

Medical data is for informational purposes only. You should always consult your family physician, or one of our referral physicians prior to treatment.

Three Years of HCL Therapy

As Recorded in articles in *The Medical World*
With Introduction by Henry Pleasants, Jr., AB, MD, FACP, Associate Editor
Published by W. Roy Huntsman, Philadelphia, PA 1935



®

Furnished by
The Arthritis Trust of America
7376 Walker Road
Fairview, TN 37062-8141

The use of hydrochloric acid therapy for the purpose of strengthening key components of the immune system is such an important and inexpensive treatment, that the whole of this wonderful 1930's booklet is hereby reproduced.

We know that hydrochloric acid therapy works. We know nothing of the effectiveness or desirability of other therapies reported in this booklet, and so we cannot recommend consideration for any other treatment herein reported, other than that of the clinical use of hydrochloric acid against invasive microorganisms.

A Republication of The Arthritis Trust of America/The Rheumatoid Disease Foundation, Projects of
The Roger Wyburn-Mason and Jack M. Blount Foundation
for the Eradication of Rheumatoid Disease, Inc.



Hydrochloric Acid for Untreatable Bacterial Infection

(Published in Townsend Letter for Doctors & Patients,
<http://www.townsendletter.com/>, January 2000, p. 115-116,
permission to reprint granted by Wayne Martin)
Reprint of *Medical World's* Three Years of HCl Therapy is
available at the "Books and Pamphlets" tab in
<http://www.arthritis-trust.org>.

Editor:

There is much in the news media of late concerning the great danger of antibiotic-resistant bacterial infections. We have a few bacteria now for which there is only one expensive antibiotic that will contain them. There is a dire warning that the time may not be far off when there will be deadly bacteria resistant to all antibiotics.

Here is a suggestion that we go back and have a good look at intravenous infusions of 10cc of hydrochloric acid, from one part per 500 to one part per 3,000.

This work originated with Burr Ferguson, MD of Birmingham, Alabama. During World War I he had been a battle surgeon in France where he was seeing the ravaging effect of bacterial infections in wounds. Dr. Ferguson picked up the concept of treating bacterial infections with intravenous hydrochloric acid from another surgeon, Dr. Granville Hains in 1927. Dr. Heins had been using intravenous hydrochloric acid one part per 3,000 in treating pruritus ani with success.

Dr. Ferguson then began treating many kinds of bacterial infections successfully with intravenous infusion of 10cc of one in 1000 hydrochloric acid. When he tried to publish his results he found that no leading medical journal would accept his reports.

There was a medical news magazine then that reported on topics that today may be called alternative medical treatments. It was called *The Medical World*. In 1932 as a student at Purdue University, I subscribed to it, I think for \$5.00 a year. Dr. Ferguson wrote extensively for this publication and many not-too-orthodox doctors read what he wrote and treated bacterial infections with hydrochloric acid infusions. Some of them reported success in so doing in *The Medical World*.

Dr. Ferguson reported that very soon after an infusion of hydrochloric acid, there would be a marked increase in white cell count and in phagocytes; also that red cells had an increase in oxygen content. He suggested that one infusion of hydrochloric acid would increase oxygen in red cells in excess over what would result from maintaining the patient in an oxygen tent. Dr. Ferguson reported that in treating gonorrhea with bladder irrigations of 1 in 1000 hydrochloric acid, he was able to get negative smears in two days with even more rapid relief from the symptom of burning and pain.

I am going to give one case here of the use of hydrochloric acid in treating a bacterial infection, a case to show its remarkable fast antibacterial effect. The case was reported in *The Medical World*. The doctor was William Howell, MD of the small town of Lexington, Tennessee.

He had gotten a supply of sterile 1-1500 hydrochloric acid but had feared using it. His story is as follows: "On August 18, 1931, I found the case to use hydrochloric acid. Five days before I had delivered a girl of 15 after a prolonged and difficult labor using all

possible aseptic precautions possible in a log cabin in the woods. The large baby lived only two hours. In spite of the small size of the mother (she weighed only 90 lbs), lacerations were small in size. Three days later a message was sent to me that she had had a chill and a very high fever. It was a long trip to the river bottom where she lived so I suspected malaria and I sent quinine.

"On the fifth day another message came telling of the grave condition of the patient and that my immediate presence was necessary. On going into the room, I saw that there had been no mistake in this urgent message. The little girl was delirious; temperature 106, pulse 140, respiration was 40; discharge from the vagina that was fetid in odor. Every other case, in the condition in which I found her had died of this infection.

"With much trepidation I gave her an injection of 10cc of 1-1500 hydrochloric acid. The following minutes were anxious ones for me, as I hardly knew what to expect as this was the first time that I had even heard of acid being used in puerperal sepsis. The reports that I had seen of Dr. Ferguson's cases were of pyrogenic infections in gunshot or lacerated wounds. As I sat by that bed holding the radial pulse in that lonely log cabin, a flood of memories of teachings concerning the fatal consequences of injections of acid into the veins came over me. While in this frame of mind I noticed sweat on the neck and forehead of the patient and along with it a slowing of the pulse and in a few minutes more she was bathed in a profuse perspiration. With it there was a cessation of the chatter of her delirium

"Thirty minutes following the injection of the acid I asked her how she felt. She said that she felt much better and she would like to go to sleep. Within one hour the temperature had dropped to 103, the pulse to 100 and the respiration to 22.

"During the following four days, I injected the acid every day and on the fifth day temperature was 99, pulse was 72 and respiration was 22. Two days thereafter, I was called again and was told that the fever had returned. Found her with a temperature of 101^oF, with a free discharge from the vagina. I gave her another injection as before. Save for weakness, all evidence of infection had disappeared the next day. She went on to an uneventful recovery with a complete disappearance of the mass in the left iliac region."

So here was a case where the patient was marked for death soon and within moments of one intravenous infusion of 1-1500 hydrochloric acid, the patient showed dramatic improvement. Was there ever a case where an antibiotic drug was so quickly effective?

It is suggested that if bacterial infections are again treated with infusions of hydrochloric acid, it will be found that there is no such thing as a bacterium resistant to hydrochloric acid.

In 1932 there was very little that could be done for the pain and suffering of a patient with a gonorrhea infection of the testicles. Dr. Howell reported that by then Dr. Ferguson had told him that treatment with intravenous infusions of hydrochloric acid was effective in treating any and all bacterial infections. In that year he was referred to such a patient. Dr. Howell said that after all of his training it seemed foolish to do an injection in the arm for a swollen and painful testicle. After the first injection of hydrochloric acid the patient had pain relief. This patient had a complete recovery from the infection following eight daily injections. He added that in time he had seen a few other cases of epididymitis like this one and they all responded to injections of hydrochloric acid just as had this one.

Replace Antibiotics with Dilute Hydrochloric Acid

With the escalating cost of medical treatment, how nice it would be to replace expensive antibiotics with dilute hydrochloric acid, the cost of which is nil.

Many antibiotics are greatly immunosuppressive and anything

Medical data is for informational purposes only. You should always consult your family physician, or one of our referral physicians prior to treatment. that is immunosuppressive will tend to cause cancer. How much better it would be to replace immunosuppressive antibiotics with immunostimulating infusions of hydrochloric acid in treating bacterial infections.

This letter was sent in to the TLfDP [*Townsend Letters for Doctors & Patients*] on 09-11-1999. On 10-04, *60 Minutes* on CBS devoted one-third of the program to tuberculosis. It was said that tuberculosis is a major disaster in the making. It was said that while tuberculosis is a minor problem in the USA today, it is a major problem now in Russia, especially in prisons for men. It was said that the tubercle in Russia for the most part is resistant to all drugs that in the past have been used to treat tuberculosis.

It was suggested that a single commercial aircraft flight returning to the USA had several passengers infected with the Russian type tuberculosis. It was also said that there are no new drugs in the pipeline to treat tuberculosis because there is almost no need for them in the USA and there is no money to be made on developing a drug to treat tuberculosis in Russian prisons. It was said that if this new strain of drug-resistant tuberculosis should get a foothold in the USA, it would cause thousands of deaths and cost billions of dollars.

There is notation in the *Medical World* of 1932 that Dr. Burr Ferguson had indicated that tuberculosis could be treated with intravenous infusions of hydrochloric acid. Dr. William Howell, referred to above in treating puerperal seps and gonorrheal infections, has a report in 1932 of treating with success, two cases of pulmonary tuberculosis with infusions of hydrochloric acid. Both patients before treatment had suffered severe hemorrhaging of the lungs. In these cases the infusions were of 1-1500 hydrochloric acid done three times a week for several weeks. In both cases the patient became free from evening fever and began to gain weight and live a normal life. In both cases there was a notation, that infusions of hydrochloric acid would continue.

If the threat of pandemic drug-resistant tuberculosis is so great, it is hoped that some not-so-orthodox doctor in the world will try treating tuberculosis with intravenous hydrochloric acid, 1-1500 every second day. There were a few cases of treating cancer with success with injections of hydrochloric acid. One such case follows: The date was May 25, 1933. the doctor was O.P. Sweatt, MD of Waxahachie, Texas. The patient had epithelioma of the lower lip extending to within a quarter-inch of the chin. The cancerous area was the size of a silver dollar. There was much swelling and pain and an offensive odor with discharge. The patient had but little appetite.

Treatment was intravenous infusions of 5cc of 1-1000 hydrochloric acid every second day. After three such injections, they were changed to intramuscular injections due to the patient having poor veins. On the sixth injection the acid was changed to 1-500 and this caused a severe reaction. After only six injections the patient had shown improvement. There was less pain, the discharge was less and the odor of it was less offensive. The patient had a better appetite and the swelling had decreased.

In the reaction there was fever, rigor and painful aching which subsided in six hours. The next day the dose was reduced to 2.5cc and then increased on a gradual basis back to 5cc. Over the next 100 days, there were 50 such im [intramuscular] injections. There was steady improvement such that after injection number 18, this 77 year-old man was able to go out and chop thirty rows of cotton.

Then the injections were changed back to intravenous infusions for 20 more treatments. The statement was made that at this point the patient was not cured but that the tumor was reduced to the size of a five-cent piece. Another observation was made. It was said that a black scaly substance would form over the tumor and

then fall away and that each time this happened the tumor would be reduced in size a bit. Also it was noted that during this treatment, the patient had no need for pain medication.

Here we see a case where intramuscular injections seemed to be effective. Also in this case there was notable regression after only six injections of hydrochloric acid. Here again, as in treating tuberculosis, over 50 injections were used over a period of many weeks.

Medical data is for informational purposes only. You should always consult your family physician, or one of our referral physicians prior to treatment.

Three Years of HCl Therapy

as Recorded in *The Medical World*

with introduction by

Henry Pleasants, Jr., A.B., M.D., F.a.C. P.

Associate Editor

Originally published by W. Roy Huntsman, Philadelphia, PA.

To present the essential features of the articles and case reports reprinted in this volume, revisions have been made and sections not directly related to the subjects have been omitted.

To Dr. Burr Ferguson and Dr. Walter Bryant Guy whose monumental efforts in the advancement of knowledge regarding the principles of hydrochloric acid therapy have stimulated the interest and won the respect of their colleagues.

CONTENTS

Introduction — By Henry Pleasants, Jr., A.B., M.D., F.A.C.P. . 1
Original Articles

By Burr Ferguson, M.D.

The Metchnikoff Idea	15
Hydrochloric Acid and the Phagocytes	17
Hydrochloric Acid and Oxygen Content of Red Cells	20
Quinine and Chlorides	23
“Favorite Medicine”	24
Intravenous Hydrochloric Acid and Blood Transfusion	29
Stronger Solutions of Hydrochloric Acid	31
Does Hydrochloric Acid Intravenously Harden Arteries?	34
Hydrochloric Acid as a Germicide	37
Sinus Infection	39
Acne Vulgaris and the White Blood Cells	43
The Healing of Wounds	45

Original Articles By Walter B. Guy, M.D.

Degenerative Disease and Its Etiology	47
Acid Mineral Chlorides in Treatment	54
Toxemia and Alkalosis	60
The Conquest of Cancer	66
Relation of Iron to Neoplastic Disease	72
Treatment of Cancer	77
A Further Report of Cases	81
Acid Mineral Therapy in Cancer	84

Original Articles of Other Contributors

Dilute Hydrochloric Acid Intravenously and Intramuscularly Therapia Sterilisans Magna? By Desiderius de Beszedits, M.D.	91
Treatment of Diabetes, Erysipelas, Scorpion Bites By Desiderius de Beszedits, M.D.	113
Nature is the Best Doctor By William I. Howell, M.D.	119
Hydrochloric Acid Injections Produce Leucocytosis By William I. Howell, M.D.	127
Hydrochloric Acid Injections in Acute Infection? By William L. Howell, M.D.	128
Hydrochloric Acid Intravenously as a Therapeutic Measure with Report of Cases. By W.G. Brymer, M.D. Ph.G.	130
The Use of Hydrochloric Acid Intravenously. By M.A. Craig, M.D.	137
An Attempt to Rationalize HCl Therapy. By A.M. Allen, M.D.	140
Case Reports and Comments	

Erysipelas-Streptococous Infection-Hay Fever-Arthritis

By F.J. James, M.D.	145
The Use of Hydrochloric Acid in the Treatment of Cancer. By O.P. Sweatt, M.D.	146
The Use of HCl in Hodgkin’s Disease. By M.M.M.	147
Reactions to HCl Injections. By R.L. Bills, M.D.	148
Hydrochloric Acid Intravenously in the Treatment of Puerperal Infection. By R.S. Ingale, M.D.	150
Treatment of Malta Fever. By C.W. Baynham, M.D.	151
Hydrochloric Acid in Puerperal septicemia. By O.F. Marocotte, M.D.	151
Hydrochloric Acid Intravenously. By E.D. Jackson, M.D.	152
HCl Applied in Nose. by A. Bursell, M.D.	152
A New Treatment for Burns. By C.W. Baynham, M.D.	153
Miscellaneous Reports and Comments	154
Picking A Winner	157
Conclusion	159

FOREWORD

The demand for reprints and previous issues of *THE MEDICAL WORLD* containing articles by various contributors on the subject of hydrochloric acid therapy exhausted the supply of material available. In order to meet this increasing demand, we have collected in one volume the original articles and minor comments which have been published in this magazine during the past three years.

This collection of reprints is a unique feature of medical journalism and should be of valuable aid to any physician who desires to review the literature on this subject. It must be remembered, however, that this volume covers but three years ending early in the summer of 1935, and that some extremely important contributions have been published since that date.

It is to be hoped that this volume will fill a long felt need, and that it will stimulate further individual research on this most interesting development in therapeutic procedure.

INTRODUCTION

The awakening of interest on the part of the medical profession in the use of dilute hydrochloric acid intravenously, intramuscularly, orally and locally in the treatment of many disease conditions warrants a condensed outline of the principles upon which this therapeutic measure is based; a resume of our own experiences with it in certain cases; a frank discussion of its limitations, and general outline of its possibilities. The fact that this agent is so inexpensive; that it is not an exploited compound put out by pharmaceutical manufacturers, and that its usefulness was developed by two practicing physicians, working independently along entirely different theoretical lines, brings this remedy into a position of economic importance that should be disregarded.

Since the days of Hippocrates, medicine has been seeking for some remedy which would be efficient in stimulating the resistive forces of the human body to combat disease. Even following the discovery of the bacteria as the cause of most of the diseases to which human beings are susceptible, the efforts to stimulate personal resistance went hand in hand with the effort to discover a germicide which would destroy the bacteria without producing harmful effects on the patient. Metchnikoff in the early years of this century presented his theory that the resistance of the body to disease depended upon nuclear leucocytes. It was not long after this that Ehrlich announced his discovery of “606,” an arsenical preparation which would destroy the spirochaete of syphilis. He believed that it was possible, through chemistry, to evolve remedies which were of tremendous sterilizing power. Without attempting to explain the intricate features of the “opsonic theory” of Metchnikoff, and the “side-chain” theory of Ehrlich, the fact remains that the scientific workers of the profession split into two groups each supporting one of these theories although

Medical data is for informational purposes only. You should always consult your family physician, or one of our referral physicians prior to treatment. granting the logical importance of the other. In 1931, however, the theory supported by Ehrlich was allowed to pass into the discard as being untenable.

During the World War, a practicing physician, Dr. Burr Ferguson, of Birmingham, Alabama, entered the service of the United States Army Medical Corps, rising to the ranks of Lieutenant-Colonel, and seeing much surgical work in the hospitals of France. After the war, he volunteered his services with the Red Cross in Siberia, later being sent to Albania in the Balkans, where he studied typhus fever in association with Colonel Hans Zinsser. Returning to America, he entered the Public Health Service for a few years, later of active military and public health work he had given much thought and attention to the effect of many of the powerful war wounds. One of the first of his observations was the recovery of a long-standing case of osteomyelitis following shrapnel wounds immediately after the administration of intramuscular injections of salicylate of mercury. In this particular case there was no history of syphilis, and the Wassermann was negative. He studied the blood of this and other similar patients, and noted a remarkable increase in the polynuclear leucocytes following each injection. He continued his studies both during and after the service, and discovered that the same increase of polynuclear leucocytes was noted following the administration of most of the so-called specific remedies, such as arsphenamin, bismuth and others. He presented two papers on this subject, which appears in the *British Medical Journal* and the *Lancet* about 1925, while he was doing public health work in England. His findings were commented upon most enthusiastically by Sir Arbuthnot Lane, who stated that he believed that Ferguson had made a most important contribution to science, but that his work would be ridiculed by most of his colleagues in America. He advised him to continue his investigations.

From this time on, Dr. Ferguson studied the influence of various drugs on phagocytosis. The effect of the intravenous injection of mercurochrome was particularly powerful as a phagocytic stimulant, but its toxicity was dangerous. The same was true of other remedies. His observations showed that alcohol was an active phagocytic stimulant, but the ability of the phagocytes to combat the bacteria was lessened. He also found that nearly all of the physiotherapeutic measures, from mustard plasters and cantharides blisters to the most modern radio-thermic appliances, were of very definite value in producing a marked leucocytic and phagocytic response. The same was true of bleeding, transfusion, injections of whole blood, injections of sterile milk, leucocytic extracts, bacterins and other similar measures. Their value in certain cases was unquestioned, but their action depended solely upon the principle that was old as Hippocrates, namely the stimulation of individual resistance.

The problem before Dr. Ferguson now was to find some remedy which would be successful in stimulating phagocytosis, yet non-toxic. In 1927 he heard Dr. Granville Hanes, a noted proctologist, and studied this surgeon's technique in treating pruritus ani by injections of 1-3000 hydrochloric acid. without any evidence of toxic effect, yet with uniformly good results. Dr. Ferguson attributed this absence of toxicity to the fact that hydrochloric acid is one of the very few inorganic acids which are normal constituents of the human body, and he determined to experiment upon himself in order to discover whether it could be used safely by intravenous injection. Upon his return home, he instructed his technician to take several leucocyte counts; then give him an intravenous injection of 10 c.c. 1-500 solution hydrochloric acid. There was no severe reaction, as in the cases which had received arsphenamin, mercurochorme, donor's blood; and the leucocyte count increased very considerably, with a definite increase of polynuclear percentage. With this encouragement, he gave several doses of this preparation to some of the most seriously ill patients who had failed to respond to other forms of treatment. The effect was

so spectacular that he continued his efforts, and reported his observations in *Clinical Medicine and Surgery*.

Considerable skepticism was expressed by the leaders of the medical profession not only as to the value of such a simple procedure, but also as to the veracity of the reports of clinical improvement. Strong criticism was voiced against intravenous injection of such a powerful acid, even in dilute form. Many men refused to give it clinical trial on this ground; and on several occasions Dr. Ferguson was refused permission to publish articles on the subject or to discuss the matter before medical gatherings.

THE MEDICAL WORLD gave honest support to Dr. Ferguson and permitted the publication not only of articles submitted by him, but also by other physicians, including Dr. Walter Bryant Guy, of St. Augustine, Florida, who was approaching the same subject of hydrochloric acid therapy from a somewhat different angle, and whose research was of equal importance. His work deserves a brief description at this point.

Dr. Guy formulated a theory that most disease conditions, acute infections, anemias, metabolic disturbances and malignant cell overgrowths are direct results of changes in the hydrogen-ion content of the lymph of the body which produces blockage of the lymph channels. In his studies of the growth of corn and other forms of vegetable life he had been able to demonstrate that the absence of sufficient potassium salts in the soil would result in stunted growth, and evidence of precipitation of minute particles of iron and other substances in the stalks. When potassium was added, the growth proceeded normally; when dilute hydrochloric acid was also added, the growth was further stimulated. He studied the lymph of a large number of patients suffering from carcinoma, and found that these cases showed a hydrogen-ion much higher than normal individuals. He also found that by administering the salts of potassium in combination with dilute hydrochloric acid, either orally or by the intravenous route, these patients made remarkable clinical improvement and the hydrogen-ion content of their lymph became normal. The publication of his series of articles in the *THE MEDICAL WORLD* was followed by a large number of case reports by participating physicians who greeted the new therapeutic procedure with great enthusiasm. Dr. Guy published his first book on this subject in 1934, and a revision in 1935.

Having thus far presented a brief summary of the prodigious work of Ferguson and Guy, it may be well to call attention to the fact that Ferguson was approached by one of the largest pharmaceutical houses and offered a large sum of money to cease his efforts to place his discovery before the medical profession except through the medium of products of this concern. Although in actual financial distress, he refused this offer, and has continued in general practice, thereby exemplifying the spirit of the Hippocratic Oath as few men have done. Similarly, Guy presented to the profession all of the results of his research, including his formulae, and continued his work in general practice. These two instances of utterly unselfish devotion to the interest of humanity are an object-lesson to every practitioner.

While no attempt has been made to claim for hydrochloric acid therapy that its use intravenously produces the effect described by Ehrlich as "Therapia Sterilisans Magna" which he claimed for his original compound "606," it is interesting to note that laboratory research showed very definitely the actual germicidal properties of dilutions of this acid. Cultures of staphylococci and streptococci and other organisms were destroyed within a few minutes when mixed with dilutions 1-1000. This observation led to the use of the solution as a local application in pustular skin affections. The effect was so spectacular that its importance is no longer questioned. Ferguson demonstrated its efficacy as urethral antiseptic in gonorrhea by being able to obtain negative smears in from two to three days, and by being able to alleviate the distressing symptoms of burning and tenes-

Medical data is for informational purposes only. You should always consult your family physician, or one of our referral physicians prior to treatment.

mus in even less time. Even bladder irrigations of solutions as strong as 1-500 were tolerated satisfactorily by the patients, and there was no evidence of the destruction of normal tissue cells which often attended the use of other antiseptic solutions such as the silver salts, potassium permanganate and the like. Most interesting of all was the report by Ferguson of his success in the treatment of a most aggravated case of pustular syphilides (secondary stage).

The attitude of the medical profession toward the work of Ferguson and Guy has been highly amusing, and deserves a word of comment. Many of the leaders of research, whose observations coincided with the clinical results obtained by practitioners, refused to allow their names to be used in connection with the work done. Others openly ridiculed the whole theory as preposterous, and refused to allow this simple therapeutic measure to be employed in their clinics. However, it has been found that the makers of sterile ampules admitted frankly that the demand for ampules of hydrochloric acid dilutions vastly exceeded the demand for all other preparations — and the largest consignments were delivered in the city where most of the open criticism and ridicule was heard! In other words, the leaders of the profession in many places were giving the measure a full trial and finding it efficacious, yet were unwilling to admit the fact.

The story of this revolutionary episode in medicine grows more interesting and more dramatic day by day. The suffering patients in the country districts, far from the well equipped clinics and hospitals, have at last found that something can be done for them. Whether or not it meets with the approval of the solons interests them not at all. They ask for relief — and they get it, where the applicability of the measure to their complaint is obvious.

It would be unwise and unfair to both the medical profession and the public to discuss the merits of hydrochloric acid therapy and fail to call attention to its limitations, and to the actual dangers attending its use in certain cases. We have called attention to the fact that the use of the acid intravenously was followed by a considerable increase in the leucocyte count. A patient who had been suffering from myelogenous leukemia, with a leucocyte count of 84,000 (the normal count being 6,500) was inadvertently given several intravenous injections of this preparation, with the result that the already high count rose to the unbelievable figure of over 400,000. Obviously, it is poor medical judgment to give a remedy that can only aggravate an existing condition.

Another important — vitally important — consideration affecting the administration of hydrochloric acid is one which depends upon accurate and painstaking investigation of the individual by the practitioner. Since this measure had the effect of stimulating the defense mechanisms of the blood, it is plain that the sudden increase of “phagocytes” at the focus of infection will be followed by the formation of pus, which, after all, is but an effort on the part of nature to attack invading bacteria. Should this sudden increase of the defense forces take place in an area where the drainage is poor, an abscess may result. For instance a patient may have a diseased appendix which has been quiescent; there has developed in that patient a balance between the defense elements and the infecting organisms. A sudden marshaling of the phagocytes at this point may stir the sleeping dogs into a first-class battle, with the result that the patient will require immediate operation. Similar situations may develop in other parts of the body, particularly in closed spaces such as the middle ear and sinuses, and the patient must be watched closely for the development of acute symptoms that might require surgical treatment.

From a prognostic standpoint, the inability of the patient to respond to stimulation is of grave significance. This is readily determined by the blood counts made at frequent intervals during a course of treatment; in fact it is highly essential that the progress of every case be watched by an intelligent and observant physician. While

astonishingly good results have been obtained by hit-or-miss methods in country districts by physicians who are without laboratory facilities, it is reasonable to assume that more care is mandatory on the part of those whose facilities are greater. The fact that there have been no reported cases of death as the immediate result of this medication speaks volumes for the safety of this measure.

It may be well to discuss in simplest terms the essential differences between the methods of hydrochloric acid medication used respectively by Ferguson and Guy. There is little to be added to what we have said in the preceding paragraphs regarding Ferguson’s technique and the principles upon which his reasoning has been based. He is essentially a man of practical, rather than theoretical, ideas. He proved to his own satisfaction that intravenous injections of dilute hydrochloric acid was a practical and cheap germicide, of greater potency and less destructive action than anything thus far discovered. Why, how, when and where its action occurred were of less importance than the fact that the patient got well. Dr. Guy was more scientifically minded. Although also a general practitioner, he was determined to discover, if possible, a basis for the formation of a theory. He was a student of biologic chemistry, and from his knowledge and observation of plant life and its behavior under the influence of hydrochloric acid and the salts of potassium in the soil he believed that certain similar principles applied to the growth and nourishment of human beings. Most important of all, he based his hypotheses on the observations of Hawk, that lymph circulation, which is the medium by which nourishment is carried to every cell in the body, is of as great importance as the blood; and any condition, whether chemical or physical, which interferes with the flow of lymph produces a profound effect on the cells of every organ in the body. He had reduced his theory to simple and easily understood terms by a full explanation of the significance of the acid balance of the human body, and the necessity for a proper maintenance of this balance for the preservation of health. Under normal conditions, the hydrogen-ion concentration of human lymph should be slightly on the alkaline side. Should this reaction vary too much, either on the acid or alkaline side, the patient, will develop conditions known respectively as “acidosis” or “alkalosis,” either of which may be fatal. In health the acid balance is maintained by the normal production of hydrochloric acid in certain cells of the stomach; should this production fall short of bodily necessity, the balance must be made up. Other acids, which are the products of decomposition in the human body, such as lactic acid, fatty acids, carbonic acid, uric acid and others, are called in to fill the deficiency. These, however, being abnormal constituents of the great chemical laboratory of the human body, are ill-adapted to the requirements, for they are unable to keep in solution many of the salts which must be thrown off as waste matter in bodily excretions, the sweat, the expired air, the urine and the feces. In the effort of the body to provide acid of some sort these harmful acids become a “monkey-wrench in the machinery,” and the condition known as “acidosis” results with symptoms of general systemic poisoning. Conversely, when the hydrogen-ion concentration of human lymph falls into the acid side, due to excess production of lactic acid, fatty acids, carbonic acid, uric acid and like poisons, there is an effort on the part of the body to neutralize these with alkaline salts, such as calcium, sodium, potassium, ammonium and others. These also, being foreign to bodily economy, produce the condition known as “alkalosis,” the general symptoms of which are similar to acidosis, but often attended with general collapse.

Dr. Guy has claimed that the mere administration of hydrochloric acid to a patient would not fulfill the necessary requirements. In his opinion, potassium salts, often lacking in the patient’s food, are a necessary adjunct in the treatment aimed at bringing about a normal acid-base balance. Excess of potassium may be harmful, and the in-

Medical data is for informational purposes only. You should always consult your family physician, or one of our referral physicians prior to treatment.

Ingredients of the formula which he advocates are the result of close clinical observation by himself and others. The case reports following this line of treatment have demonstrated improvements and recoveries which, in many instances, would seem miraculous, if it were not for the basis of sound reasoning along bio-chemical lines upon which the treatment was founded. Furthermore, if these reports were offered by the protagonist of such a system of therapeutics himself alone, skepticism would be justified; but the fact remains that from all parts of the world come infinite numbers of similar reports from men in active practice — shrewd and experienced physicians on “the battle line of medicine.” Actual and prompt clinical results to such men mean bread and butter. Satisfied patients mean an increase in clientele. These men are willing to leave research to the workers in heavily endowed laboratories. Their patients are more interested in being cured than in scientific aspects of the disease from which they are suffering. These patients ask them to “do something”; and they know that unless something is “done” they will drift into the hands of some charlatan, who will at least give evidence of some definite form of active treatment, even though hopelessly misdirected.

The application of the principles of the hydrochloric acid therapy, or the “acid-mineral therapy” to various metabolic disturbances, such as diabetes mellitus, arthritis and many obscure conditions, is deserving of serious consideration. The most elementary lessons in chemistry in our public schools, teach that various substances may be held in solutions of given degrees of acidity or alkalinity. When the proportions of the ingredients are perfectly balanced, the solution may be as clear and colorless as water; but let the acidity or alkalinity change a minute fraction of a degree and a turbid fluid will result, with the accumulation of a precipitate at the bottom of the container. With this explanation, it is by no means difficult to understand how the normally clear and colorless lymph of the human body might, by a change in its chemical reaction, begin to become cloudy, and to deposit the salts, such as calcium, which should be held in solution. The deposit of these salts in joints must, naturally, interfere with the free and well lubricated action of these joints. Could not such a change in chemical reactions explain the enormous deposits of lime salts in old arthritic patients? Similarly, if the lymph should become turbid and sluggish, is there not reason to infer that the lymph channels would become blocked, and the normal amount of nutrition be denied such structures as muscles, bones, cartilage, skin in fact every other component of the body? By the same line of reasoning, is it not likely that the products of decomposition, which should be removed by the lymph, would remain in the tissues and act as poisons to the delicate individual cells? On this basis can we not explain the atrophies of muscles which are so characteristic of arthritis? With so many of the cells of the human body becoming degenerated, is it not inevitable that the blood-making cells should also be affected? Anemia is a characteristic symptom of arthritis.

The applicability of the theory of Guy to diabetes mellitus is still under consideration. If it be true that by appropriate medication it is possible to restore the acid-base balance of the blood or lymph, the possibility of ultimate cure in these cases seems not unreasonable. Certainly it seems within the bounds of probability that the tendency to acidosis from the absorption of harmful metabolic products would be lessened; conversely, the tendency for the development of hypoglycemia and alkalosis from overdosage with insulin would be minimized. At best, insulin is but a crutch upon which the diabetic patient leans heavily, and the medical profession is still seeking some form of treatment which will correct the abnormal metabolic disturbances which have produced this distressing condition. We can see most clearly, however, that it must be the interference with the circulation of the blood and lymph in the extremities which brings about diabetic gangrene. Even a slight improvement in this circulation would be

productive of much relief to the patient.

The most startling possibility in the development of the acid-base balance theory — one which we approach with the same feeling that one approaches the spot where a treasure chest is said to be buried — is that it might be the key to the vault in which lies the secret of cancer. Research foundations, notably the department conducted at the University of Pennsylvania by Dr. Ellice MacDonald, have been working for years on the theory that the development of cancer has a definite relationship to the pH of the blood plasma. Dr. Guy goes one step further in holding that the lymph is the responsible factor, and that in cancer patients the hydrogen-ion concentration is much higher than in normal individuals. It is necessary to give very large doses of appropriate acids to these patients in order to bring the acid-base balance to normal. When this is done, in his experience, remarkable changes are seen in the new growths, some of which seem to disappear, and the lives of the patients are prolonged in comfort. He carries his theory further by claiming that there seems to be little doubt that the water supply bears a distinct relation to frequency of occurrence of this disease in certain areas or “cancer belts.” He is studying this problem at the present time.

It seems but reasonable to discuss at this point the theoretical weaknesses in the claims of both Dr. Ferguson and Dr. Guy as to the efficacy of the hydrochloric acid, or acid-mineral therapy. First of all, are the remarkable results that have been reported actual facts, or figments of the imagination of an enthusiast? In the reports of Dr. Ferguson we find a wealth of clinical observations, made before and after treatment, to support his statement that intravenous administration of solutions of hydrochloric acid will actually increase the polynuclear leucocytes of the blood. Ferguson stops theorizing at this point, and, perhaps, is wise. Whether or not this increase is due to change in acid-base balance, or to stimulation of hormone action is for someone else to determine. In our own studies clinically we are forced to agree with him. The records of our cases in the wards where this procedure has been given a fair trial show conclusively that in each case observed there has been definite improvement as indicated by the blood-counts. Furthermore, the objection raised as to the possible toxicity of this procedure has not been borne out by the experience. A patient, suffering from some obscure cerebral disturbance, and in coma upon admission, lay unconscious for several days. Spinal drainage showed a pressure so high that on several occasions it could not be recorded. The Wassermann was negative, the cell count was 225, sugar 2-plus, and globulin 4-plus, culture negative. There was choking of the discs, but definite localizing symptoms were difficult to determine because of the man's stuporous condition. Soon after admission, even in the absence of a positive spinal Wassermann, he was given 0.9 gms. neo-arsphenamin, followed by spinal drainage. This seemed to improve his general condition temporarily, but he soon relapsed into unconsciousness, became incontinent, and developed Cheyne-Stokes breathing. The end seemed imminent. By chance, Dr. Burr Ferguson, who was on his way to the A.M.A. convention was asked to see the patient. He agreed with the suggested diagnosis of meningo-encephalitis, with the possible development of cerebral abscess, but unhesitatingly advocated heroic doses of hydrochloric acid intravenously. Acting upon his suggestion, the man was given 20 c.c. of a 1-500 solution. There was no evidence of upward reaction. By misunderstanding the second dose of the same strength was given two hours later, also with no ill effect. Injections of 1-500 solutions were continued every two days, but with little appreciable effect, except a marked increase in polynuclear leucocytosis. Several days later the patient showed slight improvement, but was developing bedsores and postular eruption on his back and buttocks from the continual soiling. A local application of 1-1000 HCl solution was immediately successful in bringing about rapid healing of these sores.

Medical data is for informational purposes only. You should always consult your family physician, or one of our referral physicians prior to treatment.

For a time the man was able to converse intelligently; was able to take food, and, on one occasion, climbed over the sides of the restraining crib to the floor, and appeared in the ward walking normally. His spinal pressure still remained high — so high that it could not be recorded by the manometer—but his temperature came down to 99.0° F.; pulse 72, and the spinal cell-count fell to 31. The man was later removed to the University Hospital and died following an operation in which a large brain tumor was removed.

A second case in the wards was that of a young man, admitted in serious condition with signs of pneumonia involving the left lung. He was treated by the usual methods, and recovered from the more acute condition, but the involvement of the left lung and pleura refused to clear up. X-ray examinations showed evidence of some fluid, or thickened pleura on the left side; and the physical signs over this area supported this diagnosis. His temperature began to develop the characteristic septic swing from normal or subnormal to 101.0° or 102.0° F., with sweating and chills. An aspiration was attempted, but no fluid obtained. He was given 1-1500 HCl injections intravenously, 10 c.c., every second day. Immediately improvement was noted in his general condition, but in a day or two he complained of considerable left-sided pleuritic pain and discomfort in breathing. The X-ray showed some increase in the shadow over the left base, and the breath sounds became more indistinct. A second aspiration was successful, and 40 c.c. of cloudy fluid obtained, which on examination showed pneumococci and short-chain streptococci. The patient stated that he experienced immediate relief from his pain. The following day he was much more comfortable, and the temperature began to come steadily down to normal. He was given the acid-mineral solution (formula of Guy), 12 drops every 3 hours, with continuation of the intravenous therapy. His condition immediately became extremely satisfactory, his temperature normal and he began eating ravenously. His leucocyte count fell to approximately normal, as might be expected where necessity for phagocytic activity no longer existed. We mention this case to illustrate the point emphasized in the first part of this introduction, that collections of pus may be expected in closed cavities when phagocytic activity is increased. In this case, however, the mere withdrawal of a portion of the infected fluid was sufficient to throw the balance in favor of the patient. A thoracotomy, with weeks and months of drainage and discomfort, to say nothing of expense to the hospital, seems to have been obviated by this simple therapeutic procedure.

In conclusion we wish to say that we feel that the medical profession is probably entering upon an era of remarkable discoveries, based upon the logical theories of Dr. Guy and Dr. Ferguson, who are at the present time suffering from the stings of skepticism on the part of many of their colleagues. We realize most fully that many steps must be taken before the procedures advocated by these pioneers can be accepted by the conservatives. Careful checking of results by laboratory investigation will eventually establish or disprove the assertions made by these men. However, it seems incumbent upon progressive practitioners to make every effort to assist in clinical research which may later prove of unbounded assistance in the healing of the sick patient. We have been led along the paths of synthetic medication for too many years, to the detriment of too many sufferers, as evidenced by the growing incidence of serious blood disturbances, such as agranulocytosis, methemoglobinemia and others. We have often relieved pain without attacking the underlying cause; we have operated when resistance was at too low an ebb; we have prescribed remedies empirically, without clear-cut knowledge of their action or collateral effect. Let us make a determined effort to follow our line of treatment with scientific exactness, and, if we feel justified in assisting the work of Ferguson, Guy and others, we may either offer conclusive proof in condemnation of its principles or congratulate our-

selves on being able to support the efforts of its advocates by accurate clinical proofs and painstaking case records.

HENRY PLEASANTS, JR.,

Associate Editor, THE MEDICAL

WORLD.

ORIGINAL ARTICLES of BURR FERGUSON, M.D.

Birmingham, Ala.

THE METCHNIKOFF IDEA

It seems the time has at last arrived when we may crystallize all of the millions of case histories, with their innumerable therapeutic observations, to confirm the truth of Metchnikoff's conclusion, that "the one constant element or factor in resistance, whether innate or acquired, is phagocytosis."

All too long we have used the work of this remarkable observer in the white counts as an indicator of infection for the surgeon or the internist, after which we have paid no further attention to the little bodies that keep a man from harm.

Bleeding, cupping, counter-irritants, diathermy, the much discussed short-wave cabinet, mercury, arsenic, quinine, insulin, transfusions and the serums, hot and cold water, and whiskey, all have an immediate effect on the most sensitive cellular system. So, since all these procedures have a common effect on this system, we must attribute an essential element in the good results to this cellular stimulation

Now, since studies in Germany and in this country, as shown by the recent paper of Dr. S.M. Alter before the American College of Physicians in Montreal, demonstrate that cancer, diabetes and many infections are accompanied by a pathological variation of the acid-base on the alkaline side, we must look for an agent that will not only stimulate the cellular and glandular forces, but also modify the excessive alkalinity, and the agent that meets all these requirements is — hydrochloric acid.

Another thing which I may have left out of the paper in *MAY WORLD* is: All the drugs with which I have worked, with repeated use lose their clinical potency. Many counts with these agents have shown that with the lessening of the clinical effect goes a weaker stimulation of the white cells. This explains the teachings of the series of courses. These rest permit the body to re-establish a sensitiveness to the drug; so that again when it is administered the white cells are again stimulated in numbers and activity. With HCl, however, this tolerance is not established; so that the last injection is just as strong as the first. I have a case of tabes I use to illustrate this fact for occasional visitors. This man has had the HCl since January, 1928; several hundred injections. With the acid I have kept him from the pain and enabled him to walk. He could not walk across a room when I saw him first in 1928. By the way, it is not the fever of malaria that helps the paretics and such cases as mine — no temperature of 104° or 105° ever burnt up a germ, but the leucocytosis of the inflammatory reaction does destroy micro-organisms.

