. of water, shook well, added cochineal for color, and gave it to the man with directions to take one-third at once, one-third in three hours and the balance in three hours. Sent him home and told him to return the next morning. Came back swearing he had had no fever, or as they say here, he had not called up the fire, that he had eaten and slept better than he had for months. Upon examination, found that the knife wound had partly healed and that the infiltration which covered most of the neck posterior, had loosened considerably. Opened the wound with gentle pressure and secured about half a teaspoonful of straw-colored serum, sent him home with this mixed as the pus was mixed the day before. In forty-eight hours after the time I lanced him, he was back to give me the pus bottle, saying that he was all right and needed no more medicine. Upon examination, found the infiltration was all gone and a good scab forming in the line of the incision. That was three months ago and I have seen the man (water carrier) every day since and he has had no return. He feels grateful for what help I gave him and especially as the medicine cost him only 100 cash (3 cents) which by the way was all profit (?) for me since water costs nothing and the pus was his. From that time on, all pus cases have been coming due to the advertisement this man gave me. Fresh cases of gonorrhea as well as some as old as the Chinese Republic, eyes running pus from all causes mentioned in our books, as well as from causes not mentioned in any book; gonorrheal buboes, virulent buboes accompanying or following chancroid, impetigo contagiosa, psoriasis, ringworm which has the habit of becoming purulent here due to the filthy habits of the people and their centuries-long habit of picking at everything, puerperal sepsis; all these and many others which I cannot classify, have come for treatment by my wonderful method of mixing drugs (?). The latter case was most interesting. (See chapter, Gynecology and Obstetrics.)

In all cases I have given the crude pus or the crude washings of dressings worn or sponges used to mop up secretions, as in the case of eczema or the crude washings or soakings of scabs as in the case of impetigo contagiosa, ringworm (infected), etc., all by the mouth. Have not had one case where there was any subjective symptom. Should have said that every case that comes in is treated by this method, if we can find any pus, scabs or excretions of any kind. Now none of the natives so far, have any idea of what I am doing.

I neglected to say that at first I gave small doses, but soon found they were not effective. I think there is no doubt but that it takes more of any kind of treatment for these people than for the people of our own race.

Now if these facts are of any use to you, use them, and if not put them where they belong. Later when I get more help I will keep a more detailed account of cases both for myself and for you, provided you care for them.

Trusting that this will find you hard at work at it, and in good health, I am,

Fraternally yours,

G. Glass Davitt, M.D.

Dr. William H. Dieffenbach, Professor of Physical Therapeutics at the New York Medical College and Hospital for Women:

"It gives me pleasure to heartily endorse Dr. Charles H. Duncan for his remarkable discovery and elaboration of Autotherapy, which in bacterial diseases is destined to supersede vaccines and other immunizing methods. I desire to make my endorsement of Dr. Duncan in medicine, as strong as pen and ink can make it and refer you to his numerous articles on the subject, which have been published in the United States of America and on the continent of Europe."

Dr. Charles Deady, Dean of the New York Ophthalmic Medical College and Hospital, New York City:

"In the discovery of the principle of the cure which has been made by Dr. Charles H. Duncan, of New York City, and which he has termed Autotherapy, a contribution has been

made to our therapeutics which is of the greatest value to the medical profession; and if his methods are thoroughly examined and correctly applied, the results would convince any fair-minded person that his investigations and experiments covering many years of hard and unremitting labor, have been most important in their findings and have furnished new and powerful weapons in the never-ending conflict with disease. As we both live and practice medicine in the city of New York, it has been the good fortune of the writer to have seen many of Dr. Duncan's cases as they were presented at the meetings of our medical societies, to watch the progress of such cases under treatment, and to be assured of the permanence of the results. The writer has also made numerous observations of hospital cases in his own service and that of other surgeons, and has seen results that would be considered remarkable under ordinary methods of treatment. As the discoverer of a method which is a distinct advance in medical science and which is likely to be a great boon to humanity in general, it is with the greatest pleasure that the writer most cordially endorses Dr. Charles H. Duncan."

Dr. Harvey D. Morris, Port Arthur, Texas:

"It gives me great pleasure to endorse Dr. Charles H. Duncan, of New York City; he is a true pioneer. Have repeatedly used his method of Autotherapy with specific effects, in acute gonorrhea, boils, infected wounds, etc. Autotherapy has always proved prompt in its effect and decided in its cure."

Dr. George W. Galvin, of Boston, Mass., states:

"I am using Autotherapy now to the exclusion of all vaccines. I have been using it continuously and successfully for the past seven years and value it highly. In acute infections the response is usually quick and striking; in chronic infections there is nothing that will equal it. I am venturing nothing in prophesying that its wide range of application will cause it to be universally used when the profession becomes familiar with its technic."

Dr. William A. Pearson, Dean of Hahnemann Medical College and Hospital, Philadelphia, Pa.:

"Dr. Charles H. Duncan has developed a new field of medical thought and like many discoverers, his contribution consists of a recognition of a simple law of Nature. The mere fact that Dr. Duncan has recognized this law and applied it to the alleviation of disease, is in itself a remarkable discovery; but the fact that his clinical results fully substantiate the law and make possible the relief of human suffering, is a still greater triumph."

Dr. James M. Ward, Dean of the Hahnemann Medical College of the Pacific, San Francisco, Cal.:

"I desire to testify to the very remarkable service that Dr. Charles H. Duncan has made to the world in the discovery and elaboration of Autotherapy. It is a distinct advance in Therapeutics, a probable corollary of the great law of similars as applied to drug action and deserves recognition. Dr. Duncan's standing in the profession is eminent and recognized throughout America."

Dr. Royal S. Copeland, Commissioner of the Department of Health, New York City:

"I am conversant with the labors of Dr. Charles H. Duncan in the line of Autotherapy. There can be no doubt that in the last analysis his ideas are scientific in their foundation and successful in their application. Dr. Duncan is a faithful, conscientious and painstaking student of medicine."

Dr. Claude A. Burrett, Dean of the Ohio State University, Columbus, Ohio:

"Dr. Charles H. Duncan, of New York City, in his researches along the line of Autotherapy has made a most valuable contribution to the world of science. His work has been reviewed and verified in a very wide range of infectious conditions, both upon men and animals. Dr. Duncan has shown himself to be a thorough conscientious worker in the field of science and should receive due consideration as such. In his principle of Autotherapy he has made a contribution to humanity which is worthy of consideration."

Dr. G. H. Laidlaw, Professor of Medicine, New York

Homoeopathic College, Consulting Physician to Yonkers Homoeopathic Hospital, Consulting Physician to St. Mary's Hospital, Passaic, N. J.

"I recommend cheerfully and conscientiously, Dr. Charles H. Duncan, of New York City, for his work in Autotherapy. I have been familiar with his work since its inception, have used it in my practice and value it highly as a means of saving life and curing disease. Dr. Duncan has worked faithfully for many years developing Autotherapy. He has given his results and methods freely to his fellow physicians. He has never kept it secret or attempted to make any money out of it. The work developed by Dr. Duncan is undoubtedly one of the great discoveries in medicine, and will be adopted widely as more physicians become acquainted with it."

WHAT OTHERS SAY OF AUTOTHERAPY

Dr. John Besson, of the Sellwood & Besson General Hospital and Training School for Nurses, of Portland, Oregon:

"Truly, Dr. Duncan, I feel that my patients cannot get well nowadays unless I have some Autotherapy to offer them, and if it is a case presenting an opportunity for Autotherapy I have no concern for the outcome. Suffice to say we invariably treat our patients autotherapeutically in connection with other well-known methods of treatment."

Dr. Besson says in the *Northwest Medicine*, November, 1914; "At the Sellwood Hospital we have wide and favorable experience with Duncan's teachings in many varieties of infections, even to long-standing chronic bronchitis, and I refer you to his numerous and classic writings on the subject. Dr. Charles H. Duncan is the most ingenious of autotherapeutists. I predict Monuments or Bronze Tablets will mark his birthplace. The Nobel Prize should belong to Dr. Duncan."

Dr. R. L. Rierson, of Dixon, California:

"I am using Autotherapy successfully in all kinds of infectious diseases. It seems to me that it is only a question of

time when prejudice will be unhorsed and the sick and afflicted will learn the thing that gives the best service."

Dr. D. C. Haverland:

"I am sure that Autotherapy needs but further elaboration to prove almost a 'cure-all' for every disease caused by bacterial infection."

Dr. S. W. Frederick, of Kokomo, Indiana:

"I thank you for your unselfish attitude towards the profession. I am glad that you love your profession for humanity's sake and not for selfish motives."

Dr. Harvey D. Morris, Port Arthur, Texas:

"The great work you have started is one of the most important in medicine."

Dr. R. L. Rierson, Dixon, Cal.:

"I believe Autotherapy will relieve more suffering than anything that has come before the medical profession."

Dr. C. L. Moore, Cleveland, Ohio:

"I consider Autotherapy the most satisfactory therapeutics with which I am familiar. I read a paper on your methods before the physicians' hospital association. I am using Autotherapy extensively in all my hospital and private practice and have been successful in every case except three cases that were not treated in accord with your teachings."

Dr. Otto Casey, Terre Haute, Indiana:

"I have had results in the use of Autotherapy that have been most brilliant."

Dr. Charles D. Freeman, St. Paul, Minn.:

"If there is anything in vaccine therapy, you have certainly hit the nail on the head. It appeals to me as being strictly scientific."

Dr. Walter Sands Mills, Professor of Medicine, New York Medical College and Flower Hospital:

"The most logical vaccine is prepared according to the method of Autotherapy suggested by Dr. Charles H. Duncan, of New York City."

Dr. Fenner, Sacramento, California:
"I have cured many cases of infections of the respiratory tract where every other means at my command utterly failed."