The fascinating thing to me about this work is that it is as old as the Eden tree and as new as new "cut tooth." How Metchnikoff could have missed anything so simple is a mystery to me. For all the time that the was standing the profession on its beam ends in trying to make us use the white cells, we were saying that his counts might be good, but, since he was only a chemist, he was treading on scared ground when he talked to us about therapeutics. All the time these discussions were going on we were using the Metchnikoff theory in the only positive therapeutic agents then known: mercury, arsenic, and quinine. So, if Mechnikoff had known that the "specifics" were but stimulants for the white cells, Ehrlich would have been known because of his excellent salvarsan and there would never have been side-chain theory of immunity. All of which but confirms the truth of Lord

Medical data is for informational purposes only. You should always consult your family physician, or one of our referral physicians prior to treatment.

Lister's introduction of Metchnikoff to the British Medical Association in 1896, when he said: "the history of phagocytosis furnishes the most romantic chapter in pathology.

I am absolutely bewildered by the effects of these acid injections. On April 22nd, 1933 a boy came to me with an ordinary myocarditis one sees sometimes in syphilis. At the city clinic he had 36 injections of arsphenamin and bismuth. The Wassermann had been brought down to 2+. But he said he could go no further with the awful reactions, nausea, chill, fever, and other effects on his heart. That after the last injection of the arsenic he felt as if he would die. Heart 130; irregular and the Negro had grayish color that one sees regularly in his race when they are very ill. Truly a hopeless prospect. After 3 c.c. of the acid intravenously he almost fainted; so that we had to withdraw the needle and put him on the table to recover. This he did in a quarter of an hour, when I finished the injection without further trouble. On the 24th he returned vastly improved in looks; heart below 100. And I was pleased to hear him say that since the fainting attack he had felt nothing but good. And that this was the first injection in the arm that had not made him worse than he was when he took it. Another injection on the 24th and I saw him no more until May 4th. To my bewilderment we found he had put on 10 pounds in weight, heart regular and 88, and a Negro who is confident of the future.

If nothing else save the comfort and relief given to patients with a deficiency of the HCl in the stomach or to old men with alkaline urine, had been done, all the work has been well worth while in remarkable results that follow the intravenous injection of the acid.

HYDROCHLORIC ACID AND THE PHAGOCYTES

Satisfactory surgical procedure is governed by two essential factors: first, the training, experience and skill of the operator; second, and quite as important as the ability of the surgeon, the repair of the operative wounds. This feature of the wonderful work of the surgeons is left altogether to nature, and, when this natural process fails, as we have all seen from time to time, the operation is said to be a failure or simply an improved case. So far as I know, no suggestions are made in text-books or teaching of any direct method of giving nature any positive aid beyond conventional directions for diet and general care.

As a basis for the following case report, illustrating the failure of nature in collaborating with a skillful surgeon, suppose it is said that the repair of wounds is but one of the ubiquitous activities of the white blood cells and that these cells do the most efficient work in a medium of modified alkalinity of the blood stream. If it be granted that this idea renders the phenomena of repair a bit clearer, one should see a marked healing activity in surgical wounds after a stimulation of the cellular forces.

After every surgical procedure there is an increase in the numbers and activity of the white blood cells, greater or less according to the size of the wounds and the loss of the blood. So a further stimulation of these cells would be but an application of the conclusion of William Harvey, almost 300 years ago: "Nature herself must be our adviser; the path she marks must be our walk"

For the busy clinical medical man in general practice, whose time and resources do not permit frequent counts of the blood cells, it might be interesting to recall the unbelievable numbers of the white blood cells provided by the body, not only for the repair of wounds, but also in the elimination of harmful germs and the demolition of pathological tissue. Seven to eight thousand white cells to the cubic millimeter seems casual. But when one considers that a man of 160 pounds has about six liters of blood and that each liter has normally about eight billion of the forces of repair and defense, or forty-eight billion in the circulating medium, the bountiful provision of nature is better comprehended. So with each increase of 1,000 to the cubic millimeter, a billion more cells is added to each liter. It would seem that it would appeal to us to work with such a force.

To illustrate the good work of the surgeon and the failure of nature in her essential work of repair the following case is reported:

About the first of August 1933 I was called to see a case of acute infec-

tion in a man. A well-marked pallor and evident loss of weight, giving evidence of some chronic ailment of his wife, gave me really more interest than the acute illness for which I have been called. In reply to my request for information as how she was losing so much blood, she told me that in 1929 she had been operated on for infection about the anus and internal hemorrhoids. But that following the operation there had been little or no change in the bleeding and that every evacuation was accompanied by more or less pain, which was said to come from ulcerations about the anus. That on the advice of the surgeon she dilated about twice a week a much constricted anus, which was always painful.

Since there seemed to be no means of making a satisfactory rectal examination I accepted her report of the diagnosis of the surgeon.

Clinical experiences of the past ten years having convinced me that the stimulation of the white blood cells induces a noticeable increase and activity in the healing of wounds, I felt very sure that the bleeding would be easily controlled. At once I began the daily injection of 1-1000 solutions of hydrochloric acid (Loeser). On the fourth day I was told there was no evidence of any bleeding, and after the first week the patient no longer felt it necessary to dilate the anus, and felt much better. During the third week, in a series of fourteen injections of the acid, I had an opportunity for a rectal examination in my office. The anus seemed to be normal, as no undue pressure was necessary in the insertion of the proctoscope. Numerous cicatrices of smaller ulcers and several larger lesions, not completely healed, were seen, but an active process of healing was observable.

The acid injections have been continued about twice a week and after the 25th injection all lesions are completely healed.

The observations of the changes in weight of this patient indicate clearly the benefit of this plan in the healing of wounds. Before the rectal involvement this patient weighed 140 pounds. At the time of the operation in 1929 she weighed 130 pounds. Two months after the operation her weight was about 100 pounds. In the four years since the greatest weight has been 109 pounds.

When the injections of hydrochloric acid were started on August 1st she weighed 105 pounds. Since that time there has been a gradual increase in strength and weight and on October 16th she weighed 118 pounds.

One may conclude from the ready response to the stimulation of the natural forces of repair by the injection of the hydrochloric acid and the most satisfactory improvement in looks and feeling of well-being that the surgeon's work was well done and that the failure was altogether due to a lethargy of the white blood cells.

In all cases of elective operations which I have the opportunity to see I use daily injections of 1-1000 to 1-250 hydrochloric acid four or more times in order that all the natural forces of resistance may have the greatest activity at the time of the operative procedure. Clotting of the blood is hastened, consequently much less blood is lost, repair is much quickened and the convalescence shortened.

The stimulation of the natural forces repair may also be done by the injection of neo-arsphenamin, any of the several preparations of mercury, bacteriophage or the proteids. I prefer the injection of the hydrochloric acid because of the comparative freedom from the inflammatory reaction following this injection. Also because my clinical observations have convinced me that a greater degree of phagocytic activity follows the acid injection than any other I have known.

This induced activity, I believe, is due to the fact that the white cells are acid in reaction, and since hydrochloric acid is the only inorganic acid made by the body, this acidity of the white blood cells may be logically attributed to this acid. May we not conclude that these acid cells are the elements in the blood stream which maintain the acid-base balance of circulating medium?

If it is granted that this hypothesis might have in it an element of truth, the conclusion is inevitable that the hydrochloric acid is not a medicine at all in the accepted meaning of the term, but simply an essential factor in the chemical balance of blood.

Perhaps if such a conclusion could be accepted even a Christian Science practitioner might use the injections of hydrochloric acid as a

Medical data is for informational purposes only. You should always consult your family physician, or one of our referral physicians prior to treatment. very positive aid to the mental processes of his patients.

HYDROCHLORIC ACID AND OXYGEN CONTENT OF RED CELLS

Among the reports before the recent meeting in Cambridge of the American Association for the Advancement of Science, was one by Dr. W. V. Macgilvra, of the Harvard Dental School, on the intravenous use of a solution of hydrochloric acid. He said: "The patient was moribund, due to the unexpected effects of an anesthetic. The hydrochloric acid was injected at 10:15 a.m. Eight minutes later lips began to twitch; in the minutes the hands moved; in 40 minutes the patient was talking coherently." "Repeated studies of this patient since have failed to disclose any ill effects." Dr. Macgilvra said, further, that the acid had been given to six other cases, and it was found that respiration, blood pressure and pulse were increased and lost reflexes restored. Dr. Macgilvra said, also, that was the first time the hydrochloric acid had been injected intravenously in man.

Within the following week there was a published report in the *Kansas City Star* of the use of the intravenous injections of the hydrochloric acid solution in 300 guinea pigs after the cessation of respiration following anesthesia. Miss Pearl Moorman, who made these determinations, said that lactic acid was also tried, but that the animals in which it was used all died. The report indicated that a search would be at once instituted for the reasons for these unusual clinical phenomena. With whatever value there may be in some six years of observation of patients with all manner of infective diseases under the influence of the injections of hydrochloric acid solutions, it is possible something may be suggested to clear up problems which now seem obscure, both with the patient in Worcester and the guinea pigs in Joplin.

The explanation I am about to lay before my fellows, of course, has as its *raison d'etre* changes in the blood cells following the injection of solutions of hydrochloric acid. To any colleague who may have read papers of mine in the past I will say at the beginning that I shall not discuss the white blood cells nor the Metchnikoff idea, since neither the phagocytes nor the Metchnikoff theory played any part in the clinical changes I am about to describe.

Early in the month of January I was called to see a patient, a man of 55, apparently dying from angina pectoris. He was alone in a hotel room and could give me no history of his ailment. Apartly empty bottle of digitalis on the dresser, stertorous breathing from water-filled lungs precluded any possibility of hearing anything of the very rapid and tumultuous heart. With the aid of a bellboy I gave him an intravenous injection of a 1-250 hydrochloric acid. Before the completion of the injection of the 10 c.c., the breathing had improved and he rested easier. Within a few minutes he told me he had angina for four years, during which time he had taken digitalis. That he had taken a dose of it a little while before I had been called, but that he could feel no good effect whatever. During the forty minutes following the injection of acid solution, while the breathing was still done with appreciable effort, improvement was such as to make me believe that he would recover. Twice during this period he got up from his bed and went across the room to the bathroom.

At the end of the forty minutes, however, the breathing became worse, edema in lungs increased, and within a few minutes the patient became unconscious, in spite of subcutaneous injection of the acid. Within something over an hour he died.

I shall attempt to show that the passing improvement in this case of angina pectoris and the recovery of the anesthesia case in Massachusetts, as well as the guinea pigs in the West, were all due to the stimulation of the same cellular activity by the injection of the hydrochloric acid. The explanation comes from Wisconsin.

During the summer of 1933 Dr. John Edmonson spent a few weeks in the Battle Creek Sanitarium with Dr. Paul Roth. Since Dr. Edmonson had been using intramuscular injections of hydrochloric acid for several years, Dr. Roth heard reports of the clinical behavior of patients with diverse infections and ailments which had come un-

der his observation. Some one of these reports so impressed Dr. Roth that it was determined to make an observation on any change that might be noted in the red cells. Readers of this paper will note that the subject of phagocytes is not brought up.

The following table shows the changes in Dr. Edmonson's red cells after the injection of 10 c.c. of a 1-1000 solution of the acid:

SOME EFFECTS OF INJECTION OF 10 c.c OF 1-1000 HCl on VENOUS BLOOD

Specimen Number Before Injection	Time	O ₂ Content	O ₂ Capacity	%Saturation	Hemoglobin	CO ₂ comb. power	pH of blood	% cell vol.
1.	11:20	8.56	21.85	39.2	16.3	70.37	7.48	36.
Inj. HCl	11:25							
2.	11:55	14.69	20.96	70.1	15.6	64.46	7.50	34.5
3.	1:35	5.95	18.38	32.4	13.7	64.43	7.49	35.2
4.	4:45	7.34	20.30	36.2	15.1	63.34	7.45	33.5

I quote from Dr. Roth's kind letter: "The above figures show that the injection of hydrochloric acid intravenously does not materially change the 'CO₂ capacity' of the blood, while the O₂ content is markedly increased in 30 minutes after the injection. The CO₂ combining power is decreased and remains at a lower level for several hours. Similar results were noted in several other cases, except in one instance in which very little change occurred in the CO₂ combining power only.

"I wish to suggest to you that an increased oxygen content of the blood is readily, though roughly, observed by merely noting the change in the appearance of the blood to a brighter color."

In the light of the observations of Dr. Roth it would seem to me that the temporary improvement in the angina case and the recovery of the "moribund" anesthesia case were due to the increased oxygen content following the injection of the acid.

I am most grateful to Dr. Roth for the information given in this report of his determinations because of the enlargement of perspective. Phenomena for which phagocytic activity or chemical change failed to furnish an explanation now are clear. For example, in December last I was called to see a young woman with a temperature of 103-1/2°; respiration, 36; pulse 115; great pain in involved lobe, lower left. There was marked improvement in the heart, breathing and general condition within a few minutes after the injection of the acid. During the following three days an injection of the acid was given every day, and on the fifth day she sat up in bed to eat breakfast of a cereal, eggs and coffee. There were no inflammatory reactions following any one of these injections. Although the temperature was normal, I gave as a tonic an intravenous injection of 1-1500, solution of HCl, following which there was a marked reaction, which gave the nurse more to do than she had during the activity of the pneumococci. After which the patient went to an uninterrupted recovery. For the explanation of the inflammatory reaction, I have none. Nor had I any reason satisfactory to myself for the behavior of the patient after each injection of the acid. Her clinical improvement softened the regret of my own lack of knowledge. Now, however, with the information given me by Dr. Roth, the explanation of the clinical change seems just as simple as it would have seemed if an oxygen tent had been used. I doubt very much if the inhalation of oxygen in a tent causes an increase in the content of this element in the red cells so great as that which follows the injection of hydrochloric acid.

All of us will agree that two important factors in the well-being of these bodies of ours are copious amounts of oxygen in the red blood cells and the maximum activity of the phagocytes of the defensive force of the individual. In *THE MEDICAL WORLD* of May, 1933, was a paper showing the marked increase in phagocytic activity against the staphylococci after the injection of hydrochloric acid. So through the use of this basic acid of the body two of the cardinal principles of resistance may be easily induced. In closing, I congratulate

Medical data is for informational purposes only. You should always consult your family physician, or one of our referral physicians prior to treatment. late Miss Pearl Moorman, of the Duncan Laboratories, Joplin, Missouri, and Dr. W.V. Macgilvra on their use of intravenous injections.

QUININE AND CHLORIDES

Dr. W.B. Guy has just sent to me a copy of *THE MEDICAL WORLD*, describing his use of the hydrochloric acid injection and your most interesting discussion of the effects of quinine in gonorrhoea. In all of the determinations I have done the increase in the exudate of such infections is the direct result of the increase in numbers and activity of the white cells. In the old books on therapeutics quinine sulphate in very large doses was highly recommended in the treatment of puerperal sepsis. So basically I think we must attribute the results to an induced phagocytic activity from the potent effect of the administration of quinine. Several years ago I treated a number of cases of furunculosis by the intramuscular injection of dihydrochloric acid of quinine, with excellent results.

Since all these drugs that seem to do so well have a bit of chlorine as an active principle, I use HCl in the treatment of all infective diseases which I happen to see. Not only because of the chlorine, but because this acid not only stimulates the essential factor in the inflammatory reaction, but also seems to have a most potent influence on the acid-base balance of the blood stream. And with the modification of the pathological alkalosis the phagocytes seem to engulf the invading organisms with increased avidity.

“FAVORITE MEDICINE”

Evidently Dr. W.D. Anderson has found that the drugs and procedures taught during his college life are not altogether satisfactory. Like many of us, he is being forced to rely more and more on observation, hygienic directions, hope and nature for the relief of many of his patients suffering from the consequences of the presence of various infecting organisms. His earnest request for information of “favorite medicine” is the reason for this paper, in which a plan will be laid before him which may be helpful.

Nature has earned the reputation of being the best of doctors and since by far, the greater number of our maladies are the direct result of the presence of germs or their sequelae, nature must have some simple and easily understood method for their elimination; otherwise the well-earned reputation as leading in therapeutics could not have been maintained over so long a time.

With the recent collapse of the side-chain theory of Ehrlich, the very last word in humoral immunity, the last vestige of faith in the “humors” as protective of curative factors was removed. Without the Ehrlich theory it will be granted that we have no principle before us for the elimination of germs, the repair of wounds, the demolition of pathological tissue. In view of this dearth of therapeutic knowledge I wish to discuss “the one constant factor in resistance, whether innate or acquired — phagocytosis,”¹

¹ Metchnikoff.

Since the white blood cells have been used for a generation as indicators of infection or the virulence of the organisms involved, it must be granted that this mobile cellular system plays an important role in all infections. When it is known that countless determinations during the past ten years have shown that all of the best used drugs and procedures in time past and time present have a more or less potent influence in artificially stimulating this cellular force, their consideration might be worth while.

Among the stimulants for the white cells a beginning might be made with one of the oldest of remedial measures of which we have record, cantharides ointment vigorously applied in arthritis, as used in Greece early in the Christian era. With the following erythema the early classical observers might have seen marked changes in the cellular picture, had Van Leeuwenhock, the janitor in Delft, made his discovery of the microscope a bit earlier. So with mustard plasters,

counter-irritants of all kinds, cupping, leeches or bleeding of our medical forbears, or queerly enough in the transfusions of blood of our time.

So with drugs, mercury, whether by inunctions, the copious doses of calomel of the past or the intramuscular or intravenous injections of the present, counts before and after will show an immediate effect on the cellular system. So with arsenic, bismuth or serum injections. Also with the short wave and the following induced fever or the therapeutic application of the X-ray or the well-used diathermy of many of our colleagues. Counts before and at hourly intervals after the use of any one of the foregoing drugs procedures will demonstrate the effect of the procedure on the white cells.

So through this cellular system and its artificial stimulation by medical observers we have a straight line of therapeutic endeavor to connect us up with our Greek colleagues before we became Christians.

Dr. John Edmonson, a local colleague, has suggested that this cellular army of defense may be definitely likened to the defensive force of the nation. In this national force we have one army and one navy trained and equipped to the resist inroads or enemies of whatever kind. That we do not have a specific army for each and every potential foe, but one centrally directed fighting force as a nucleus to which we add millions of recruits by the draft when the country is in danger.

So with and in the ceaseless war with the enemies of mankind, Dr. Edmonson thinks nature uses one defensive force, and only one.

Since the final proof of the truth of any theory of resistance and its control is the effects to be observed on a sick man, means for the mobilization of the cellular forces must at once be considered. Pretty well all the drugs and combinations of drugs have been tried and found wanting for one or many causes. So in the consideration of this plan for setting up more active resistance to the inroads of germs it might prove worth while to use a drug hitherto unused in the treatment of infective diseases if we can be assured that no possible harm will result and there is any promise of the elimination of harmful microorganisms.

The essential character of the white blood cells in resistance cannot be denied; but these cells must have a proper field in order that the best phagocytic work may be done. Unfortunately, however, in cancer, diabetes and many infections it has been recently shown by various laboratory observers that there is an accompanying superalkalinity of the blood. Now, this alkalinity must be the direct result of the presence of germs to inhibit the aggressive activity of the cellular compared to the use of chlorine gas and in the late disagreement in France.

The white blood cells are acid² in reaction, circulating in an alkaline medium. Since hydrochloric acid is the only inorganic acid made by the body it must be the basic acid of the most delicate chemical balance of the blood. So if there is a pathological variance of then normal balance of the blood a logical procedure would seem to indicate the injection of this essential acid. Now, such an injection of this hydrochloric acid solution not only seems to have a most beneficial effect on the blood reaction, but is also followed by an increase in the numbers and activity of the white blood cells. The following leucocytosis usually reaches its maximum four or five hours after the injection, but there is left a well-induced phagocytic activity that is maintained 24 hours or longer.

¹ Metchnikoff.

Verification of the truth of this conclusion is furnished by the following observations of good friends, who as yet are unable to draw conclusions from these determinations. Three billion of the staphylococcus albus were injected into a guinea pig. Examination of the cells after the injection of the organisms showed that 23% of white cells had engulfed the cocci. So we may conclude that this figure

Medical data is for informational purposes only. You should always consult your family physician, or one of our referral physicians prior to treatment.

represents the natural phagocytic reaction to the injection of the infecting organisms. Thereupon the hydrochloric acid solution was injected. Within two hours 32% of the white cells were showing pronounced phagocytic activity in engulfing the micro-organisms. The next determination, done 24 hours after the injection of the acid, showed phagocytic activity in 69% of the white cells, an apparent improvement of over 200% on nature. Details of these determinations follow (See table below).

The foregoing determinations give to the writer a logical reason for the clinical observations in the elimination of all varieties of germs from infected individuals, and demonstrate beyond the value of the acid injections in augmenting the purely natural phagocytic activity.

Besides the removal of germs another daily problem of the surgeon and of those in general practice is the healing of wounds. Here, too, nature makes constant use of the ubiquitous activities of the white blood cells as shown by Dr. Carrel in 1922. "The existence of mechanisms causing leucocytes to invade tissue in need of repair is certain. The initiation of healing seems to depend on the coming of the leucocytes to the wounded tissue. The leucocytes have the important function of promoting cell multiplication in the parts of the organisms where they accumulate."

The truth of the observation of Dr. Carrel may be quickly demonstrated by an artificial stimulation of the white cells by giving a few daily intravenous injections of hydrochloric acid in preparation of patients for elective operations, or in the treatment of ulcers, infected or clean wounds. Surgeons will see an astonishingly small number of infected sutures and a marked hastening of the repair of the surgical wounds and shortening of the convalescence, particularly if the injections of the acid be given every day or every other day after the operation.

In recommending the hydrochloric acid injections for the stimulation of all of the known and unknown forces of resistance in the treatment of infective diseases the writer does so with full confidence in the safety of the procedure and the delightful freedom from the annoyances of the inflammatory reaction so often seen after intravenous injections.

BEFORE HCl	TWO HOURS AFTER HCl	24 HOURS AFTER HCl
1%—6 bacteria	2%—8 bacteria	15%— over 20 bacteria
21%—2 bacteria	2%—6 bacteria	3% " 19 "
1%—1 bacteria	3%—4 bacteria	1% " 18 "
	25%—2 bacteria	2% " 17 "
23% phagocytic		3% " 16 "
77% non-phagocytic	32%— phagocytic	1% " 15 "
	68% — phagocytic	3% " 14 "
		2% " 14 "
		4% " 13 "
		1% " 12 "
		2% " 10 "
		34% " 1-10 "
		71% phagocytic
		29% non-phagocytic

Readers of *THE MEDICAL WORLD* have only to recall the astonishing results in the treatment of cancer and of many infections reported by Dr. Walter B. Guy, of St. Augustine, Florida, following the acid injections with his own addition of various chlorides and potassium salts, to know that some powerful force is added to resistance. My good friend, Dr. Guy, and I are not agreed as to the reasons for the results. He attributes the undoubted clinical phenomena to the addition of the chlorides and other chemical elements, while I persist in my conclusion that the effects are due to the induced phagocytic activity and the modification of the pathological alkalinity of the blood. However, we are in hearty agreement on the good clinical effects of the acid injections.

Observations just published by Dr. Glover from the Public Health

Service Institute of Health, in which definite proof has been furnished of the infective origin of malignant diseases, give a cogent reason for the good results reported by Dr. Guy in the treatment of these hitherto hopeless maladies.

Our young colleague in Okalahoma may be disappointed in hearing of a "cure-all" in answer to his request for papers on "favorite medicine." If this impression is made the writer can only reply that hydrochloric acid, in his opinion, cures no ailment of any kind, but that its injection is followed by a most marked stimulation of cellular and glandular activity not seen clinically following any of the many other agents used for the stimulation of the white cells. I contend that nature has a "cure-all" defensive system, and that it is to this force that we must attribute the unquestioned clinical results. Such results but confirm the adage of the ages that nature is the best doctor.

In no sense is the writer to be understood as suggesting the hydrochloric acid to take the place of well-recognized directions for hygienic care, diet and other measures found best for the particular case, but simply as adjuvant in the demolition of pathological tissue, the repair of wounds and the elimination of harmful micro-organisms. A solution of 1-1000 U.S.P. hydrochloric acid in distilled water has been found itself in 10 to 20 c.c. intravenous injections, this being the strength of this acid solution in the stomach.

The importance of the cellular fighting forces and agents of healing and repair is conclusively shown by Dr. C.A. Doan, of Ohio State University, in a paper on "The Neutropenic State," in which he says:

Roberts and Kracke were among the first to recognize the importance of analyzing accumulated data in terms of white cell level and symptomatology. In a review of the records of 8,000 private clinic patients 1 out of every 54 was found to have a mild granulopenia; 1 out of every 2 women patients between the ages of 40 and 60 years was neutropenic; and complaints of weakness exhaustion and fatigue were twice as frequent in the granulopenic individuals as in those showing a normal white cell count. Furthermore, the severity of the symptoms paralleled, to a remarkable extent, the degree of granulopenia found.

INTRAVENOUS HYDROCHLORIC ACID AND BLOOD TRANSFUSION

Through the kindness of Dr. George C. Williamson, of Columbia, Tenn., the following case report is made to illustrate the remarkable changes in the blood pictures after the injection of hydrochloric acid and in the same case the transfusion of blood, both procedures being followed by a marked stimulation of the cellular forces.

On the night of April 4th Dr. Williamson, in a talk over long-distance telephone, told me he had a woman patient of 73, apparently in a dying condition, with evidences of a marked abdominal infection, with temperature and blood picture as shown in the chart, with diagnosis uncertain. I replied that I could give him no advice, but could only tell him what I would do were I present in Columbia, that I felt a marked change could be made in blood picture by the injection of hydrochloric acid.

Within ten days thereafter Dr. Williamson was so good as to send charts with the information that the patient had died. So the case is reported to show the failure of the measures taken in spite of the changes in the cells. Also as an illustration of the changes in the blood that must have accompanied the clinical results reported by another Tennessean in *THE MEDICAL WORLD*, Dr. W. I. Howell.

THE KING'S DAUGHTER HOSPITAL

Columbia, Tennessee
Laboratory Report

W.B.C.

Differential

April 3, 1933 3:00 p.m. 1,750
 April 4, 1933 9:00 a.m. 1,400 Neutrophiles- 1 Lymphocytes-11
 April 4, 1933 4:30 p.m. 1,750 Lymphocytes- 1
 April 5, 1933 7:30 a.m. 4,900 Neutrophiles-52 Lymphocytes-48
 April 5, 1933 4:30 p.m. 8,600 Neutrophiles-60 Lymphocytes-40

Medical data is for informational purposes only. You should always consult your family physician, or one of our referral physicians prior to treatment.

April 6, 1933 7:30 a.m. 20,100 Neutrophiles-79 Lymphocytes-15

Transitional- 6

August 7, 1933 7:30 a.m. 26,650 Neutrophiles-79 Lymphocytes-14

Transitional- 7

August 7, 1933 4:30 p.m. 19,950 Neutrophiles-88 Lymphocytes-12

April 8, 1933 8:30 a.m. 31,600 Neutrophiles-89 Lymphocytes- 8

Myelocytes- 3

April 4, 1933 10 c.c. 1-1500 hydrochloric acid

April 6, 1933 Transfusion 250 c.c. "whole blood."

I have never seen such changes in the blood picture. These changes give an explanation so lucid as to the reasons for the results reported by Dr. Howell as to make publication useful, I would think.

One can get the same effect on the stimulation of the phagocytes by the injection of 20 or 30 c.c. of blood intra-muscularly. In such injection, of course, no examination of the blood of the donor is necessary save that it is clean and free from any infection. So much time might be saved by the use of such an injection of blood or the use of hydrochloric acid.

STRONGER SOLUTIONS OF HYDROCHLORIC ACID

When nature developed hydrochloric acid in the evolution of animals by the extraction of chlorine and hydrogen from food and drink for the maintenance of the acid-base balance of the blood stream, a very peculiar acid was the result. Its presence is essential to all glandular and cellular activity. And the fascination of its use lies in the fact that laboratory determinations are not necessary to confirm this statement. One may observe the changes clinically, which, after all, furnishes the final test of any theory; for example, no theory ever started its clinical test with more conclusive laboratory proof than did the Ehrlich theory, and yet twenty-five years of faithful trial were required before the conclusion was reached that the side-chain theory was utterly worthless, thus taking its place along with all humoral theories as a souvenir of past relief.

Dr. Paul Roth, of Battle Creek Sanitarium, found that after the injection of 10 c.c. of 1-1000 hydrochloric acid intravenously the oxygen content of the blood was almost doubled in 30 minutes after the injection. Hourly counts after an injection will show the immediate effect in increasing the numbers of the white cells and the quick correction of an improper balance as shown in the differential. So when this basic acid of the body is injected there is an immediate effect on the oxygen content of the red cells, a may see phenomena which can only be explained by some peculiar chemical effect on the acid-base balance. With the foregoing facts and impressions as a basis, one may always find a case for illustration of the many peculiarities of hydrochloric acid an acid which I do not use as a medicine, as I was taught to consider drugs. It cures no ailment known to me but simply stimulates all the known and unknown forces of resistance, the same forces that have earned for nature the reputation of being the best of doctors—the same forces which Hippocrates called "a vital spirit inherent in all of us for the correction of ailments of our kind."

On September 22, 1934, a young man of 25, weighing 104 pounds was brought to me by his father. A well-established case of asthma, with a history of five years' duration, was given as the reason for the visit. In the piping voice of a little boy the anemic young man, with the characteristic prolonged expiration of asthma, gave me haltingly the story of visits from his home in Oklahoma to El Paso and Phoenix, Arizona. He reported temporary improvement in both towns immediately after his arrival, but this helpful changes was soon replaced by the same attacks of difficult breathing. In spite of a great quantity of mucus in both lungs, as shown on auscultation, there was a little or no expectoration. White cells were 7800 and red cells 3,200,000 per cubic millimeter, so furnishing an opportunity for increasing both white red cells by the injection of hydrochloric acid.

Since the F.A.M.A. has so frequently given the opinion that injection of 1-1500 hydrochloric acid was dangerous in the great hemolysis following its intravenous use, I decided to look for danger in this case, which I had done many times before. So I gave 10 cubic centimeters intravenously, 1-250 put-

ting the remaining drop of blood in acid solution on a slide at the finish of the administration of the injection. Nowhere could one see any change in the contour of red cells. According to the opinion from Chicago I should have seen destructive change, but I did not.

The patient was asked to return the next day. This he did, and he told me that he had never had such an expectoration. An examination of this sputum showed a few streptococci and staphylococci, and numberless white cells; so it was not necessary to confirm this stimulation of the white cells by counts. Clinically I have never seen such expectoration from infected lungs following the use of expectorants as given in materia medica as one sees after hydrochloric acid.

Six injections of the 1-250 solution were given every seven days. After the first week there was a great decrease in the expectoration, a marked decrease in the severity of the asthmatic attacks and a small increase in weight. Also an increase in strength. Before beginning the acid injections he could not walk one block without stopping one or more times for rest. At the end of the first week he could walk the block without discomfort. After sixty injections of the acid the patient was apparently free from asthma, but occasionally had at night what he described as "wheezing", attacks. so the injections were continued to try to eliminate the wheezing and in the effort to get the weight back to the original 140 pounds, as at this time he weighed only 120, a gain of 16 pounds under the influence of the acid-stimulated cells.

To my utter surprise, in late November his appetite failed and he began to lose weight. Acid injections were continued as before. After a few days' steady loss of weight a severe attack of asthma was reported and he has lost 8 pounds in weight. This was therapeutic anomaly, and as I saw it was only to be met by the injection of more hydrochloric acid. However, stronger solutions than 1-250 intravenously are painful at the site of injection and oftentimes this pain is continuous for several hours up to the shoulder. so on December 1st I gave more acid by making up a 2 per cent solution of novocain and adding hydrochloric acid to make a 2 per cent solution of the acid. To make it a series of 2's 2 cubic centimeters were injected deep in a gluteal muscle. About 1/10 of a cubic centimeter was first slowly injected, and was felt by the patient as a slight stinging sensation. After one minute the anesthetizing effect of the novocain was in force, and the rest of the acid solution was very slow injected. The discomfort following was negligible. Visits were made every 48-hours or three times a week; so that today he had the eighth injection of the 2 percent hydrochloric acid in novocain solution. His clinical behavior has proved the truth of the reason for the change; that is, that the only medicine better than hydrochloric acid is more of it.

Today the patient weighs 118 pounds, has not had an attack of asthma this month, has walked 3 miles a day to make the visits here; hemoglobin is 90, red cells 4,770,000 per cubic millimeter; white cells 8400, before the injection of the acid.

As an indication of the behavior of the white cells under the influence of the acid injections a count was done on the morning of the third visit, after two injections of the 1-250 solution, and was 10,400. So I felt fairly sure of the ultimate results after seeing this increase of 2,600,000 white cells to the liter of blood over the first count 48 hours before, of 7,800. As I see it, these counts illustrate vividly the power of the basic acid of the body to stimulate the one constant factor in resistance — phagocytosis.

With the check in clinical improvement and loss of weight after two months of the intravenous injections and the immediate change for the better under the influence of the stronger solution intramuscularly, I feel it must be attributed to a direct effect on the acid-base balance of the blood stream. At any rate, the clinical behavior of this patient shows that this intramuscular injection is more potent than the intravenous administration of the acid, in some cases.

The change in the voice of this patient has been quite as marked as that in the red count. As mentioned before, on the first visit he had the voice of a small boy. Within two weeks it would have been noted as sonorous and deep in "Fultah Fisher's boarding house." The disappearance of the anemia, I think, is to be accounted for by doubling the oxygen content of the blood six times a week and by the added activity to the phagocytes in neutralizing the toxins or eliminating the germs causing the asthma.

There have been no inflammatory reactions or any discomfort

Medical data is for informational purposes only. You should always consult your family physician, or one of our referral physicians prior to treatment. attributable to the injections of the hydrochloric acid, and in passing I might say I have given after novocain this intramuscular injection as strong as 10 per cent, 2 c.c. So the opinion of the colleague in the Association journal as to the danger of the injection of hydrochloric acid is wrong.

DOES HYDROCHLORIC ACID INTRAVENOUSLY HARDEN ARTERIES?

The observations of Dr. Miller of hardening of the arteries after a few injections of solutions of hydrochloric acid in a man of 70 are well worth consideration. In my experience the only hardening of the blood vessels I have seen was at the site of the injection of solutions stronger than those used by Dr. Miller, and was in veins rather small. Since Dr. Miller does not say what strength of the acid solution was given his elderly patient, for purposes of this discussion suppose we say he used 1-1000 HCl or 0.01 in 10 c.c. of water.

Unless this solution is given very rapidly it is difficult for me to see how any irritation is made even at the site of the injection. As to any such effect on the arteries, I cannot see how less than 1 drop of hydrochloric acid in 10 c.c. of water in five or six liters of blood could possibly be so potent as to cause such irritation of the arteries as to cause any hardening.

My technician and I have had a greater number of the acid injections than any patient I have had save one — he has had so many his history is worth a paragraph later. This technician weighs about 112 pounds — I weight 160, Veins are rather small in both of us. In these determinations all variations of the acid solutions have been used up to 4%. After one takes one injection of the acid solution intravenously after the strength is increased beyond 1-250 only wants one of each strength up to 4% to feel that the investigation has gone quite far enough, for it is painful for several hours, the pain going up to the shoulder. Such intravenous injections are used rarely on patients.

When I began to give intravenous injections of the hydrochloric acid to my technician in December, 1929, she had acne, with induration of the skin and a deficiency in acid content in the stomach. She had one prominent vein, the median basilic of right arm. With the repeated injections of the acid the walls of this vein grew thicker slowly. After the injections were made stronger the vein was usable about a year, when I fancy I must have given some solution a bit too rapidly, when it became totally occluded and has continued so. It is now necessary to use smaller veins.

In my own case the small vein has been used regularly for about five years. One cannot see it. It can only be felt, and the technician is the only one who can strike it. Kind urological friends occasionally give me an injection of the acid and, after a few attempts, use a vein on the dorsal surface of my hand.

A little personal history might not be amiss just here. After unusual physical exertion in October I had a slight hemorrhage of the brain about the fissure of Rolando, sufficient to make my right side, particularly the hand and arm, rather useless. Blood pressure in the Veterans' Hospital was 170, 100. After a fair amount of persuasion my kind colleague, Dr. Edwards, agreed to give me this "dangerous" drug in 5 per cent solution intramuscularly. The white count at the time of the injection was 8500. Four hours afterward it was 15,900 per cubic millimeter. This procedure was suggested because the lymphocytes are known to be the agents for the removal of extravasated blood and for the demolition of clots, and I felt that the injection of the acid would simply increase and make more active this purely natural phenomenon. I was appreciably better after three of these injections — so much so that I took a leave to return home to hear a paper on the intravenous injection of HCl by Dr. C.W. Shropshire, a urologist of Birmingham.

My technician continued the intramuscular injections as given in the hospital every other day for two weeks. Since then I have had

HCl intravenously or intramuscularly every week or ten days — and my blood pressure is now 150, 190, and there is no evidence of any hardening of the arteries. Hence I am forced to think that any hardening of the arteries in Dr. Miller's patient came from some cause outside of the acid injections.

Now to tell Dr. Miller of the patient of 69 who has had more of the acid injections than I have. I saw him first on January 4, 1928, in the City Venereal Clinic, supported on one side by a young Negro and on the other by a heavy cane; both agents were necessary for locomotion. He came to the clinic, not for treatment, but to sell, paradoxically enough, health insurance. His condition gave a vivid illustration of one's need for it. *Tabes dorsalis*, with a history of 15 years, was his principal malady, and he was attempting to get sufficient money from the sale of insurance to buy a wheel chair for future progress.

At this time I had been using the hydrochloric acid injections for five weeks intramuscularly; so this agent was told of what I thought to be the promise of interesting clinical determinations. He was given 10c.c. HCl c.p. 1-1500 (0.0 in 90 c.c. of distilled water) intramuscularly, two such injections being given per week. The Negro boy's services were no longer necessary after the seventeenth day following the first injection. By the way, this man's white count was 3500 before the injection; within an hour thereafter the count was something above 5000. For two years he was given two injections a week, sometimes three.

During this time I began the intravenous use of the acid, and tried it on him on several occasions and each time there followed a pronounced inflammatory reaction. This was never seen after the intramuscular injections of the weak acid solution. Bismuth or salicylate of mercury, however, would be followed by a marked reaction.

During the third year one injection every five days seemed sufficient for this soliciting salesman to carry on. At the end of this time I began to use still stronger solutions of the acid, and this case of *tabes* furnished a useful subject. It was found that solutions stronger than 1-250 were followed by reactions; the stronger the solution, the greater the reaction. So marked was this phenomenon that he was really sick for a few hours after 5 per cent. But happily his visits became less frequent, and he only came when the numbness, incoordination or pain was marked. On every such occasion, when we have done a count, a marked leucopenia has been found. With the quick re-establishment of more nearly a normal count these symptoms were markedly relieved. This patient is now having intramuscular injections of 1-250 two or three times a month, and since he goes about the town wherever he cares to go, with a small amount of occasional discomfort, I feel that his malady is being kept under control and that life is a bit more livable than it would be without the acid injections. He has had over 400 injections of the acid as described, and if he has any induced hardening of the arteries I have never seen any evidence of it.

It is an interesting fact that some 300 years ago in Africa Negroes with nervous diseases were brought to the coast or to sea level where they might be infected with the malady that we now know to have been malaria. Because these primitive people had found that such cases improved when chills and fever accompanied the more disabling malady, would it not be entirely logical to conclude that the benefit that must have been seen was the result of the cellular stimulation that accompanied the inflammatory reaction in the paroxysm of malaria? In the light of the present practice of the infection of paretics by the direct injection of the plasmodium of malaria, one might conclude we were agreed that the Negro had found a useful therapeutic procedure. So if one can induce the essential factor of the inflammatory reaction without the chill and without the fever by the simple injection of the basic acid of the body, the acid on which the acid-base balance is maintained, one might think it worth while.