Dr. M. C. Curtner, Vincennes, Indiana:
"I have been having such good success with Autotherapy that almost all of the physicians of my city request me to make the autotherapeutic filtrate for them instead of the autogenous vaccines. I am using Autotherapy successfully in all kinds of localized infections."

Dr. P. T. Geyerman, Hot Springs, North Dakota:
"Results of treatment with Autotherapy have been miraculous."

Dr. Walter R. Grutzmann, D.V.S., Veterinary of the 15th U. S. Cavalry, stationed at Fort Bliss, Texas:
"I am pleased to report to you fifteen cases of purulent infections in animals treated with Autotherapy, with one hundred per cent. cures."

Dr. Daniel E. Coleman, of New York City, reports:
A far-off cry of appreciation comes from a Medical Missionary in the Philippine Islands, "I am saving the women from operation following gonorrhea."

Dr. Frederick G. Canney, San Francisco, Cal.:
"I think it is no more than justice to you for others who have tried out your methods to tell you of it. I have used your method of treatment in many infections and produced splendid results. Your filtrates are a great improvement over the vaccines."

Dr. Alexander Vertes, Louisville, Ky.:
"I have used your method in septic conditions, and in pulmonary diseases and am happy to report to you that in all

cases treated by Autotherapy, I find it superior to all methods known to me at the present time."

Dr. Orrin F. Burroughs, Plainwell, Mich.:
"I have been using your method of curing diseases now over a year, with great satisfaction, almost invariably with success."

Dr. Shute, Pottstown, Pa.:
"I am using Autotherapy continually and successfully in all kinds of infectious diseases."

Dr. Francis E. Sparks, Stoneham, Mass.:
"You have given the Medical Profession another weapon of great power against disease, and I am personally grateful to you for telling me of it."

The Veterinary Medical Association, of New York City, N. Y.:
"Dr. Duncan's name will always be in the hearts and on the tongues of men in grateful acknowledgment and appreciation of this his great work in Autotherapy."

Dr. Alfred S. Mattson, Bee Building, Omaha, Neb.:
"I am working along the lines you have suggested in your articles on Autotherapy and have a number of cases that prove your contention."

Dr. George F. Laidlaw, Professor of Theory and Practice at New York Medical College and Flower Hospital, says:
"While this treatment is new, it is not a wild experiment. It is the logical conclusion of the work of Koch, of Pasteur and Wright with his vaccines. It is merely one step forward in the regular revelopment of bacterial therapeutics. Dr. Duncan has solved a problem that has been germinating in medicine for over a thousand years."

Dr. James Law, ex-Dean and Emeritus Professor of New York State Veterinary Medical College at Cornell University, says:
"This is one of the greatest therapeutic advances of the age. As Dr. Duncan has said his method of curing disease is the

natural method. By means of Autotherapy the physicians may assist the tissues in bringing about a natural cure in more than fifty per cent. of the diseases that tend to recover by themselves."

Dr. D. J. Mangan, Chief Veterinarian of the Department of Street Cleaning, New York City, after making hundreds of tests on animals says:

"The brilliant results I have witnessed after the application of this treatment has made me feel that to ignore it in pyogenic infections would be nothing short of criminal neglect on my part."

Dr. J. B. Riley, of St. Joseph, Mo.:

"Experience during the last six months has demonstrated to my entire conviction that your teaching is absolutely in line with Nature's method of protection and cure: and I take pleasure in offering you encouragement in your efforts to make practical the advancement you have made."

Dr. James Ross, Moline, Ill.:

"The theory of Autotherapy as advanced by you appeals to me strongly. I can readily appreciate the objections raised by you against the whole subject-matter of present-day vaccine therapy, and accept with avidity the possibilities of your new therapy. I have used vaccines since the time of Wright, but the results I have with your autogenous toxins are incomparable; I am using them altogether."

Dr. James R. Vincent, East End, Pittsburg, Pa.:

"Autotherapy is the most rational and scientific therapy I know of."

Dr. C. M. Haverland, Denver, Col.

"Autotherapy sounds the keynote in the treatment of many diseases."

Dr. F. J. Champney, Toledo, Ohio:

"Autotherapy strikes me as being the most rational therapeutics that has yet been given us."

Dr. M. G. Reynolds, Woodbury, Conn.:

"I am strongly impressed with the fact that Autotherapy is of extraordinary value to the country physician."

Dr. Maurice H. Tallman, Secretary County Board of Health, Boise City, Idaho:

"I have not tried it in as many cases as you have, but in those that I have employed autotherapeutic measures the results have been very gratifying."

Dr. H. E. Stroud, Los Angeles, Cal.:

"I am a devout believer in vaccines, and have made use of them since the time of Wright. You go a step further. I am with you, doctor, because I believe you have struck it."

Dr. E. E. Mills, New York City:

"I never saw another remedy act so quickly and beautifully in my life."

Dr. P. E. Gregory, Reno, Neb.:

"I am confident Autotherapy will attract universal attention, and will be an addition to our armamentarium."

Dr. Paul F. Ela, East Douglas, Mass.:

"The absence of pain and excessive swelling is especially noteworthy in this treatment."