HYDROCHLORIC ACID AS A GERMICIDE

Medical data is for informational purposes only. You should always consult your family physician, or one of our referral physicians prior to treatment.

For a very long time chlorine has been known as a potent germicide in laboratories, but clinically no means for its successful use in infected wounds or ulcers has been found, so far as I know. With a few changes these manifestations of infection are treated now about as was done in the early nineties. Twenty years ago it was said that the solution had been found from which the chlorine would be liberated. The promised germicide was made from a solution of chlorinated lime, soda and boric acid, and theoretically it was the ideal agent for local application on infected lesions. Like the many other agents for such local application, clinical results did not come up to the laboratory promises. In the most exhaustive paper on ulcers in the *J.A.M.A.*, January 26, 1935, among the numerous agents used in the Cook County Hospital for these lesions, the solution of lime is not mentioned. Hence we may conclude that this preparation has not proved to be of any clinical value.

In 1919 and 1920 I had the good fortune to be associated with Dr. Carl Yount, of Pittsburgh, in the Morskoi Hospital, Vladivostok, Siberia, in the service of the American Red Cross. This institution was maintained by the Red Cross for the care of war injuries, and I was a ward surgeon there. Here there were the greatest number of infected gunshot and other wounds I have ever seen grouped in one institution. All manner of antiseptics were used in the treatment of these lesions by direct application and irrigation. When one agent would fail, another would be tried, and another and another, and usually at the end of the round of antiseptics Dr. Yount would amputate the leg, arm, or finger or I would sign the death certificate.

A few months ago, in thinking over the problems made by ulcers and these infected wounds, I determined to try cleaning, irrigating and dressin these lesions with a solution of t-250 hydrochloric acid. I was seeing its good effects everyday following its intravenous or intramuscular injection; so with its great chlorine content I could see no reason wh it might not be used on such lesions. Results were all that could hope for and in an attempt to get a laboratory observation on the effect of this solution on germs in a culture tube I asked Dr. Stuart Graves, Dean of the Medical Department of the University of Alabama, for his co-operation. This he very kindly gave me, turning my letter over to Dr. Ralph McBurney Professor of Bacteriology. After a few wee Dr. McBurney was so good as to send me the following report of his observations:

University, Alabama
School of Medicine
University of Alabama
Office of the Dean
Dear Dr. Ferguson:

February 16, 1935

Dr. Graves turned your letter regarding the germicidal action of a 1-250 aqueous solution of hydrochloric acid over to me for investigation of this property.

We have subjected twenty-four-hour beef-infusion broth cultures of staphylococcus aureus and streptococcus hemolyticus to its action in the dilution named. Exposure of both types was at a constant temperature of 37 degrees C. for successive periods of 5, to, 10, 30, , and 60 minutes and for 12 and 24 hours, respectively. Organic matter to the form of 10% horse serum was not added to the hydrochloric acid solution.

The following results were obtained:

The ,5, 10, and 30 minute exposures failed to kill both types. The 1, 12,, and 24 hour exposures resulted in complete germicidal action, all sub-cultures from the original tubes being sterile after 24 and 48 hours incubation at 37 degrees C. We were unable to try this out upon gonococci and trponema pallidum as we do not keep these organisms in stock owing to their fastidiousness in culturing. Because of this and their greater vulnerability to the action of germicidal agents, in general, as compared to the organisms we have used it may be inferred that a hydrochloric acid solution of the above strength will kill them within the same time period as determined above and in all probability sooner.

We were glad to be of this service to you and trust that the results may reach you in time for your paper.

Very truly yours.

RALPH McBvauat, M.D.,
Professor of Bacteriology.

I had had the pleasure of working with lesions made by the several germs mentioned, save the streptococcus hemolyticus, and the report from Dr. McBurney gave me a delightful confirmation of the rapid elimination of the organisms which I had seen so many times clinically.

I am using .the hydrochloric acid in all infective foci to which once may apply it, but as yet I am not in position to recommend any particular strength of the solution for other infections of eye, rectum, urethra or colon.

SINUS INFECTION

In the winter of 1933 and 1934 it happened often that I met a colleague whose manifestations of infection were such as to make him an interesting subject in a study of the peculiarities of germs. He wore almost constantly a large green patch over the right eye. On lifting it there in bold relief were to be seen apparently every capillary in the choroid coat. The iris seemed pretty well fixed. At a glance one could see that a great number of pyogenic organisms were being distributed throughout this eye daily. In response to my efforts to try the elimination of the germs, he did come to the office, where a count was done, and it was found that the white count was 12,500 per cubic millimeter. I tried to convince him that this was nature's effort to rid the eye of infection, and that, whatever surgical procedure migh be done, phagocytosis gave the only promise of the ultimate elimination of the infecting organisms. He declined vehemently to have me stimulate the white cells and induce a greater activity with hydrochloric acid and to double the oxygen content of the red cells. His comment was amusing: that as uncomfortable as life was at present, he preferred it to the uncertain chances of the hereafter that might follow the injection of an acid into the alkaline blood stream.

As the summer came I noticed that he had discarded the green patch, although the eye was far from normal in appearance. He told me a specialist had done some work on the ethmoid cells, which were said to be the focus of infection. Gradually the inflamed eye improved, but evidences of the pernicious activities of the germs were still shown in his frequent use of a handkerchief. The exudate was a reddish, mucopurulent discharge, indicating slight bleeding, and phagocytic activity was shown in this pus. No discussion of the Metchnikoff idea, no recital of histories of clinical experiences with other cases of infection of the sinuses carried any weight with my good friend, in my efforts to attempt the elimination of the pyogenic organisms. Apparently he was so convinced of the truth of the opinion that my reasons for the injection of the hydrochloric acid were figments of fancy that he would preserve his repute by neither giving nor taking this dangerous acid. During the winter 1934-1935 I saw him rarely but when I did see him there were always evidences that he was still the host of germs.

To my utter surprise he came to the office on April 3, 1935 a sick man, 58 years of age, weak and dispirited. He told me that the day before Dr. J. P. McQueen had told him of unusually satisfactory results in his treatment of salpingitis by the intravenous injection of solutions of hydrochloric acid. He was so impressed that he at once determined to come to me, as the sinus infection was in such a state of activity that a good night's rest was impossible, bleeding was growing worse, and the exudate of pus was most annoying night and day. The right eye was much reddened; apparently again the iris, retina and choroid were involved.

My confrere said he wanted I-200 hydrochloric acid. I asked if he did not think this was a bit strong for the first injection. I told him that, in my opinion, this strength of the acid would give him a

Medical data is for informational purposes only. You should always consult your family physician, or one of our referral physicians prior to treatment. vivid illustration of the phenomena of the inflammatory reaction, nature's own response, to infective diseases, and that the essential factor in the reaction, the following leucocytosis, would be most helpful, if he did not mind the fever.

The intravenous injection of 1-200 was given and he returned to his office. From his cot I had hourly reports of fever — 101°, 102° and in four hours 104° F. I assured him he would not die, and he could rest assured he would be better when the reaction had passed, as he had had the fever that is said to destroy micro-organisms, a great increase in phagocytic activity, and that his red cells had twice as much oxygen as at the time the injection was given. In spite of these assurances, my good friend was not altogether satisfied.

However, the next morning he came in with the report of the first good night's rest he had had for months, having awakened to clear the nasal passages only once. It was amusing to see that he brought with him a box of 25 ampules of 1-1000 hydrochloric acid for further use. Nothing I could say would induce him to consider another injection of the stronger solution. Exudate from the nose was still stained with red cells. So I was forced to tell him that, since he seemed determined not to take the acid which he seemed to like so much the day before, I should be forced to add its germicidal qualities to the intravenous injection by its injection into the infected area by a spray. This was done with a hand spray of a solution 1-500 hydrochloric acid. Of course, a sharp stinging in the nasal passages was felt, but there was an immediate effect in the contraction of the swollen capillaries and the consequent freedom of the passage of air — altogether the same clinical phenomena that follow the direct application of solution of cocaine or novocain to these membranes.

During the month of April the intravenous injection of the acid, 1-1000, was given six days in the week, along with the nasal spray twice as strong. Improvement was steady. In the first week the exudate on handkerchiefs was no longer stained with red cells; the gain in weight was regular from 160 to 169 pounds. So great was the improvement that the visits were made in May with much less regularity. There was a total number of 35 visits, on each of which the nasal spray as described was used, and altogether 25 injections of the intravenous solution. He has not been in the office for a week, and yesterday he told me on the street that he had not been to see me because there was no need for my services.

The foregoing case is reported in detail because it was the most advanced case of the infection in which I have used this plan. Other similar infections not so far advanced have shown the same satisfactory clinical results. The recital of other histories would be but a repetition of the above described case.

The reasons seem clear. As reported in May *Medical World*, Dr. Ralph McBurney, Professor of Bacteriology in the University of Alabama, found that a solution of 1-250 of hydrochloric acid would sterilize cultures of the staphylococcus aureus and the streptococcus hemolyticus in an hour. And the behavior of the sinus infection described in the first twenty-four hours illustrates the value of the cellular stimulation in such infection.

Dr. A. M. Allen, of St. Louis, in May *Medical World*, draws attention to the fact that when water is added to the solution it at once breaks up into H, OH and C. This fact is the elemental reason for the action of the solution as a germicide. He says that, when the acid solution is injected into the blood stream, there may be an enormous increase in the rate of metabolism "and therefore greatly alter the quality and quantity of osmotic interchange between intercellular and intracellular areas." If this is true, and I grant its probability, would it not be quite logical to conclude that the first line of defense, the phagocytic system, is also greatly stimulated by the injections of hydrochloric acid? At any rate, the changes in this easily mobilized

system may be witnessed in hourly counts after the injection of the acid. Changes in the other cells cannot be shown so easily.

After seeing the beneficial effects of the acid sprays in coryza and sinus infections I concluded that, in all probability, the infecting agents of asthma made the invasion through the nasal passages, and that in the next case of asthma which I might see I would try this plan. Something over a week ago a little boy came to me whose recurrent attacks of asthma have apparently been controlled by intravenous injections of the hydrochloric acid. Two or three times a year he has been to me for over two years. When I first began it required some 15 visits for the complete cessation of the difficult breathing. The succeeding attacks have been much more quickly controlled; that is, a smaller number of injections of the acid were needed. Last week he came with a moderately severe attack. As usual on the first visit I gave him the intravenous injection, forgetting my determination to use the spray. The next day he came markedly better, rales diminished and breathing with slight effort. On this occasion I used first the intravenous injection and then the spray of 1-500. He was given a bottle of it with instructions to use it twice a day. A telephone message to his home resulted in the information that he is going to school every day and, so far as my informant knew, is having no trouble from the asthma, which gave him so much trouble last week. The next case of asthma I may see will have the sprays of hydrochloric acid from the beginning.

I have never known a drug about which there were so many diverse opinions as hydrochloric acid. Many colleagues still maintain that its injection is followed by fatal consequences. On being asked to report the mortalities one is told to wait and they will come. Others say there must be merit in the injection of the acid, but phagocytosis by no means sufficiently explains the good results. Dr. Allen thinks the benefits come from the chemical reactions, while Dr. Guy is equally convinced that disease is the result of lymph stasis and that the hydrochloric acid and the minerals serve to stimulate the flow of lymph and modify the pH of the blood. I maintain that all of the reserve forces of resistance are made more active by the injection of the acid, phagocytosis is greatly increased, so is the oxygen of the red cells, poisons are neutralized or modified, and wounds are repaired more rapidly by exactly the same force that is used by nature in healing. Indurated tissue is softened, and the exudate of serum about injuries to joints or about wounds and other lesions of the skin is quickly taken away after the stimulation of the white cells by hydrochloric acid.

ACNE VULGARIS AND THE WHITE BLOOD CELLS

On November 26 1934, a lad was brought to me by his mother, with a history of five months' treatment with lights, X-rays and salves. The conventional plans of therapeutics were so seemingly ineffectual, I determined to look for a suggestion from nature. This was promptly found by a count of the white blood cells: 17,700 per cubic millimeter. The count was really not necessary, since the many larger and smaller pustules filled with white blood cells left one in no doubt of the mobilization of the cellular defensive forces in and about the points of invasion of the pyogenic organisms.

Many of these pustules bore the cicatrices of incisions for the drainage of this "laudable pus."

Since nature makes no purposeless efforts, I concluded that the one thing needed by this lad was more activity and aggressiveness of the cellular forces, and that this missing factor or factors could be added by the intravenous injections of hydrochloric acid. This was done by the injection of 15 c.c. of hydrochloric acid 1-250, or 0.4 c.c. to 100 c.c. of triple distilled water. The mother was asked to apply hot compresses to his face for a half hour every evening, which was but another effort to still further mobilize the defensive forces about the lesions. Whether the results were due to the hot pack or the stimulation of the white cells by the acid, or both, one cannot say; but, at any rate, the mother told me on the second visit that she had never seen

Medical data is for informational purposes only. You should always consult your family physician, or one of our referral physicians prior to treatment.

the lesions drain as after the pack of the night before although no incision had been made. This indicated, beyond question, that the induced leucocytosis had caused such an influx of white cells into the infected foci as to so increase the pressure that the skin was ruptured. For three weeks the boy came regularly every other day, and the improvement was satisfactory, the lesions growing smaller and paler. On each of the visits he was given 15-20 c.c. of hydrochloric acid 1-250 as reported before. In this series he had only one inflammatory reaction, and this lasted only two or three hours, simply the usual chill, fever and sweat one sees so rarely after the acid injections.

With the advent of the holidays and Christmas school festivals his visits to my office were irregular, but the injections were given when he did come.

He returned in 48 hours; the packing was withdrawn and there was only a suggestion of an exudate on the gauze from the cavity. There was absolutely no exudate on pressure from the lesion: a phenomenon I had never seen until I began the local use of the acid a few months ago.

To complete the history of the boy.. He was given in this series 25 injections of the hydrochloric acid, hot packs at night and 1 tablespoonful of mineral oil every night.

This local use of hydrochloric acid, as I am using it now, is a most satisfactory germicide apparently, and happily there is a cogent reason for such a procedure. For many years the germicidal value of chlorine has been well known. Twenty years ago a preparation of chlorinated lime was extensively used. It is possible that the chlorine in this alkaline preparation was not available in a potent form. This conclusion has been made after seeing the effect of the application of dressings saturated with solutions of hydrochloric acid on ulcers, after a thorough cleaning and irrigation of such lesions with solutions of 1-250 or 0.4 c.c. to 100 c.c. of distilled water. This solution is being used just as we used solutions of bichloride of mercury or carbolic acid in the old days. The behavior of the abscess above described is an indicator of the behavior of ulcers and infected wounds. From the clinical results the conclusion is inevitable that the chlorine of hydrochloric acid is a most useful germicide. Could it be that this chlorine of the intravenous injection of the acid adds a noxious quality to the serum of the blood, thus accounting for some of the inexplicable results following the intravenous injection of the acid?

THE HEALING OF WOUNDS

This is in answer to E.B., in *Monthly Clinic in March Medical World*

Like you, I am often puzzled over the clinical effects of the injections of HCl. I have had, of course, a few cases of ulcers of the duodenum and the pylorus, one of the former having been of 22 years' duration. X-ray showed active lesion. Gave her ten injections of HCl, 1-1500, and she was clinically well. Three years thereafter a study was made of the intestinal tract, and showed nothing but scar tissue at the site of the old lesion. This patient was 73 year's old when I gave her the acid injections and is in good condition now at 78.

The white cells are the essential factor in the healing of wounds, and I think on the chemical side the good effects you and I have seen come from a glandular and cellular stimulation by the HCl, so making these factors in the production of the acid return to their normal production.

I agree with you on the difficulties in understanding these phenomena, but if it is good for a sick man it pleases me to give it, whether I understand all of its manifold peculiarities or not. Try it on the secondary anemias and you will be still more puzzled.

ORIGINAL ARTICLES

of

WALTER B. GUY, M.D.

St. Augustine, Fla.

DEGENERATIVE DISEASE AND ITS ETIOLOGY

It has been customary up to this time to look upon the degenerative diseases so common in advanced life as a group of separate diseases rather than as a distinct entity, and to say this man or this woman is afflicted with or died as the result of several different affections or complaints. In a recent case, that of Mr. Edison, the famous inventor, we read in the daily press that he was suffering from the results of diabetes, arteriosclerosis, heart disease, nephritis and so forth.

It is the writer's intent to take up the subject of degenerative disease and endeavor to show that this group, so increasingly prevalent, is, in reality, not many separate affections, but one in substance, arising from one general cause and differing only in its mode of manifestation and in the tissues involved.

In this group the writer includes arteriosclerosis, hypertension, nephritis, affections of the heart, tuberculosis, diabetes, neoplastic growths, senile insanities and many other affections that are caused by degeneration of the varied tissues of the human organism.

In organic life we have, in order, birth, adolescence, maturity, decline and death.

At birth the constructive forces are in the ascendancy; in maturity the constructive and destructive are in balance; in the senile the destructive force is in excess. If health were perfect the organism would complete its full life cycle with probably an average of 120 years' duration, but the destructive agencies, destroying the balance between the constructive forces of life and the invading microorganisms and other injurious factors, bring about premature decay and death.

Cancers or neoplastic growths are seemingly increasing; at least statistics claim so. Also arteriosclerosis, diabetes, nephritis, senile insanities are increasingly prevalent; so that this subject is well worth considering, and if but a small beam of light can be thrown on this enigma, a big step forward can be assured.

In the first place, let us consider the protective agencies of the animal organism; but instead of talking about antibodies, vaccines, antitoxins, immunity of blood serum, diet and so forth, let us rather go to rock bottom and consider the very essential mineral elements of which our body is composed. Suppose that today we first consider an element that has been but little studied, yet is probably the greatest disinfectant, antiseptic, germicide, deodorant and preservative that nature has ever produced; viz., chlorine.

It is generally believed that organic life began in the saline ocean many aeons ago, and that the chemical formula of that ocean, of the blood serum and temperature of the body has not changed materially since that time.

That the ocean is always free from corruption, no matter how many of its animals die within it, is probably due to its chlorine content; not only to sodium chloride, but also to the chlorides of magnesium, calcium, and other minerals present. It is to this chloride group of minerals that I wish to direct your attention, for in the proper concept of the role of the chlorides in the human organism we shall find, I fully believe, the key to long life and health; and the reason why, in the treatment of degenerative disease, the best indicated remedy fails to relieve or inhibit the ravages of disease.

First of all, let us study the part that chlorine plays in the digestion of food and its absorption into the body tissues. In Prof. A. E. Austin's *Manual of Clinical Chemistry* he says: "Chlorine may be found free, as hydrochloric acid, in the gastric juice, or combined with albumin and albumoses, or it may be found united with sodium, chiefly in the fluids of the body, and with potash in the solids."

Under "Potassium" he writes: "Potash is also found as a chloride by preference in morphological elements like blood corpuscles, muscle cells, etc."

Medical data is for informational purposes only. You should always consult your family physician, or one of our referral physicians prior to treatment.

Under "Calcium" he says: "Calcium chloride is found in the gastric juice, as a secondary product."

Also, he says hydrochloric acid favors the excretion of the calcium phosphates.

Concerning the amount of hydrochloric acid in the gastric juice, a very important factor, as I shall later point out to you, Prof. Austin says the normal gastric juice in man is from 2 to 3 parts in 1000. In healthy dogs 5 parts is found. That a healthy dog can eat septic meat and if its stomach is opened one-half hour later, this foul, odorous meat will be found sterile is a well-known truism, showing conclusively the germicidal power of free chlorine in process of normal digestion. Too often, however, acidity of stomach is not due to an excess of hydrochloric acid, but rather to an excess of lactic acid, and if contents of stomach is alkaline, oxybutyric, diacetic and other acids due to putrefactive processes are present. This can readily be determined in practice by giving a few drops, well diluted, of dilute hydrochloric acid, when usually relief will quickly be obtained.

We are, however, concerned at this time in the consideration of progressive degeneration, and whether or not the normal production of free chlorine in the gastric juice is involved in the cause of progressive degenerative disease. In healthy digestion, Austin further says that, in half an hour after eating of food, all lactic and other acids should have disappeared, owing to the inhibitive action of hydrochloric acid. Further, he says that what is true of lactic acid is also true of the other organic acids, butyric, formic, and acetic, all of which are especially abundant where there is stagnation of gastric contents due to pyloric obstruction.

What, then, may we expect to occur when this fundamental, normal, sterilizing acid is deficient, or absent, and what, then, are the causes of its inhibition? The answer to these questions opens up a vast field of research; but enough data are already at hand to supply us with sufficient information to make us realize, if we study them carefully, that an absence or deficiency of this acid is a large factor in the etiology of degenerative diseases.

The first question is readily answered: Hydrochloric acid is the only normal acid in the animal economy; all other acids, such as lactic, uric, carbonic and so forth, are waste products, to be eliminated as quickly as possible, and the normal acid is truly the chief factor in their removal or destruction, for if we have a too great excess of carbonic acid, we have coma, as in diabetes or later stages of pneumonia; if uric acid, deposits in valves, arteries and articular surfaces and so forth. When this hydrochloric acid content of the gastric fluid is deficient or absent, grave results must gradually and inevitably appear in the human metabolism. First of all, we shall have an increasing and gradual starvation of the mineral elements in food supply. The food will be incompletely digested and failure of assimilation must occur. Secondly, a septic process of the tissues will appear; pyorrhea, dyspepsia, nephritis, appendicitis, boils, abscesses, pneumonia, etc., will become increasingly manifest. Again, a normal gastric fluid demands activity of the gall-bladder contents and of the pancreas or neutralization. Deficiency of normal acid leads to stagnation of these organs, causing diabetes and gallstones. In other words, an absence or a great deficiency of HCl gives rise to multitudinous degenerative reactions and prepares the way to all forms of degenerative disease.

That this normal acid is nature's true antiseptic has been clearly demonstrated by Dr. Burr Ferguson, of Alabama, who injected hydrochloric acid, 1-1500 intravenously and subcutaneously, causing rapid repair, in many septic infections, such as abscess, osteitis and tuberculosis. The writer has proved in several cases, such as septic induration following gunshot wound, delayed repair following operation, that this acid, given by mouth, well diluted, hastens delayed or absent phagocytosis and repair of injured tissues.

What, then, are the causes of its disappearance in the gastric fluid,

following eating of food? First, Prof. Austin says most conclusively that "hydrochloric acid secretion may be completely suppressed by emotion or worry." In these days of emotional worry and distress, loss of homes, business, incomes and money, we may well fear that in the near future a great increase of degenerative disease, such as cancer, nephritis, cardiac, nervous and mental affections must assuredly occur unless man can rise above worldly affairs and find the true and only source of contentment and happiness. To this state the true physician must continually point, first himself finding and then showing it to others.

As long as mental depression envelops like a dark cloud the soul of man, so long may we search in vain for the indicated remedy and the relief of our patient's distress. Shall we, then, fold our arms and give up the fight? Not by any means. The remedy the doctor prescribes, is it not, in a spiritual sense, the symbol of a healing force? Nature's recuperative powers? Yes, and the patient's faith must be present to reinforce the doctor's knowledge. But how much better for the physician's own abiding faith if a truer concept of the nature of disease and tissue pathology can be truly visualized and this necessary acid and the deficient minerals be restored to the starving tissues, feeding and cleansing the vital fluids! To do this no massive doses of inert, sterilized minerals are required. Rather an ionized dilute solution of these elements will quickly bring about a change of the impaired metabolism.

The writer is using, after months of study and research, helped along by brilliant results, again discouraged by absolute failures, an acid solution of arsenicum, ferrum, potassium and chlorine. This, properly diluted, can be used intravenously or by mouth.

RX Liq. potass. arsenitis (Fowler's) πλ xv
Tr. ferri chloridi f 3 iss
Sol. potass. chloride (10 per Cent.) f 3 iij
Sol. acid. hydrochlor. (3 per cent.) ad f 3 j

M. Sig.: gtt. v to xx well diluted three or more times daily.

One remarkable case may be quoted here, of a colored woman more than 80 years of age, with an enormous adenoma of colon, who was found with complete stoppage of bowels, vomiting and gas pains. Instead of the use of an opiate, a solution of mineral chlorides was given intravenously, with complete relief in six hours. Four more injections were given followed by treatment by mouth. Within four months all trace of growth had disappeared. Eighteen months later, a hard sarcomatous growth, appeared in right tibia. The chlorine solution was again given by mouth and at this date, two months later, has almost disappeared.

Tuberculosis, especially of bones and in lungs, rapidly improved, while septic boils disappeared. Hypertension, by removal of toxins, becomes normal; and, strange to say, the erythema of skin seen in excessive hot weather is rapidly relieved by injections of these acid mineral chlorides. In diabetes, thirst and sugar are rapidly reduced to a minimum. All cases of arthritis are helped by giving this normal acid in addition to other remedies.

When one considers that this normal acid is derived from the tissues of the stomach or gastric membrane and not directly from the sodium chloride of the blood, one readily realizes that an ample supply of sodium chloride alone is insufficient to restore normal gastric acidity. Rather that it is, instead, a complex process, the sodium atom being picked up and combined with the phosphorus atom, giving rise to sodium to be eliminated, thus allowing the chlorine atom phosphates to be set free to combine with the potassium and other minerals and albumins in the gastric acid cells and to be made ready for future digestive functions.

That the removal or breaking down of toxic products found in impaired metabolism is best accomplished by an acid is very well demonstrated by considering methyl guanidine, the deadliest toxin yet

Medical data is for informational purposes only. You should always consult your family physician, or one of our referral physicians prior to treatment. recovered from animal tissues. A few minims of this toxin, when injected into the tissues of an animal, cause convulsions; a slightly larger dose, immediate death. Yet, when hydrochloric acid is combined with it, it becomes a harmless food substance.

This paper would not be complete without reference to malignant growths already mentioned. So far, search by studying cell growth has ended in complete failure. Not in cell life is the secret to be found, but rather in the media in which the cell lives and the nerves control. That cell growth is materially influenced by the nerve centers of the spinal cord is undoubtedly true, as shown by the rapid wasting of the cellular tissue when involvement of the anterior horns of the spinal cord occurs in infantile paralysis and progressive muscular atrophy. Such being the case, a toxin causing destruction of the inhibiting control of cell growth probably present in the posterior spinal nerve centers would allow wild growth of cell life; therefore neoplasms in all their multitudinous forms and a general failure of the antiseptic powers of the blood serum will bring about what is known as malignancy.

In the writer's limited experience cancerous growths seem to appear when the blood pressure is low, indicating beginning failure of the adrenal system to combat toxemia. When hypertension is present the other group of degenerative diseases makes itself evident. In youth a deficiency of normal gastric acid may allow tuberculosis to become active, for all are probably infected, but only those deficient in natural immunity develop this disease.

Of dietary causes, one naturally considers the great excess of sugar now eaten, which produces a surplus of lactic acid, and an excess of egg proteins, making an unbalanced diet. But the worry fatigue, failures and despair of our present civilization, I believe, are the greatest factors of all.

Austin has clearly shown the absence and deficiency of hydrochloric acid in gastric fluids in pneumonia, consumption and cancer, as well as in those mental states previously mentioned.

In neoplastic disease by Prof. James Ewing, page 73, writing on probable causes of cancerous growth, we find: "It has been shown that the presence of lactic acid is dependent on impaired motility and deficiency of HCl. Since these conditions are present very early in cancer, the test for lactic acid is of considerable diagnostic value." On page 71 we find that deficiency of HCl causes alkalescence, and this is found in cancerous disease.

CONCLUSIONS

- That normal hydrochloric acid is necessary for complete healthy digestion.
- That deficiency of this acid tends to sepsis, suppuration and general toxemia.
- That if adrenals are inactive, degenerative forms of disease usually appear.
- That if the adrenals are impaired, malignant neoplasms may be expected.
- That neoplasms are most likely caused by failure of the inhibitory nerve controls, probably located in the posterior nerve centers of the spinal cord.

That emotional worry, grief, anxiety, depression, are factors to be considered as causes of acid deficiency of gastric fluid and thus give rise to many conditions causing degenerative processes and alkalescence so commonly found in cancerous disease.

The writer, after administering this acid solution of mineral chlorides to over one hundred cases of chronic disease of many types, including cases of diagnosed cancerous growths in digestive system, feels confident that this method is without doubt a reliable and satisfactory one for such conditions and also a method of preventing cancerous disease. If cases are too advanced for hope of recovery, this treatment ameliorates symptoms and prolongs life. Also, above all else, it opens up a new field of research which he believes will lead to

ultimate victory over the degenerative progressive diseases so increasingly common among mankind.

ACID MINERAL CHLORIDES IN TREATMENT

In a previous article emphasis was laid upon the necessity of free chlorine in the gastric fluid and its fundamental role in carrying on normal digestion, assimilation and excretion. Also certain consequences were indicated of the metabolism of the body cells, if its secretion by various causes was interfered with.

It was also shown that chlorine deficiency would cause incomplete digestion and bring about a slow starvation of the mineral elements, and thus produce abnormal symptoms, indicating profound changes, not only in the skin, bones and glands, but also in the nervous system, such changes causing malfunctioning of the spinal nerves. Also that this dysfunctioning of the motor and sensory spinal nerves by lack of control over cell life may give rise to neoplastic growths.

In this paper an attempt will be made to bear out this hypothesis; to show that mineral deficiency is quite common; also to show results of treating various diseases with a solution of mineral chlorides, the formula of which was given in the before-mentioned article and also here.

RX Liq. potass. arsenitis (Fowler's)πλ xv
 Tr. ferri chloridi f 3 iss
 Sol. potass. chloride (10 per Cent.) f 3 ii!
 Sol. acid. hydrochlor. (3 per cent.) ad f 3 ij
 M. Sig.: Gtt. v to xx well diluted three or more times daily.

Before doing so, the writer desires to bring out some interesting facts found in the vegetable world, in order to clarify, if possible, the hypothesis advanced. Mineral deficiency has long been recognized in the agricultural world, and results of same, to a marked degree, have been studied, and appropriate remedies or fertilizers have been applied, and results from their use verified.

It is not the writer's intention to take up all these minerals, but to select the few necessary to bring out the salient points involved.

Let us take, for instance deficiency of potassium in soils. Corn or maize grown in such a soil is apt to be sickly and die. When examined by biochemical methods, deposits of iron salts were found in joints of corn; also coagulation of proteins. When potassium salts were applied to soil this condition disappeared. Tobacco plants grown under the same deficiency will become sickly, also areas of necrosis of cells appear on surface of leaf, etc. Does not this at once call to mind pernicious anemia, with its debility, lack of gastric HCl, deposits of iron salts in liver and kidneys? The necrosed cells of tobacco leaves surely point to a great similarity of our commonplace epitheliomata of the skin.

In soils deficient in calcium and phosphorus another variety of disease appears: wilts and fungi of root system and an accumulation of aluminum in the tissues of the corn. Quite a few articles on absorption of aluminum have appeared in various medical magazines, indicating that this element, foreign to the body cells, causes much disturbance, such as nerve and digestive disturbances. Calcium deficiency is quite common even in Florida, where the artesian water is impregnated with calcium salts. It is recognized by the tendency to nocturnal asthma, worse from cold and dampness, slow healing of broken bones, lack of strength and myocardial weakness; also a low blood pressure, twitching of muscles, and cramps.

That the nervous system is implicated in tumor formation we believe is indisputable. The lack of sensation or pain in area involved in the early stage of the disease shows dysfunction of the sensory nerves. That spinal nerves may have more than one function to perform is a truism corresponding to the varied functions of other organs. Nutrition, cell growth and repair, cell control, and inhibition of cellular growth must also be included in their functions, as well as motor impulses and sensory impacts.

Medical data is for informational purposes only. You should always consult your family physician, or one of our referral physicians prior to treatment.

We need greater knowledge of gastric chemistry: how the *warm* peptic hydrochloric solution functions, how it breaks down food products, changes slowly but surely the minerals into chlorides, to be again transformed in the duodenum, these chemical changes liberating heat and vital forces for the use of the brain and nervous system, etc.

Deficiency of this hydrochloric peptic solution must, of necessity, bring about in the animal economy a slow starvation of the mineral elements, an imbalance, also a fixation or deposits in various tissues. For instance as already mentioned, deposits of iron in anemia, deposits of urea and sodium in gout and arthritis, an overplus of sodium in edema, a probable deficiency of potassium in tumor and epitheliomata; also a deficiency of calcium in parathyroidism and some forms of asthma; a lack of chloric acid must be manifest in alkalosis of cancer, tuberculosis and septic infections. Progressive diseases of eyes, ears, kidneys and uterus may come under potassium deficiency; also tumor formations. The value of potassium iodide in syphilitic nodes and gummata is well known and universally applied. The various calculi of kidneys and gall-bladder, deposits of uric acid in tissues also indicate a lessened solidibility of salts, showing deficiency of hydrogen and chlorine. Chlorine, like oxygen, carries on its own combustion in the digestive organs, while oxygen functions in the blood and lungs. Deficiency of chloric acid solution also indicates a lowered immunity to infective organisms, lowered vitality, impaired appetite and excretions, endocrine dysfunction and premature old age.

Hydrochloric acid is also the protective agency against microbic life in food and water intake of stomach.

The first case to be reported is one showing marked indications of duodenal growth and who, after three weeks' treatment, with good results, of the mineral chloride solution, developed severe nocturnal asthma. Calcium chloride was added to solution and immediate relief was obtained.

Case of Annie M.; age 45 years, colored, normal weight 170 lbs. losing weight one year, now 140 lbs. For past two months frequent gastric distress. July 5, 1932, found in great distress in region of stomach for past three days. Soreness over duodenum. Unable to vomit, no relief from soda bicarb., etc. Gave the acid mineral chloride solution 3 minims, diluted, every half hour. July 6th reported complete relief in 6 hours. Examination showed induration and tenderness in duodenum. Gave the solution every hour while awake.

Diagnosis: Probably precancerous condition at pylorus.

July 13th, much improved soreness relieved. Gave the solution, t.i.d. July 27, no sign of soreness of duodenum or induration, but had developed nocturnal asthma. The solution plus 10% calcium chloride: relief of asthma reported next day. Still under treatment, steadily improving.

Case of Andrew D., age 26, school teacher. Asthma at night, greatly aggravated by dampness, rainy weather and bathing in water. Calcium chloride, gr.3 t.i.d. diluted, was given. Immediate relief of all symptoms can now bathe in ocean, get wet in rain without previous symptoms. Still taking remedy once daily.

Case of C T., age 46, clubfeet, low blood pressure, weight 188. Fractured tibia and fibula midway between ankle and knee. Seven months in hospital with regular treatment of milk food in excess, also calcium lactate and cod liver oil. Left hospital with ligamentous union of bones freely movable. The acid mineral solution plus calcium chloride, gr. iii, diluted, t.i.d. In spite of sharp attack of influenza, complete ossification had taken place in 6 weeks and he returned to his occupation.

The next few cases are diagnosed growths in digestive organs. They were treated by the solution, some intravenously, all by mouth. Most of these cases were probably in a precancerous condition or early stages of cancerous disease.

Case of James C. age 3 years. Dec. 12, 1930. Diagnosis: papilloma of bladder; no loss of weight. Second attack of hematuria; last, one year before, bright blood and clots for two weeks, soreness in bladder.

Treatment: intravenous injections of the solution once weekly. The solution four times a day for four months. Bleeding slowly disappeared; no recurrence to date.

Case of Peter D., age 50, Greek, married, two children, normal weight

135 lbs., now 102 lbs., jaundiced four months, growth in gallbladder easily outlined by palpation. Several surgeons and specialists gave fatal prognosis. X-ray picture indefinite. Oct. 10, 1931 the solution intravenously once weekly and by mouth four times a day; bile laxatives at night. First two weeks, lost 4 lbs. Third week passed bile, and icterus gradually cleared. Treated by mouth only after three months. One year later no indication of tumor, in good health, no history of gallstone colic; weight 128 lbs.

Case of T. W. M., age 60. Feb. 16, 1932. For two years had suffered from severe gas pains for several hours after eating -- no loss of weight, now 158 lbs. Blood pressure, 110. Examination, soreness and induration of sigmoid flexure. Gave .9 minims after meals. Feb. 23, 1932, reported immediate relief of gas pains. Continued the solution, treated spasmodically until May when he had a severe attack of influenza. June 13, 1932, soreness and induration still present, but much reduced. The solution was continued; still under treatment. As he is out of work, he is greatly despondent, but much improved at last visit.

Case of Lyla G., 87 years, colored, many children. June, 1929, found writhing with stoppage, gas pains vomiting. Examination showed immense adenoma of descending colon. Gave the solution intravenously; no other treatment. Next day reported relief in 3 hours. Four more injections were given intravenously, then by mouth. October, 1929, showed tumor almost disappeared; treated for 2 months longer. September, 1930, reported tumor in right tibia, size of an orange. Diagnosis: sarcoma. Treatment: the acid mineral chlorides by mouth. July, 1932, although complicated by two attacks of edema, is in good health; very small swelling of leg still present.

Case of J.L.J., colored, age 40 years. Oct. 8, 1931. Tumor removed from abdomen one year previous; fibroma. Complained of severe pains over abdomen, small tumor present in site of previous operation. Gave the solution internally. Complete relief in 3 months and disappearance of its duration or tumor. June 10, 1932, no sign of growth.

Case of C.S., colored, age 50. 4 children living, weight 100 lbs. Three miscarriages. For 10 months had pain during eating; great distress after. No relief from medicine. Asthenia and insomnia.

Examination: liver enlarged; hard mass in outlet of stomach and edge of liver. Gave the solution intravenously and by mouth. Complete relief of pain after eating in five days. Growth in pylorus cleared up, but induration still remained in liver. Treated one year, complete relief, no sign of tumor remaining, well at this date, July 1, 1932.

Case of L.P., age 63, colored. Aug. 2, 1930. Dairyman. Operation for removal of stone one year before, suprapubic incision, no history of venereal disease, frequent urination during day, none at night, loss of weight 11 lbs.

Examination: prostate shrunken; tumor size of small orange in scar.

Treatment: Intravenous injection of the solution weekly; same by mouth q.i.d. In three weeks' time tumor had softened and in six weeks had entirely disappeared. Opened urethra by sounds, which aggravated trouble. Solution continued at intervals. July 7, 1912, still under treatment, much improved; had lost in beginning 15 lbs., gained 7 lbs.

Case of A.K., age 67 years. Sarcoma of right mastoid for eighteen years. Three years ago had radium seeds applied, for pain and swelling had become severe. Partial absorption and relief from pain, then a decided recurrence of all symptoms six months later. Gave solution without HCL Much improved for awhile; then relapse. HCl was added to solution three months ago, with great improvement, tumor decreasing and pain in nerves of jaw nearly disappeared, with gain in weight, strength and facial appearance.

Case of J.D., Nashville, Tenn., age 62 years. Jan. 11, 1931. Recurrent growth in larynx. Operated on 5 times at Johns Hopkins; last time Oct. 15, 1930. Very hoarse, larynx swollen, inflamed, involving epiglottis. putrid tongue. Solution given by mouth; still under treatment. Thinks he will get entirely well, as he is greatly improved and able to speak in public.

Case of C.S.S., 57 years. Sept. 19, 1930. No history of syphilis. One year ago had an attack of vertigo, unable to walk, face and tongue paralyzed on left side, deafness in left ear, blood pressure normal. Left knee reflex slightly exaggerated, left pupil larger.

Diagnosis: Brain tumor causing pressure on brain. The solution gave quick relief. June, 1932, recurrence; same symptoms, also a hernia at 6th cervical vertebra of spinal fluid, which varied in size at intervals and could be squeezed back into spinal canal. Solution again given six times daily. In two weeks relief of symptoms and drawing in of hernial sac. He is now walking, can stand with eyes closed, reflexes normal, face and tongue normal. This case shows action of acid mineral solution on the fluids of brain.

These cases, chosen for their variety of symptoms, show but little

Medical data is for informational purposes only. You should always consult your family physician, or one of our referral physicians prior to treatment.
of the possibilities of this method of treatment.

Diabetes has been treated with this remedy, with very gratifying results. Doubtless some of the curative results of insulin are due to the I per cent. HCl that the preparation contains; likewise the famed adrenal cortex solution. During the World War Dakin's solution of chlorine, lime and soda became famous for its curative action because of its power to liberate minute quantities of chlorine into suppuring tissues. The acid mineral solution likewise liberates chlorine into the general circulation of the body.

It may be criticized that the dose of solution is very small, but if we call to mind how the farmer uses but one ton or less of an 8% potassium fertilizer to the acre -- that if too much is used injury, instead of growth, is produced -- so likewise, as we are dealing with the delicate pH equilibrium of the tissues, small doses (repeated often, if necessary) are better than massive medication.

Pulmonary tuberculosis has responded wonderfully to this solution, and, if another paper is in order, cases can be quoted later. So far, it appears that uterine fibroids and myomata are not benefited by this method of treatment.

CONCLUSION

The world is in sore need of a reliable, effective remedy for cancer and tuberculosis, also a preventive treatment. The writer does not claim that he has a perfected remedy, but he does claim, by repeated proofs, that this solution contains in itself an ability to promptly cause many precancerous lesions to disappear, that cancerous conditions of the internal organs, where other methods are so futile, are and have been dissipated, and that in cases too far advanced for recovery, relief of pain and distress is so marked that such patients believe they will entirely recover.

If the chlorine deficiency hypothesis be true, as it seems to be, we have in the solution a reliable, inexpensive medication which, taken daily for several months, will prevent the imbalance of minerals; likewise restore into the circulation, for assimilation or excretion, pathological mineral deposits in the tissues involved.

Other physicians will doubtless test out these claims, as some are doing now, and publish results, and the writer hopes that in the near future hope will take the place of despair, and no longer need cancerous victims face inevitable and untimely death.

(1) The intravenous dose used by writer is 3 to 5 minims in 5 c.c. of distilled water at 5 to 7 day intervals. Dose by mouth: 3 to 20 minims well diluted 3 to 6 times daily.

(2) The solution has been proved by writer to be an effective and curative remedy in many cases of cancerous growths; also it points the way to the etiology of cancer and how cancer may be avoided.

(3) The remedy can in no wise cause injury; also advanced cases of cancerous disease oftentimes find great relief from pain and toxemia.

(4) It has curative properties in diabetes, tuberculosis and other degenerative diseases.

(5) It will restore the normal acidity of the stomach, and thus bring about those conditions whereby the digestive organs will absorb those minerals necessary for sustained health.

(6) The solution should be administered before and after surgical or other methods of treatment in cancerous affections.

(7) The formula is the result of over three years' clinical study in many diverse diseased conditions, testing and eliminating unnecessary salts, and as now constructed should produce even better results than those herein reported. .

(8) Certain minerals in a weak hydrochloric acid solution by reason of its free ions, are quite active, and but small doses are required.

(9) Taken regularly for sufficient time, the solution will correct alkalosis and put into circulation precipitated salts.

(10) The solution, by releasing free chlorine ions, raises immunity against infection, also an increased phagocytosis.

TOXEMIA AND ALKALOSIS

In the understanding and treatment of the progressive degenerative diseases much depends upon a practical knowledge of the cause of acidosis and toxemia, and of the condition known as alkalosis. The writer hopes to show that acidosis and toxemia are, in reality, synonymous, and that underlying the varied symptoms of these diseased conditions there is, in reality, a basic alkalescence of the cellular tissues.

To get an approximate picture of cellular chemistry we must first of all realize we are not dealing with fluids and solids but rather with a colloidal form of tissue, a popular illustration being a diluted mixture of gelatin and water or gel. Dr. Edward J. Stieglitz writes: "The living cells of the kidney or elsewhere consist of just such colloids, containing many thousand different substances in complex combinations, separated by surfaces and limits." (*) "Dr. Martin Fischer and Prof. Jacques Loeb demonstrated that with slight chemical changes, in the medium bathing living cells, the cells could be made to swell with water, or shrink and give up water at the will of the experimenter. Dr. Fischer studied not only the living cells, but simpler colloid mixtures, such as gelatin, and was able to show that increases in acidity and of certain salts, caused the gel to give up water and therefore to shrink in size. In the body swollen with edema exactly such phenomena occur. It is the 'thirst' of the chemically altered tissues that absorbs and binds the water, and the reason for the small urinary output is, in large part, that there is no, or very little, water available for excretion by the kidneys." (*) "In this connection one particular phase is of special interest. Fischer and others contended that the swelling results from increased acidity of the tissues, so that their treatment consisted in the liberal administration of alkalis. This treatment is often effective; but inasmuch as the reaction of the kidney cells has been shown by the indicator method to be the opposite to the reaction of the urine eliminated, excessive alkali treatment is liable to cause injury to the kidney cells, and thus occasionally lead to suppression of diuresis, aggravating the dropsy. More recent work has demonstrated that certain acid-producing substances, like calcium chloride, give rise to a prompt and liberal flow of acid urine and a diminution in the edema. If the above explanation is correct, improvement by this treatment is probably due to favorable action on the kidney itself, the acidity of whose cells is diminished."

That the acid-alkali balance or pH in the colloidal tissues is the base of all the phenomena or disease symptoms which are termed acidosis, alkalescence or toxemia is readily understood. But what the medical world is in sore need of knowing is how to read these clues or symptoms aright and to better realize the causation of these clinical signs and their pathological significance.

What is acidosis? An accumulation of acids or a diminution of the pH reaction. But what acids? We can glibly say: carbonic acid in the blood or lactic acid in the tissues, uric acid in the joints and blood vessels; lactic, diacetic, butyric in stomach or intestines, and so forth. We may even visualize hepatic acids in the liver, but unless we know why these acids appear in excess and their relation to alkalosis we shall never be able to understand their true significance or marshal our remedies effectively against them.

The only normal acid in the animal body is, of course, hydrochloric acid -- found in the gastric juice. All other acids are waste products. The carbonic acid of the breath is created by the oxidation of the lactic acid of the tissues; therefore, an excess of lactic acid is a failure to oxidize this acid sufficiently. In diseases, such as cancer, tuberculosis and fevers, this failure of complete oxidation is present, particularly so in cancer, where the cancer cells, too, throw off this substance. The amino acids are but stages of food digestion, and, when present in excess, show impaired hepatic and pancreatic functions. The most pernicious form of acidosis is that produced when a stoppage occurs

Medical data is for informational purposes only. You should always consult your family physician, or one of our referral physicians prior to treatment. in the duodenum or pylorus. In this condition the HCl of the gastric fluid disappears, and other acids, such as the acetic, butyric, lactic, take its place. Also Dr. L. G. Rowntree, of Philadelphia, says in this condition the chlorine of the blood is usually diminished, the urea increased and the capacity of the blood to combine with carbon dioxide increased. *

The above quotation of Dr. Rowntree is worthy of more than a cursory reading. Many people, both young and old, have, if not a sore or ulcer at the pyloric orifice, an inflamed or congested area indicated by digestive distress. Dr. Moore says † that achlorhydria occurs in some cases of apparently healthy persons and in many cases of gastro-intestinal disease. He also stresses its frequency in diabetes mellitus, and still greater frequency in thyrotoxicosis, as well as in certain non-megalocytic hypochromic anemias. Although achlorhydria occurs in both forms in anemia, a deficiency in hydrochloric acid in the gastric juice is a common symptom in depressive neuroses. It is frequently associated with mental fatigue, persistent worry and strain, especially in persons with a congenitally unstable psyche. The symptoms are very vague: lack of appetite, fullness after eating, gaseous eructations, and diarrhea is more common than constipation. Pain is absent. Again we find quoted ‡: “Moreover, hydrochloric acid forms with the duodenal membrane a hormone named secretin, which stimulates the pancreas (to form insulin), also formation of bile and activity of gallbladder. It is estimated that 2 grams of HCl is required for a meal.”

If we have followed the above carefully we shall realize how failure to secrete sufficient HCl in gastric juice gives rise to a long train of events: improper digestion, fermentation, therefore poor absorption of food and mineral elements, a likelihood of sore ulcers or cancer forming at pyloric outlet; next an inactive liver and pancreas, failure to secrete the secretin hormone -- which reduces sugar in blood, failure to oxidize lactic acid in tissues, more or less retention of CO₂ in blood, inability to destroy bacteria sufficiently in food.

We can visualize still further a toxic liver, hypertension in arteries; retention of CO₂ has been implicated in convulsions of epilepsy and other brain affections, also failure of endocrine glands to function normally, as well as diabetes and kidney affections. Still, we can go further and trace out more of the disturbances we may expect to gradually appear in various patients. The mineral elements have been mentioned. Improper digestion means malassimilation — unbalanced mineral content of body. What are some of these symptoms? First, a surplus sodium; tissues too watery; tendency to edema and asthma; flabby muscles and little strength; a lack of chlorine produces a condition favoring boils, abscesses, pus formation. Deficiency of calcium means excess of sodium and deficiency of potassium; this last the writer believes to be the most important of all.

Let me quote Dr. Robert A. Hatcher, of Cornell: * “It is only within recent times that we have come to understand the importance of extremely small amounts of certain salts of the blood, and the influence exerted by even slight changes in its composition. Small amounts of potassium salts are essential for the heart-beat; large amounts are poisonous. It has been found recently that under certain conditions the behavior of the heart toward potassium is an index of its behavior toward therapeutic doses of the digitalis group, and those hearts which do not respond to potassium are incapable of benefiting by the use of digitalis.”

No one who has not read the reports of potassium salts in fertilizing the soil can really appreciate its value; a common comparison of 30 bushels per acre of potatoes without it and 150 bushels or more by its presence in the soil is well known; yet it is used in such small amounts that such a difference is hardly believable. What of the body if it is deficient? We find coldness of extremities, weakness of

heart, an unhealthy, pasty skin, tendency to skin diseases, as well as malignant growths. And this is not all, for out of the potassium molecule in the gastric acid cell the hydrochloric acid is derived -- not from the sodium chloride of the fluids, but from the solid tissues; therefore potassium is undoubtedly implicated in hypochlorhydria, with all its subsequent effects.

Shall the writer go further? Yes, there is more to say; viz., the lack of hydrochloric acid is the main causation of alkalosis. Much space might be taken up to show this is so; but let us go on to another sequel to its deficiency.

Tuberculosis is in everyone and everywhere. But why do the few succumb and the many escape its ravages? Alkalosis is the answer. When the cellular tissues are too alkaline the fatty acids tend to disintegrate and give off glycerol; a study in fatty acids will readily show this to anyone. In this glycerol molecule (glycerin) the tubercle bacilli thrive. Let me quote an authority on this point, Dr. Esmond R. Long, University of Chicago*. “Curiously enough he says the tubercle bacillus stands almost alone in its dependence on one or two particular combinations of carbon. The most usable source of carbon by far is the relatively simple substance glycerol -- luxuriant growth does not occur (in laboratory) in absence of glycerol.” Again, Long says: “It may be that a difference in the availability of free glycerol in the tissues accounts for some of the differences noted in people in susceptibility to tuberculosis.”

So far we have given an hypothesis; but to the writer the only real proof is a pragmatic one: Does the hypothesis work? Do clinical reports bear out these claims? I will quote but three cases, although many are indexed, then leave the formula I use today in the hands of my colleagues for their vindication. The formula contains: ferrum, necessary for oxidation of cell life; sulphur for same reason to complete cycle; chlorine and hydrogen to keep ions free; potassium to supply the hypothetical mineral deficiency and to enable gastric cells to form their own peculiar acid.

The formula now in use by the writer is as follows:

Rx Sol. potass. arsen. (Fowler's) f3j
 Tr. fern chloridi f3▼
 Sol. potass. chloridi (10%)
 Sol. potass. sulphads (10%) aa f3J
 Sol. acidi HCl (2%) ad f3 i▼

Case of Pat. R.; girl aged 8 years. Two years constant cough, night and day; fever, weak, dullness over lung area. History bad X-ray showed lungs riddled with plastic areas; weight 50 lbs. Diagnosis: pulmonary tuberculosis. Realizing that ordinary treatment of bed and feeding was hopeless, she was allowed to run about and kept on her diet, but lunches were added, and kept from school.

Treatment: the given formula, 5 drops 5 times daily. In two months almost complete cure has taken place, lung healed, gain 10 lbs. and child has romped herself to health, for she cannot keep quiet.

Case of J. R. D., 64 years old, dairyman for 16 years. Had cold 1 egg, pained at night, insomnia, nervous, liver and stomach involved, despondent, tongue red and cracked.

Diagnosis: Potassium and chlorine deficiency.

Formula: 9 drops 4 times daily. In one month completely well. All former treatments had failed and daily and he had tried many physicians.

G. B., male, age 65. Diabetes for several years. Health poor, weakness and thirst. A small cancer size of a quarter on neck. Treated by formula, also with Harrower's pan-secretin tablets. In three weeks was sugar free. The growth was removed by zinc chloride paste and a small daily dose of the mineral chloride formula keeps him in good health. In fact, the writer finds that all cases of functional diabetes become sugar free if the above gland tablet is used while needed, in addition to above prescription.

CONCLUSION

Much more could be said concerning the complex cellular chemistry, but many of my medical colleagues can hold up their own hands or those of their elderly patients, and see their swollen or distorted

Medical data is for informational purposes only. You should always consult your family physician, or one of our referral physicians prior to treatment. joints and say, "Alkalosis." Then if they will, they can take this formula and week by week see these infiltrated joints subside with increase of bodily comfort and physical strength, and realize that alkalosis causes precipitation of waste products, and that the administration of alkalies but changes the acid waste products into salts, to be deposited as sodium urate, in those joints farthest removed from the heart, or to form calculi in bile or kidneys. Destroy these acids by the stronger natural normal acid (HCl) and they will be eliminated; broken down by alkalies they become deposits. The formula is designed to increase the amount of HCl in the gastric juice, to supply deficient minerals, and finally to restore the chemical reactions of the body to their normal metabolism.

A word of warning seems necessary, viz.: keep to a small dose. Recently a fisherman with furunculosis of arms took, instead of 9 drops, a teaspoonful as a dose. After the second dose he had to walk about for half an hour to overcome the numbness and failure of circulation in his legs. Needless to say his boils soon disappeared.

The potassium salts suspended in an acid medium have free ions and are rapidly assimilated.

The formula is self-sterile and can be given intravenously, 3 to 5 minims in 10 c.c. of distilled water as needed; by mouth well diluted 5 to 20 drops three to five times daily. The writer gives it in hot water in cases of cholecystitis, with inevitably happy results. If desired, calcium chloride can be used in place of the potassium salts when indicated in edema, asthenia, etc.

References:

* *Chemistry in Medicine.*

† *British Medical Journal.*

‡ *U.S. Dispensatory.*

THE CONQUEST OF CANCER

It is incumbent upon all physicians and surgeons who have made any improvement or discovery that may help in the constant warfare against disease and premature death to report such discovery or improvement to the medical world at large, so that perchance it may fit in, become a necessary cog, or a stepping stone whereby the army of this world may function more readily, or move upward toward the unseen and perhaps unattainable ideal of a humanity free from disease, plague and early death. Also it is morally obligatory upon those who gain help and knowledge from such contribution to acknowledge their obligations by reporting back to the same journal their successes or even failures, in order that such claims may be fully verified or disproved by the light of experience and corroboration.

The following article is to bring up to date the writer's progress in the war against cancerous disease, to present his claims, deductions and the results of his treatment.

First of all, what are the underlying causes which allow the formation of neoplastic growths? These he believes to be:

1st. A deficiency of potassium in animal tissues.

2d. Potassium deficiency causes loss of function in posterior spinal nerves.

3d. Hypochlorhydria is the chief cause of potassium deficiency.

4th. Hypochlorhydria, likewise, causes alkalosis of tissues.

5th. When a group of cells becomes isolated from nerve control, such cells will become a parasitic entity.

Potassium is one of the essential minerals of animal tissues; also in vegetable life; it is found in all cells, tissues and fluids with the exception of milk. Potassium salts are absolutely necessary for the sustenance of life. In small doses they stimulate the heart and raise the blood pressure; in poisonous doses they depress and paralyze the various functions of the body. It is claimed by Wood that the stimulating effect of beef tea, beef extracts and coffee is due to the small amounts of potassium contained therein. To its value in vegetable

life, reference has been made in previous articles. No crop can be grown without its presence in the soil, and the contrast when potassium deficiency is corrected is at times almost unbelievable. That a deficiency, of potassium in the human tissues can set up great pathological disturbances is easily imagined; but just what these tissue changes are has never been established.

Clinical reports are few, yet for years has not Bland's mass, with its potassium carbonate content, been one of the standard remedies for impoverished blood and asthenia?

The writer contends that potassium deficiency in nerve tissue will bring about a slow degeneration and loss of function, attacking particularly the posterior spinal nerves, and that this malfunctioning is the cause of neoplastic growths.

Deficiency of hydrochloric acid in the gastric juice is becoming, under the stress and strain of modern civilization, very common. That this deficiency will cause imperfect digestion and assimilation of food is easily understood; also the mineral content of food will be imperfectly absorbed. Thus a vicious cycle is thereby set up, and as potassium in the acid gastric cells becomes depleted, less and less HCl will be excreted into the digestive fluids, thus giving rise to asthenia, diabetes, toxemia, and, above all, profound tissue changes. That hypochlorhydria will bring about the condition known as alkalosis in the cells of the body is easily grasped, although much further laboratory work is required to show the process by which this condition appears. As, however, HCl is the only normal acid to the human economy, it must be inevitable that such is the case.

When carcinoma, for instance, is fully established, this alkalosis is increased by the lactic acid excreted by the cancer cells; so, therefore, excess of lactic acid in stomach and tissues of body is but another term for alkalosis. This condition is supposed by man to favor the formation of or to precede the appearance of cancer.

In this city there is grown, for ornamental purposes, a thick, waxy-leafed plant. When one of its leaves is broken off and lies upon the ground, it puts out roots and shoots, and if in a favorable location will grow into a similar plant from which it came. In other words, cut off from its nerve control, it takes on an independent existence. So in cells of the body, any cell supplied by nutritive elements, but cut off from nerve control, must of necessity become an independent growth, the nature of which depends upon the kind of cell or cells involved. This theory, therefore, can explain all the innumerable varieties of neoplastic tumors, both benign and malignant growths.

It is the writer's belief that the posterior spinal nerves have a sensory function controlling and inhibiting cell growth, and that the anterior spinal nerves, as is well known, in addition to their motor control, stimulate cell production. This is well shown in progressive muscular atrophy, and in infantile paralysis, where the anterior spinal nerve centers are involved, causing destruction of tissue cells in affected muscular areas. So likewise if the posterior spinal nerves or centers are involved, a loss of control over areas affected will ensue, thus allowing the various forms of neoplastic growths. In other words, the cells are cut off, both from sensory and inhibitory control. This also explains the lack of pain or discomfort in early cancerous growths.

As all theories and hypotheses are dependent for their substantiation, finally, on clinical proof, the writer presents two cases that are uncomplicated by other diseased conditions to illustrate above claims, in addition to those already quoted in December, 1932, issue of *THE MEDICAL WORLD*, giving not only the remedy used, internally and intravenously, but the treatment applied to the local lesions.

Cancerous growths, when localized on skin or in the orifices of the body, must be destroyed. At the same time, if the conditions which caused their appearance are not corrected, sooner or later their appearance at the same site will become manifest.

The formula I use by mouth and by intravenous injection in these

Medical data is for informational purposes only. You should always consult your family physician, or one of our referral physicians prior to treatment. cases is as follows:

RX Sol. potass. ars. (Fowler's): f 3 ins
Tr. ferri chloridi f 3 iv
Saturated sol. potass. sulphatis. f 3 ij
Sol. HCl (2%) q, a. sd. f 3 iv

Dose by mouth: 5 to 20 drops.

Intravenously: 3 to 7 minims in 10 cc. of sterilized distilled water.

Why should the above formula be effective? What, in other words, has to be accomplished? First, phagocytosis. This term not only implies destruction of invading germ life, *for these are always present as scavengers of the body in diseased condition*, but also destruction and absorption of diseased tissues.

Arsenicum has been known for many years to have this therapeutic virtue, to increase hemoglobin and red cells of the blood; also it helps to correct toxemia, always present in cancerous affections.

Ferrum seems to have a special affinity for cancerous cells. When applied locally it is very destructive to local lesions. Ferrum, likewise, is essential to restore hemoglobin, also for cell oxidation, and with the sulphur atom present in the solution is necessary for normal metabolism of the cells. In cases of hemorrhage from cancerous growths the writer has found it necessary to add a sulphur lozenge daily to the treatment. This readily brings relief from bleeding lesions as found in stomach, bladder, rectum, etc

As to potassium it may be argued, what proof is there that a deficiency of this metal is involved in neoplastic growths? It can be readily surmised that this element, so necessary for life, can become deficient; but whether this supposed deficiency is responsible for the above condition can be demonstrated only by the biochemist in spinal nerve tissue of cancer victims. Since this metal has been added to the acid mineral solution results have been so uniformly satisfactory and curative, even in the most advanced and hopeless cases of cancer, that the writer feels justified in making this claim. The contention of the writer, that potassium chloride in the gastric acid cells is the chief source of HCl in the gastric juice, and primarily not from the sodium chloride in the plasma, is, he believes, logical and understandable. Therefore a deficiency of potassium would be a potent factor in hypochlorhydria present in so many of the progressive degenerative diseases. If such a deficiency of potassium is corrected, and if this hypothetical deficiency is really the chief cause of the degenerative diseases, including neoplastic growths, marked improvement must appear in these patients, and so substantiate this hypothesis. And these curative manifestations are exactly what the writer, day after day, has witnessed, and wishes to put on record. Every case of cancer put on the acid mineral solution has responded favorably to its action. No matter whether it be applied to local lesions, given by mouth or administered intravenously, the result in cancer is always favorable, and at times unbelievable.

As to hydrochloric acid, Dr. Burr Ferguson and Dr. C. De Witt Colby both have shown repeatedly the value of this acid. In spite of alarmist cries from the ranks of the ultraconservatives, they have repeatedly, with miraculous effects, injected this dilute acid into the blood stream. They have also demonstrated, by careful watching, a marked increased activity and number of phagocyte corpuscles.

The increased supply of chlorine to the tissues rapidly controls sepsis; the H ion slowly changes alkalosis of tissues to the normal pH 7.3.

This acid mineral solution is the outcome of four years' clinical study. It has the virtues of all those minerals, contains all the possibilities of HCl therapy demonstrated by those eminent physicians; also, being an acid solution, its ions are readily absorbed and consequently are very active.

The following case demonstrates how, without use of X-ray and expensive radium, small local lesions may be readily and inexpen-

sively treated and destroyed with this acid mineral solution, with far better results than those treated by raying, and it is available in all communities.

This case also demonstrates how multiple skin cancers are very often but probable metastases from a pyloric growth.

Case of M. S., St. Augustine, Fla. Male, 55 years. History of gastric distress and frequent vomiting since 1921. Toxemia, high blood pressure; also appearance of sore on right temple, 1926. This lesion was treated with radium twice in 1928. Three more growths appeared on face and one behind left ear in 1930. These lesions were treated by X-ray therapy at Pensacola Veterans Hospital; also his toxemia and hypertension, November, 1931.

July, 1932, case came into writer's care. Examination showed lesions of face and head were increasing in area and depth, the one on right temple angry, crusted and red from radium burn. Vomiting at least once weekly. Area over pylorus swollen, tender and indurated. The acid mineral solution was ordered four times daily; dose, 9 drops; with relief of gastric symptoms. Later the smallest lesions on face were scrubbed with Fowler's solution until diseased cells were removed; then site was painted with tincture of iron. Later the cancers on chin and back of left ear were covered with a thin layer of absorbent cotton, which was fastened at edge to skin by collodion. Then HCl, full strength, was dropped on cotton and allowed to remain on lesion for 90 minutes. Ungt. zinc oxide was applied daily. Results were perfect. The radium burn and cancer was again scrubbed with Fowler's solution, all crusts removed, and painted with tr. of iron.

April 1, 1933. Face well; radium burn still red; digestion nearly perfect, vomiting rare, soreness over pylorus absent. This case should still continue remedy for several months longer.

The next case is one of gastric and duodenal carcinoma.

W. T., white, age 42, veteran, children. Had suffered from gastric troubles at times since 1911. Disabled by gastric trouble since February, 1930. February, 1931, attack of chickenpox; stomach trouble grew worse.. Went to Pensacola Naval Hospital, September, 1931, for treatment. Discharged with no relief Dec. 1, 1931, as hopeless case of gastric ulcer. May 1, 1932, X-rayed at Flagler Hospital, St. Augustine. May 8, 1932, entered Lake City Veterans' Hospital. Discharged June, 1932, as a hopeless case of gastric cancer. Became worse, frequent bleeding from stomach and bowels. Almost died January, 1933. February 22, 1933, writer took over case. He was in great pain and profound cachexia. Hemoglobin, 40; pulse 120; fever and night sweats, diarrhea. Hands bloodless, sordes, looked moribund, unable to walk. Palpation disclosed a large mass in upper abdomen very swollen and tender to touch; taking opiates. Treatment was 3 to 7 minims of acid mineral solution intravenously every three days and 5 drops in oatmeal water 6 times daily. On account of extreme poverty no particular diet could be ordered. Slow improvement took place; bleeding gradually stopped; also less pain. May 2, 1933, patient up and walks out. Pulse, 100; still pain at times; color returning to face and hands. Hemoglobin, 70. Good appetite, but distress at times; still has fever and sweats occasionally, perhaps due to absorption of disease tissue slight cough. Mass in abdomen no longer palpable; still tender. Prognosis: looks as though he will recover. Intravenous treatment discontinued. At no time did these injections cause any disturbance. Drops continued by mouth 6 times daily. Due to extreme poverty and lack of suitable food, entire credit is given to medical treatment.

The first case quoted shows how small cancerous lesions of skin can be quickly and easily destroyed with a minimum of pain and scarring, without the sad after-results of radium and X-ray treatment. The acid mineral solution is quit inexpensive and readily available in all parts of the world; so that everyone, no matter how poor, can obtain this treatment.

The above cases were described in detail and can readily be verified. If the second one recovers, another film will be taken for comparison. That the acid mineral treatment promises much is evident. Further improvement in standardization and correct dosage of remedy needs more experience with a plentiful clinical material. So far clinical

Medical data is for informational purposes only. You should always consult your family physician, or one of our referral physicians prior to treatment. results bear out the hypothesis given, and if, in the writer's opinion, the nerve control of cell metabolism can be reestablished, absorption will take place in internal growths.

RELATION OF IRON TO NEOPLASTIC DISEASE

It is axiomatic that a healthy organism in either the vegetable or animal world is primarily dependent upon a normal balanced mineral content. Therefore, an excess or a deficiency must inevitably bring about, sooner or later, conditions known as disease. That the abnormal mineral content will likewise cause the affected organism to be less able to withstand encroachment of microbic life is likewise a truism.

The writer wishes to present some interesting data linking up both the vegetable and animal worlds, showing, by proven statistics, how certain mineral deficiencies cause disease conditions and how this knowledge applied to neo-plastic and affiliated diseases in the human kingdom throws a flood of light upon this darkened area of human knowledge; also to show how, when this truth discovered in the vegetable world is applied to cases of cancerous disease, its symptoms can be greatly mitigated and curative results become strikingly manifest.

Twelve years ago, more or less, east of the Mississippi River corn plants began to die, their stalks were stunted, molds grew on ears and roots, and farmers were in despair. The sweet corn canning industry was also involved, for black specks would appear in the canned corn, to the disgust of good housewives and the dismay of the canners when this product was returned to the canning factories. Expert chemists examined these black specks and pronounced them precipitated iron particles.

But how did iron get into the corn and why did these corn plants' roots and ears develop unsightly molds such as the rhizopus, gibberella, fusarium, etc.?

It was George Hoffer who, with the help of other's, finally put the puzzle together. Taking ears of corn, by using the well-known thiocyanate test, he found iron, first, in the grains of corn, before canning; next, in the joints of corn, where it had blocked the channels for sap; also that a weak solution of iron slowly injected into a growing corn plant caused these diseased conditions to appear.

By using the methylene blue stain he noted that the circulation of sap had been almost completely blocked by these iron deposits. At last, after much research, it was found that when potassium salts were applied to the soil these disease phenomena were controlled; also the various molds likewise were no longer found on roots and ears. Again, potassium salts increased production two to three hundred per cent. in potassium deficient soils.

Can we show that potassium deficiency may be present in animal bodies and, like in corn, this deficiency may cause profound changes in their metabolic life?

Professor A. K. Austins says that: "Potash salts are believed to be absolutely necessary for the sustenance of life." Again, Professor R. A. Hatcher² says: "It is only within recent times that we have come to understand the importance of extremely small amounts of certain salts of the blood and the influence exerted by even slight changes in its composition. Small amounts of potassium are essential for the heart-beat, etc." Of late years we hear of iron precipitation into kidney and other organs, as in pernicious anemia, and if this precipitation of metallic iron can be shown to be the cause of the indurated tumors, malignant and benign neoplastic growths, a great step forward can be taken toward ultimate victory over neoplastic malignant disease.

But what test can demonstrate potassium deficiency in human tissues? There is a more or less accurate test for this deficiency in soils; but, after all is said and done, the only real proof is a pragmatic one, viz., what effect does the administration of certain potassium salts have in cases of cancerous disease? Can we show, as in corn production, that this metal does the same to human bodies as it does to growth of this

cereal? Does the administration of potassium salts soften indurated cancer tissue, pick up again precipitated iron and cause a decisive increase of hemoglobin in anemic blood, cause tumors to reduce in size and bring health and life back to cancer victims? If so, what great possibilities are in sight! For, by simply adding a potassium salt to daily intake of sodium chloride all the varied aspects, and they are many, of this deficiency may be prevented and controlled. As, however, this thesis is devoted to cancer warfare, mention of other disease conditions will be left for some future papers.

What evidence have we that, like as in cases of iron precipitation in corn, shutting off the circulation of sap through the nodes of the plants, in man a blocking of the lymph nodes can be likewise present and cause the phenomena we term neoplasms? First of all I will quote from a letter from Professor W. W. Keen to W. Sampson Handley, M. D., surgeon to Middlesex Hospital, London: "I have just read your very interesting address on 'Lymph Stasis the Precursor of Cancer.' It appeals to me as the most reasonable and almost certain paper on the origin of cancer that I have ever seen. All others are guesswork. Here is a series of facts, observations which cannot be disputed. . . . Whether we can do anything to prevent or remedy the stasis of lymph or not is the next question. If we can, we can possibly prevent cancer."

Again, in the same article! Dr. Handley states: "In remarkable accord with the view that lymph stasis is the greatest general physiological factor which lays the foundation of cancer, is the flood of evidence coming from many quarters that papilloma or adenoma is the precursor of carcinoma of every variety." "If, as I maintain, the papilloma or papillary adenoma is the characteristic product of local lymphatic obstruction, we are getting near to the conclusion that all carcinomas are the result of local lymphatic obstruction."

That an excess of one group of minerals and deficiency of another may seriously disturb the delicate pH chemical balance is easily understood; also that this chemical imbalance is present in cancerous disease has been almost universally accepted by the scientific medical authorities. The late Dr. Willy Meyer, of New York City, wrote: "Exact pH measurements have revealed the fact, as shown by the literature, that malignancy is always associated with a high degree of alkalosis, and it has also been shown that the alkalosis precedes the malignancy. There can be alkalosis without malignancy, but it would seem that there can be no malignancy without alkalosis. The more virulent the malignancy, the stronger must be the alkalosis which sustains it."

Calcium, magnesium and sodium are seemingly in excess in alkalosis of the body; in the earth calcium, phosphorus and magnesium are recommended for acid soils. Yet potassium is rarely in excess in such soils, but usually deficient and when corn is destroyed or injured by precipitation of iron into the nodes, roots, ears and leaves of the plant, we always find a deficiency of potassium salts. Likewise in this potassium deficiency disease of corn we find reported that many varieties of molds attack ears and roots. Does this fact not remind us of the varied microorganisms that are found in all advanced cases of malignant growths and reported by so many research workers

During the past years a potassium salt solution has been given to quite a few cases of cancer with striking curative results. Since giving potassium salts in a solution of hydrochloric acid of about 2 per cent, results are so striking that the before-mentioned claim of result of precipitated iron must be as true in man as in corn, for in as short a space of time as four weeks in a woman of 42 years the writer has seen indurated masses disappear, circulation of the arm restored, infiltrated lung by metastatic growths clear up, blood index rise; strength, color and appetite return; pain relieved and a large hole in right breast under simple germicidal application fill in rapidly with healthy tissue; also involvement of spine with pain in spine and intercostal nerves entirely relieved.

Medical data is for informational purposes only. You should always consult your family physician, or one of our referral physicians prior to treatment.

A striking case of keratosis treated in Takoma Park, Md., was that of a woman who had a horny mass on the heel of one foot for over eighteen years. This growth would crack, ulcerate and break away; then another growth would take its place. Six weeks from commencing to take potassium salt solution the foot was well and skin was normal. This case is especially interesting, showing, as it does, how a potassium deficiency may be present many years, and opens up new thought for treatment of not only keratosis, but psoriasis and similar affections, for in keratosis we have a condition closely allied to epithelioma.

In the city of Jacksonville there is a woman about 70 years of age who several years before had her right breast removed and axilla cleaned out for cancerous growth. Last spring the writer examined her and found several large hard, recurrent growths on the border of the axilla and in the ribs. The potassium and hydrochloric acid solution was prescribed. At this date all these recurrent growths have disappeared her general health is greatly improved.

Repeated cases have proved that the acid potassium solution changes back to normal the gastric secretion and impaired digestion. The past four years of economic distress and financial worry are already bringing a harvest of degenerative disease, including cancer in all its manifold phenomena. And because of this great demand for relief, the writer puts out this information instead of piling up conclusive proofs for several years in order that others, if they so desire, may use this form of treatment, so inexpensive and yet so successful in the writer's hands.

Apropos of the claim that iron is precipitated into lymph channels, blocking of the affected areas from the lymph circulation and nerve control of cell life, and these blocked lymph areas become a fruitful field for micro-organisms of varied nature and kind to infect these occluded tissues, what further proof can be given to prove this statement? A most suggestive fact repeated over and over again is that in advanced cases of cancerous disease the hemoglobin color index is invariably low --4.0 to 50% on the color chart. After such cases have been treated a week or two, even when no iron is administered the color index is found to have risen to 70 or 80%. This indicates, the author believes, that the red cells of blood have taken up the precipitated iron which they had lost by the potassium deficiency. This phenomenon throws new light on the various anemias of blood so hard and unsatisfactory to treat, and also on the solution of the problem, for if iron is precipitated into the tissues it seemingly must have been lost by the hemoglobin of the red corpuscles, and, if they regain it, this engorged tissue should be dissipated. This is exactly the phenomenon that occurs when HCl and potassium are taken or, better injected into the blood stream. The cancerous indurated growths often then disappear and the hemoglobin color index rises nearer to the normal.

Various means have been employed to combat alkalosis, mostly futile, others quite injurious. In soils calcium is applied to combat acidosis, and, when given to cancer cases by the author, has proved most disastrous. Magnesium salts likewise. The hydrochloric acid solution with potassium salts, by vein and mouth, however, is most effective. The ammoniacal urine present in advanced cancer soon becomes acid, accompanying the dissolution of swollen lymph nodes and improvement of blood etc.

The addition of hydrochloric acid to the body increases the available chlorine, with its marked antiseptic and phagocytic properties; also it helps to restore the normal pH of the tissues.

Starvation also tends to correct alkalosis, but it cannot do much to relieve accompanying toxemia. Loss of blood likewise also helps greatly, in the writer's experience, in removing excess of iron, and many report themselves improved in health after losing blood from hemorrhoids, kidneys, liver, etc.

TREATMENT OF CANCER

Experience to date indicates that the treatment of cancer can now be divided into two divisions. First: removal of underlying factor producing lymph and nerve stasis, viz., a potassium deficiency, an alkalosis and lymph stasis, caused by an iron precipitation. Second: surgical removal, when possible, of tumor, or local antiseptic treatment to external open lesions to destroy invading microorganisms; also other measures are helpful, such as bacterins, sulphur internally, as well as supporting treatment, as proper diet, tonics, gland therapy, and radiation.

This local antiseptic the writer believes he has perfected. It can be applied to large cancerous lesions, is very effective in destroying micro-organisms, removing foul odors and discharges; it causes cancerous nodules to break down, stimulates growth of healthy granulations, and, best of all, its application is painless and inexpensive.

The antiseptic oil I use is the following:

RX Sat. sol. of iodine (crystals) in chloroform 4|00
Sat. sot. of naphthalin in mineral oil120|00

M. Sig.: Apply to cancer sores for thirty days.

By the above treatment rapid improvement occurs; the cancerous nodules in lymph channels melt away. Recent growths are rapidly dissipated, ammoniacal urine becomes acid, blood index improves, complexion clears and a sense of well-being comes in place of toxic malaise. Also cancer pains are quickly alleviated.

The question may be raised: why potassium deficiency? This the author believes to be quite common and may due to hypochlorhydria brought on by worry, grief, etc., producing the deficiency of hydrochloric acid giving rise to lactic acid replacement and maldigestion and impaired absorption of mineral salts.

As lactic acid is given off by malignant growths, it may be assumed, therefore, that replacement of hydrochloric acid by lactic acid is proof of existing alkalosis.

Potassium deficiency may also be the underlying factor in susceptibility to tuberculosis, causing excretion of glycerol from the fatty acids of cells, as outlined by Professor Esmond R. Long, of Chicago University⁴.

A few of the cases treated will now be briefly described in order to show how the remedy causes alleviation in different aspects of neoplastic disease:

L.W., Negress, aged 73 years, St. Augustine, 4- to-33. Paget's disease of left breast, necrosed area six inches in diameter, breast hard, swollen, retracted nipple, bloody discharge at intervals, toxic, bedridden, no glandular involvement, severe pains posterior to heart. Intravenous and internal treatment by acid potassium solution; also local treatment. x11-14-33: In good health, has gained twenty-five pounds in weight. Breast normal except for small induration remaining in center of breast. Still under treatment, breast improving after each injection. N.B. — This case was neglected during absence of writer for four months during the summer.

Wm. T., 42 years, White, veteran, 2-22-33. Had gastric distress twelve years previous. February, 1930, much worse. February 1931, had chickenpox; gastric distress became worse; went to Pensacola Naval Hospital; treated for gastric ulcer, no relief. May 1, 1932, X-rayed at Flagler Hospital; St. Augustine. Sent to Lake City Veterans' Hospital. June, 1932, went home. Diagnosis: Cancer of stomach, hopeless, grew worse, frequent hemorrhages from stomach and bowels, almost died January, 1933.

February 22, 1933: Examination. Near death large mass in stomach and duodenum, great pain, frequent hemorrhages from stomach in vomitus and from bowels. Pulse, 120; night sweats, fever, marked cachexia and much emaciated. Case looked hopeless.

Treatment: acid mineral solution intravenously every 3 days. Same by mouth in oatmeal water 5 times daily. Atropine sulphate given when in pain. April, 1933: Big improvement; mass in epigastrium no longer palpable. Hemoglobin had risen from 40 to 70 color chart. Bacterin Van Cott was given. This patient got up and around during writer's absence during the summer. In September, roof blown off shack; got wet, has gastritis, no sign of tumor present, should recover. 11-18-33: Owing to extreme poverty and lack of

Medical data is for informational purposes only. You should always consult your family physician, or one of our referral physicians prior to treatment.
 proper food all improvement is due to medical treatment.

Case of L.W., age 48, St. Augustine; weight, 117; loss 13 lbs. 10-6-33. Uterine fibroids for six years. Treated eighteen months before by X-rays. One year ago severe pains in back and pelvis; sitting or lying down almost impossible. Examination showed uterine fibroids, size of head reaching nearly to umbilicus yellow skin, operation scar for removal of right kidney. seventeen years before. Motion painful in base of spine and unable to bend forward. Weekly injections of acid potassium solution were given intravenously; also same by mouth q.d. After second injection pain and stiffness decidedly relieved. Can now lie down in bed and sit without pain; complexion clearing and growth much reduced in size and uterine discharge stopped. Diagnosis: Beginning of malignancy in growth. 11-13-33: Case still improving. Intravenous injection once weekly; tumors decreasing in size after each injection.