Dr. Eric Vondergoltz, New York City:

"Autotherapy is one of the few things that will endure all time."

Dr. Otto Casey, Terre Haute, Indiana:

"The possibilities of Autotherapy appear to be unending."

Dr. Thomas B. Kenny, Edinborough University, Master of Surgery:

"I cured a case of pericarditis followed by acute arthritis of the left wrist and right knee by Autotherapy. There was a complete disappearance of all pain in wrist and knee within three or four days. In ten days the patient was well. No return now seven months."

Dr. August K. Detwiler, Omaha, Neb.:

"I take great pleasure in reporting four cases of old chronic bronchitis of eight to twelve years' standing, which have made good recoveries under Autotherapy. Dr. Nason, a dentist of this city, reports two cases of gingivitis pyorrhea that made remarkable recoveries under this treatment. I reported many other cases in a paper to the Nicholas Senn Medical Society. I assure you I prefer to use the bacterial tissue-toxin-complex to the autogenous vaccines. These latter surely do not meet all of the indications."

Dr. Alfred Matson, Omaha, Neb.:

"I am working along autotherapeutic lines, and have a number of cases that prove your contentions."

Dr. Robert Watt, Philadelphia, Pa.:

"I have tried Autotherapy on a few cases with excellent results."

REPORT OF THE COMMITTEE

APPOINTED BY THE HOMOEOPATHIC MEDICAL SOCIETY OF THE COUNTY OF NEW YORK TO INVESTIGATE

AUTOTHERAPY.

Submitted November 22, 1914.

Your Committee was appointed at our February meeting in obedience to the following resolution:

Inasmuch as Dr. Duncan's Autotherapy has been used in some public hospitals, and inasmuch as the management of one public hospital has objected to its use owing to the fact that Autotherapy has not yet received public recognition, resolved that a committee be appointed consisting of three members of the Volunteer Hospital, three members of the County Society and three members appointed by Dr. Duncan, to investigate his method and report.

The Committee really consists of six members, Dr. Duncan

having selected three members of the Volunteer Staff to represent him.

From the County Society, Drs. J. P. Seward, G. S. Harrington, G. F. Laidlaw.

For Dr. Duncan and the Volunteer Hospital, Drs. W. H. Dieffenbach, H. P. Gillingham and G. H. Stearns. Owing to his absence from the city, Dr. Stearns was unable to attend the meetings of the Committee and does not sign the report.

Your Committee realizes the pitfalls that await one sitting in judgment on a system of therapeutics. They have tried to profit by the errors of the past. They have remembered that many of our best therapeutic measures were at first misunderstood, denounced and won recognition slowly while methods of treatment introduced under the glamour of great authority have sometimes proved illusions. They have kept in mind the saying of the great Hippocrates that, in the medical art, experience is fallacious and judgment difficult. They do not pretend to say the last word on Autotherapy, but to report to the Society its present status in the medical world and especially, in response to the resolution under which the Committee was appointed, whether the treatment has gained sufficient recognition to warrant its practice in hospitals in this city.

Your Committee finds that Autotherapy is now being practiced by many physicians of high standing all over the country, some holding distinguished positions in colleges and hospitals, including members of our own Society. When the usual rules for making the instruments aseptic are observed and the directions of Dr. Duncan as to the size and repetition of the dose are followed, there appears to be no danger or no more danger than in the use of tuberculin and the sera and vaccines that are in daily use among us. This being so, we believe that the physicians in all hospitals should be permitted to use the treatment according to their judgment just as they are permitted to use other therapeutic measures, even those which are dangerous in unskilled hands.

The principle of treating disease by a minute dose of its own poison needs no elaboration by this Committee. It is being practiced in some form by physicians of both schools of medicine all over the world. This principle is the beacon light of today of experimental and preventive medicine. In

this and in other Societies, the Chairman of your Committee has expressed the opinion often that the method of applying this principle devised by Dr. Duncan is the ideal method from the theoretical standpoint. It places it in the hands of all physicians, even those who are far removed from a laboratory, and for all patients, even those who are unable to afford the expensive bacteriological preparations a simple and accurate method of giving the dose, strictly autogenous, undeteriorated by heat or preserving chemicals, free from the delay, the uncertainty and possible error or contamination of bacteriological culture. With this opinion, your Committee is in accord. We found that we were unanimous in the belief that the principle is sound. It remained for us to consider how far this principle had been put in safe operation.

Your Committee found that the practice of Autotherapy had been developed in two fields, in veterinary and in human therapeutics.

Veterinary Autotherapy. In May your Chairman attended a meeting of the New York Veterinary Medical Society. A paper on Autotherapy was discussed by many members. Every speaker who had tried the treatment endorsed it and quoted cases cured of animals that had convinced him of its value. At that meeting, there were no reports of any damage done by the treatment.