L.G., age 87 years, Negress; June, 1929; many children. Found with gas pains from an immense adenoma in the colon, size of eight months' pregnancy; vomiting and complete stoppage. Injection of acid solution was given intravenously; no opiates. Gas pains and colic relieved in five hours. Five further injections were given, then solution by mouth. By September, 1919, all signs of tumor had disappeared. One year later a sarcomatous swelling appeared on the right tibia, which disappeared after treatment by the same solution by mouth for several months. This woman died from diabetic gangrene in 1932 — from diabetes with gangrene of the hand.

P.D., Greek, male; age 50. Growth in gallbladder and duodenum badly jaundiced for four months. X-ray film indefinite; loss of 20 lbs. Several surgeons in this city and Jacksonville gave fatal prognosis, and mineral solution was given intravenously once a week; same by mouth. Gradual improvement took place. At this date he is in the best of health and has gained 2.8 lbs. in weight.

J.L.J., woman, colored, age 40, 10-8-31: Recurrent growth in scar above pubes; operation for removal of fibroid one year before. Gave acid solution internally for three months. Complete relief of pain and disappearance of tumor. 6-10-32: Still Well.

Mrs. F.P.J., white age, 7 years. 1-2-31 : Probable growth in duodenum, with digestive disturbance; also hard red swelling on right tibia. Gave acid mineral solution for ten months. Complete relief and at this date is in good health.

Mrs. M.M.; age, 67 years; white. 12-4-30: Indurated swelling over duodenum. Toxemia; ptosis of stomach and intestines. Gave acid solution by mouth. Slow recovery. Now in good health.

C.S., Colored woman; age, 67. 10-19-30: For ten months had severe pain while eating. Examination showed growth in stomach and liver. Insomnia, toxemia, no relief from medical treatment. Acid solution was given intravenously and by mouth. Immediate relief from gastric distress. Complete relief from all symptoms and growths at end of one year. Still well. 4-10-32

P.F., age 30; colored woman, Jacksonville. 3-19-31: Gas and pains in abdomen for three years. Low lood pressure; asthenia. Examination showed indurated swelling in left colon. Acid solution by mouth. Complete relief in two months and disappearance of growth.

J.D.C., age, 58; colored man Jacksonville. 2-24-33: Indigestion for twenty-five years. Ate freely of eggs and sugar. Examination showed indurated swelling of left colon. Acid solution by mouth. Complete relief in three months.

M.E.P., age 63 years; white. 2-24-33: Cancer of cervix uteri, ten years before. Radium treatment four years ago. Examination shows vagina nearly occluded. Cancerous membrane on meatus and vaginal wall, like raw steak; cauliflower excrescence of vulva; large nodule in rectal vaginal wall. Acid solution by mouth. Ferrous sulphate locally. 10-10-33: Unable to pass finger into vagina. Acid solution intravenously once weekly. Antiseptic oil locally. 11-21-33: Much improved. Vagina opening up, less painful, better health; gaining in color, weight and strength. Still under treatment.

L.P., Colored man; age, 63 years. 8-2-30: Complained of cystitis; loss of weight, 15 lbs. Examination showed indurated growth in scar over pubis from previous operation for stone in bladder. Acid solution intravenously once weekly and by mouth. Within twenty-one days tumor had disappeared. 11-1-33: No recurrence of growth. Bladder still irritable. Prostatic gland normal; gained seven pounds in weight.

C.S.S., age, 57 years; Colored, St. Augustine. 6-19-32: Vertigo; paralysis, one year before treated by acid mineral solution, complete relief in four weeks. Attack of vertigo, facial paralysis, deafness in left ear. Small hernia in back of neck of spinal canal about sixth cervical; can be compressed. Diagnosis: Cerebral tumor. Acid mineral solution by mouth. 9-19-32. All Symp-

toms absent. Able to resume work.

CONCLUSION

More cases could be quoted, but these have been chosen to show how the acid potassium solution covers a large field of internal cancerous diseases.

As experience permitted, the acid potassium solution was improved; so at this date, the solution is rapidly effective, especially so when given intravenously. The local remedy mentioned is intensely antiseptic and germicidal and, being inexpensive and painless, is well adapted to large ulcerated areas, seen in advanced cancerous disease, also in rectal and vaginal growths.

The revised solution I am now using is the following:

RX	Liq. potas. arsenitis.	1 00
	Sol: potas. chioridi (io°J)	8 00
	Sol , potas. sulphates (to%)	16 00
	Sol. acidi hydrochlorici diL	q.s.ad30 00

M. Sig.: 5 to 25 drops in water after each meal. Intravenously: 5 to 10 minims in 10 c.c. of water.

No bad effects have been noticed by the intravenous injections.

Literature cited.

1. Cancer contributions. Adair.
2. Bulletin 298. Purdue University, Indiana.
3. *Manual of Clinical Chemistry*, Austin.
4. *Chemistry in Medicine*.

A FURTHER REPORT OF CASES

I have some interesting cases to report. During the summer of 1933 the writer visited New Hampshire, Maine, New York City and Washington, D. C., and its environs. Wherever he went, he found cases of chronic disease of many kinds. Some hopeless and in despair; others still fighting for their lives. To these varied cases the writer gave his acid mineral solution with remarkable results. Some of the cases are worthy of record, and are here briefly recited. The first case, however, was under treatment ere the writer left for the North, but is worthy of inclusion, because of its severity.

May, 1933 L.W., Negress, age 72 years. For two years had Paget's cancer of left breast. Ulcerated area 6 inches around retracted nipple. Pains in left lung. No glandular invasion. Bedridden, toxemia and asthenia. Acid mineral solution¹ by vein twice weekly, 12 drops in water four times daily. Locally a saturated solution of coppers to ulcerated area on breast. Quick relief was attained. Oct. 6, 1 933, patient well and active, breast still swollen, area of ulceration completely healed. During the summer months the solution was taken only by mouth. Still under treatment.

May 15; 1933 White widow, age 74 years, New York city, in slum area. Last stages of heart disease and pulmonary tuberculosis; a large cavity in her right lung. Acid mineral solution, 12 drops after meals and a Blaudstrychnine compound tablet twice daily was ordered. Report at this date: is able to go out and greatly improved in health.

H.G., White girl, age 4 years, New Hampshire. Parents and three older children well. For two years had slowly increasing convulsions until they numbered five to twenty-four daily. Under observation at Boston Children's Hospital several weeks; report negative. Phenobarbital in large doses ineffective. Examination showed child running about with body bent to right, dry cough and persistent constipation, Headaches preceded convulsions, evidently not epileptic. Acid mineral solution was given six times daily, With immediate relief. Convulsions returned slightly once weekly for three weeks, then stopped. When last seen had gained in weight, rosy cheeks and seemed in best of health. Here was plain evidence of increased brain pressure. The diagnosis or cause I will Leave for present

August 15, 1933. H.C. White man, age 90 years New Hampshire. Large tumor in abdomen from fecal impaction action in small intestines; blood

Medical data is for informational purposes only. You should always consult your family physician, or one of our referral physicians prior to treatment.

pressure, 230. Interstitial nephritis, slight albumin. Bedridden from herpes zoster for four months. Treatment: acid mineral solution, 12 drops in cup of hot water, preceded by dessertspoonful of mineral oil every hour. Complete relief of impaction in forty-eight hours. Acid mineral solution now three times daily. Blood pressure slowly dropping and improving in health

July, 1933. H.C., White woman, age 43 years, Washington, D. C. Diabetic. Three years before had received intravenous injection of glucose for varicose veins in legs at a Baltimore hospital, which set up a glycosuria; taking forty units of insulin daily for three years. Complained of muscular tetanic spasms, awake and asleep, indicating parathyroid insufficiency. Acid mineral solution was given six times daily, with immediate relief of tetany; also it lowered the excretion of glucose in urine.

M.E., White woman, age 53 years, Washington, D.C. For eighteen years had a horny growth on heel of one foot, which would crack, ulcerate, then horn would peel off to form still another one. The whole foot inflamed and sore. Acid mineral solution was given. In four weeks the growth fell off and foot is now healed and free from disease.

H.S., male, age 43 years, Washington, D.C. Weekly migraine; also raised pus from chronic bronchitis. Acid mineral solution given; complete relief in two weeks. Two months later still well.

E.S., White woman, age 70 years. Complained of gastric distress after eating for past two years. Burning and pain immediately after meals. Acid mineral solution was prescribed. Immediate relief was obtained.

G.H.S. White male age 72 years, Washington, D.C. Had operation on prostate one year before. Examination showed cavity in apex of right lung. Myocarditis marked, with frequent extrasystoles; carcinomatous growths in bladder wall. Two large cancerous growths in the right groin, 6 x 6-1/2 inches. These growths had occluded right ureter. Anemia marked, weak. Average of urinary evacuations 16 times each night. Six intravenous injections of acid mineral solution were given; also four times daily by mouth. Improvement soon took place, urinary frequency soon reduced to five times at night. The ammoniacal urine soon became acid; heart beats became normal, the lung lesion disappeared, also expectoration. Growth gradually reduced to two inches in size. The right kidney ureter opened up, discharging large amount of pus through bladder. October, 1933, case still under treatment; outcome, owing to advanced age and anemia, atU uncertain, but he is much improved.

Other cases might be quoted, but enough has been described to show there must be an underlying factor in all these varied aspects of disease, and that this factor, the writer believes, is a deficiency of potassium in progressive and degenerative disease, including tuberculosis as well as cancer, bringing about a deficiency of chlorine in gastric secretions and an excess imbalance of sodium, calcium, and magnesium in the tissues. Therefore, when the acid mineral solution, containing iron, chlorine, and potassium, is administered, the varied symptoms due to deficiency must inevitably be relieved. We sorely need a simple chemical color test for this potassium deficiency, and this test the writer hopes to be able to find. If so, a future article will be written. Till then let all carry on this treatment, so helpful in the multitudinous cases that are to be found in every town, city, and countryside.

The child with convulsions was diagnosed by the writer as a tuberculosis, involving bowel and brain, causing stoppage of the lymph channels; therefore high cerebral pressure.

In a previous article, reference was made to the claims of Professor Esmond R. Long of Chicago University (*Chemistry in Medicine*), who found that free glycerin was given off from the fatty acids in tubercular patients, and that this glycerol is the chief food for growth of tubercle bacilli. It seems logical, then, to believe the acid mineral solution, producing, as it does, profound changes in the chemical reactions of the tissues, inhibits the breaking down of the fatty acids and the production of the free glycerin in such cases, thus bringing about starvation and death of these invading germs. All cases of tuberculosis when given the acid mineral solution show quick and uniformly curative reactions.

The writer hopes that other members of *THE MEDICAL WORLD* "family" will report their cases to this journal, knowing that only good results can follow. However, it must be clearly understood that when

this acid mineral solution is given to cases of cancerous disease, both calcium and magnesium must be rigidly excluded from the treatment; otherwise no good results can possibly follow.

For the reason for this law, study should be made into the mineral chemistry of the soil of the earth, where excess of soluble calcium inevitably produces sterility and permanent injury.

Magnesium is the chief impurity of sodium chloride and produces injury to the nervous system when in excess, and as in the writer's opinion neoplastic growths are but signs of failure of posterior spinal inhibitory control of reproduction of cell life, we can readily see, by the light of this hypothesis, why magnesium is contraindicated in cancer treatment.

The case of keratosis of foot, a horny growth existing over eighteen years, is very suggestive, for here we have uncontrolled proliferating, epithelial cells, so closely allied to malignancy.

Hence, when a potassium salt is given in an acid solution, and within six weeks the growth falls off, to be replaced by normal skin, shows conclusively that lack of potassium in tissues can be present over many years and that this mineral has a very distinct relationship with cell production, its deficiency causing doubtless excessive uncontrolled cellular growth, not restricted to any portion of the human economy.

The writer has received many letters of inquiry and of commendation, and he believes if such letters were addressed to *THE MEDICAL WORLD* all could share in answers, and likewise receive encouragement from the favorable reports quoted.

ACID MINERAL THERAPY IN CANCER

One year has passed since a report was written to the readers of *THE MEDICAL WORLD* concerning the use of hydrochloric acid and potassium salts in combating cancerous disease.

Since that time treatment on above lines has been carried on; from here and there reports have been sent in that a few apparent cures of cancer have been made by hydrochloric acid; but many failures show that this acid alone, though harmless, is ineffective in advanced disease. There are some notable facts about cancer that are acceptable by all; also certain definite conclusions that we have made as probably the hidden truth, that needs further verification, modification and experience before being accepted, as certain laws manifest in cancerous affections:

1. The first generally accepted theory is that alkalosis is an underlying cause.

2. The next is that loss of cell control by the nerve centers allows or permits cells to grow wild.

3. A lymph stasis causing tumor formation is present in all cases.

The next claims are the writer's conclusions after years of study and use of hydrochloric acid and mineral salts by mouth, vein and intramuscular injection:

4. Potassium deficiency of tissues.

5. A lymph stasis, caused by precipitation of iron, etc.

6. That malignancy consists of an invasion by an unknown, filterable, ultramicroscopic virus.

7. That, when possible, cancer growths must be removed or destroyed by surgery or other methods.

8. Radiation by X-rays is ineffective in destroying the cause of malignancy.

Let us take up, one by one, these varied claims, and examine them carefully, for, in so doing, much that is obscure will come to light and enable us to go farther on the path that leads to cancer control.

Alkalosis in cancer, as well as in other affections, is now almost universally accepted by the biochemical research workers in cancer investigations. In serum of the blood and the lymph of the tissues, the pH is increased from the slight alkalinity of 7.3 to 7.8 or higher, this change causing the normal unfertile tissues to cancer invasion to

Medical data is for informational purposes only. You should always consult your family physician, or one of our referral physicians prior to treatment. become a favorable medium for growth of malignant neoplasms. This change, when far advanced, lowers the normal immunity against wandering cancer cells and thus allows widespread metastases to appear.

As the late Dr. Willy Meyer so tersely phrased it, "We may find alkalosis without cancer, but no cancer without alkalosis."

Therefore, cancer alkalosis may have a different cause than that found in arthritis, diseased hearts and kidneys, or swollen joints of fingers caused by an infiltration of the salts of urea into the lymph channels of the diseased organs. Dr. James Ewing has also come to the conclusion that, as cancer has so many different aspects, variations and sites, there must be more than one factor involved. As the writer has stated before, alkalosis is necessarily dependent on a lessened secretion of hydrochloric acid cells of the gastric tissues. Hydrochloric acid being the only normal acid present in the human tissues, this conclusion is therefore inevitable: when decreased by various causes, lactic acid increases in amount; but this acid is but a waste product of muscular energy, and in course of elimination is broken down into carbon dioxide to be expelled finally by respiration, the balance as glycogen retained for further use as tissue food.

It has been reported lately that a so-called carcinomic acid has been found present in cancer victims, but on examination we find it to be but a half-way product between lactic and carbonic acids and manifests the need of a larger supply of hydrochloric acid in these people. Probably when all is said and done we shall find that when a weak solution of hydrochloric acid is introduced into tissues, either by mouth, vein or muscles, it acts chiefly in clearing out the poisonous waste acids of the body from the lymph channels, increases elimination of CO₂, decreases to normal the pH reaction and desensitizes the tissues to disease proteins. This explanation, probably true, can readily explain all the marvelous reports made by its adherents.

That this acid has still other properties will be mentioned later. The various causes of its diminished secretion such as depressing emotions, sepsis, etc., as from septic teeth, mineral imbalance and vitamin or endocrine deficiencies, is worthy of deeper study by the investigators of chronic disease.

Lactic acid is also a waste product of cancer life, the amount eliminated being probably dependent upon the malignancy of the growth.

Lymph stasis, or blockage of lymph channels, according to Dr. Sampson Handley, of London, is also a prime factor in cancer lesions or tumor formations. It is easy to visualize how a stoppage of the flow of the lymph stream, even in microscopic channels, will cause, first, congestion and an increased tension equal to the blood pressure; also how the oxygen supply decreased, waste toxins were retained, nerve endings impaired in function, therefore loss of control over cell proliferation; tumor formation or abnormal cell life is inevitable. But it is plainly evident that all cases of lymph stasis do not cause tumors, either benign or malignant, and the varied causes of lymph stasis must be well considered.

In cases of deposition of urea salts, as in arthritis, we have an alkalosis, but no cancer, nor in edema of feet; therefore the lymph stasis preceding cancer must have a special cause ere cancer becomes possible; also we see lymph stasis, by irritation and by trauma.

In a previous paper it was shown how potassium deficiency in soil of earth produces in corn life a blocking of sap channels by the absorption and deposition of iron; so, too, we find in repeated cases that by supplying this metal in a hydrochloric acid solution a rapid improvement appears, not only in cancer victims, but also in lymph stasis of heart tissues seen in angina pectoris, myocardiac cases, in the congestion and failure of pancreatic cells as seen in diabetes, and above all in the anemias of the blood.

I fully believe today that, when potassium is fully supplied to

human life, cancer will begin to disappear from off the earth.

It is most striking to read in agricultural bulletins the results of potassium deficiency when varied forms of vegetable life are grown: how corn withers and dies, how iron deposits form in stalk, ear and seed; that when these sweet corn kernels are canned black specks of iron appear in the kernels; how, too, varied rotting fungi appear on roots and ears.

So, too, in tobacco culture, plants die -- sometimes the surface of leaf is covered with necrosed areas of diseased cells. How much like the common epitheliomata of face in elderly men! We may well mention here one case of multiple epitheliomata on face of a man about 60 years of age which we removed by scrubbing with dilute hydrochloric acid and giving him the mineral acid solution. No further lesions have since appeared; also a peptic ulcer present has remained quiescent; four years have passed and skin remains free from cancerous sores.

Can deposits of iron into lymph channels of man be found? The answer is yes. Such deposits have been found by eminent biologists, especially in pernicious anemia. Further, we might add that giving of the acid mineral solution seemingly produces an improvement in all secondary cases of anemia, even though no iron be given. Anyone who will take a weak solution of tr. ferrum chloridum, add to it some dilute hydrochloric acid, can readily see the change of color (ionization) by its presence.

What proof can be brought forward that malignancy is an invasion by an unknown, unseen, filterable, specific organism? It would be well for the student to do as the writer has done, viz.: to study the records of other invisible virus diseases such as are present in the mosaic disease of plants and in the foot-and-mouth disease of cattle. The first is transmitted from plant to plant by the offspring of infected insects; the other simply by a contact with the lymph discharge of the sores or by infected food -- no sign of microbic life can be discovered.

Yet the writer would lay down this law, viz.: that life without a vehicle to function in is necessarily undifferentiated. Where vital phenomena are present, there a differentiated life force is manifest.

The physician who contacts cases of broken-down breast carcinoma, with its peculiar, offensive and characteristic odor, who watches widespread growths appearing in other parts of the body, the toxic anemia, prostration, etc., must say, "there is an unknown virus," no matter how futile all tests and laboratory research work have been to date.

If we recall to mind, there are two factors involved: first, loss of control of cell life by the nerve control, through lymph stasis, of the life centers, this loss causing cells to form neoplasms in the varied tissues of the body; second, that hitherto apparently benign growths may become infected with this unknown and unseen virus, these benign tumors then becoming malignant cancers.

What, then, has the writer to prove these statements and claims? They do not disprove that cancer cells, with their changed mitosis and chromosomes, cannot be transplanted from one animal to another; not at all. If this hypothetical virus is destroyed during transferece we simply have tumor formation, and not malignancy, and that in spite of a tumor growth a mouse with transplanted tissues may die of old age rather than from malignant disease.

From these premises it is evident that when feasible a cancerous growth must be removed as early as possible to cut off the organism from further infection. Surgery, especially in breast carcinoma, is to be preferred.

We have no proof that X-ray radiation can destroy malignancy; but rather in many it seems to aggravate and increase metastases. Proof is not lacking that this malignancy is not transferable or contagious. As it seemingly appears only where alkalosis is present, it can be easily understood why two persons can live, eat and sleep together, one to be

Medical data is for informational purposes only. You should always consult your family physician, or one of our referral physicians prior to treatment. infected, the other escape. Also it must be present in every one, but waiting for a favorable soil in which to propagate. As this malignant virus grows only in an alkaline medium, this must be the vulnerable aspect of its life's cycle for attack.

Therefore, after a cancer has been removed by surgical means, or any other method, the remaining lesion should be treated by an acid antiseptic, such as boric acid, to be dusted into wound, even before stitches are tied, and should be applied freely and frequently until wound is completely healed. Also boric acid may be added to the acid mineral solution, as follows:

RX Sol. potass. arsenitis (1 %) 1.5 c.c. or πλ xxij
Sol potass. chloridi (10%),
Sol. potass. sulphatis (10%) aa 11.0 c.c. or f3 iij
Saturated solution of boric acid in dilute
hydrochloric acid q.s. ad 30.0 c.c. or f3j

Dose: Give 9 to 15. drops, well diluted 4 times daily. Intravenously or intramuscularly 5 minims in 30 c.c. of water at three to five day intervals.

The following case reports are given to illustrate the previous statements.

M.J., married; age 36 years; no children. Pus tubes and both ovaries removed 8 years before. Weight 125 lbs. Lump in right breast discovered January, 1932. May 1, 1934, came to office with a necrosing massive cancer of right breast, one large gland in axilla. Operation to prevent offensive sore was advised. A local surgeon kindly removed growth, leaving gland untouched. Growth was highly malignant, as shown by tremendous number of blood vessels that had to be ligated. Sent home on the fifth day after operation; the large incision was discharging freely the cancerous lymph -- stitches were pulling through. An active fight was begun. Every three hours wound was cleaned and boric acid packed into incision. An intravenous injection of the acid mineral solution was given every third day and five times daily by mouth. By the fifth day improvement was visible. Boric acid was then added to formula and was injected in solution into axilla. October 10, 1934, this patient is in good health, weight 139 lbs, gland in axilla hardly palpable, wound healed, but a keloid in scar tissue. The formula before mentioned will be taken, to prevent recurrence, for one year.

The next case just put under treatment shows such curative results as to be most worthy of mention, indicating the ease of administration, and shows how this hypothetical cancer virus may be controlled.

E.B., white; age 54 years; 4 children, 2 dead. Twenty-two years ago had a pus tube removed. A complete hysterectomy for cancer was performed on her five years ago. February, 1934, removal of gallstones and repair of an operative hernia. Since that date rectum is blocked and feces evacuated through vagina. October 3, 1934, examined: vulva, one mass of squamous carcinoma, no tumor found in abdomen. Unable to sit up. Treatments: as this case seemed hopeless, benzoic acid was added to the acid mineral formula in addition to the boric acid -- by mouth six times daily. Local compresses of boric acid solution to vulva. One week later the results of this treatment were most amazing -- a big appetite returned, soreness relieved, patient walking and sitting in chair, rectum still occluded. Now quite cheerful, improved in every way, and all signs of intestinal blockage have disappeared.

CONCLUSION

Time and experience will only tell whether cancer virus or malignancy can be destroyed by the addition of these harmless yet seemingly effective antiseptics and fungicides to the acid mineral formula. The writer hopes others will try out this treatment and report results. The treatment is harmless, non-poisonous and in the writer's experience in quite a few cases very effective.

ORIGINAL ARTICLES OF OTHER CONTRIBUTORS DILUTE HYDROCHLORIC ACID INTRAVENOUSLY AND INTRAMUSCULARLY -- THERAPIA STERILISANS MAGNA

BY DESIDERIUS DE BESZEDITS, M.D.
*Former President of the Federal Sanitary Brigade in the
District of Ilixiaco, State of Oaxaca, Mexico*
One outstanding, highly beneficial, naturally progressive result

of past series of Mexican revolutions and consequent revindications, was the establishment of the most modernly organized federal health department, the Mexican Federal Public Health Service, located in a large American-style modern building, occupying a whole city block in the capital of the Mexican republic, in delightful Mexico City, so well and favorably known to thousands of American tourists.

The men at the head of each department, as well as their co-workers, are physicians and surgeons of the highest standing, who, while relatively well paid, could earn at least double their salaries in private practice. This fact alone displays their unselfish patriotic service to their country and to humanity.

The government the strongest and best Mexico has ever had leaves a large budget and practically free hands to these professionals to handle the country's health service in the most up-to-date and efficient manner, which they do to the best of their ability.

This health department has its physicians in every state of the republic, doing excellent work in the interest of public health and hygiene.

Yet Mexico is a very large country, abounding in regions sparsely settled, lacking ways of communication, our only locomotion for traveling and freight hauling in these regions (more than half of the country's territory) being on the backs of our sure-footed patient little burros or their stronger and more modern cousins: the mule and, more rarely, the horse.

The fact that from our headquarters town it takes us four or five days to reach the nearest railway or a day or two of forced mule-back ride to attend a call and reach a hut or shack with its "moribundo" inhabitant, makes us only more wakeful and appreciative of our wonderfully picturesque surroundings; also more thankful to great nature, and with lots of time to think and meditate during these long, slow trips, it brings us nearer to God, and, all in all, with the infinite silence and solitude, makes us a better man and . . . decidedly a better doctor!

Far away from ordinary civilization, still farther away from hospitals, laboratories or even nurse service, more isolated yet by months of "rainy season," content to read week-old newspapers, reading and rereading and reading again every word of *THE MEDICAL WORLD* and other medical journals, and everything readable we can lay hand upon, keeping informed and keeping up with the times somehow, an idea situation to work out real complicated jig-saw puzzles, medical and otherwise!

Then comes an "urgent" call -- brought by some friendly neighbor who had traveled for a couple of days on foot as the crow flies. Up here in the Sierra Madre, in a most primitive log-cabin-like affair, of the poorest charcoal matter native, set out over almost impenetrable mountain gorges with such a narrow path leading to it that while it may do for goats and deer, even my experienced and surefooted mule must be led along on it where the volcanic cold air and the wailing tigers and mountain lions help to increase the chill of my bronchial pneumonia patient; or in the heart of the treacherous, swampy, dripping jungle, where in the matted tangles of the tall kunai grass, in the very breeding ground of legions of mosquitoes and hundreds of kinds of insect pests, scorpions, snakes and alligators, there stands the poorest fisherman's loneliest kitchen and living room, all in one palm hut, with an eclamptic primipara -- also a confirmed leper -- racked by the "yellowest" malaria fever in it, awaiting death or the "doctorcito" !

Only such very sick people in such an extreme condition can have such absolute faith in the doctor. And I just simply must get these sick people well, and quickly, too, as the old Indian medicine-man, still remembered in their legends, used to do it, and more so, because people with no education or with the most limited degree of it, do not understand the complicated causes of any eventual delay. Besides, my bread (we have no butter here in the jungle

Medical data is for informational purposes only. You should always consult your family physician, or one of our referral physicians prior to treatment. country) and my reputation depend on my successful "doctoring" !

The movie-reel-like picture of all my past ambitions and future hopes of and for a successfully rounded out professional life flashes through my mind, but -- and by these "buts" human affairs are ordered -- here I must deal with present realities!

And now back to realities and facts. So I instinctively turn to my much-treasured bottle of HCl solution and use it here at the world's most tucked-away corner, in the same manner and with the same excellent results, as used in the great U.S.A. in the very heart of modern civilization. Can there be anything more wonderful real and more really wonderful than this accessibility and facility?

Right you are, Dr. Ferguson and your followers: induced leucocytosis and increased phagocytic activity. Well enough and true, but for me the story, the "good doing," does not end there. I have seen too much to be satisfied with these limits. Due to the invariably excellent results I have personally obtained with HCl solution injected, in my own mind I am convinced that there is a great deal more as to the cause or causes of the beneficial healing action of this HCl solution. What the white and red blood cells will do under its influence we all thoroughly understand. What I want to know, what we do not know yet, is what HCl solution injected, alone and in itself, due to its intrinsic therapeutic value and merit, is capable of doing and will do *besides*, while and when helping nature to do what only nature can do.

PNEUMONIA

Take, for instance, in my exceedingly severe pneumonia cases, where it has never failed me. Pneumonia -- all types of pneumococci -- in hot climates is more treacherous, more deadly, than in the temperate zone. A characteristic of these pneumonia cells is that they are inclosed or, should I say, "gum-coated." Thus incased this outer coating or casing or capsule contains polysaccharides. This evidently impermeable coating makes the protected germs inaccessible, virulent, deadly; more so if each type has its own particular coating. Once made accessible (to the action of the white blood cells), exposed, undressed, so to say, these germs are not particularly dangerous.

Then, I ask, when injected, what does HCl solution do to these pneumonia cells, to this perhaps impenetrable coating? Is it that it itself attacks and simply "skins" them? After which, once made accessible, their undoing and elimination are simple through the natural process of leucocytosis plus phagocytosis. Am I on the right trail in my deductions?

Or would this HCl solution injected, do some biochemical wonder as to respiration and the physiology of circulation, since the exudates (blood, pus, serum, germs) that accumulate in the minute air chambers of the lung cause it to lose its "sponginess" and become liver-like; the devitalized air cells definitely collapse; no adequate amount of oxygen can get into the blood; neither can carbon dioxide and toxins constantly produced by the attacking germs escape from the blood; the lungs, under the undue labor, become exhausted; so does the toxin-poisoned heart. .

Yet, noting the unflinching beneficial effect I always obtain with HCl solution in injected even in such extreme conditions, isn't it reasonable if I ask: did it cause dilatation of the plugged air spaces (so that the white cells can get to the toxins?) so that enough oxygen can get through, so to sustain the patient until (the white blood cells having done their work carbon dioxide gets into the blood and helps (via the brain) to excite the lungs to expand and contract, thus reestablishing normal breathing and saving the patient?

Or can or does HCl solution injected act as a detoxifier or a "toning up" agent when the toxin-poisoned cells are no longer able to take and deliver life's essential oxygen? The most trying circumstances -- numerous civil uprisings, thus not only far away, but cut off from any possible help, simultaneously with the burning down of my house and drug store -- under which I have been laboring in my daily clinical

work, compelled me at first not only to use, but really to abuse, HCl injections. At first I entertained very serious doubts about this substance, and did not approve its promiscuous use in almost every case that came to my clinic, my only excuse (to myself) being of the sheerest necessity: numerous sick people seeking treatment and absolutely no other medicine available. So if necessity is mother of all inventions, so much more was it mother in my case of innovation or discovery or, better yet, "revelation" of this humble, but marvelous, acid.

Little by little, the more I used it -- upon others as well as on myself my doubts turned into hopes and gradually my hopes into happy surprises. Looking back now -- after having used several thousand injections -- I am not only not sorry for having done my "dangerous" experiments, but I am decidedly glad for all, for HCl injected had proved to be a godsend therapeutic agent on all occasions when used with due caution and prudence.

My investigations -- with the capable guidance of a competent American biochemist I employ -- I consider far from being complete. However, to me it is certain that HCl, *besides* its action upon cellular life and cell behavior, does have some additional inherent "virtue," for it accomplishes much more than claimed by its most ardent advocate.

So far we have only heard of what it will do in infectious diseases.

My observations, my failures and results, my work with this substance, lead me to reason thus: man is the center of medicine; he is either the victim of illness or is the cause of his own disease; so human diseases may be put into two general divisions: from within, degenerative diseases; from without, the infectious diseases. Numerous subdivisions are possible, but not necessary.

In the infectious diseases the leucocytosis and phagocytosis theory -- as championed by Dr. Ferguson and his followers -- certainly is correct and most satisfactory.

But what about the degenerative diseases, due to tear and wear, where the "cogs" in the wonderful human machinery become more or less worn and out of alignment; life-giving and sustaining substances -- *minerals* -- depleted or exhausted?

What will HCl solution injected accomplish in order to obtain "repair?"

What are the coadjuvants that are needed to make it a complete success?

In pernicious types of malaria and in a malignant type of highly infectious dengue, as seen only in tropical climates, HCl solution injected intravenously produces a notable effect -- quick and sure -- upon the hematopoietic elements of the spleen, marrow, and lymph glands.

MALARIA

The gradual re-establishment of the acid-base equilibrium of the body, the renewed carbon dioxide combining power of the blood, the relation of the chlorides of the blood plasma under its action attest its highly active and beneficial (repairing, coagulating, etc.) influence.

This is my tenth year of clinical experience in Mexico, spent in different parts, mostly on the coast in the hot country. I usually see from two to twenty malarial cases every day, besides all the diseases that one finds "in the books," and sometimes I think that there still are some "unwritten" ones that occasionally come to me.

Among all, my own case was, perhaps, the most characteristic and most malignant. Though saturated with quinine, I was daily shaken with chills lasting 45 minutes, followed by high temperature up to 105° of two to three hours' duration; then profuse sweating.

Having exhausted all my own malarial knowledge, I consulted two of our best malaria expert M.D.'s, whose three weeks' treatment did me no good. Of my usual weight of 170 lbs. I have lost 65 lbs., and became the yellowest-skinned skeleton, with added tropical dysentery

Medical data is for informational purposes only. You should always consult your family physician, or one of our referral physicians prior to treatment. and stomach ulcers, and -- seriously contemplating suicide.

Then just at this time my house and small drug store burned down. Thereafter the only medicine I had left was a scorched bottle of "acid phosphate of Dr. Horsford," and at that time it enjoyed quite a large sale in Mexico. It is composed of different mineral phosphates and dil. HCl.

Hardly able to drag myself around, and with many sick people asking for treatment, I decided on something "big and bold." I diluted that bottle to the limit, so that it would go a long way, and I myself took it by the mouth and in intramuscular injections and administered it to every one of my patients for any and all ailments.

Seems and looks foolish, doesn't it, this my "Indian medicine-man" attitude and action? Yes, I think so myself, but everything is fair in love and in war. So is everything excusable for a sick person trying to get well! To be short -- in one week we all were well and happy. This, again, gave me the idea to use certain mineral salts as coadjuvant with minute doses of HCl.

Since then I have treated a great many similar malignant types of malaria -- bilious, hemoglobinuric or black-water fevers. One of them that I treated with quinine and salvarsan terminated fatally, with persistent hiccough, hepatitis and abundant vomiting of blood. All others treated with my HCl mineral prescription survived, like myself. In the most severe cases of tropical malaria, with "access pernicieux" (when death may supervene with unexpected suddenness) and with cerebral involvement and consequent coma, the very efficient and quick effect of HCl injected is noticeable in copious sweating, this "crisis" of sweating usually terminating the comatous state and heralding the beginning of nursing back to health.

Now, why is this sweating? [See "The Herxheimer Effect," <http://www.arthritis-trust.org>; Ed.] What effect can HCl produce on the "glandular sudorificas"? Or on the corresponding nervous system in malarial amblyopia that under the action of the HCl solution, injected intravenously, will clear up readily? How does it work in this case upon the benumbed or oppressed nerves (causing release from oppression)? What deductions and explanations can doctors, thoroughly familiar with the blood picture, morbid anatomy, pathology and pathological anatomy, etc., of this "multiform" disease, make as to the action of the HCl injected? Those who know malaria and quinine therapy in all its forms and manifestations know that quinine is *not* a specific for malaria. It is only that certain types of malaria and malaria in its certain "phases" are amenable to quinine. But, all and every malarial case will clear up when the sulphate of quinine is used, dissolved with water with the aid of HCl. And in the opinion and practice of our best malaria experts, it is infallible when the chlorides, as recommended by Dr. Walter B. Guy in the pages of *THE MEDICAL WORLD*, are added.

Not to apply the HCl solution with quinine in all malaria cases right from the start I would consider a culpable error.

If HCl solution so used does not prevent the next succeeding "chill" (it always diminishes it), or if relapse is prone to occur, it is only because the right dose was not given.

Can it be that HCl solution injected, due to its inherent quality or virtue, exerts a toxic influence upon malarial parasites, killing them by poisoning or "burning" them up or choking them to death by engulfing them, by isolation or saturation? Or is it that the white blood cells will do any or all this when stirred up by the HCl solution injected?

What an immensely broad field is offered here for the most interesting research work as to the possible or likely effect of HCl solution injected, upon these and all other parasite germs. Is such effect the same on the filterable as on the different bacterial germs? On those that are reproduced by dividing or splitting or on those that grow spores? When they alone can or do cause the disease or when acting

in concert with some other contaminating organism that somehow gets into the colony? On new germs or on new forms of the old ones? During the reproductive or other evolutive period, in free state or when encapsuled? Such research and accompanying experiments should be carried on and kept up until the final solution is reached, for the hot countries, as well as the temperate zones, have a great many seasonal and regional, but in all "international," pathological puzzles.

ELEPHANTIASIS

In another interesting trial I have put the HCl solution in two cases of elephantiasis arabum, and in a good many cases of elephantiasis graecorum. The first, said to be caused by the filaria sanguinis hominis, and the second by the specific bacterium, the bacillus leprae of Hansen. HCl solution injected intravenously in these hopeless cases produces surprising effects.

It is an accepted fact in pathology that the causation of the condition as in the first case is due to lymph stasis, or to an occlusion in the lymph stream. Naturally, the involvement of the lymphatic glands ensues; or lymphangitis may be due to specific infection in the congested area.

LEPROSY

In leprosy, while the cause is somewhat different, the effect is very similar, if not the same. Persistent use of HCl solution will, first of all, correct the accompanying numbness and gradually the pain in these cases.

In one case of leprosy of 17 years' standing, pain stopped after the fifth injection; regular movement was almost restored after the tenth, and reduction to almost normal size was noted after the twenty-third injection. As in many of these cases there is "nephrotic" involvement present, the edemas due to nephrosis enter into the same class and HCl injected has a signally favorable effect on the edemas. I wish to ask: In face of the above, is it that HCl solution injected is capable of raising the osmotic pressure at first to and around and beyond the edema zone and keeping it up there until normal functioning in the tissues is restored?

And what about its action on depleted plasma protein, on its restitution, on raising the whole plasma volume, on establishing spontaneous diuresis and on the final cessation and thus the cure of this diseased condition? These questions I present as some more "food for thought" on this HCl subject.

THE PRESENCE OF A MOLD

Here I wish to be put on record for the following statement. From conditions found in everyday clinical experience verified physiologically and biochemically in the laboratory I am bold to state that in a great many, if not all, of the diseased states, degenerative or infectious (cancer in all forms included) there is a precursory, prebacterial, pre-incubatory period; that is, a period when a favorable condition and *ground are being prepared* for the bacilli by some other micro-organism. So it often happens that the so-called "specific" germ, believed to cause the disease, only appears on the scene after another parasite has begun the war, prepared the battleground and even fought the decisive battle. This ever-vanguarding micro-organism is a fungus, or of fungoid origin, an unknown type and unclassified species of mold. I am inclined to name it a "man-eating" mold.

On several occasions, here in Mexico, I found myself so located that I was the only doctor in a district or a region numbering from five to thirty thousand souls. For years I have been constantly doing a great deal of charity work, furnishing all the necessary medicines to all such patients. Indeed, I am glad to do this, for the satisfaction it gives me. Besides, it puts me in a favorable situation to do all the experimenting I wished to do in my clinic and laboratory. So it came about that at first, as simple experiments, I have treated a great number of different ailments with HCl solution.

The failures, I know now, can be ascribed to my own limited

Medical data is for informational purposes only. You should always consult your family physician, or one of our referral physicians prior to treatment. knowledge of this substance. They also taught me in what cases it should not be used. But the generally surprisingly good results obtained with its use made me adopt its use in most cases as my standard clinical procedure, coupled with the use of the proper adjuvants and, naturally, with the usual dietary and hygienic observations.

CEREBROSPINAL MENINGITIS

In several cases of cerebrospinal meningitis, with injected HCl solution, and fluid-extract of colchicum by the mouth as the only medicines, I have obtained invariably good results, with not a single demise.

TYPHUS AND TYPHOID

Equally so in typhus and typhoid fever cases, the liberal, but careful, use of HCl solution injected brought along happy endings.

I may note here that while in U.S.A. and in Europe these fevers (carried by the rat flea) are milder and endemic, in my cases with the body louse, the "cootie" as the carrier is mostly epidemic in form and more violent in character.

LIVER AND INTESTINAL AILMENTS

In different kinds of liver and intestinal ailments HCl solution injected should be used with the, greatest care. I obtain very satisfactory results with it, using as coadjuvant Dr. Rommel's prescription of calomel, podophyllin and magnesium sulphate.

In using HCl solution in these cases one must ascertain the correct dosage (that in given cases is only a few drops of the diluted solution) for even a slightly excessive dose may cause serious intestinal inflammation, with diarrhea and dysentery almost uncontrollable.

The same is to be kept in mind in pulmonary affections. Here, as in most other ailments where depleted condition exists, I have found the chlorides combination as advocated by Dr. Guy the most valuable coadjuvant. Just here the thought often comes to me: Which one is the coadjuvant and which one is the principal, in these cases or in others as well?

DIABETES

Diabetes mellitus is invariably kept under control by HCl solution injected intramuscularly. I have sixteen cases on record in which lasting cure was established by the use of this acid solution injected and *honey diet*. The action of HCl injections in this ailment -- not a disease, but an organic disarrangement -- is interesting enough to go over in some detail; interesting mainly because neither of these substances, though they cure the diabetes, has any measureable quantity of blood-sugar-reducing properties. They act otherwise -- in the natural way: *By correcting the functional endocrine depletion, which is the real cause of this ailment.* But let us see in order: We know that insulin is a hormone secreted by a small group of cellular masses called Langerhansian islets in the pancreas, charged with the function of regulating the combustion and storage of sugar in the body. When this function is impaired or wholly fails, the sugar of the blood increases abnormally, and starches and fats eaten are turned into sugar to such an excessive degree that the blood and urine become loaded with sugar; thus the body is starved of carbohydrates.

The discovery of insulin was considered a great forward step, controlling this diseased state, though insulin is never capable of effecting a cure. Insulin dosaging may prove dangerous in case the patient is not careful of his diet. Overreduction of sugar will produce hypoglycemic shock, a breaking into a cold sweat, convulsions, collapse. Only a physician at hand can save such a case by injecting glucose solution. Here is where HCl solution injected -- intramuscularly only and in stronger solution, but in smaller doses -- will perform an unknown and unsung feat; will establish a correct "sugar balance," so that blood sugar will not fall below normal (fasting 0.08 to 0.12) and such medication persisted in will have a lasting cure.

My complete treatment of diabetes thus includes: HCl solution injection, mineral chlorides supplying (always as recommended by Dr.

Guy) and bee honey diet ad libitum, and is based upon the *homonimulative effect* of the substances administered.

For functional endocrine depletion once verified, in glycosuria the real need is for the excitation and support of the substances to serve as real food for the exhausted, hungry glands, helping at the same time to regenerate the cells themselves. Once the torpid pancreas rebuilds itself, normalcy is re-established.

My constant search for the "how" and "why" leads me on; in the many difficult kinds of skin and bone diseases, tropical ulcers, sores and wounds usually of fungus or insect infection (or the combination of both) origin, that due to repeated infections in 95% are regarded as incurable, HCl sol. injected will effect a 99% definite cure.

While I consider the leucocytosis and phagocytosis theory proven beyond all doubt, I continue searching for some *additional* mysterious force locked up on HCl sol. in order to account fully for the observed physiological results and pharmacologically desired effects.

The explanation I find in the fact that HCl sol. injected incites, reestablishes, increases, returns to the body its *natural*, though (for the moment impaired, *autopharmacological* power and ability.

I refer to the drugs which the human body creates within itself. The hormones, so called, are such drugs. I may also mention two already known: such subtle "autopharmacals": histamin and acetylcholin. The effect of HCl sol. injected on histamin may be noted in the ready repair of body tissue in the epidermal cells in the process of coagulation, but perhaps most prominently in the cells of the lungs.

It is for this reason that incipient or latent T.B. cases will get completely well, while chronic, advanced ones are greatly benefited. My records in this respect are not long enough (see following section) standing to warrant definite opinion or statements as to the final outcome.

The HCl sol. injected seemingly excites the injured cells to exude their histamin component and to increase its quantity; this self-produced component, as well as the HCl sol. itself helps to dilate the blood vessels to the limit of their capacity near and around the wound, thus initiating rapid healing.

And when HCl sol. injected is used in abdominal, lung and heart troubles or in women's diseases, then the other component acetylcholin is acted upon and enters into the fighting line, since this component lies -- as if dormant -- in our large arteries, in the small and large intestines and in the placenta, and while this component is chemically different from its mate histamin, it acts similarly under the beneficial exciting effect of the HCl sol. injected.

Here is again the explanation. as to how and why T. B. and myocardial cases, also women's diseases, are benefited as if "toned up" under the HCl sol. injection treatment.

CONTROLLING PAIN

Referring to several very recent cases, I can state -- based on another foolish "let's try it" of mine that HCl sol. injected has a decided effect in childbirth, inasmuch as it hastens the expulsion of the fetus, and, it appears, considerably lessens pain.

The increased activity of the acetylcholin substance present in the placenta under the "teasing" influence of the HCl sol. injected may be a precursor to a fatal disease (organic accident the first time); my experience in sixteen subsequent cases has confirmed it.

This "pain reducing" or "pain controlling" quality -- if so I may call it -- of HCl sol. injected is quite notable in ulcerous diseases resulting from a great variety of skin troubles, wounds and lesions, that in many instances may be precursors to a fatal disease (organic lesion) and that are usually very painful.

I find that the disturbance of the abdominal sympathetic nervous system first brings on a cutaneous manifestation, then progressively pain or lesion (ulcer) with pain develops. Such pain may be periodical or a steady, lasting one.

Medical data is for informational purposes only. You should always consult your family physician, or one of our referral physicians prior to treatment.

I can usually control these conditions -- pain and all -- with HCl sol. injected, whose continued, careful use-with indicated coadjuvants -- usually also establishes a cure, even if temporarily.

What is it that happens? What could be the effect of HCl sol. injected upon the walls of the blood vessels that are threaded with sympathetic nerve fibers that transmit these pains, perhaps all pains, even the pain of cancer?

Permit me to refer here to one of my cases, that will be so much more interesting, because everything in it is "too far ahead of present medical thought"; so far, ahead, indeed, that even Dr. Ferguson's leucocytes and phagocytes cannot be "explained away." They will simply balk and back out here! Yet, since I seek no laurels, but am simply narrating facts, if in spite of this the editor cuts it out, I shall send it to my friend, Mr. Ripley, who may accept it in his column of "Believe it or not" and then I will only add: "but, try it!"

On the 8th day of February, 1932, a woman with terrible pain in her left arm came, in tears, to my sanitarium, and gave me the following history: 45 years of age, widow no children; her mother died of cancer of the stomach and her father died of delirium tremens

About two years previously a "hard spot" developed in her left breast. Some months later a hard nodule appeared on the same place, with occasional burning pain in breast. Went to Oaxaca City, where she consulted two very able doctors, both of whom recommended operation. Some months later when the pain and the size of the formation kept on increasing, she sold her house, her only modest property, and went to Mexico City, where at the excellent "Hospital General" she was operated upon by one of our famous surgeons. She felt quite well after the operation, during seven months. Then three small nodules appeared on the left upper arm. Gradually pain set in in the whole arm; that kept on increasing until it became continuous and almost unbearable. Gradually the nerves and muscles in the arm began to "dry up" until the whole arm went limp; even the fingers were inert. She spent most of the day squatting and crying, nursing her sick arm, that she could only move or lift with the help of her right hand. Having also occasional abdominal pains, in eight months' time she lost 26 kilos of weight.

On examination, I found that her whole left breast had been taken off, and the operating surgeon, having evidently recognized the malignancy, continued under the arm with his bistoury, and the glands of the axilla were also shelled out. I told her frankly that I could do nothing worthwhile for her.

She begged me only to stop her pains! Not wishing to employ morphine, I have tried everything else; finally a daily dose of adrenalin injected lessened her pain; but after a few days it also proved useless; the pains seemed to increase. Finally: as an experiment -- with her consent -- I injected HCl sol. After the third injection the pain diminished notably; after the ninth injection it stopped. After a month's treatment she was quite braced up.

Then I gave her by mouth: Sol. pot. arson. (Fowler's); sol. pot. chlor.; tr. ferri chlor.; dil. acid. phosphorici. Sig.: 10 drops in full glass of lemonade three times a day.

HCl sol. injected daily, then two or three times per week. Today after 10 months of continuous treatment -- on an exclusive fruit diet, the largest part of it consisting of bananas in all forms and styles, the woman is quite well. She can, with some difficulty, lift her formerly useless arm slowly to her head. The fingers are still somewhat forceless, but no longer stiff and getting better -- she says -- slowly, very slowly, but noticeably. Pain is completely absent.

She is still taking three or four HCl sol. injections per month, plus:

RX	Sol. pot. arson. (Fowler's)	1.00
	Sol. pot. chlor. (10%),	
	Sol. calcii chlor. (10%)	aa 7.50
	Sol. acid HCl dil.2%	1.50
	Aqua dest.	q. s. ad 30.00
M.	Ft. sol.	

Sig.: 15 drops after meals and at bedtime.

(Take it for one week, rest one week and take it again. This is the prescription of Dr. Walter B. Guy. I used it with very good results in a case of muscular atrophy.) I make no attempt to comment on this case -- nor of several other cancer cases I have under treatment -- at this time; only will refer to the ability of HCl sol. injected stopping the pain.

Remembering Romberg's famous dictum that "Pain is the prayer of the nerve for healthy blood" -- that is, *food* -- my contention is that HCl sol. injected conveys food to the oppressed, starved nerves in the form of the chloride of the salt of the sea!

Minute particle (2 drops once a week) of HCl injected into the hard mass -- nodule -- of incipient cancerous growth and caustic potash the size of a pinhead rubbed into it will stop pain, the "tumor" collapses and disappears (absorbed).

No matter how incredible a "cure" may appear in such cases, no matter how big the question mark appears after each detail connected with such cases, even if there were no established merit, even if absolutely uncertain of cure, but positive of the palliation and lengthening of life, the reward is magnificent.

TETANUS

I have also used HCl acid sol. injected in three cases of tetanus, one of them moribund when I reached his bedside.

A young cobbler cut his hand while working. The next day he was handling green rawhides in his father's tannery. On the very same evening he had large lumps in both armpits. When I was called I found this exceedingly strong young man with trismus and "sardonic smile" unable to move. HCl sol. injected, alone (and enemas of sod. bicarb.) saved this man's life and brought him back to health.

Hence may I deduce and conclude that: spasmophilic manifestations -- with very wide variations of blood calcium -- suggest not only infectious foci somewhere in the brain centers, but also a neuro-endocrine imbalance, with generalized (pituitary and parathyroid) gland involvement? I am not affirming, but am simply asking questions, hoping and waiting for the correct answer.

For I must humbly admit my own limited knowledge of these organs called glands and their mysterious function; also their evasive products called hormones.

May I be permitted to imagine that our authorities' knowledge of them is also somewhat limited, recalling that just a little while back they were called "ductless," while lately the same high priests seem to have decided to agree (amongst themselves) that they do have "ducts" and plenty of them! I only refer to these glands and to their products, the hormones -- literally "excitants" -- because I have made observation and "experimental treatment" with HCl sol. injected in two Addison's disease cases, who are doing very well under the influence of HCl.

SEXUAL IMPOTENCE

And if it be true that our glands make us what we are, then another of my experimental cases should be mentioned -- a completely impotent young man, having had no erection during 18 months, whose vanished vitality was completely reinvigorated by the HCl sol. injected in less than two months' time. How and why is this sex-stimulant effect?

If we consider what a terrible strain we put upon our bodies (organs) through abuse, due to ignorance or overconfidence, we may appreciate the hard work of the glands, and the never ceasing work, real "racing around," these hormones must do in order to maintain the "normalcy balance," health. It is reasonable to believe that in case of the diseases to which these glands are liable -- due to tear and wear or to infection -- they first of all, will turn to and use their own natural defense, their secretions, the hormones.

Does HCl sol. injected serve rriuch as an "excitant" when the glands become partly depleted or exhausted?

The relationship of the glands and their hormones to the nervous system and the relationship of the various endocrine organs with each other and the exact effect of HCl as a beneficial therapeutic agent in this connection present and offer an unimaginably large field for research, where the laboratory technicians should be assisted by the practicing physicians in actual "field work."

Medical data is for informational purposes only. You should always consult your family physician, or one of our referral physicians prior to treatment.

SMALLPOX

I spent last year in the well-known Mexican state of Oaxaca, more well known lately for the famous archeological Monte Alban district, where the priceless Mixtec Indian treasures, recently exhibited in Chicago and in different American cities, were found. While there and acting as president of the Federal Sanitary Brigade in a district (county), I vaccinated many hundreds of school children and the large mostly Indian, population during a sweeping epidemic of smallpox.

The ever-watchful federal health department sent me some ten thousand doses of lymph vaccines, but my supply gave out just when I was some five days' muleback ride from the nearest railroad station. So a thought came to me: try HCl sol. ! and I used it, not only on persons already attacked by the disease, but also as "prophylactic" in face of the impossibility of segregating the stricken in those one-room. kitchen combination, bamboo-palm huts.

The HCl sol. injected certainly did an excellent service on this occasion.

The epidemic, on the whole, was a "benign" affair, with only an occasional hemorrhagic type, and with only the death of two children and one grown-up already down with other ailments.

No death occurred among the HCl sol. treated. It was strange to note that among the stricken with smallpox several were pockmarked, having had the smallpox years previously; strange to say, these were the sickest ones of all.

The same HCl sol. dil. served as a soothing and healing lotion for sponging the body covered with pustules.

SNAKE AND SCORPION BITES

I have used HCl sol. injected with never-failing results in snake bites. No matter how poisonous the snake may be, the injection and cotton soaked in pure acid and placed on the site of the bite will control the situation.

We got a great many cases of scorpion poisoning. This animal, here called "alacran," is much dreaded, not only in the hot country, but also in the northern part of Mexico; in the State of Durango, said to be most deadly there. As I myself have been bitten by this scorpion, I can very well describe the very uncomfortable symptoms: the site where it strikes with its hook-armed tail that releases the poison is very painful. In a few minutes after being stricken numbness creeps into the arms, face, lips; gradually into the legs, finally with choking feeling in the throat and paralyzed tongue; a semi-comatose state follows and sometimes the bitten person must be held down in bed to keep him from jumping up and down in convulsions.

In case of children the scorpion's bite is often fatal. The mortality rate varies according to season; so it seems that in some seasons the scorpion is more poisonous than in others.

It made me equally very sick each time I was bitten; the last time, thanks to the HCl sol. injected, I was in bed only one day.

Since I adopted using HCl sol. injected in these cases, I have lost but one case, a 6 weeks' old baby; I am convinced this baby died because I was afraid to give her a stronger solution and a large enough dose of this acid and to repeat it.

Any precaution against these poisonous insects is fruitless, inasmuch as they make their nests in the roof (inside) of our ceilingless houses or huts, from where, mostly during the night, they simply fall down and upon the peacefully sleeping citizen; and on occasion of high winds shaking the houses or huts, they may come "pouring" down in numbers.

The federal health department uses tens of thousands of these scorpions yearly for the making of a serum against their bites. I hear that this year's "scorpion harvest" was rather slim and that the department could get but around thirty thousand of them; insufficient to supply the demand for the serum.

Myself and several M.D. friends of mine depend on and use

exclusively HCl sol. injected in these scorpion poisoning cases, and we are well satisfied with results.

The conclusion of my paper on this interesting and helpful subject brings to your notice an additional number of conditions for which the remedy herein stated is useful. I follow Dr. Burr Ferguson and use a 1 to 1500 solution unless otherwise stated.

ANIMALS AND PLANT

Man, all-important, is the center of medicine, we have said, but let us remember that *every* essential thing relating to disease or medicine holds good for man as well as for *animals and plants*. Nature -- dear, wise, old thing -- provided no closed compartments into which man, animals and plants could be separately divided, said Dr. Flexner, of the Rockefeller Institute, the other day. All are related organically and united physiologically and pathologically.

The untoward malign operation of the mosquito and all other biting insects in conveying disease germs is the very same in principle in Texas cattle fever, in malaria or yellow fever in man and in virus disease of plants. Thus if we would want to learn to prevent, to palliate or to cure disease in man, we should always watch nature's never-erring pointing finger in animal and plant life. (Read and re-read Dr. Walter B. Guy's splendidly reasoned article comparing plant life and human disease in *THE MEDICAL WORLD*, January, 1934 pp- 26-30.)

ANTHRAX

Thus it may be interesting to mention here the following as a matter of record: in the months of August and September 1933, a severe anthrax epidemic decimated the animal population of my district here. One of my friends and patients, a rancher, lost over 500 head of cattle, small and big.

Many of the poor's beasts of burden, our useful little burros, had also succumbed to this disease. Just to satisfy my own curiosity, and as a new experiment, I decided to try different strengths and doses of HCl sol. injected on the sick animals as well as a prophylactic measure upon the healthy ones.

No more than six injections were given to any of the sick animals (site of injection, inside surface of the hind leg and in the neck, but not in the vein) and no more than three injections as intended "preventive" dose. None of the animals so treated were taken sick and only one of the 64 sick animals died after the second injection. Makes one think, doesn't it?

PLANT DISEASES

In the old Spanish patio of my house I keep two little grape plants in pots. They are -- old folks here tell the story -- the real old, original Aztec Indian grape plant, small, degenerate, left-behind-looking compared with their modern improved Californian brothers.

The other day I noticed that their leaves became yellow, rusty-spotted and some of the green leaves curled up .

Another HCl thought came to me. I bore, from top downward, between two branches, into the trunk (they are the size of a finger's thickness) with a large cobbler's needle until I reached its middle, softer texture, into which I injected HCl sol.].

In a few days the dry leaves had fallen off and in their stead new leaves started to bud, a few of the yellow spotted leaves had turned green again and the whole plant seemed to be "revived." Just some more food for thought or perhaps only "curiosidades Mexicanas" (?). Quien sabe? But, would it not be interesting to try and see what HCl sol. would do to grape's Peronospora and other disease?

TO REBUILD CHILDREN

This "reviving" effect of the HCl sol. injected reminds me: Every once in a while, when I have time, select a half dozen or so underfed, yellow-skinned, emaciated, malaria-ridden, skinny, narrow-chested, poor kids from 6 to 10 or 12 years of age and inject into their buttocks 1/4 or 1/3 of 1 c.c. of 1 to 1000 HCl solution, every

Medical data is for informational purposes only. You should always consult your family physician, or one of our referral physicians prior to treatment. day or two for a month or six weeks.

You should see these kids "revived" after 10 days or so of such treatment. I also administer to them two or three drops of Dr. Guy's mineral chlorides sol. 3 or 4 times a day.

At the end of a month or six weeks you would not know them; they just simply fatten up, become round-faced and full of life.

SOME THOUGHTS

As I look over these and many more similar records in my notebooks a sincerely sad thought comes to me: What a pity that this excellent, 100% dependable therapeutic agent, this HCl sol. injection, may never become generally accepted and used, due to an *inherent*, terrible and unpardonable defect; it has and carries an indelible birthmark as greatest of all sins: "It is just too common for anything! dirt cheap and most easily accessible to everyone! There is no mystery at all about it; as easily procurable, as easily applicable — accepted or not accepted, listed or not listed -- in all parts of the globe, thus: *it cannot lend itself to profiteering commercial exploitation and still less to monopolistic purposes.* Of course, we mean "ethical exploitation" and very "ethical monopoly" !

Dr. Burr Ferguson and the other advocates of HCl sol. injections are simply in bad luck, for they could not "hire out" or "license out" this substance to a big, powerful and respectably ethical laboratory concern for its "exclusive" manufacture, and make one and one-half million dollars a year (1931 figures) profit on it, ethically divisible and divided between the laboratory and the doctor-discoverers, as it happens with another exclusively "licensed out" (and, of course, "accepted") product.

It also happens, of course, that -- the inventors and doctors being, usually, poor business men -- the laboratory, big and powerful and all that, very ethically gets the lion's share! In short: there is the reason!

What the theory, the book and literature say and hold as to its being dangerous to inject this acid into the bloodstream, and that it will cause hemolysis, is at the best just another scientific blunder.

And we can point out a great many of these scientific blunders which passed for proved science for a long time and so heralded in loud voice by our most respectable looking authorities, writers and editors -- to be revealed as absolute fallacies in the end.

Physicians who had given this HCl sol. injection a reasonably long and fair trial -- I mean, the men who had been in tight spots, and had pulled themselves out of profound difficulties by their own boot-straps (meaning, by the use of this HCl sol. injected) and then helped to lift others similarly afflicted -- should get together and give this new conception of cure a good scientific threshing out.

In such a gathering it would be interesting and edifying to swap "profundities" concerning this HCl marvel.

But since such a new therapeutic conception, as well as its agent, will have its honest advocates, also its most poisonous critics, I would like to remind all concerned that Americans were always famed for their traditional "square deal." So why not concede this same famed square deal to this humble and cheap, but excellent, therapeutic substance?

For my own part, I am well satisfied with the excellence of the HCl sol. injection *judiciously used*, proved beyond any doubt in numerous cases, at the sickbed where the final questions are decided.

My absolute faith in this therapeutic agent is well rewarded by the unalterable faith of my patients in me. In summing up:

SUMMARY

1. HCl sol. injected is first of all an excellent "emergency" therapeutic agent.

2. Because it can do no harm, but in most cases will produce a beneficial effect, it can be used as a dependable "feeler" before instituting a definite treatment in diseases whose cause, origin and

symptoms are not quite clear, so that for the time being only tentative or presumptive diagnosis can be made.

3. While HCl sol. injection is quite effective in all the proportions (doses) so far recommended in the different publications, its most beneficial effect is in direct relation with correct (indicated) "per centum" in making up the diluted solution.

4. This correct (indicated) percentage, strength and dosage of the solution *varies* in acute and in chronic cases, also the number of injections to be given, as well as the periodicity of the injections (daily, weekly, etc.) for best results.

5. Practice teaches that each case, where the use of HCl sol. injection is indicated, is a separate one unto itself; there is no "standardization" possible, and that, in some cases the intravenous, in others the intramuscular, application will be found the more effective. Why? I prefer the intramuscular application of this acid injection, and now I do apply it, constantly; I have found for one thing, that, so applied, its detoxifying effect is superior.

6. The "macrocephalic contention" that this acid injection is dangerous, due to its hydrogen-ion content, is pure imagination; the 1 to 1500 solution exhibits pH 1 hydrogen-ion content and is absolutely harmless for injections.

On this dangerous point we all can rest assured: HCl sol. injections are put up at least by one reputable scientific laboratory in New York. The competent authorities of the U.S. Government would certainly never permit the manufacture and sale of an allegedly medicinal substance were it really dangerous to individual and public health.

In incompetent hands sodium bicarbonate may be dangerous; in capable hands the strongest poison may be medicinal.

The liberal application of the HCl sol. injection will confirm that mother nature is the best doctor! Yet, she needs human doctors to interpret and carry out her voiceless teachings, and in doing so our calling, with our scientific knowledge and professional training and ability, really reduces itself to "helping nature to do what only nature can do!" to protect the human body from the deteriorating effects of the time and age, to defend it against invading harmful micro-organisms, to fortify it, and thus eventually rid it of the untoward-acting disease germs, thus nursing it back to its natural state -- as intended by nature: health. To do this nature wisely furnished us quite a few outstanding therapeutic agents; amongst these there is none better, none more useful, than HCl sol. injection.

TREATMENT OF DIABETES, ERYSIPELAS, SCORPION BITES

The following case, just discharged as cured, may be of interest to some of my readers, since I have received sixty-four inquiries regarding diabetes treatment:

E.S., male, 54 years of age, weight, 214 lbs.; a Frenchman living in Mexico for more than thirty years, last ten years here in the tropical country, engaged in the vegetable oil extracting business, employing large capital. Business gone to the devil, owing to large cash advances to producers and nobody paying. Last two years just worried to death.

Functional diabetes for several years, living on insulin, arsenic, and "pancre-sal." He was an almost model complete diabetic case: glycosuria, polyuria, polydipsic, polyphagic. He was a gourmand all his life. Sugar, 167; urea, 83; density of urine, 1065. Acid decomposition complete, traces of albumin. Soft, spongy gums: teeth all gone. Also dyspeptic; occasional nausea and vomiting.

When I first saw him he was in bed with a very painful erysipelas of one leg. To treat erysipelas I gave him a good purge of Epsom salts in hot water, followed by daily injection of HCl solution, 3 c.c. of the 1-1500 concentration, for three days, intramuscularly. One capsule of dimethoxyquinizine and bicarbonate of soda, morning, noon and night for three days. (Rx dimoxquin., 1.00; bicarb. sod., 4.00 in 10 caps.)

Then I started to attend to his diabetes. First week: One capsule of calomel, podophyllum, sulph. magnesia, according to Dr. Rommel's prescription. (Dr. Nicodemus, of Walkersville, Md., has a very good tablet for

Medical data is for informational purposes only. You should always consult your family physician, or one of our referral physicians prior to treatment. the purpose.)

Two injections (on Monday and Saturday) of 5 c.c. of the 1-3000 concentration of HCl solution intravenously. (Due to the "whistling, leaking" heart of this big, fat man, I had thought it prudent to select this "feeling out" dose and concentration.)

On Thursday one injection of 3 minims in 10 c.c. distilled water of Dr. Guy's "old" formula (as published in the March, 1933, *MEDICAL WORLD*). One cup of hot or cold tea after each meal, or at meal hours (morning, noon, and night) made of the leaves of the herb called tecoma or retama mollis. (40 grams of the dry leaves to one liter of water) into which I put 5 drops (graduating from 9 to 15 drops) of Dr. Guy's above referred to formula. This tea and another one made of the root of the Mexican plant matarique can be taken ad libitum. (A laboratory in Mexico City ships large quantities of these teas to Germany, possibly there used for the same purpose.)

In a glassful of freshly drained, undiluted honey the yolks of two eggs are beaten and mixed; taken daily in large soup-spoonful doses, from three to six times. Milk ad libitum. Two or three bananas. Absolutely nothing else. No water whatsoever. The big, fat, always hungry Frenchman called this a "half-starving" diet.

Second week: Two injections of 2 c.c. of the 5% HCl solution intramuscularly. Tea, milk and honey as during first week. One injection of Dr. Guy's solution. Vegetable diet: almost exclusively squash, in all shapes and forms, cooked, baked, etc. A couple of bananas. Bread made out of dried banana flour, powdered at home. (This also can be made up oatmeal style.) Dr. Guy's drops in tea. Teas ad libitum. Absolutely nothing else.

Third, fourth, fifth, sixth, seventh and eighth weeks the same treatment and diet as during second week. HCl solution injections to be diminished if and when sugar, thirst and polyuria diminish or disappear. If so, one or two glasses a day of fruit juice to be taken with 10 or 15 drops of HCl, 2% solution, or 5 c.c. of the 1-3000 concentration in each glass of fruit juice.

A glassful or two of vinum agave (in Mexico called "pulque"), well substituted by buttermilk.

Also one or two small glassfuls of "quinine wine." This I make myself, by boiling a local quinine bark (red bark of the cinchona family) in water, adding equal quantity of good, pure grape wine.

After the eighth week suspend HCl injections during 15 days; in case any of the symptoms return, repeat treatment.

If faithfully carried out, this is 99% a cure-proof. As may be noted, this treatment includes a considerable amount of patience and will power. In returning to normal diet, meat should be given, for some time only, ground as hamburger or sausage; this because, if you will note, all diabetic persons eat like ducks, swallowing pieces of meat unchewed or only partly chewed. Chewing with mouth closed would be ideal for this food cannot be swallowed unless it is perfectly chewed. I know two cases where inattention to this seemingly unimportant detail caused the return of the disease.

Now, my dear readers, if anything is left unmentioned or unexplained on this subject, please call on me. Also, if the tea here mentioned cannot be gotten in U.S.A. I shall be glad to send it to any of you -- of course, free of charge. In happy beautiful Mexico it is yours and mine for the picking, also free of charge.

Just one more thing to conclude: the employing of honey diet in the treatment of diabetes may look unscientific, anti-medical, even kind of silly to the theoretically minded uninitiated or to the superficial observer. Just at this writing my bee flocks (a cross between the lazy, native, Indian, wasplike bee arid the large, ever-busy Hungarian - also called Italian -- bee, I imported from Europe) are busy gathering honey from a plant now in bloom here called retama or tecoma mollis, retania or tronadora. We make tincture and fluid extract of this plant (leaves and roots) also and I give it to my diabetic patients in drop doses in manzanilla tea when I cannot obtain the leaves for tea that I use in preference. The tea, tincture and fluid extract of this plant have a decidedly and markedly antiglycosuric and eupeptic quality and their antipolyuric effect is notably rapid. Now we all know that the bee sucks the quintessence of the flower juice, adds something of its own to it (saliva and perhaps something else), and so manufactures it into honey. Each country has a large number of provenly medicinal

plants free to the bees to gather their honey from their flowers. Making our deductions, it is not difficult to understand why, on this basis, honey fits into the curative diet for diabetes. Most likely it is just the proper food for the depleted hungry glands.

The hormone-forming substances are wonderfully furnished to the body and to the glands by Dr. Guy's formula, by supplying deficient minerals and restoring the chemical reactions of the body to their normal metabolism. To all these is added the cell-regenerating, homostimulative effect of the HCl solution.

I would recommend the trying of Dr. Guy's two formulas, the old and the new; for I have had two cases where the latter (without tr. ferri. chloridi) gave me more satisfactory results. The agave and the quinine wines seem to have a favorable stimulative effect on the digestion when taken in between the meals. The French idea about this seems to be correct, that "it keeps the blood in the stomach where it is needed for digestion for at least half an hour after the end of the meal."

SCORPION BITE

Just to show how impossible it is to establish set rules in the application of HCl solution injections I Will mention a case that would overrule all rules:

Just a few days ago at midnight I was called to see a sick person in a poor Indian hut; in fact, there were three very sick persons there. An Indian peon went to sleep on the same bamboo cot with his wife and a six weeks' old baby in her arm. At about 11 p. m. the three were bitten by a scorpion that fell upon them from the ceilingless roof. Of course, I would inject HCl solution, my reliable remedy, in these cases; I had done it over and over in about two hundred similar cases, but I have never had a case just exactly like this, three persons poisoned by the same scorpion at the same time.

The man was bitten first, and his being in coma indicated that he had received a large dose of the venom. Gave him a 2 c.c. of the 5% solution; the wife, second in order of biting, was conscious, but pharyngeal muscles and tongue were already paralyzed. Gave her 3 c.c. of the solution of 1-500 concentration. The baby the third in line of biting, was inert, limp, unable to move or even to cry, just moaning. Gave him a "heroic dose" of the HCl solution 1/2 c.c. of the 1-1000 concentration. All injections were intraglutal. I would have preferred to give these injections (with the exception of the baby) in the vein, but the only light available was that given by a beautiful full moon shining into the doorless hut. I could not do what I wished. Who could standardize or rule things under such conditions (Happy is the M.D. living in God's country, think I.)

Next morning at 6 a. m. all three were reasonably well. Gave to all, half of the previous doses of HCl solution injection. They spent the day in bed, baby sleeping all day.

Third day: all well and up, baby nursing heartily. These poison cases I consider emergency cases, and I feel that experience gives us permission to do the right thing. It seems to me that I even feel when the dose should be repeated after an hour or two, if at all.

CALCULATING THE DOSE

Ordinarily for children from 1 year up the following calculation has nearly always given me satisfactory results:

$(\text{age of child} + 1) \times \text{dose for adults in c.c.}$

25

Thus: child 4 years old: $[(4+1) \times 3 \text{ c.c.}] \underline{15} = 0.6 \text{ c.c.}$

25

(This I use and suggest as a "starting" or "feeler" dose to verify and establish toleration.)

For given cases twice daily at 12-hour intervals. Again: in cases with complications in or following measles, pneumonia, meningitis, mastoid symptoms, undetermined fevers, etc., for children from 3 to 9 years and to effect, or from four to ten days, I obtain good results giving 5 c.c. of the 1 to 1300 or 1 to 1500 concentration intravenously, or 1 c.c. of 1 to 500 intramuscularly. In case of any difficulty the same solution may be given orally in broth, fruit juice or good wine.

For older children (from 10 to 15 or even up to 18 years of age), in paratyphoid, typhoid or in fevers of unknown origin, abscesses,

Medical data is for informational purposes only. You should always consult your family physician, or one of our referral physicians prior to treatment.

septicemic infections, appendicitis, peritonitis, malaria, exanthema, bone infections, etc., 5 c.c. of 1 to 1000 or 10 c.c. of 1 to 1300 concentration intravenously, or 1 c.c., 2 c.c. or 3 c.c. of the 1 to 750 concentration intragluteally daily or on alternating days. These doses have given me uniformly good results.

For children when given intramuscularly I would add stovain or novocain; but, as a rule, the accompanying sting disappears in from 15 to 30 minutes. In g.u., gonorrheal venereal and rectal cases there is nothing like this HCl therapy, given daily, to effect or till "saturation." This "saturation point." when reached, will be manifest in upset stomach, diarrhea (mostly with beneficial effect), tired feeling (as if one had received a good beating), and "wakened" legs. In all cases in order to hasten the curative effect of HCl therapy, I use the indicated adjuvants or supportive treatment.

Several months ago I was instrumental in having HCl therapy introduced into Bolshevik Russia's most wonderfully organized hospitals. In due time we will hear from "red medicine" about this experiment. I have also had the opportunity to recommend its use in the treatment of a member of a European royal family. For the good of all I hope HCl therapy will click in these select cases, for it would be the greatest blessing to the most humble and poor of suffering humanity.

So while I am cheerfully paying my penalty in working overtime, answering inquiries and in expenditure for postage stamps (a week ago I sent a cable reply to a cable inquiry from a California doctor), all students of this HCl therapy should work in harmony, united, keeping an open mind free of all prejudice and willing always to learn, allowing each and all the same freedom we claim for ourselves and keeping in mind the motto of your able President Roosevelt, "It is our task to perfect, to improve, to alter when necessary, but in all cases to go forward."

Just a word of warning: judging from the various samples of HCl solution put up in ampules and sent to me by American laboratories it is evident that their manufacturers do not exercise sufficient care in making it up. Laboratory chemical analysis shows that some of the concentrations are not exactly the strength shown or indicated on the label (they are either stronger or weaker), several of them are not of absolute purity and some show a flaky precipitate. The cause of these shortcomings resides in the carelessly distilled water and its handling and in the employing of alkaline glass ampules. Naturally with the use of an unscientific product of such uncertain quality no full therapeutic effectiveness can be secured. Until an absolutely dependable solution is produced and put on the market by the manufacturing laboratories, I would advise the fraternity to make up their own HCl solution or have it made up by a graduate expert pharmacist or chemist. Thus the freshly made up solution will be absolutely dependable.

I use boiled distilled water, reboiled and redistilled, with the so-called "chemically pure" acid. *Concentration is by weight volume.* Keep it in a non-alkaline glass container or in Jena glass ampules. The greatest care should be exercised in selecting the container in which the water is boiled and distilled and the acid solution is made up or stored. The use of a copper or brass container, for instance, should be absolutely avoided, for, due to chemical changes and reactions, a poisonous solution is obtained with very untoward and possibly fatal results if such solution is injected into the blood stream.

NATURE IS THE BEST DOCTOR

BY WILLIAM I. HOWELL, M. D.

Lexington, Tenn.

With the Collaboration of BURR FERGUSON, M.D., Birmingham, Al.

Thirty-two years of general practice in a small town without the resources of laboratory help made me often wish I might live and work in a larger community where I might have more assistance with many of my cases. Drugs, as I had been taught to use them in the treatment of infections that came under my observation, did not have the effect

on my patients promised by my studies of *materia medica*. Hence, when my patients reported all too often that they were not doing well under the plan of treatment in use, I changed the prescription and hoped for the best.

During those years there was the occasional visit from a detail man from some chemical house, from whom I would hear of many new specifics for this, that or the other infection. After a few trials of the new serum, drug or vaccine there still seemed to be something lacking; so I reached the conclusion that there must be something wrong about either the drug or my diagnosis. Since I felt fairly certain of the correctness of the latter, I concluded that there was still something missing about the drug.

In the hope of finding some better way for fighting germs I went to all medical meetings in my district. At these meetings the greater number of the papers by men from colleges and larger towns were on difficult surgical procedures, diagnosis, therapeutic use of the X-ray or other electrical devices. Sometimes there was a most interesting report of the use of the cystoscope and ureteral catheter for lavage of an infected kidney or passing a catheter into the gall-duct for drainage of the pus from an infected gallbladder.

In the delight of listening to such reports I felt full of confidence of what I could do with such cases on my return home if I happened to get one. Then, when the meeting was over, in the long drive back home I realized that such elaborate treatment was not for me, with the limited equipment in my district.

In 1931, on my return from such a meeting, at about the same time I saw two reports in print. One was in a Memphis newspaper reporting that in America the year before there had been some 16,000 deaths of women in childbirth. This was startling to me, and a shock. For, no doubt, many of these women had died from infection, and while I had just spent the better part of a week at a most interesting meeting, not a word had I heard about what to do for childbirth fever. Then I saw the other report, just spoken of, in *Clinical Medicine and Surgery*, on the treatment of pyogenic infections, by Dr. Burr Ferguson. The clinical results he said he had seen seemed unusual in that he appeared not to rely at all on any local application of germicides. Dr. Ferguson's claim, that nature was responsible for the good results through the induced activity of the white blood cells following the injection of hydrochloric acid solutions intravenously, fell in with my own belief that nature was the best doctor.

At once the thought came to me that it was highly probable that nature did use these white blood cells in resistance, and if a way had been found to create a greater leucocytosis and to make these cells more active, it would add a lot to my medical knowledge. I had no way of checking Ferguson's report of the leucocytosis following the injection of mercury, arsenic, quinine, milk or serums; but it seemed reasonable, if true.

Since I had been trying new drugs and combinations of drugs for almost thirty years and was still changing, I decided to try the acid injection, because it was so new. I had never heard of anyone injecting an acid intravenously before, and I had heard of all the deaths that followed the injection of salvarsan when errors had been made in its neutralization; but since Dr. Ferguson said he had given thousands of injections in all sorts of infections there did come up in my mind the objection that maybe this acid injection was just another cure-all, and every one of these that I had ever heard of was a failure.

As I thought of the plan of treatment more and more did it seem to me to be worth a trial. For if Dr. Ferguson had not seen what he claimed to have seen and if all of these drugs he reported having used as stimulants for the white cells, including the hydrochloric acid, did not produce a leucocytosis, somebody would surely have taken the trouble to disprove his claims. Even then, however, I was nervous over the acid injection, and I decided I would not use it, on a moderately

Medical data is for informational purposes only. You should always consult your family physician, or one of our referral physicians prior to treatment.

sick case, but would wait until I got one that felt sure would die anyway, when I would be taking no chance in giving the acid as recommended.

Here was another thought that came to me. Arsenic, mercury and quinine had been used for a long time by the mouth, but it was only when these drugs were used by intramuscular or intravenous injection that such remarkable results were reported, and therefore the intravenous route must be the best, because you never hear much now of the oral administration of these old drugs. It seemed possible that with hydrochloric acid, which had been used by the mouth for several hundred years, and of which I had used a great deal as an aid to digestion, I might see some clinical results I had not seen before, just as other men had seen in the change of administration of the metals.

On August 18, 1931, I found the case for the use of the hydrochloric acid. Five days before this date I had delivered this girl of 15, after a prolonged and most difficult labor, using all possible aseptic precautions permissible in a log cabin in the woods. The large baby lived only two hours. In site of the small size of the mother (she weighed only 90 pounds), lacerations were apparently small in size. Three days after the delivery a message was sent me that she had had a chill and a very high fever. It was a long distance to that river bottom where she lived; so in the hope that it was malaria I sent quinine and calomel.

On the fifth day another message came, telling me of the grave condition of the patient and that my immediate presence was necessary. On going into the sickroom I at once saw there had been no mistake in this urgent message. The little girl was delirious; temperature, 106°; pulse, 140; respiration, 40; discharge from the vagina scanty and fetid in odor. Every other case I had ever seen in the condition in which I found her is dead.