Some months later, in October, three well-known veterinary surgeons kindly attended a meeting of your Committee and testified as follows:

Dr. D. J. Mangan, in his position of Chief Veterinary for the Department of Street Cleaning and other appointments, has in his charge four thousand horses. He has used Dr. Duncan's Autotherapy for four years in all forms of sepsis and endorses it highly. In some disorders of the horse, as in ozena or nasal gleet, acute infections of the hoof and fistula of the dorsum, Autotherapy is by far the best and in some cases the only successful treatment. He believes that he probably cured one case of glanders. In the prevention of sepsis in wounds of the horse, he values Autotherapy highly.

Dr. George J. Goubeaud, of Flushing, Long Island, Veterinarian to the Department of Health, to the Long Island Kennel Club, and to the First Cavalry, has used Autotherapy for two

years and values it highly, especially in pus infection. He specifies necrosis of the withers and lacerated wounds of the legs in horses, involving the tendon sheaths, as conditions formerly incurable, but now curable by Autotherapy. He has seen no bad results.

Dr. C. W. Shaw has used Autotherapy for three years in about one hundred cases. He endorses the treatment thoroughly and has seen no bad results.

Your Committee places a high value on these reports of the cure of sepsis in animals. Many of the infections in the lower animals and in man are caused by the same bacteria. The laws of infection, immunity and cure seem to be the same for all animal tissue. Practically all of our bacteriological remedies were worked out on animals. It is found that the results of these experiments can usually be transferred directly to human therapeutics.

Turning to the application of the treatment to human beings, the evidence may be classified as follows:

1. Articles in medical journals.
2. Presentation of patients.
3. Testimony of physicians using the treatment.

1. Articles both by Dr. Duncan and others, endorsing Autotherapy, have been published in many of the most conservative journals in both schools of medicine; as the *Medical Record, The New York Medical Journal, The London Practitioner, The Boston Medical and Surgical Journal, The American Journal of Surgery, Medical Times, Medical Brief, Medical Era, Medical Sentinel, Therapeutic Record, Cincinnati Lancet and Clinic, Paris Medicale* and the *Practical Medical Journal, Delhi, India.* Of homeopathic journals, the *North American Journal of Homoeopathy,* the *New England Medical Gazette* and the *Chironian;* of veterinary journals the *American Veterinary Review* and the *London Veterinary Journal.*

Your Committee does not think that this publication carries with it the endorsement of the treatment by the journal, but it does show that the editor thought the claims of the new method of sufficient importance to bring before his readers, and so much in harmony with current medical thought that the reputation of his journal would not suffer by the publication.

2. Presentation of patients. Dr. Duncan presented seven patients who had recovered under Autotherapy from the following disorders: Acute appendicitis, catarrhal bronchitis, puerperal sepsis, infected finger, compound fracture, furunculosis, and acute articular rheumatism with complicating endocarditis.

Dr. John Arschagouni presented one patient who had suffered many weeks from obscure fever with eventual appearance of many abscesses. The patient had been seen by Dr. Laidlaw and Dr. Helmuth, both of whom thought the case serious and recovery doubtful. He recovered completely under Dr. Duncan's treatment.

Dr. Dieffenbach presented himself as an example of cure by Autotherapy, having been cured of a persistently recurring ivy poisoning by drinking the milk of a cow that had been fed poison ivy. The same treatment has been successful in the treatment of a child.

Dr. Duncan offered to present many more patients, but the Committee believed that the sifting of the evidence and ascertaining the details of these cases would require far more time than it had at its disposal.

3. Testimony of physicians using the treatment.

Your Committee has kept in mind the uncertainty of all human testimony and the liability of physicians, like other men, to be carried away by enthusiasm and deceive themselves honestly as to the value of therapeutic measures. Nevertheless, it has seemed to your Committee to be important evidence of the value of Autotherapy that educated and experienced physicians all over the country are using the treatment in hospitals and private practice. Testimony of this class is presented in letters to Dr. Duncan and the verbal testimony of physicians who attend the meetings of your Committee.

The very number of the letters is impressive. We have seen five hundred letters from physicians all over the country endorsing Autotherapy and relating instances of cure of patients whose disorders had proved refractory to other method of treatment. Some of these physicians had used the treatment on themselves. The cases are too numerous to quote here. The letters also are too numerous and from too many well-known men to permit the thought that they were gotten up for

the Committee's perusal. Your Committee accepts them as competent evidence. Among the writers, we recognize the names of homoeopathic physicians whom we know to be honest and competent observers.

Perhaps even more convincing evidence of the value of Autotherapy was supplied by the physicians who attended the meetings of the Committee, most of them well-known members of this County Society. They testified as follows:

Dr. J. Wilford Allen: Case of chronic cough and bronchorrhea and a case diagnosed by Dr. Carleton as tubercular epididymitis with gleet. Prompt improvement and eventual recovery under Autotherapy. Dr. Allen thinks the Committee will make a grave mistake if it reports unfavorably of the treatment.

Dr. E. F. Mills has used Autotherapy in one hundred cases in the past four years, especially at the surgical and skin clinic of the South Third Street Brooklyn Homoeopathic Dispensary. In pus cases, he has had very good results, only a few failures and no bad results. He values the treatment highly.