With much trepidation I gave her 10 c.c. 1-1500 hydrochloric acid. The following minutes were anxious ones for me, as I hardly knew what to expect as this was the first time I had ever heard of the acid being used in puerperal sepsis. The reports that I had seen of Dr. Ferguson's cases of pyogenic infections were of gunshot or lacerated wounds. As I sat by that bed holding the radial pulse in that lowly log cabin, a flood of memories of teachings concerning the fatal consequences of injections of acid into the veins came over me. While in this frame of mind I noticed sweat on the neck and forehead of the patient, and along with it a slowing of the pulse, and in a few minutes more she was bathed in a profuse perspiration. With it there was a cessation of the chatter of her delirium.

Thirty minutes after the injection of the acid I asked her how she felt. She replied that she felt much better and would like to go to sleep. Within the hour the temperature was 103.3°; pulse, 100; respiration, 22.

During the following four days I repeated the injection of the acid each day, and on, the fifth day temperature was 99°; pulse, 72; respiration, a 18. Two days thereafter I was called again, as I was told the fever had returned. Found her with a temperature of 101°, with a free discharge from the vagina. I gave her another injection as before. Save for weakness, all evidences of infection had disappeared the next day, and she went on to an uneventful recovery with a complete disappearance of the mass in the left iliac region.

This case seemed unusual to me because no local treatment or douches were used and all of the foregoing clinical changes took place under my own eyes, during the first visit, with absolutely no other treatment than the injection of the acid.

On October 10, 1931, I was called in consultation to a case of eclampsia. The patient was a primipara, and in a forceps delivery there was a small laceration. On the third day she had a hard chill and fever, and again I was called by the attending physician. I advised the injection of hydrochloric acid intravenously. The physician in charge refused to have the patient subjected to such a procedure. After a more or less heated discussion I was forced to agree to the injection of one c.c. of a mixed infection vaccine.

On the following day the patient was much worse; temperature 105°; pulse, 130; respiration, 30; delirious and very restless large mass easily felt in pelvis. My colleague then said: "It looks to me as if death is inevitable, whatever we do; so you might try an injection of that damn acid." I gave the injection and witnessed the same clinical changes that I had seen in the other case just reported. Three days more and I was called again and found the patient with temperature of 104°, but she was not delirious and the mass in the pelvis was much smaller. Two other injections were given on the follow-

ing days, after which she went on to an uneventful recovery. This woman has continued in good health and will be again confined in a few weeks. So nothing but good seems to have followed the injection of the acid.

Shortly after this I was called to see a case of double epididymitis. The patient was in the declining stages of acute gonorrhea. I advised the application of ice, soft diet and calomel and rest in bed. The next day the patient reported a restless night and intense pain in the testicles.

After the good results with my childbirth cases I had exchanged several letters with Dr. Ferguson. In the reprints he sent me and in his replies to my letters I was astonished at the confidence he seemed to have in the hydrochloric acid, not only for pyogenic infections, but for any and all germs. So since my results with the other cases had been all that I could ask, I determined to try the same plan for the treatment of the gonorrheal complication. At that it did seem foolish, according to all of my schooling, to give an injection in the arm for a swollen testicle.

There was a marked lessening of the pain after, the first injection. These were continued every day as in the other cases. After the third injection temperature was normal and testicles much smaller. With the eighth injection there was a complete disappearance of the swelling and he was discharged after the tenth injection. Since that time I have had a few other cases of epididymitis the behavior of which was altogether like this case.

However, I have had several cases of salpingitis in which I did not get the expected good results. They would seem to get much better for a time, but the swollen tube did not disappear; but after giving these cases a few injections of lactigen they seemed to recover altogether.

In January, 1932, I was called to see a mother nursing a ten-month-old child. Found her with a temperature of 96p, generalized pains in her body and legs, pulse rapid and weak, breathing shallow. There was a discharge from a ruptured infection on the last phalanx of the middle finger. A deep ulcer-like infection on the upper half of right hand, about the size of a parter. Gave her an injection of hydrochloric acid, as in the other cases. The next day there was a much more profuse discharge from both lesions and after the second injection she went on to an uneventful recovery.

In August, 1932, I was called by Dr. H. I. Wylie, of Scott's Mill, to see a woman evidently septic, having had chills, fever and prostration for several days. There was an ulcerlike lesion on the last phalanx of a finger, edges ragged, blister-like lesions over forearm. Gland above elbow and axilla much swollen and tender. Diagnosis of tularemia was made and the use of hydrochloric acid advised. I failed in my efforts to give an intravenous injection because of the very small size of her veins; so I gave her intramuscular injections of 3 c.c. Of 1-1500 hydrochloric acid every day for ten days; using alternate hips. At this time all evidences of the infection had disappeared. There has been no return of the infection.

Since that time Dr. Wylie has told me he had another case of tularemia which he treated in the same way, except that he used the intravenous injection and that the result was like that in the case I saw with him.

A banker in a nearby town came to me with the only carbuncle I ever saw on the upper lip. There were draining sinuses over lip and left side of nose. Pain was being controlled by morphine. Six daily intravenous injections were used in this case, with the same good results I had witnessed in the other cases in which I had used the acid injections.

During the summer of 1932 I had the opportunity to see a woman of 35, the mother of 5 children, three weeks after a severe hemorrhage from the lungs. Temperature, 103°, rapid pulse, and exhausting night sweats. Pulmonary tuberculosis in both lungs. Weakness and emaciation made the prognosis rather hopeless. Since Ferguson had reported that the injection of hydrochloric acid made the polynuclear cells attack the tubercle in a way that is not done in nature, I decided to try the same injection I had used in the preceding cases.

I advised absolute rest in bed and mineral oil for her bowels and began the injections of hydrochloric acid, 1-1500 three times a week. As the days passed her appetite began to improve, and I ordered a diet of fruits, vegetables and what meat she felt she could digest. The improvement was most satisfactory and within one month was free from fever. In three and a half months she went from 95 to 110 pounds in weight. She had a comfortable winter and has been able to move about the house since early in the year, after fifty injections of the acid. Early in March, 1933, I began another series of the

Medical data is for informational purposes only. You should always consult your family physician, or one of our referral physicians prior to treatment. acid injections, which I shall continue during the spring and summer.

In the autumn I was called to see a man of 30, a farmer whose mother had died some time before with tuberculosis of the lungs. He too, had just had a hemorrhage from the lungs, and his history and condition were typical of pulmonary tuberculosis. He decided to go to Memphis for treatment but after six weeks he returned, saying that he had had the rest-in-bed treatment and he might have that at home just as well. Soon after his return, when he was running an evening temperature of about 101°, he began to have painful urination. Specimen of urine was cloudy and well colored with red blood.

After the first injection of the acid, 1-1500, there was a most pronounced chill, but the following fever was no greater than his daily temperature. For a few following injections of the acid I decreased the strength to 1-2000. There were no further reactions, so I again returned to the injections of the 1-1500 solution. After a month there was no more discomfort on urination and the specimens were pretty well clear. With the freedom from fever and an improving appetite he began to increase slowly in weight; so I increased the strength of the acid solution to 1-1000, which I am giving three times a week. He continues to eat and sleep well and I shall continue the injections of the acid for a few weeks.

In the fall of 1932, after a coryza, my grandson, a robust lad of 6, complained of a pain over the lower lobe of right lung. Rapid onset of fever. Within two days the lower lobe was consolidated. Light diet, attention to elimination and an occasional mustard plaster over infected lobe were the only treatment used. In spite of the fact that I had seen no untoward consequences following the use of the acid, I feared to give it to one so young. Crisis came on the sixth day, after which he was free from fever for two days when it returned with this relapse, quickly going to 102°; pulse, 120. Fearful of an abscess, I determined to give the hydrochloric acid, giving 3 c.c. of 1-500 deep in pectoral muscle. There was an improvement in his condition for the following 24 hours, when his temperature was 101°, pulse and respiration much lower. I gave another injection, as on the day before, under the pectoral muscle of the other side. Fever was normal the next day, and after a convalescence of two weeks, the patient returned to school, where his attendance has been regular since the illness.

Confirming the observations of Dr. C.D.N.W. Colby, of Asheville, of the effect of the acid injections on asthma and other manifestations of the allergies, about a year ago a young married woman came to me complaining of intense itching over her body, sometimes in one area, sometimes in another. The elevations on her skin on this visit seemed to be an urticaria. She said she had taken and done everything advised by her doctor and friends, but the itching persisted. Six injections of the acid 1-1500 were given every other day. Improvement was noticeable after the first injection and she was wholly well after the last injection.

In the summer of 1931 I saw a baby with a severe case of colitis, frequent vomiting, abdomen much swollen, delirious, with temperature 104°. I tried all manner of recognized plans for treatment, but the smelling, frequent stools continued. I had been taught that such conditions were the result of acidosis and it seemed to be going too far to give more acid. But since all other measures had failed in giving relief, I determined to give the acid in the gluteal muscle just as I had done with my grandson. Injections were given daily. Improvement in the general condition of the child was noticeable, abdomen rapidly flattened out, fever became lower and on the third day there was a marked change in the quality of the stools. Six injections of the acid were given after which the child made a rapid convalescence and has continued in good health.

At 4 o'clock one morning, January, 1928, I had a telephone call from Dr. S.G. Martt, Proctorville, Ohio, from a hospital in Huntingdon, W.Va. Dr. Martt said he had a patient in the hospital with puerperal sepsis, fifteen days after delivery. Temperature, 105°; pulse, 140; respiration, 40. She had had two transfusions, which had failed in ameliorating the condition of the patient. Dr. Martt said he had urged the attending physicians to give the hydrochloric acid, but since the intravenous injection of the acid had been listed as a dangerous procedure, they declined to do it. On my urgent advice he determined to give the acid injection himself.

Between eight and nine o'clock on the same morning Dr. Martt called again to tell me of the remarkable effect of the acid injection. That the temperature had dropped to 103°; pulse, 96; respiration, 30, and the delirium had disappeared. While the patient still had a temperature of 102°, after the fourth injection of the acid she had apparently improved so much Dr. Martt returned to his home in Proctorville, Ohio. Shortly afterward attempts were

made to aspirate an apparent abscess. There was a rapid rise in the temperature and pulse and the patient died within the following day.

In November last I had an acute tonsillitis of my own; temperature, 102° tonsils much swollen; whitish patches over each one. Not being able to give myself the hydrochloric acid, I took calomel, aconite, gargles and painted the throat with nitrate of silver. Since I had no improvement I called Dr. J.F. Godd, asking him to give me an intravenous injection of hydrochloric acid. He demurred, saying that it was against all reason to give an acid in the veins. On my insistence, however, the injection was given. Improvement was rapid during the following hours, I had a good night and the next day my temperature was normal. I returned to my office in the afternoon.

In every case where I have a laceration in a confinement case I give before I leave the house a shot of 10 c.c. of 1 to 1500 HCl in the vein, with 100% results, without fever following. Before I began this practice I was having fever once in a while of a septic nature. In cuts or lacerations of any kind I give the acid as stated above; it prevents infection.

The foregoing clinical reports are experiences I have had in the administration of some 1200 injections of the hydrochloric acid. I have seen few reactions after the injection of the acid and those that I have seen quickly passed and I have seen no untoward following effects. I have been changing drugs for almost thirty years, but since I began the use of the intravenous and intramuscular injections of the hydrochloric acid, something over two years ago, there has been no change, and so far as I can see at present I shall continue to give the acid injections, when I see indications of infectious diseases. I have no way of checking the chemical and cellular changes that are said to go on in the body after the injection of the acid, as I am strictly a clinical medical man of the kind that do the larger part of general practice of the country. Clinically I know hydrochloric acid injections will be followed by good results in the greater number of infections. If the cellular and clinical claims are untrue or true it seems to me they might easily be disproved or proved in a well-equipped laboratory.

In conclusion, I can only say that I am grateful to Dr. Burr Ferguson.

Clinical experiences such as I have never known before are frequent in the application of this idea that nature is the best doctor, through the injection of this basic acid of the body. While this paper was being copied, on the 24th of April, 1933, I had the opportunity of seeing two cases whose behavior under the influence of the acid-stimulated cells seems worth while. One was a lobar pneumonia and the other a pyogenic bloodstream infection.

On April 23d a boy of 15 had a prolonged chill, with an intense pain in right side. I saw him the next morning with a temperature, 104°; pulse, 120; respiration, 36; cough and expectoration of rusty mucus and pus. Lower lobe consolidated.

Hydrochloric acid, 1-1500, 10 c.c. was given intravenously. Twenty-four hours later temperature was 101°; pulse, 90; respiration, 24; profuse expectoration and the patient comfortable. Another injection of the acid was given. I failed to see the boy on the following day because of a call in another district. On the fourth day I was much pleased to find the temperature normal, yellowish sputum, freedom from pain and a most encouraging appetite.

A week ago an employee in a sawmill had a lacerated wound in the right leg from a fall of lumber. I cleaned and dressed the wound, using mercurochrome. In three days the temperature was 104°; pulse, 130; intense pain in infected wound. Several small incisions were made from which there was an exudate of a small amount of bloody, pus. Following the intravenous injection of 10 c.c. of 1-1500 HCl there was a profuse sweat within the hour, after which there was another pronounced chill but no increase in the temperature. The next day temperature was 102°; pulse, 100; and the patient was much more comfortable. The discharge from the wound was much more profuse than one sees when the case of such lesions is left altogether to nature. One required no microscope to know that there had been a great stimulation in numbers and activity of the white blood cells.

Another injection of the acid was given and on the following day the patient was much better, with a normal temperature. Another injection of the

Medical data is for informational purposes only. You should always consult your family physician, or one of our referral physicians prior to treatment. acid was given in order that the very active repair of the wound might be continuous. B.F.

HYDROCHLORIC ACID INJECTIONS PRODUCE LEUCOCYTOSIS

BY WILLIAM I. HOWELL, M.D.
Lexington, Tenn.

The response to my article was quite generous. I received letters from Maine to California, from Illinois to Texas. At least 40 States responded, and still they come.

I answered many letters, but was unable to answer all. Doctors should not forget to inclose postage when writing.

Inclose herewith two reports that demonstrate conclusively that the hydrochloric acid injection produces a marked leucocytosis:

O.G. HARRINGTON, M.D.
224-227 GLUCIC BLDG.
NIAGARA FALLS, N. T.

June 22, 1933

WILLIAM HOWELL, M. D.,
Lexington, Tenn.

My Dear Doctor: I thank you for your prompt reply to my letter. It may be of interest to you to know that before receiving the reply to my letter I injected 10 c.c. 1-1500 HCl sol. into a vein of a rabbit on which I had just before done a bloodcount. Twenty-four hours later I did a second b-c on the rabbit and found the leucocyte count had increased about 50 per cent. That fact of itself demonstrated your contention of the potency of the procedure for fortifying the blood against invasion. The rabbit did not give evidence of any untoward reaction -- in fact, seemed to be a better rabbit all around.

I shall most assuredly give the remedy a trial, if and when opportunity presents and will report to you.

Sincerely and fraternally yours,
O. GRANT HARRINGTON.

August 7, 1933.

Dr. Roy A. Douglas
Huntington, Tem.

To whom it may concern:

This is to certify that Dr. Wim. I. Howell came to my office and I made a wbc at 9 a. m., which was 7300; at 9:05 a. m. I gave him 10 cc. of 1-1500 HCl in the vein; at 10:15 a. m. another wbc gave 9800, showing an increase of 2500 wbc in 1 hour and 45 minutes, an increase of 34 per cent of the wbc. Roy A. Douglas, M.D:

State of Tennessee, Henderson County.

Personally appeared before me, Wim. I. Howell, M. D., who makes oath that the above letter of Dr. Roy A. Douglas was written and signed by the said Roy A. Douglas, and that same is genuine in every respect.

Wm. I. Howell, M.D.

Sworn to this 7th day of August, 1933•

Jno. A. McCaLL, Notary Public

HYDROCHLORIC ACID INJECTIONS IN ACUTE INFECTION

BY WILLIAM I. HOWELL! M.D.
Lexington, Tenn.

It is strange that things will hold on when they get nowhere. I noted an article in a medical journal where an Indiana man was writing on cellulitis in the pelvis of women following lying-in period, either at time or not, telling of the management. His idea was to clean them up, give blood transfusions, rest. It really meant let them die if they could not fight it out alone. Some three years ago I found a remedy that is 95 per cent sure. Begin as early as they show signs of fever. Give them 10 c.c. of a 1-1500 or 1-1000 solution of hydrochloric acid, in vein, every day. Usually in five to eight days they are clear of fever, really getting well. De Lee says one out of every 400 women die of childbirth or from causes related to the same; ten out of these 400 are invalidated for life. It is almost all uncalled for. I have just attended two cases of confinement that had serious lacerations. I began to give them injections of acid at once, repeated every day to seventh or eighth day. They never had any fever. They are getting

well; are not invalidated for life.

The question arises: just how does it do this? We fight infection with the white cells. After every injection of the acid there is a rise of 2000 to 6000 cells in six to eight hours. To prove this contention I went to Dr. R. A. Douglas, and asked him to take a white cell count; then give me an injection of the acid. He did this. The first count was 7300. Then the injection. I went back in one hour and forty minutes. He made another white cell count. It showed 2800, a rise of 2500 in that short time.

NEPHRITIS

The acid gives the same happy results in nephritis. Give an injection every day; in five or six days the albumin diminishes till there is none. I saw a case of acute nephritis September 1933, following scarlet fever. A boy, nine years of age, swollen till he looked as though he would burst. I tried everything I could get at, salt-free diet, pot. citrate in large doses, milk diet. The hospital authorities said his urine showed four plus albumin. After six weeks he showed no improvement. I decided to try the acid. I gave him 3 c.c. of a 1-1500 solution in gluteal muscle every day, alternating hips each day. In seven days the albumin began to decrease. After twenty-one injections he was entirely well. I have reports from him almost weekly; no albumin. I saw him May 6th, 1934. He was out on the road with other children, was just as busy in their games as they were, showed no signs of his former trouble, looked well, ruddy like the others. Since that time I saw another case of acute prostatitis, urine loaded with albumin. After six injections his urine was entirely cleared up. I have given him about twenty-five injections. He sleeps well at night; no more bladder trouble.

I have a man under my care who had T.B. lungs. The bladder became involved. I gave him an injection every day for thirty days. He missed his fever, all bladder symptoms are gone, eats plenty, sleeps well, has had no fever in ten months. His weight has gone up from 140 to 80 lbs. I am still giving him an injection once a week. He is doing light work coughs very little. He has taken more than one hundred injections with never the slightest harm.

TONSILLITIS

In acute tonsillitis it is a specific. Never over two injections, one each day. Most of the time one injection is sufficient and next day they are ready for work.

HYDROCHLORIC ACID INTRAVENOUSLY AS A THERAPEUTIC MEASURE WITH REPORT OF CASES BY W. G. BRYMER, M.D., Ph.G.

Castroville, Texas

Gentlemen: In presenting this paper I do so with sincere respect to our predecessors who first used HCl. *HCl* has been a potent drug and was, our predecessors considered, one of the most valuable drdgs in their armamentarium. They knew it was most powerful, and thought it a most deadly drug; therefore many used it with caution. Therapeutically they knew that HCl and its combinations were valuable, and they used them freely until some other highly advertised and lauded products were found. The lauded products were tried and found wanting, and today the discarded HCl has returned and is lauded by many as one of our most potent drugs. Some chemists have tried to down it again, and again relegate it to the waste basket. Some good old horse-sense doctors have taken up the battle and proved that it not only can be given by mouth, in conjunction with other drugs but intravenously. They have proved that HCl is one of the essential constituents of the human body.

It has long been known that our stomachs secrete HCl. When it is deficient various derangements of the digestive function flare up and our system goes haywire. I wish, also, to say that when we have an excess of HCl in the stomach the rest of the system goes wrong.

As a reminiscence I want to go back some sixty years, when

Medical data is for informational purposes only. You should always consult your family physician, or one of our referral physicians prior to treatment. black jaundice, black-water fever or hemorrhagic malarial fever was rampant in east Texas. People were dying by the hundreds. The fever was considered almost certain death.

1. Read before the Nine-County Medical Society. Texas, August 10, 1934.

Drs. Bursleson, Sawyer, Doak, Oliver and Darr combined large doses of HCl with quinine and saved their patients. When they gave quinine alone the patients died.

My old friend, Dr. J. Thomas, in 1905, told me that he had saved hundreds with HCl and quinine, but that quinine alone would kill.

He said: "You are young and inexperienced and I want to put you right. Don't give quinine to black-jaundice patients, or you will kill them. Combine 15 to 20 drops of HCl with 30 grains of quinine and they will get well."

He had practiced medicine in the swamps for 60 years, and today I revere his memory for his kindly advice.

Dr. J. Smith, of Arkansas, gave the same advice.

For many years, in malaria, I never gave quinine without giving with it HCl in large dose. As my predecessors had predicted, my patients got well and invariably were free from malaria.

A favorite remedy with these older doctors was HCl and bichloride of mercury. Alone, bichloride of mercury failed. Combined with HCl and alternated with potassium iodide, it was a most potent remedy. Gummas and neuropathic symptoms disappeared under HCl and mercury.

There has always been the question: "Why?"

Dr. Burr Ferguson has answered the why in several ways. He says it increases the white cells, which we know we need so badly in great numbers on our battle front in infectious and contagious disease.

Some chemists tell us that HCl will disintegrate and crenate the red cells of the blood. Theoretically and chemically it may be said to do so. Clinically we know that it does nothing of the kind. We pay so little attention to the chemistry of the body and then wonder why we don't succeed.

Dr. W. B. Guy, of St. Augustine, Fla., forcibly calls our attention to this. Today we have a solution of salts and HCl that he advocated would help to reconstruct the body chemically. Physiology teaches us this, and we want to congratulate Guy on his excellent formula. It is worth using.

Prof. Ira Chase said that sweet spirits of niter and acetanilid were a deadly poison when mixed. Dr. Black, of Texarkana, called his hand by mixing one dram of niter with fifteen grains of acetanilid and swallowing it before the class with no ill effect.

At that time hundreds of doctors through the swamp regions were using this combination daily to combat high temperatures in malaria.

I cite these few historic data for your thought and to refute the theory that HCl disintegrates the red cells.

I have given about 1,000 doses of HCl intravenously from 1-1500 to 1-250 in strength over periods of four months with as fine a picture of red cells as one could be permitted to look at. I have a count that rose from 2,000,000 to 5,300,000. The chemical theory is not so; but it is the reverse clinically .

Dr. Burr Ferguson, with thousands of successful cases to his credit, does not report a single case of depletion of the red blood cells. Then he asks: "Why?" In his recent comment in *THE MEDICAL WORLD*, page 304, he quotes from experiments made with HCl "In Reviving Many Patients," by Dr. Macgilvra, of Harvard.

Miss Pearl Moorman, pathologist, experimenting on 300 guinea pigs after cessation of respiration following anesthesia; gave HCl intravenously to re-establish respiration. She also stated that lactic acid

was tried, and that all animals given lactic acid died.

Drs. Edmonson and Roth, of Battle Creek, Mich., in *THE MEDICAL WORLD*, report O₂ and CO₂ effect on the blood through intravenous use of HCl. Roth, according to Ferguson, says: "I wish to suggest to you that an increase of the oxygen content of the blood is readily noted, though roughly, by merely noting the change in appearance of the blood to a brighter color."

Ferguson also states: "The increased phagocytic activity against the staphylococci after an injection of HCl is greatly noticed."

My experience with HCl over a period of two years has convinced me that it is a potent therapeutic remedy given intravenously and is quite an advance over the old oral use which has been followed with success for sixty years. I wish to cite some clinical cases to bear out its potency.

Case 1 : Mrs. G.; age 45; wt., 170. Seven years ago this patient had a laparotomy for cancer of the uterus; one year later another for adhesion and strangulated bowel. Three years ago she had a third operation for adhesion. Each biopsy revealed cancer cells. The last operation wound healed partially and left cancerous growth. She came to me and was examined. I found a scar six inches long which was ulcerated and bleeding. The abdomen was full of nodular tumefaction. Hard and indurated mass in the vault of the vagina. She was suffering night and day from pain in the lower bowel and in the bladder. The bleeding ulcer would not heal. I gave her 36 intravenous HCl 1-1500. After seven doses the pain was diminished and the external cancer was healing. After 25 intravenous HCl 1-1000 the external cancer healed. The nodules in the abdomen decreased in size and were not so hard. After 31 doses she was entirely free from pain. The bowel was soft, with some mass. She could hold water in the bladder all night and sleep well. Her general appearance was ruddy and healthy. She said she felt better than she had felt to 15 years.

I then gave her HCl 1-500, once a week. She is still improving and able to do her work about the house without any pain. She still has some masses and tenderness in the abdomen. She is not well, but she is able to enjoy life and she is free of pain.

Case 2: J.B.; age, 19; wt., 105. Diabetic. First noted sugar in urine at the age of 11. Blood sugar, 300. Was in hospital, with coma, in 1927, under care of Dr. H.M. Bush; was put on insulin. Her blood sugar was 280 to 380 in monthly test. She had to take U80 insulin, 10 units twice a day, to hold sugar around 350. She had numerous abscesses, boils and disfigurements of the face. Diet and insulin kept her in fair shape.

In May, 1934, she commenced taking HCl, 1-500, every 4 days. All boils have gone, skin is clear. She is active and has the best of health. There is no acid. The blood sugar test on July 10 shows 111.

Case 3: Miss L.K.; age, 22; wt. 130. A nurse by occupation. She has been a healthy girl all of her life. Went through nurses' training and graduated at the Santa Rosa Hospital in San Antonio, Texas, in 1933•

She first noted illness by having weak spells, with dizziness and inability to concentrate. Consulted Dr. Smith, of Hondo, who diagnosed diabetes and began insulin treatment. She had great hunger and thirst and did not attend to diet and was on the verge of coma several times.

She was taken to the Santa Rosa, November 12, 1933 and went under Dr. H.M. Bush's supervision. Blood sugar was 253. Insulin dose was promptly restored by glucose. She was properly dieted and blood sugar gradually rose to 170, 188, 190 and on January 8, 1934 was 266 and the same the 22d. On July 7, 1934 she was emaciated and very weak, with a blood sugar of 200. She had deserted her diet and was despondent.

On May 14th she came under my care in the above condition. I promptly found blood sugar nearly 300, an acid complex of 4 plus, with gastric distress, sighing respirations and mental complex dull, bordering very closely on coma. I promptly gave her U80-15U insulin and 1-1500 HCl daily for 10 doses at which time she was another woman and said she felt better than she had felt in four years. Instead of a pale human, she was rosy and vivacious. Urination dropped from ten to five times a day, spec. gr., from 1040 to 1020; urine sugar, 0; alb., 0; acidosis, 0. She said that for several hours after each HCl injection she had a glow over the entire body, that each dose encouraged her to live, and that previously she had despaired of life. She has steadily gained and weighs 15 lbs more than before beginning treatment with HCl. Her blood sugar after ingesting the day before a full amount of carbohydrates and beer, with a big bait of ripe figs, was 200, after leaving off HCl for 14 days, but which quickly fell when HCl was resumed. In both of the diabetic

Medical data is for informational purposes only. You should always consult your family physician, or one of our referral physicians prior to treatment.

cases I am giving every fourth day a dose intravenously of 1-500, and have given them t.i.d. 30 drops of Guy's solution, No. 2, by mouth, which keeps the bowels well open. I have been able to lower the insulin once a day to approximately 5U.

Case 4: E.H.; age, 49; ht. 6 ft.; wt. 200. Varicose ulcer above right ankle, size of dollar; varicose condition very bad toward knee. Varicose ulcer 6 in. above ankle, which resisted all treatment. Put him on 1-1500 HCl every other day in April. Varicosities about normal after 26 intravenous injections. Increased HCl to 1-500 every third day, with great improvement (added infrared treatment). June 26 dismissed well, after 46 intravenous HCl injections.

Case 5: Age, 39; wt., 165; ht., 5 ft. 3 in. Was called to her bedside March 4th. Severe pain in neck, running down into shoulder. Gallbladder greatly enlarged. Liver small, dimness of vision, pain in left eye. Complained of inability to sit up and pain through left shoulder and neck. Blood pressure, 300, 220. Heart action regular. No temperature.

Family history: father died of arteriosclerosis and nephritis three years ago. The mother died of nephritis seven years ago. She has been sick since her father's death.

Several doctors diagnosed chronic bronchitis and probably T.B.

Clinical finding: Urine, 1025; albumin, plus 4; sugar, 0; diabetic acid, plus 2; Wassermann, 0.

The gallbladder was about the size of a quart cup. The liver and gallbladder were both very tender. Icterus almost all over; corneas yellow; tongue furred. The usual treatment was of no avail. She got worse.

Beginning April 15th I gave her HCl intravenously, 1-1500, every day for 10 days and then every other day for 10 days. There was a marked improvement in the gallbladder and a lessening of pain. Jaundice was disappearing fast. B.P., 260, 130. After I had given 10 doses of HCl she said she could feel a great change for the better.

On June 10th her B.P. was 240, 110. No pain. The gallbladder is not perceptible; the liver is at the border of the ribs; eyesight has greatly improved. Albumin still 4 plus; acidosis, sugar, 0. At the time of this report she feels fine and eats normally, sleeps well and says she is never tired.

When I first saw this patient her portal circulation was engorged; arteries hard; veins enlarged and menstruation occurred only every three or four months. In addition, I have given her Guy's solution t.i.d., 1 teaspoonful in glass of water after meals. The arteries now are pliable and comparably soft, veins very small with no engorgement, gallbladder not palpable. Under existing circumstances I believe she will ultimately make a complete recovery with the exception of a kidney lesion which will go with her always.

Case 6: Mrs. P.R.; age, 67. She has a diabetic family history. She had swelling of the feet. Her pulse was 120; respiration, short; B.P. 220, 160. She was restless and could not sleep. Sugar was 10%; albumin, 2-plus; bad eyesight. Ampule of coramine intravenously; digifolin subcutaneously. 20 minims every 4 hours. HCl intravenously, 1-1500. Twenty minutes later she had a slight glow of the skin and said she felt better. I then put her on Guy's solution, No. 1, teaspoonful 4 times a day with 10 ounces of water, because she did not like the needle. I continued the coramine, 10 drop: t.i.d. On the second day specific gravity of urine was 1020; sugar, 1/10 of 1%. Her restlessness was gone, she was sleeping well and felt hungry.

I continued Guy's solution for two months. Her pulse is normal; B.P., 145, 80; no sugar. She eats and sleeps well and says she is feeling better than she has felt for several years.

Case 7: P.G.; age, 36. Mexican. Double upper lobe pneumonia. Pulse, 140; resp., 50 cyanotic. Eight a. m., 10 minims Guy's solution No. 2, in 10 c.c. of distilled water injected into vein. Cyanosis disappearing in 10 to 30 minutes. Temperature, 102°; pulse 100. Patient said he felt greatly relieved and that his feet were warm for the first time in three days. At 3:30 P. M. I gave him 5 minims of Guy's solution in 10 c.c. of distilled water and at 8 p. m. temperature was 99; pulse, 80; resp., 25, no cyanosis, lungs fairly unloading. Nine a. m. next day I found him doing fine. Temperature, 99; pulse, 80; resp. 22; lungs clearing, and he said he felt well enough to be up if we would let him. I gave him Guy's solution intravenously 10 minims in distilled water, 10 c.c., at 10:30. He had a severe reaction, lasting one hour, but temperature dropped to normal, and at 7 p. m. he was spitting volumes of prune juice, but feeling fine. Third day: 10 minims of Guy's solution in 10 c.c. of distilled water, intravenously. Lungs clearing, sputum clearing, and easy to throw off. He made an uneventful recovery and only 1 teaspoonful of Guy's No. 2 solution in 10 ounces of water given as a tonic t.i.d.

Case 8: S.G., brother to P.G., age, 30; left pneumonia, extending from

upper lobe to all three lobes, with severe pleurisy in left side. Patient looked very distressed. Resp., 35; temperature, 105°; pulse, 120. Cold hands and feet. Tongue furred and dark. Gave him 10 minims Guy's solution in 10 c.c. of distilled water, intravenously. Repeated in six hours. After first dose extremities became warm and pain not so severe. Six hours after second dose patient said he felt comfortable and no pain; spitting red sputum. In twenty hours the patient's temperature was normal; pulse, 80; resp, 22, and throwing off large amount of prune juice sputum, which in four days cleared. I continued Guy's solution No. 2, 1 teaspoonful t.i.d. in 10 ounces of water. Patient made an uneventful recovery.

Just recently, in *MEDICAL WORLD*, Dr. Burr Ferguson answers Miles in regard to whether or not HCl will cause arteriosclerosis. Ferguson says that, "on the contrary, HCl will relieve arteriosclerosis," and cites several thousand doses, with special comment on his own case and that of his technician, up to and including doses of a 5 per cent solution.

My experience with HCl in high blood pressure bears this out and has given me most gratifying results.

As said before, I find it a valuable remedy in varicose veins and ulcers after some 30 to 40 doses intravenously, given in 1-500 solution. There is a general softening and drying condition that takes place and in some cases the varicose conditions are entirely obviated and ulcers heal spontaneously.

I have noted that after some 10 to 30 doses intravenously the liver function is better; engorged portal circulation is relieved; there is a general clearing of the hepatic ducts, gallbladder and icterus; the scleral icterus clears and the stools become more normal under the intravenous use of HCl solution and the general condition is further improved by the use of Guy's solutions, either No. 1 or No. 2. Guy's solution is in two formulas, as follows:

RX Sol. pot. arsenitisf 3 j
Sol. ferric chloride f 3 v
Sol. pot. chloride (10% sol.)
Sol. pot. sulphate (10% sol.).....aa f 3 j
Sol. HCl, dilute. ad f 3 iv

M. Sig.: Ten to 20 drops, three to five times a day in a glassful of water. Or it may be given intravenously, 3 to 5 drops in 10 c.c. of distilled water for rapid effect, once a day.

I have used Guy's solution, modified by him, mostly intravenously and which I call No. 2, and find it most advantageous in acidosis. It keeps the bowel open and makes a most excellent hepatic stimulant and is as follows:

RX Sol. pot. arsenitis1 00
Sol. pot. chloride (10% sol.).....8 00
Sol. pot. sulphate (10% sol.).....16 00
Sol. HCl, dilute. q.s.ad 30 00

M. Sig.: Five to 10 minims in 10 c.c. of distilled water once a day for alternate days.

I have noticed no ill effects or reaction by the intravenous route, but get quick action in acidosis. My acidosis patients' index drops from 4 or 5 plus to normal after a few doses of HCl or Guy's solution, No. 1 or No. 2.

The preparation is easily made and is of insignificant cost. It is stable for an indefinite time.

So far as I know, I am the originator of the name of this solution. Guy, of St. Augustine Fla., gave me the formula worked out from the annals of chemistry of the human body. For convenience and to his memory I have called it Guy's solution No. 1 and No. 2. I have never consulted him about the name, but hope he will, in all good grace, let us call it Guy's solution.

CONCLUSION

HCl, intravenously used, no doubt is a valuable therapeutic agent. I am convinced that, given intravenously, we get a specific action. The intravenous route is far superior to the stomach route as HCl has been used in the past.

Medical data is for informational purposes only. You should always consult your family physician, or one of our referral physicians prior to treatment.

I am convinced that it increases the white cells and that it increases the CO₂ of the red cells and resuscitates the diseased tissues. At the same time it furnishes white blood cells to repair damage done. Our work along this line has just begun. The answer to the question, "Why" will eventually be found. It will be answered, not only clinically, but chemically.

THE USE OF HYDROCHLORIC ACID INTRAVENOUSLY

BY M.A. CRAIG, M.D.
Lakeport, California

For a number of years I have read clinical reports by Dr. Burr Ferguson. These papers dealt with a wide variety of infections, and the results he secured were attributed by him to the stimulation of the white blood cells and other unknown natural forces of resistance, which were said to be stirred up by the injection of varying solutions of hydrochloric acid.

That such results could follow the use of one drug aroused in me a spirit of skepticism and forced me to conclude that another enthusiast was seeing therapeutic visions with a "cure-all."

However, with the passing months, the papers by Dr. Ferguson and other observers reporting the satisfactory results following the use of hydrochloric acid continued to appear. Laboratory facilities were not such that I could check the effects claimed to have been made on phagocytosis. So I was still undetermined as to giving a trial to a procedure so at conflict with all accepted principles.

About this time, August 12, 1933, I saw an editorial opinion in the *J.A.M.A.* on the hydrochloric acid injections. Reasons for the reported results of the acid were said to be figments of the imagination. The acid injections were said to hemolyze the red cells, create inflammatory reactions, and all reputable medical men were advised under no circumstances to give an injection of a drug so dangerous. The writer offered no evidence of any kind as the reasons for this adverse opinion save to imply that Dr. Ferguson was not reputable and that no colleague should take a suggestion from one so far beyond the pale of ethical physicians. However skeptical I may have been, in no way had Dr. Ferguson's papers given me the impression of quackery. It seemed to me that he was a colleague who thought he had seen good results and was anxious to tell his fellows of the "fancies" with which the editorial writer referred to said he had been seized.

Here was a bitter opinion by a man who made no claim ever to have seen an injection of hydrochloric acid given to a single individual, against that of a clinical medical man who claimed to have given thousands of injections of the acid. It seemed hardly fair. So I determined, in spite of my age, training and experience, to try the plan of the doctor in Alabama, who had been so maligned.

Preliminary to my clinical report of two most happy results in the use of hydrochloric acid I wish to express my heartfelt thanks that the most unjust opinion of Dr. Ferguson and of the hydrochloric acid, more than any other one cause, induced me to write to Dr. Ferguson preceding my beginnings with the acid injections. The replies to these letters were those of a colleague who believed every claim made and showed a spirit of desire for help. A spirit utterly at variance with that given of him by the editorial. My clinical experiences with the hydrochloric acid have convinced me that something worth while can come from a private practicing physician even if he has our national association in dogmatic opposition to his every effort.

While neither my training in serologic work nor my laboratory resources permit me to discuss the cellular phenomena which Dr. Ferguson claims are responsible for the repair of wounds, the removal of diseased tissue and the elimination of infecting organisms, I can say, in all sincerity, that these helpful changes do accompany the use of intravenous injections of hydrochloric acid. Whatever the true reasons may be, the use of the acid helps infected patients and this clinical proof

is quite good enough for me. Until some well-recognized laboratory proves untrue Dr. Ferguson's claims of the great increase in phagocytic activity and the marked addition to the oxygen content of the red cells following the injection of the acid, I shall continue to believe the truth of his claims. Queerly enough, if these claims are found untenable I shall continue to use the hydrochloric acid injections because of the consistency of clinical results.

On June 4, I was called to see a young woman of 26, the mother of three children, youngest 18 months of age. Fifteen days before my visit she had had an abortion and the flow of blood has been copious since that time. Three days before I was called she was said to have had a severe chill, followed by fever. This seemed to be a typical case of septic infection of the uterus, as these inflammatory phenomena occurred several times a day. At this time the temperature was 104-3/5°. Ten c.c., 1 dose only, of 1-1500 hydrochloric acid was given intravenously and ergot was ordered every four hours. The patient was left in charge of a kindly neighbor.

Sixteen hours after the injection of the acid solution and the administration of the ergot I saw her and was pleased to hear of a more comfortable night and that the flow of blood was less. Temperature was 102°. Clinical improvement continued, with a decreasing flow and lowering of the temperature until the fourth day, when the temperature was normal. The patient went on to a complete recovery. This happy result I attribute to one intravenous injection of 1-1500 hydrochloric acid.

The intravenous use of this basic acid of the body is breaking down, one by one, pretty well all of my well-established habits of therapeutic thought. In a way, it is a shock to me to violate all traditions and teachings by giving the same medicine in the same way in the treatment of septic abortion, as in the case just reported, and the following one of asthma, and to see the same good results in each case.