Dr. Eric Vondergoltz has used the treatment since May, 1913, in seventy cases, mostly gynecological. He values the treatment highly; had bad results in two cases of tuberculosis but thinks the dose was too large.

Dr. Thomas B. Kinney, graduate of Edinburgh University and for sixteen years in the British Civil and Military Service, has used Autotherapy for one year. He reports five cases with good results. He thinks highly of the treatment.

Dr. Wilton E. Brown has used Autotherapy four years in pus infection and gonorrhea. For pus cases, no treatment equals it. He has seen no reactions and no bad results.

Dr. John Arschagouni presented the patient already mentioned. He values the treatment highly.

Your Committee has not attempted to give all the available evidence concerning Autotherapy. Time and space forbid. It has sought rather that the evidence presented should be accurate and authentic.

Perhaps the best illustration of the opinion of the Committee is given in the words of each member when summing up at the last meeting, as follows:

Dr. Seward: Impressed by the testimony. Worthy of use by all physicians.

Dr. Dieffenbach: Good treatment in septic and toxic cases in proper doses and technic.

Dr. Gillingham: The principle is reasonable, logical and scientific. The evidence is convincing that the treatment is good.

Dr. Harrington: In selected cases, a good treatment where systemic poison extends beyond the reach of local measures. The technic requires more precision in preparation, in the size and repetition of dose.

The Chairman: Theoretically, the principle is sound and the evidence presented shows that in many cases, the practice is successful.

Remarks on Technic. Your Committee believes that the technic of Autotherapy requires further elaboration and precision in the size of the dose and the interval between the doses. However, the most important question before us is not the crudeness of the method but the soundness of the principle. Crudeness of method and uncertainty of dose are common to all treatments. The early bacteriological methods were crude enough, and there is no agreement yet as to the size and repetition of the dose of tuberculin and other remedies that have been before the profession for many years. Crudeness of method will be corrected by time and experience; but no refinement of method and no improvement in technic should be permitted to take from our fellow-member, Dr. Duncan, the credit of being the first to see the principle clearly and by his own industry and ability work out a safe and practical technic, starting Autotherapy on a sound practical basis.

Your Committee deems it its duty to commend Dr. Duncan for his good judgment in keeping his method of Autotherapy free from the taint of quackery and charlatanism. He has had no secret formulas nor has he claimed superior skill. His work and thoughts have been given freely to all inquirers. He has been actuated by a high sense of professional honor and responsibility to the sick. There has been no effort to trade commercially on the ignorance and credulity of the people. On the contrary, he has gone boldly among his fellow-physicians and challenged the judgment of those whose education and

experience make them competent judges of his work. For this resisting the temptation to exploit his work among the people when his fellow-physicians were hostile and his friends indifferent, we owe him sincere thanks and praise.

Finally, the Committee wishes to thank Dr. Duncan for his frank and friendly coöperation in this investigation and also to thank the veterinarians and physicians who assisted in its work.

GEORGE F. LAIDLAW, M.D. (Chairman).
Professor of Theory and Practice of Medicine. New York Homoeopathic Medical College and Flower Hospital.

WILLIAM H. DIEFFENBACH, M.D.
Professor of Electro- and Hydro-Therapeutics. New York Medical College and Hospital for Women.

GOVE S. HARRINGTON, M.D., F.A.C.S.
Visiting Surgeon Metropolitan Hospital, Blackwells Island.

J. PERRY SEWARD, M.D., A.B.
Professor of Practice. New York Medical College and Hospital for Women.

HORACE P. GILLINGHAM, M.D.
Professor of Medicine. New York Medical College and Hospital for Women.

BIBLIOGRAPHY

No. 1.—*The Chironian,* November, 1910. Autogenous Virus and Treatment of Sepsis. Charles H. Duncan, M.D.

No. 2.—*The Homoeopathic Record,* May 15, 1911. The Cure of Sepsis. Charles H. Duncan, M.D.

No. 3.—*North American Journal of Homoeopathy,* July, 1911. The Cure of Sepsis. Charles H. Duncan, M.D.

No. 4.—*Medical Record,* September 16, 1911. A New Method of Vaccine Treatment and Prevention of Sepsis. Charles H. Duncan, M.D.

No. 5.—*Journal of the American Institute of Homoeopathy,* October, 1911. Cures and Recoveries in Purulent Infection. Charles H. Duncan, M.D.

No. 6.—*Lancet Clinic,* November 4, 1911. Autotherapy. Charles H. Duncan, M.D.

No. 7.—*Medical Record,* March 30, 1912. Acute Gonorrhea: Its Prevention and Cure by Autotherapy. Charles H. Duncan, M.D.

No. 8.—*North American Journal of Homoeopathy,* May, 1912. Prophylaxis and Treatment of Furuncules. J. H. Schall, M.D.

No. 9.—*Proceedings of the Forty-ninth Annual Meeting of the American Veterinary Medical Association,* 1912. Autotherapy; or, The Unmodified Natural Toxins in the Treatment of Disease. Charles H. Duncan, M.D.

No. 10.—*American Veterinary Review,* August, 1912. Autotherapy in Its Application to Veterinary Practice. Charles H. Duncan, M.D.

No. 11.—*Cleveland Medical and Surgical Reporter,* October, 1912. The Principles and Practices of Autotherapy. Charles H. Duncan, M.D.

No. 12.—*Medical Era,* October, 1912. Autotherapy—A New System of Therapy. Charles H. Duncan, M.D.

No. 13.—*American Veterinary Review,* July, 1912. Autotherapy. D. J. Mangan, M.D., Chief Veterinarian of Department of Street Cleaning, New York City.

No. 14.—*New York Medical Journal,* December 14 and 21, 1912.

Autotherapy; or, The Unmodified Autogenous Toxin-Complex in the Treatment of Disease. Charles H. Duncan, M.D.

No. 15.—*The Cleveland Medical and Surgical Reporter,* December, 1912. Autotherapy in the Treatment of Intra-alimentary and Intra-pulmonary Disease. Charles H. Duncan, M.D.

No. 16.—*New York Medical Journal,* December 21, 1912. Editorial on Autotherapy.

No. 17.—*Boston Medical and Surgical Journal,* March 6, 1913. Autotherapy in Acute Articular Rheumatism. Charles H. Duncan, M.D.

No. 18.—*American Veterinary Review,* May, 1913. Cases Treated by Autotherapy. W. G. McGee, Vet. Surgeon.

No. 19.—*American Veterinary Review,* May, 1913. Severe Infections of the Fetlock Treated by Autotherapy. J. McDonald, D.V.S.

No. 20.—*American Veterinary Review,* October 4, 1913. Fistulous Withers and Poll-Evil Treated by Autotherapy. R. S. McKellar, D.V.S.

No. 21.—*Medical Sentinel,* March, 1912. Dr. Duncan's Autogenous Vaccines. J. J. Sellwood, M.D.

No. 22.—*American Practitioner,* July, 1913. Autotherapy versus Operation. Charles H. Duncan, M.D.

No. 23.—*Homoeopathic Recorder,* September, 1913. My Experience with Autotherapy. Eric Vondergoltz, M.D.

No. 24.—*American Practitioner,* September, 1913. Autotherapy in Purulent Infections, and the Technic of Its Application. Charles H. Duncan, M.D.

No. 25.—*The American Journal of Surgery,* October, 1913. Autotherapy in Surgery. Charles H. Duncan, M.D.

No. 26.—*Homoeopathic Recorder,* 1913. From the Biochemic Point of View. Eric Vondergoltz, M.D.

No. 27.—*New York Medical Journal,* October, 1913. How I Cured Myself of Chronic Bronchitis. L. C. Tony, M.D.

No. 28.—*Paris Médicale,* Paris, January, 1914. The Radical Treatment of Chronic Bronchitis and Catarrhal Condition of the Respiratory Tract. Charles H. Duncan, M.D.

No. 29.—*Therapeutic Record, January,* 1914. Urine as an Autotherapeutic Remedy. Charles H. Duncan, M.D.

No. 30.—*The Practitioner* (London), April, 1914. Autotherapy in the Prevention and Cure of Purulent Infections. Charles H. Duncan, M.D.

No. 31.—*Medical Brief,* April, 1914. Autotherapy. J. H. Barrett, M.D.

No. 32.—*New England Medical Gazette,* January, 1914. Autotherapy in the Treatment of Nasal Accessory Sinuses. Charles H. Duncan, M.D.

No. 33.—*Medical Times,* May, 1914. Autotherapy in Gynecology and Obstetrics. Charles H. Duncan, M.D.

No. 34.—*The Medical Sentinel,* June, 1914. Autotherapy. J. J. Sellwood, M.D.

No. 35.—*Journal of American Institute of Homoeopathy,* July, 1914. The Year's Progress in Therapeutics. Walter S. Mills, M.D.

No. 36.—*Practical Medicine* (Dehli, India), July, 1914. Autotherapy. Charles H. Duncan, M.D.

No. 37.—*Medical Record,* September 5, 1914. Autoimmunization in Respiratory Infections. Charles H. Duncan, M.D.

No. 38.—*New York Medical Journal,* September 5, 1914. Autogalactotherapy. Charles H. Duncan, M.D.

No. 39.—*North American Journal of Homoeopathy,* October, 1914. Clinical Substantiation of Autotherapy. A. Clement Shute, M.D.

No. 40.—*New England Medical Gazette,* October, 1914. Post-operative Treatment of Pus Cases. Claude A. Burrett, M.D., Dean of the Homoeopathic Department of the Ohio State University.

No. 41.—*Northwest Medicine,* November, 1914. Autotherapy Indorsed. John Besson, M.D.

No. 42.—*Indian Medical Gazette* (Calcutta, India), November, 1914. Prevention and Treatment of Septic Wounds of Warfare. F. W. Sumner, M.D.