In April a man of 56 came to me with a history of asthma since his boyhood. Every medicine every plan of treatment had failed to give him relief. So much so that he had resigned himself to a life of difficult breathing, without further attempts for medical advice. Among the advisers of the past I had been one. So he was told that I would like to make this one effort with hydrochloric acid, which also would probably fail; in which event we would call it an unsuccessful experiment and there would be no charges for my services. Reluctantly the patient agreed. For seven days I gave him daily 10 c.c. of 1-1500 hydrochloric acid. Improvement was noticed after the first injection of acid, and in seven days he was discharged. This report is being written something over six months after the injection of the acid, during which time there has been no indication of any kind, of his former malady.

In closing I wish to express my thanks and cordial appreciation to Doctors Burr Ferguson, C.D.W. Colby, W.I. Howell, J.W. Handley, W.B. Guy, O.P. Sweatt, Desiderius de Beszedits for reports on their observations of the therapeutic effects of the injection of hydrochloric acid. And may I add to these expressions of gratitude my thanks to Dr. J.C. Rommel and other editors who have been willing to publish reports of the use of hydrochloric acid in the treatment of infectious diseases.

AN ATTEMPT TO RATIONALIZE HCL THERAPY

BY A. M. ALLEN, M.D.

Director Medical Research, Blue Line Chemical Company,
St. Louis, U. S. A.

Much has been published in *THE MEDICAL WORLD* in the last year or two regarding the intravenous use of HCl in attenuated dilutions. I have no first-hand acquaintance with the therapeutic merit of this technic, but I am sure that case histories, such as have been supplied by Ferguson, Guy and many other physicians of outstanding reputations, must incline any unprejudiced practitioner to believe that it possesses unusual therapeutic possibilities.

It seems to be the opinion of those who are employing this HCl therapy that its therapeutic efficiency is due to an effect upon the systemic acid-alkali balance; in fact, Dr. Guy enunciates this theory in an article contained in the March, 1935 issue of *THE MEDICAL WORLD*.

But in the same issue we find a communication from a New York

Medical data is for informational purposes only. You should always consult your family physician, or one of our referral physicians prior to treatment. doctor who states that he has used HCl therapy in a series of cases in which (gastric) hyperacidity was a proven fact, and yet the patients were improved by injections of acid. This physician writes that "in the light of our present knowledge the institution of dilute HCl is contraindicated."

If the therapeutic potency of these dilute HCl solutions was due to a lowering of the somatic pH, undoubtedly this doctor would be 100 per cent correct in stating that such medication would be contraindicated in a condition of hyperchlorhydria. However, I do not believe that pH is at all concerned with the problem, and make bold to suggest an entirely different rationale, and to set down, with all possible briefness, arguments relating thereto.

First, let us remember that all of the end-products of vital function are acid, and that in disease there is always an increased acid production, and if there be any change in blood pH it is always toward the acid side. It can be said that a disease condition inclines to be an acid condition, and therefore the use of an acid to ameliorate a disease condition appears incongruous.

That is, it would seem incongruous if the acid used was of the kind and was present in an amount sufficient to have any effect upon the blood pH. As a matter of fact, HCl in amounts less than that required to hemolyze (destroy) the blood has but a slight and very transitory effect upon blood pH, and in the concentrations used by the exponents of HCl therapy it has absolutely no discernible effect, even when measured with a galvanometer sensitive to 1-2000 of a degree on the pH scale.

Charles Richet, the French physiologist; has written that "the living being is stable. In a sense it is stable because it is modifiable; so that stability may be maintained in spite of changes of environment or diet." The remarkable stability of systemic pH is well illustrated by experiments conducted at Santa Barbara, Calif., in 1933•

It was found that from 15 to 20 grams of ammonium chloride must be ingested in order to lower blood pH two-tenths of one degree; that the daily administration of 45 grams of sodium bicarbonate was necessary to change the reaction of the blood to a similar extent in the opposite direction. It was ascertained that it would require 18 pounds of oranges to produce an alkaline ash content equal to 40 grams of sodium bicarbonate and four pounds of lean beef to produce acid ash equivalent to 15 grams of ammonium chloride. The ingestion of other mineral bases and both organic and inorganic acids in amounts far beyond those used medicinally all failed to materially affect the systemic pH.

Carbonic acid is the only acid ever found free in the blood in health, and this is the only acid that can alter blood pH without destroying it. The amount of carbonic acid present in the blood is not governed by diet or by medication, but by the rate and character of respiration. This is very convincingly set forth in an article on "Asphyxia.." by Yandell Henderson, published in the *Jour. A.M.A.*, July 22, 1933. In this article the fallacy of the "acidosis" theory is illustrated by citation of the fact that carbon dioxide is being successfully used in treating carbon monoxide poisoning, diabetic coma, asphyxia neonatorum and other so-called acidoses.

All organs of vital function and nearly all the tissues of the body are cellular in structure, and if life and health are to be maintained there must be an optimum osmotic interchange of fluid between the intercellular and intracellular spaces. Either too much or too little cell-membrane permeability is pathogenic.

The pore theory of cell-membrane permeability has been pretty thoroughly discredited by Kell researches of R. Beutner and others, and the theory that osmotic activity is regulated by "phase-boundary potential" is coming into general acceptance. This theory may be briefly explained by stating that it postulates a building up, by ionic dissociation, of electric potential on each side of a cell membrane. If

the charge held on both sides of the membrane is of the same polarity, or of the same potential, then there is no fluid interchange through the membrane. But if the electric charge on the one side is positive and on the other negative, or if there is a variation in the ion concentration, even though the polarity be the same, then there is an osmotic interchange through the cell walls until a state of electric equilibrium is reached.

In the closing years of the last century Arrhenius taught us that salts, acids and alkalies in solution are separated into their component parts and exist as ions, and Henderson, of Yale, in 1928, applied this conception to physiology by proving that the balance between acid and alkali (pH) in the blood is due to the exchange of H and OH ions between carbonic acid and the alkaline bicarbonates. Thus we find that the acid-base balance of the blood is not influenced so much by the quality of acid or alkaline substances in or available to the blood as it is by the degree of their ionic dissociation.

I think that this statement is inferentially corroborated by Hawk and Bergeim, on page 429 of their *Physiological Chemistry*, when they point out that pathologic conditions characterized by cyanosis may exist in consonance with a normal pH. These conditions may result from an excess either of the acid or alkaline factors, but the excess of alkali is compensated by an alveolar retention of CO₂, while an acid excess would be compensated by BHCO₂ retention. On the other hand, the blood pH may remain normal although there is a deficiency, marked by hypernea and tetany of either the acid or alkali factors. In this case the alkali deficiency is compensated by rapid breathing and "blowing off" of CO₂ and increased NH₃ formation, while an acid deficit is balanced by a retention of acid proteins and excretion of NaHCO₃. So, here we have disturbances of the acid-base equilibrium of the blood, such as occur in poisonings, tetany, diabetes, nephritis, etc., and yet a normal blood pH.

Chemically considered, hydrochloric acid, U.S.P., is a solution of from 31% to 33% of hydrogen chloride in water. In this solution 90% of the hydrogen chloride exists as HCl and 10% as H-OH-Cl ions. In a dilution of one part of hydrogen chloride in 1.500 parts of water 2% exists as HCl and 98% as H-OH-Cl ions. In other words, it is almost completely ionized.

Life and health depend very largely upon metabolic processes which change proteins from one form to another. In relation to pH there are three types of proteins, acid, alkaline and amphoteric, or, in terms appropriate to the theory of electrolytic ion dissociation, they may be designated as +, - and (+ -), respectively.

Only -- proteins will react and combine with HCl, but when HCl +H₂O is ionized into H-OH-Cl, -- proteins react with H ions, (+ -) proteins react with OH ions, and + proteins react with Cl ions. Hence we can conceive that an attenuated solution of HCl introduced into the blood stream as H-OH-Cl ions may quite enormously increase the rate of metabolism and therefore greatly alter the quality and quantity of osmotic interchange between intercellular and intracellular areas.

Perhaps in such an energizing of a fundamental vital process we can find the answer to the riddle of HCl therapy.

CASE REPORTS AND COMMENT'S ERYSIPELAS -- STREPTOCOCCUS INFECTION HAY FEVER -- ARTHRITIS

BY F. J. JAMES, M.D.

Paris, Ill.

Since reading an article by Dr. William M. Howell on the use of hydrochloric acid intravenously I have successfully cured a case of erysipelas in a child 18 months old. Erysipelas started in the left knee when I gave a 1-1000 solution 10 c.c. in the buttock. Three days later, all traces of erysipelas had disappeared.

My second case: Mother of three weeks' old baby had infected third finger on left hand and a large mass in the left breast, very red, with red streaks radiating about six inches in all directions away from the infected

Medical data is for informational purposes only. You should always consult your family physician, or one of our referral physicians prior to treatment.

gland. Pulse, 125; temperature, 103-1/2°. 10 c.c. of a 1-1500 solution was given intravenously at 9 a. m. Next morning, at 10 a. m., patient was feeling some better; pulse, 90; temperature, 101°. Second injection of 1-1000, 10 c.c. given. Twenty-four hours later temperature, normal; pulse 72; tenderness and redness in breast had disappeared, and patient was able to be up and was feeling fine.

Third case: Man, age 27 years, had been suffering from severe attacks of hay fever for four weeks. Was given 10 cc. 1-1000 hydrochloric acid and five days later was almost well. Was given second shot and I have not had a report as to his present condition.

My fourth case: Farmer, 30 years old, had arthritis and sciatic rheumatism extending over a nine months' period. No focal infection was found at the time he came to me, which was June 2, 1933. I had a dentist look over his teeth and he reported them in perfect condition. Tonsils were good. I gave him 10 c.c. 1-500 solution of hydrochloric acid intravenously, repeating again on the third day. Two days following second injection, patient developed severe pain in two upper left molar teeth. X-ray showed abscesses; teeth removed and patient is improving. There is no doubt in my mind that with the raising of the leucocytes following hydrochloric acid injection, obscure focal infections will quite often show up.

I have been very much interested in hydrochloric acid treatment for stomach conditions for the past twelve years, considering it one of my most valuable remedies.

THE USE OF HYDROCHLORIC ACID IN THE TREATMENT OF CANCER

By O.P. SWEATT., M.D.

Waxahachie, Texas

After reading several articles on the use of hydrochloric acid in dilutions of 1-1500 to 1-500 in pus conditions, it occurred to me to try this in a case of cancer. On May 25, 1933, I visited this man and suggested trying this treatment, gained his consent and began treatment at once.

Case Report: Epithelioma, lower lip, right side extending to within a quarter inch of chin; in all, covering an area about the size of a silver dollar. Patient was bedridden, unable to rise without help, glands of neck were severely swollen and tender, mouth so drawn that it had been impossible for him to wear his lower plate for the last several months. Duration of growth, about two years; the usual discharges of pus and blood were constantly in evidence and the odor was very offensive; sleep was very much disturbed, due to pain, and there was little or no appetite. Patient Male white, age 77 years. Two and a half years ago an epithelioma was removed from either side of patient's nose by Dr. Shelmire, of Dallas, Texas. X-ray and cautery.

Treatment: Beginning with HCl 1-1000 with double distilled water, dose 5 c.c. every other day; gave the first three injections intravenously; then changed to intramuscular injections because patient's veins were so indistinct; after the fifth injection increased the dose to 1-500. By this time patient had begun to show some improvement, sleeping better and appetite improving, discharge lessening and less offensive and lower plate could now be worn with ease.

The sixth injection was increased to 1-500 and this caused a severe reaction in the form of fever, rigor and intense aching, which subsided in about six hours; the next dose (the next day) was decreased to 2-1/2 c.c. and gradually increased each day until the full 5 c.c. dose was reached. This 5 c.c. dose of 1-500 was then continued daily for approximately 50 doses, with patient showing a gradual and steady improvement even to the extent that the day the eighteenth injection was given he was able to chop thirty rows of cotton.

I then changed to the intravenous injection, and have continued the same dose for the past twenty injections, and since then even more rapid and satisfactory progress has been noticeable.

At this point the case is not cured, but is certainly well on the road to recovery, and the area of the growth can now be covered with a five-cent piece. For about a month now practically every day it is very noticeable how a black scaly substance forms over the growth and falls away. Each time that this substance forms and removes itself the growth gradually diminishes in size. Another interesting thing in connection with this case was that patient complained of pain in shoulder joint almost three weeks after treatment was started and one morn-

ing pain was so intense that I gave the regular daily dose of 5 c.c. in the shoulder joint and this entirely relieved this pain. Since this treatment was begun patient has not had to take anything for the relief of pain.

THE USE OF HCL IN HODGKIN'S DISEASE

Observing the various comments in *THE MEDICAL WORLD* on the use of HCl, 1-1500, in various cases by various authors and evidently with an enthusiasm as to the results obtained by them, and seeing the report in the *J.A.M.A.* as to its use and its safety and its stimulation of leucocytosis in the body, though not a word was mentioned in the report as to the beneficial change in the differential blood count by the Schilling method, nor did the report mention the increase in the phagocytes or oxygen increase in the blood cell, I, therefore, have more admiration and respect for the editors of *THE MEDICAL WORLD* now more than ever before for bringing this valuable simple intravenous agent to the profession.

I wish to relate one case, where it has been used with great satisfaction:

Patient, male, 47 years, on examination revealed tumor masses all over his body, varying in size from a pea to a Welch nut and larger. Approximately about 200 such tumor masses were counted.

This patient was lying in bed in a semi-comatose condition for days, hands and feet in a spastic state and were constantly in the air, in a shaken palsy, unable to take food. Occasionally a little water was forced into his mouth by the family. From 160 he came down to 87 lbs. His speech was incoherent and inarticulate. His voice, if he uttered something, was of a high pitch, kitten-like; tongue paralyzed. Patient was expected to die, and the family was ready for it at any time. This patient was under care at the Rush Medical College dispensary, Billings Hospital and Mercy Hospital for the 1,000,000 volt X-ray treatment and was sent home to die.

For one week, HCl, 1-1500 c.c. hypodermically was given daily, from 4 to 6 c.c., but with no results whatsoever. Then 10 c.c. intravenously was used once a week. Patient began to feel better. Tremor quieted. Opened his eyes, began to talk rationally, sat up, started to eat and to eat heartily. Voice cleared; began to talk better and louder till his natural voice returned and later turned into something like that of a bass. The family began to banter him about his voice: "Why, it sounds like McCormack or Chaliapin!" He would get up and walk away to the next room, laughing: "My family is making fun of me."

To the great amusement of his family and neighbors at one time he decided to go down town to his lawyer's to arrange his mortgages so they would not be foreclosed and his property taken over by receivers. The medication worked miracles even to me, the pessimist. My prestige with the family went high. About 8 to 9 cures were referred to me by this family and friends. Friends came to the house to marvel at the man they expected to die 6 months before.

The patient gained in weight about 11 lbs. For 5 months he was getting better and stronger, from the weekly intravenous injection of 1-1500 (stronger or large doses were tried, but with regret).

This patient developed a broncho-pneumonia suddenly and died in two days..

At present a case of beriberi, polyneuritis, three years' duration (rare in this country, and still harder to diagnose) is getting weekly HCl 1-1500, with satisfactory results. The numbness is gone; the bones do not ache.

A case of asthma with many years' history has cleared up completely.

M.M.M., Chicago, Ill.

REACTIONS TO HCL INJECTIONS

BY R. L. BILLS, M.D.

Magnolia, Mo.

Just a question relative to the use of HCl. I have been using it for over a year now, and find it very efficacious in all septic conditions of the blood, especially so in acne vulgaris, furunculosis, pneumonia and, in fact, almost any zymotic disease. But the question uppermost in my mind is this: are there any contraindications for its use?

I have had two patients recently who had a severe chill, followed with

Medical data is for informational purposes only. You should always consult your family physician, or one of our referral physicians prior to treatment.

a high temperature (104°). The first one, 65 years old, came to me with the lower right leg badly swollen from the knee down, and covered with a dozen furuncles the size of a small pea to a large hazelnut. These sores were dark red, very much indurated and painful. No pus, as in an ordinary abscess, but a more or less necrosis of center, which would ultimately drop out (so-called cold sores). These attacks have been coming on every three or four years for 15 years, and would require six or seven weeks to cure. He came to me this time with a history of five weeks' duration with no appreciable benefit. I gave him 10 c.c. of 1-1000 HCl intravenously, and in about 30 minutes he developed a severe chill, followed with a rise of temperature. This occurred with each of the first three doses it being given daily for ten days, with a complete recovery, and no chill followed the last seven doses nor did any reaction whatever occur.

The second case, man, 86 years old, had acute appendicitis, and following it developed pneumonia in two weeks, in right lower lobe. On the second day of this attack I gave him intravenously 10 c.c. of 1-1000 HCl, which was promptly followed with a severe chill and a rise of temperature to 104°. On the third day I gave another dose like the first, and this was followed with another chill and fever as before. This man passed the crisis in due time and is getting well. Only gave two doses, as the chills were so hard I desisted.

I have given as much as a hundred doses in the last year and the above cases were the only ones that had any reaction that was noticeable.

(Apparently knowledge of the Jarisch-Herxheimer effect was not widespread at this writing. See <http://www.arthritis-trust.org>, "The Herxheimer Effect.")

Inclosed you will find a letter from Dr. Burr Ferguson relative to my article on the reaction in the use of HCl.

I have had one reaction since writing the article, which I would like to know more about. This was a very bad case of eczema which had baffled all treatments. I gave one ampule, 10 c.c. size, 1-1000, which was followed in about 30 minutes with a severe chill and numbness. The next day a beautiful rash came out simulating urticaria, and was very annoying. I continued the treatment for ten days with a complete cure. The rash stayed out during the time. But no more chills occurred. The back was covered with welts the size of a nickel. But the skin is all cleared up now and patient is feeling fine.

Would like to see something in *THE WORLD* relative to Dr. Burr's letter.

R.L. BILLS, M.D., Magnolia, Mo.

Dear Dr. Bills:--I read your report in *MEDICAL WORLD* with much interest. Of course, in seven years' use of the HCl injections I, too, have seen the inflammatory reaction as you describe it. I think it is due to drainage. In your case the lesions were deep-seated, and with the stimulation in numbers and activity of the phagocytes egress was checked or stopped altogether by the surrounding wall of tissue. There was a further stimulation by the fever, and so drainage was forced and your patient was made better.

I have most frequently seen this inflammatory reaction in patients with infected roots of teeth. Here, too, drainage is often difficult; so the reaction follows. As I see it, the essential factor in this reaction is the stimulation of the white cells, and the reason I like HCl is because one so seldom sees this uncomfortable phenomenon of chill, fever and the following depression. I do not believe at all that an induced fever of 105° will burn up any germ known to me, but that this fever cabinet is good solely because the white cells are stimulated. For my part, I like to stimulate these cells without the fever if I can.

There is another infection with incomplete drainage -- appendicitis. If ever you give HCl to such a case be sure you have a surgeon ready to operate within a few hours after the injection. For the influx of fresh phagocytes in and around the appendix will so increase the pressure that rupture of the wall will follow, so making operation necessary.

Occasionally I see these reactions in sinus infections, and for the same reason.

Burr Ferguson, Birmingham, Ala.

In regard to Dr. R. L. Bills' reaction to HCl injection, page 641, November *WORLD*, will say there surely must have been some defect in his technic as in disinfecting the skin, sterilizing the syringe, or the injection made too rapidly, or a bad solution of the acid used. Not all physicians have learned that all intravenous injections should be made very slowly.

J.A. Burnett, M.D., Waldron, Ark.

HYDROCHLORIC ACID INTRAVENOUSLY IN THE TREATMENT OF PUERPERAL INFECTION

Dr. S.R. Ingale, Medical Officer, Mirajgaon, Ahmednagar District, India, states having seen, in various medical journals, reports of the intravenous use of dilute solutions of hydrochloric acid, and reports the following case:

On 20th October a Mahar woman, aged about 20, primipara, was admitted to the dispensary with a transverse presentation. Under chloroform anesthesia internal version was done and the child extracted. The placenta and its membranes came away in about ten minutes. There was no post-partum hemorrhage. Since the day of operation, she began to run a temperature with rigors, ranging between 101° and 106° F. Lochial discharge was first normal, but later on it became scanty and foul smelling. The uterus was tender, and there was a hard, tender mass in the right iliac fossa.

The treatment consisted of hot vaginal douche (iodine) every morning. Cinchona mixture, containing strychnine and ergot, was prescribed for the first two days, for which an alkaline diaphoretic mixture was substituted later. She was given three intravenous iodine injections (21st, 22d, and 23d October), two intramuscular injections of quinine on 24th and 25th October, and two intravenous injections of mercurochrome, 1 c.cm. of a 1 percent solution in 5 c.cm. of sterile water, on 27th and 28th October without the slightest effect on her temperature. On the morning of 29th October her uterus was lightly curetted with a dull flushing curette, and her temperature went up to 106° F. in the evening. Her pulse, which had hitherto been below 100, increased to 140 per minute and she became restless. He then resolved to try hydrochloric acid injections. Accordingly, he prepared the requisite solution and injected 5 c.cm. of it intravenously at about 5 p. m. The effect was dramatic. Within about three hours her temperature dropped down to 101° F., and she was normal next morning and remained so until her discharge. The hard tender mass in the right iliac fossa and tenderness of the uterus also disappeared after three more injections.

Dr. Burr Ferguson, of Birmingham, Ala., has advocated the use of hydrochloric acid in the treatment of all manner of infections. The dose recommended is 10 c.c. of a 1-1500 solution of hydrochloric acid. Injections should be given either intramuscularly or intravenously, daily or two to three times a week, according to requirements of a case.

--*Indian Medical Gazette*, March, 1933.

TREATMENT OF MALTA FEVER

By C.W. BAYNHAM, M.D.

Amarillo, Texas

Last August, while looking over my New Mexico ranch, I found one of the men sick with what his doctor called walking typhoid, with a low form of malaria. In September he was the same, with low temperature, no appetite and some palsy. After some questioning I came to the conclusion he had more than typhoid and suspected Malta fever. However, he disclaimed any knowledge of drinking milk from a diseased cow or goat. I had him come into Amarillo and sent a specimen of his blood to Washington, where my diagnosis of Malta was confirmed with 175 units bovine and 125 units of goat.

I immediately put him on 10 c.c. 1-500 HCl, and alternated daily with 10 c.c. of metaphen. After the fifth shot of each his temperature was normal, and inside of 30 days his palsied condition was cleared up. When I saw him last week he was in fine condition and still gaining in weight and says he never felt better. In all, I gave him 10 shots, each of the HCl and metaphen.

Am sending, this in to help any doctor out who may have at this time or any future time, cases of Malta fever. I can look back now and see where I allowed some cases of Malta slip by me; but from now on, any doubtful cases will be tested for the malady by the Government laboratories at Washington, as they are better equipped to give a correct diagnosis. He is still taking Dr. Guy's formula No. 1 t.i.d.

HYDROCHLORIC ACID IN PUERPERAL SEPTICEMIA

By O. F. MARCOTTE, M.D.

935 Kansas Ave., Topeka, Kan.

Recently I have had surprising results with intravenous hydrochloric acid treatment. After much hesitation I used it in a case of puerperal septicemia: temp., 106°; pulse, 140; much abdominal distention and labored breath-

Medical data is for informational purposes only. You should always consult your family physician, or one of our referral physicians prior to treatment.

ing. Two local physicians consulted with me on the case and agreed that the patient was "all in." After great hesitation and feeling of fear I took the article on hydrochloric acid treatment clipped from your *MEDICAL WORLD* and showed it to the physicians. They were not familiar with the treatment; but said there was nothing else they knew of to do for the patient. I gave two injections 1-1500. Temperature reduced to 101°, pulse 104, and then directed one of my consultants to continue the injections every day for six days. I took a trip down South and was gone about ten days and upon my return called my consultant and inquired how the patient was getting along. He informed me that she was at home sitting up in bed and smoking cigarettes.

THE HYDROCHLORIC SOLUTION INTRAVENOUSLY

By E.D. JACKSON: M.D.

Enon Valley, Pa.

I have found much of interest in the February issue, especially the reference to use of 1-1000 solution HCl. I am piling up some fine results myself, inspired by the work and writings of Dr. Burr Ferguson, of Alabama.

Dr. Walter B. Guy's case reports are fascinating. I'd like to be ready for similar ones or involving same principles. I have used the HCl solution in multiple cored infection on a man's temple; on an elderly woman of 60 with asthma, chronic bronchitis and profound asthenia; on a fat Amish Dutch man with asthma and a few other conditions, with happiest results and quickly. I tell you, a doctor doing general practice in a little village must deliver results, and that promptly, or off go his patients to hospitals, specialists, or the irregulars.

HCL APPLIED IN NOSE

By A. BURSELL., M.D.

Mountain View, Calif.

Your articles on hydrochloric acid have interested me very much. I wish to add my mite to the good work and append my experience. For years I was troubled with itching in both ears. I tried the 1-500 hydrochloric acid in my nose, with complete relief. I flatten the ends of an applicator stick, wrap some absorbent cotton on it and dip it into the 1-500 HCl, and push it clear back over the openings of the Eustachian tubes. I figured that there is no better local antiseptic. There is very little pain. A previous application of butesin makes it painless.

HCl diluted with 10 to 20 per cent Monsell's sol., stops the itching of small superficial epitheliomas, if applied a few times weekly.

HYDROCHLORIC ACID INTRAVENOUSLY

BY ALIPHONSO F. RAYNES, A.B., B.S., M.D.

Portsmouth, N. H.

I cannot longer resist telling you some of my experiences with HCl as Dr. Ferguson as reported in your journal. First, I believed the thing would work. Next I was willing to try it on myself, as I had a large and painful infection on the anterior surface of my right thigh; I would be sure to be benefited by it, if any benefits were to be had. This condition was so severe I could not turn in bed without yelling. Even the clothes hurt. There was an inflammatory areola more than six inches in diameter. So I took 5 c.c. of 1-500 solution intravenously in the evening just before retiring and slept poorly; but the next morning the redness was gone and much soreness. A little, angry pimple at the edge of the initial lesion was about gone, too. A second injection stopped the process. And I have not felt so good in years as when under the influence of the HCl.

A NEW TREATMENT FOR BURNS

BY C. W. BAYNHAM, M.D.

Amarillo, Texas

Three weeks ago I was called about 6 a. m. to see a Mrs. Brown, who was burned badly. Her husband had accidentally turned over in her lap a half gallon stewpan filled with boiling water from top of cookstove scalding her quite badly on abdomen and both thighs. On left thigh she had a second degree burn the size of the palm of the hand; balance of both thighs had first degree burns.

I had with me only a 6-ounce bottle of Dr. Ferguson's HCl solution that I could use in this case; so I wrapped gauze around both thighs soaked with the solution which stopped pain in a very few minutes, and as I had such good, quick results, which were not expected, I gave prescription for 1 ounce of acid, with directions to put 1 teaspoonful in 1 quart of warm water and keep dressing wet. At the end of the second week there was only a small place, one-half inch wide, where the second-degree burn on left thigh had occurred. At the end of the third week it had completely healed, leaving no

scar. Try it on the first bad burn you have, as it gave fine results on my case.

HCL INTRAMUSCULARLY

BY P. L. GORDON, M.D.

Mount Savage, Md.

And still the HCl solution finds new uses: that of treatment of burns by the physician in Amarillo, Texas. I shall try it at the first opportunity.

In regard to an inquiry whether the intramuscular injection gives any pain and much local reaction, I can assure the doctor that it gives no more pain than an ordinary hypodermic of any other kind of medication, for I tried it on the dog, as Dr. Guy says it is best to do (meaning myself), before trying it on a patient, and no local reaction, but it will leave a slight lump if not injected deeply enough.

Sometimes think that in long-standing casts of asthma the intramuscular route is more efficacious than the intravenous, for in a few old cases I have had better results in that way than by the intravenous method.

I had a patient 70 years old, woman, with cancer of stomach; so diagnosed by a physician in Washington, D.C., one in this State and myself. The one here would only go on call; so the family asked me if I would look after her. I commenced to use Dr. Guy's formula of arsenic, pot. sulphate, pot. chloride and HCl intravenously, and by mouth as directed, with some improvement, but not enough to suit the patient, who is very unruly. I switched to Guy's old formula of iron, arsenic, pot. sulphate, pot. chloride and HCl, and used the HCl in 1-1000 solution 10 c.c. intravenously every other day for three doses, with marked diminution of the swelling or lump in the upper left quadrant. Pain was relieved, and patient seemed to be much better. Right at this time I had to go to North Carolina on urgent business, and was gone four days, and on my return found her back where she was in the beginning and had refused to take her medicine, as she was vomiting more or less all the time, and refused to have any further intravenous medication.

I have had several cases of cystitis that cleared up with one or two doses of the acid intravenously, several cases of asthma as well as urticaria, and have treated about six cases of broncho-pneumonia in children and babies with the acid intramuscularly with good results. Two cases of pneumonia or flumonia, as some call these cases, as they do not seem to be true pneumonia. One 74, with enlarged prostate who had to be catheterized, and very unruly, died. The other, 78, true pneumonia, lobar type. Eight intravenous doses of 1-1500 HCl, with recovery. In the last two cases I continued to use liquid creosote carbonate, as I was afraid to turn loose completely from the remedies I have been accustomed to use.

P.L. Gordon, M.D.

MISCELLANEOUS REPORTS and COMMENTS

Editor *MEDICAL WORLD*: — Would like, if possible, to obtain more detailed treatment of diabetes according to Dr. Desiderius de Beszedits. What dilution HCl does he use intramuscularly?

Have a case of bronchial asthma of several years' standing. A clinic in Chicago was not able to find any definite allergic cause. I gave her a vaccine in progressive doses which they made from her sputum, with no result. I then tried catarrhal vaccine (P.D.). Large doses gave a little relief, which lasted for about a month. Repeating the treatment gave no relief. Then used typhoid vaccine intravenously, no relief.

What would you suggest? She is 45 years old and in good physical condition otherwise. Have not been able to find any foci of infection. Forgot to mention that I also tried adreno-hypophysis co. (Harrower); no result. I am thinking of trying HCl now. I wonder what Walter B. Guy would use for treatment?

Washington Island, Wis. E.C. Farmer, M.D.

{Dr. Beszedits has promised a complete description of his treatment of diabetes with HCl.

The hydrochloric acid solution used intravenously is 1-1500. That is the usual strength, as described by Dr. Burr Ferguson, of Birmingham, Ala. It has been used as strong as 1-500. The amount injected is from 5 to 10 c.c., or about 1-1/2 to 2-1/2 drams. The injection is made very slowly into the vein, so as to let it get mixed with blood, and not flow through as HCl solution.

For your asthmatic patient I suggest ephedrine solution by mouth, beginning with small doses and increasing. Large doses are highly stimulating.

Give 5 drops of the solution in water three times a day to start. If this is insufficient, increase the dose gradually.

Calcium sulphide will help to loosen catarrhal secretions. If you have a copy of the December, 1932 *MEDICAL WORLD*, read the treatment on gon-

Medical data is for informational purposes only. You should always consult your family physician, or one of our referral physicians prior to treatment.

orrhea in regard to the use of calcium sulphide. Sodium iodide has a somewhat similar effect. Tincture of iodine may be given, 5 or 10 drops in water, milk, orange juice, grape juice, etc.

We have printed a great deal on the subject of asthma in past issues. Look through your files and read the articles. -- ED.]

In adding my experience to Dr. W. B. Guy's, of St. Augustine, Fla., using acid solutions intravenously in stubborn cases that baffled all treatment, will say that before hearing from Guy or reading his article on his acid potassium solution I had used simply hydrochloric acid solution 1-1500 on two cases.

One was a young lady who had been treated for months for a skin eruption on arms, neck, face and upper part of chest. The itching was so bad she could not sleep and she had scratched herself until she had bloody abrasions all over affected parts. Six injections with HCl sol., 1-1500, stopped the itching and the eruption disappeared.

The second case was that of a woman Of 78, with multiple abscesses on her feet. I gave her four shots of 1-1500 hydrochloric acid and abscesses disappeared and did not return. She had previously been treated for months by different doctors, but without any benefit. After seeing Dr. Guy's article in *THE MEDICAL WORLD* I tried it (Dr: Guy's acid pot. sol.) on a case of blood poisoning from injury to finger. The red streak had already reached the axilla. Fever was 104°. I gave two injections of the acid pot. sol. The patient made an uneventful recovery. I heard two other cases of blood poisoning with no injections given; both were fatal.

H. M. Bonniwell, M.D., Easton, Kan.

Editor, *MEDICAL WORLD*. -- I wish to thank you for your kindness in mailing me March and April numbers of *THE WORLD* along with my subscription in May. I am very much interested in the HCl articles by Dr. Desiderius de Beszedits. Also Dr. Ferguson's in June. Two questions, if answered or discussed in your good publication, would, no doubt, be of general interest:

Dr. Beszedits writes much of intramuscular injections, while Dr. Ferguson only considers intravenous.

Questions: Does intramuscular HCl cause pain in the tissues and much local reaction? .

Does intramuscular eventually bring similar results as intravenous?

A discussion of these questions by men of experience with both methods would be interesting. If intramuscular can be counted on for same results with slight or no local reaction or pain, it is much to be preferred and less to be feared from possible hemolysis.

2315 W. 3d St., Dayton, Ohio. E. W. Longnecker, M.D.

[In the dilutions mentioned the solutions do not produce any objectionable local reaction. In the intravenous method hemolysis is not objectionable. As to a comparison of the two methods, I must leave that to our readers who have made the comparisons and will write us about them. --Ed.]

Just a word about HCl sol. My son developed mastoid and infection of the bone above the ear. The mastoid did not show up enough to make me feel worried until he developed symptoms of meningitis. He, became dull, vomited with the projectile vomiting, had Kernig, it hurt him to flex his head on his chest, and yelled, "Oh, my back!" when we moved him.

Had X-ray, and then only dlid we find out that he had mastoid, and cells above ear were badly infected. This was on Sunday, and the ear specialist did not want to operate until morning. I immediately gave him a shot of HCl sol. intramuscularly, and repeated later at night and once again in the morning. He was better the next morning, even before operation, and his white count was 15,000. onoperating, a spot as large as a half dollar was badly infected and inflamed on the dura. No question about it, the HCl sol. saved my boy's life. You cannot tell me that an operation alone would have saved his life.

E., Mich.

I read Dr. Walter B. Guy's article and immediately proceeded to have his- formula of mineral chlorides prepared for self and wife 5 to 20 gtt. t.i.d., well diluted). My wife has a gastric ulcer and has been taking sod. bicarb., 3j, when troubled, sometimes several times a day.

Had f3ij prepared for us both. Began with 5 drops t.i.d. a.c.; increased 1 drop each day, till 20 drops were taken, then back to 5 drops. Ve have both improved greatly.

I treat chronic cases and prescribe mineral chlorides to my patients of- ten. Am much pleased,

F. M., Lennard, M.D. Texarkana , Ark.

I have been a victim of arthritis of the knees for the past fifteen years. For many years tried everything I could find and now wish to give you my experience in my fight for relief. Some time ago, in one of your invaluable *MEDICAL WORLD* issues, I found the following, and am very sorry that I have not at hand the name of the doctor who is entitled to the credit. He highly, recommened: Liq. potass., arsenitis (Fowler's), πλ xv; tr. ferri chloridi, f3iss, sol. potass. chloridi (10%), f3ii j, sol. acid hydrochlor.(2%), ad f3J M.Sig.: Gtt.v to xx, well diluted three or more times daily.

I took 20 drops in a full tumbler of water and I found permanent relief. I was so I could not walk more than two hundred feet without resting.

After the above course, I quit all other schemes as useless. I have helped a. number of people out of the. same trouble with A-1 success. The above formula is a "sufficiency unto the day."

J. H. L., Illinois

(The formula you quote was originated by Dr. Walter B. Guy -- ED.)

PICKING A WINNER

The following is quoted from an editorial under this title which appeared in *THE MEDICAL WORLD* Of July, 1935:

The ability to pick a winner depends upon: first, breadth of vision which will extend beyond the horizon line into the world of imagination; second, profound knowledge of the intricacies of the course which must be followed by the contestants. It is rarely possible to pick: a winner by guess-work.

THE MEDICAL WORLD claims credit for "picking a winner" by stimulating and encouraging research in hydrochloric acid therapy in the early days when the subject was in its infant stage, and when there was harsh criticism of those who had the temerity to claim clinical benefits from such a therapeutic procedure. It was in the pages of *THE MEDICAL WORLD* that Walter Bryant Guy, Burr Fergusonson and many other independent workers published the majority of their excellent articles.

In the course of several months we have endeavored to weigh the evidence submitted to us by many students and clinicians in order to be able to discuss this vitally important subject intelligently. We have endeavored to be impartial in our judgment, and have refused to allow ourselves to be carried away with enthusiasm by reason of glowing reports of case records offered by our confreres. We are by no means ready to offer a final expression of our opinion, but there are many facts that have been brought out already that have convinced us that HCl therapy promises to beome one of the greatest therapeutic measures of the century.

To put our impressions in simplest terms, let us say that since the days of Hippocrates the medical profession has been searching for some remedy which would cure disease -- not by killing the organisms of the disease by direct action, but by stimulating the defense mechanisms of the human body to the point were they would be able to successfully combat those organisms.

Having given the work of Dr. Ferguson and Dr. Guy careful study, we are unwilling to take sides either way in an argument over the relative merits of the two therapeutic measures, or over the physiologic principles involved. Rather we are inclined to whisper very faintly that we believe that both gentlemen are right in contending that great therapeutic benefit may be derived from HCl therapy, but that this benefit may be due to hormone stimulation. So far as we have read, neither author has called attention to this possibility, but which, if true, brings the observations of both investigators to common ground.

The fact remains that HCl therapy is worthy of closest consideration and clinical study. It is noteworthy that both investigators have offered the results of their observations frankly and generously to the medical profession. They have refused to capitalize upon their dis-

Medical data is for informational purposes only. You should always consult your family physician, or one of our referral physicians prior to treatment.

coveries, and have conducted their investigations at considerable financial loss to themselves. It now seems to be assured that the use of dilute hydrochloric acid, whether intravenously, intramuscularly, orally or locally, will soon become one of the physician's most powerful weapons in his battle against disease, and the fact that this discovery of its potency was the result of the efforts of humble family doctors, working with patients rather than test-tubes, will react to the glory and honor of the general practitioner.

We feel that there still remains a great deal of work to be done along the lines of clinical investigation of HCl therapy, and it is with the view to stimulating the efforts of general practitioners in this field that we have invited contributions to our "HCl Clinic and Forum." In this column we hope to publish many interesting observations. .

It is a noteworthy fact that *THE MEDICAL WORLD* has published more articles on this important subject than all other medical journals combined, and if, as we hope and trust, this simple and rational mode of treatment should prove one of the greatest medical discoveries, we will rejoice in the part that we have played in placing it in the hands of the medical profession. Since *THE MEDICAL WORLD* is pledged to its program of encouraging original research on the part of the men "on the battle line of medicine," and since it has played such an important part in the publication of the efforts of these outstanding workers and their associates, we feel justly proud of our part in "picking a winner."

CONCLUSION

In conclusion we wish to emphasize the fact that hydrochloric acid therapy is by no means to be considered as a panacea for human ills. That it is a potent remedy in certain cases is an admitted fact; that it is a powerful germicide is unquestioned, but it remains to be proved how its action in the body affects metabolism whether by changing the hydrogen-ion concentration of the lymph; whether by stimulating the flow of lymph, and permitting more nourishment to reach the individual cells of the body; whether by activating the essential enzymes of important metabolic processes; whether by increasing the electrical potential in the phagocytes and facilitating their engulfing of bacteria, or by merely stimulating the production of phagocytes by chemical changes in the blood. All of these important considerations are worthy of extensive research, and, it is to be hoped, this research will be undertaken by competent and unbiased scientists. In the meantime, however, the simplicity of this remedy, its low cost of preparation, its availability, its wide range of usefulness, and its absence of toxicity, even when given intravenously, make it particularly well adapted to the use of the resourceful practitioner who desires to add another powerful weapon to his armamentarium, and who is willing to fight for the lives of his patients even in the face of criticism and skepticism on the part of some of his colleagues.

The reports of the further experiences of red-blooded, two-fisted open-minded and fearless exponents of this new-old remedy will write a vivid and dramatic page in medical history.