No. 43.—*Wisconsin Medical Recorder,* December, 1914. Autotherapy. J. A. Burnett, M.D.

No. 44.—*Medical Record,* December 12, 1914. Dr. Duncan's Autotherapy Indorsed by the Committee of the Homoeopathic Medical Society of the County of New York. (Editorial.)

No. 45.—*American Veterinary Review,* December, 1914. Report of Committee of Homoeopathic Medical Society of the County of New York to Investigate Autotherapy.

No. 46.—*New York Medical Journal,* January 21, 1915. Editorial on Autotherapy.

No. 47.—*Medical Sentinel,* January, 1915. The Technic of Autotherapy. Charles H. Duncan, M.D.

No. 48.—*New Albany Medical Journal,* February, 1915. Report of Three Cases of Diabetes Mellitus Treated by Autotherapy.

No. 49.—*Indian Medical Gazette,* February, 1915. Case Reports Treated by Autotherapy. M. Brooks, M.D.

No. 50.—*Hahnemannian Monthly,* April, 1915. The Present Status of Homoeopathy. John Besson, M.D.

No. 51.—*North American Journal of Homoeopathy,* May, 1915. The Present Status of Homoeopathy. John Besson, M.D.

No. 52.—*Journal of the American Association of Progressive Medicine,* May, 1915. Technic of Autotherapeutic Treatment of Infected Wounds. Charles H. Duncan, M.D.

No. 53.—*The Pacific Coast Journal of Homoeopathy,* June, 1915. Technic of Autotherapeutic Treatment of Infected Wounds. Charles H. Duncan, M.D.

No. 54.—*North American Journal of Homoeopathy,* 1915. Autotherapy versus Laparatomy. Charles H. Duncan, M.D.

No. 55.—*American Medicine,* October, 1915. A Positive Method of Preventing and Curing Purulent Infections. Charles H. Duncan, M.D.

No. 56.—*Interstate Medical Journal,* October, 1915. An Appeal to the Army Surgery for the Use of Autotherapy. Charles H. Duncan, M.D.

No. 57.—*North American Journal of Homoeopathy,* April, 1916. The Remedy of Precision. J. T. Elder, M.D. (Paper read before the Texas State Osteopathic Society of Galveston, Texas, March, 1916.)

No. 58.—*Medical Council,* April, 1916. Autotherapy and the Young Mother. A. Clement Shute, M.D.

No. 59.—*Medical Council,* May, 1916. The Basic Principles of Autotherapy. Charles H. Duncan, M.D.

No. 60.—*Medical Standard,* March, 1916. The Remedy of Precision in Influenza. Charles H. Duncan, M.D.

No. 61.—*Western Medical Times,* June, 1916. Autotherapy in Gynecology. Charles H. Duncan, M.D.

No. 62.—*Medical World,* June, 1916. A New Method of Wound Treatment in and out of the Army. Charles H. Duncan, M.D.

No. 63.—*The Southern Medical Journal,* April, 1916. Autotherapy. John C. Parham, Past Asst. Surgeon, of U. S. Army.

No. 64.—*Medical Council,* July, 1916. The Technic of Autotherapy. Charles H. Duncan, M.D.

No. 65.—*International Journal of Surgery,* July, 1916. Editorial on Autotherapy.

No. 66.—*Medical Record,* August 5, 1916. Editorial on Autotherapy.

No. 67.—*New York Medical Journal,* August 19, 1916. Autotherapy in Poliomyelitis. Charles H. Duncan, M.D.

No. 68.—*Long Island Medical Journal,* August, 1916. Principles and Practice of Autotherapy. Charles H. Duncan, M.D.

No. 69.—*Texas Medical Journal,* August, September and October, 1916. The Great Yellow Peril—Pus Infection. Charles H. Duncan, M.D.

No. 70.—*Medical Council,* September, 1916. Autotherapy Indorsed. C. J. Scott, M.D.

No. 71.—*New York Medical Journal,* September 23, 1916. Editorial on Autotherapy in Ivy Poisoning.

No. 72.—*Western Medical Times* (Symposium), October, 1916. Dr. P. T. Geyerman, Hot Springs, S. Dak.; C. E. Fenner; M. L. Curtner, Vincennes, Ind.; A. Clement Shute; John Besson, and twelve more short reports.

No. 73.—*New York Medical Journal,* January 6, 1917. A New and Powerful Galactagogue. Charles H. Duncan, M.D.

No. 74.—*Medical Record,* February 10, 1917. Elective Localization of the Streptococci from an Autotherapeutic Point of View. Charles H. Duncan, M.D.

No. 75.—*Practical Medicine* (Delhi, India), March, 1917. The Technic of Autotherapy. Charles H. Duncan, M.D.

No. 76.—*Buffalo Medical Journal,* July, 1917. Autotherapy in Abdominal Infections. Charles H. Duncan, M.D.

In addition to the above there have been printed in standard medical periodicals sixty-five articles and abstracts from these on the subject of Autotherapy.

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