

The Gleaner

A PUBLICATION DEVOTED TO
AMERICAN BOTANICAL MATERIA MEDICA

"The Gleaner" Unchanged
Clyde Wilson, M. D.

▼
Are Plant Drugs a Thing of the Past?
E. P. Zenner, M. D.

▼
Selenium in Modern Practice
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Digitalization by Small Doses
I. L. Nichols



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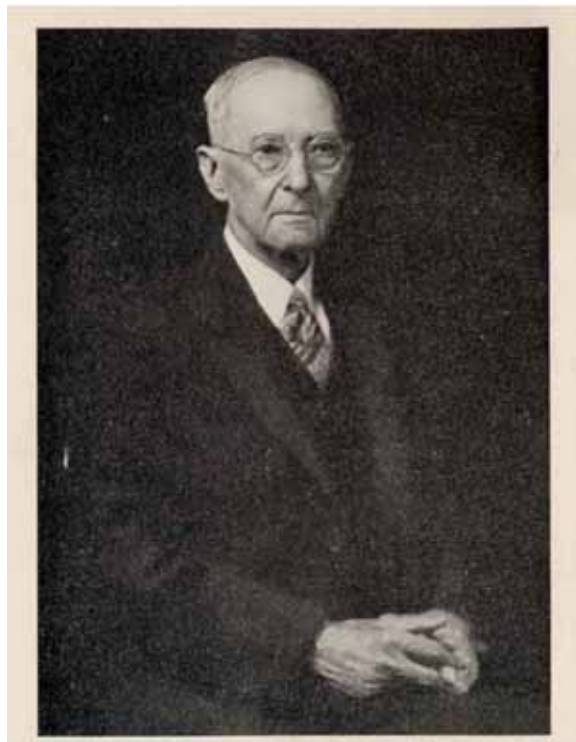
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Tribute

JOHN URI LLOYD

"Someday American Science and Medicine will more fully realize the debt she owes to this quiet, kindly man who fathered colloidal medication, invented the Lloyd distillation process, studied American plant drugs and the best method of extracting them to maintain their virtues, and who finally made available to medicine these extracts. Simple, unassuming, patient, painstaking, he has gone his way. leaving behind him a heavy task for us who follow to 'carryon.' May we be worthy of the task that no unworthy change or abridgment be made in the foundation he so solidly built."-M.B.



LAST PORTRAIT OF THE LATE DR. JOHN URI LLOYD, FATHER OF COLLOIDAL CHEMISTRY
AND REMBEYTON MEDALIST

The Gleaner
"THE GLEANER" UNCHANGED
CLOYCE WILSON, M. D. EDITOR

Because of frequent requests from practicing physicians throughout the United States and in foreign countries for continuance of the publication of "THE GLEANER," we are beginning the regular issue of this publication. We expect to publish "THE GLEANER" at more frequent intervals.

As the name has signified in the past under Professor Lloyd's leadership, "THE GLEANER" expects to carry on the form and material as the name signifies: gleanings from medical, pharmaceutical, chemical, botanical, and other sources bearing upon the indigenous American *Materia Medica*.

Most of our material will come from the actual practicing physician, and we welcome correspondence, reports of: cases, remedies useful in various diseases and conditions, the pharmacy and chemistry of botanical drugs, plant drugs useful and efficient in veterinary, dental, and the allied professions.

As in the past, "THE GLEANER" will be sent to physicians, pharmacists, veterinarians, nurses, schools of medicine, and hospitals, whose interests legitimately touch upon the field of drugs of vegetable origin.

We shall not hold ourselves responsible for the opinions or statements of our correspondents, but shall pass them on for the consideration of all our readers. In no way is "THE GLEANER" expected to touch upon controversial subjects, but its pages are open to any and all whose investigation covers this particular field of medicine.

We welcome and urge correspondence as in the past, and shall be glad to receive original articles upon any subject of general interest connected with vegetable remedies.

"THE GLEANER"
MISS MARGARET M. STEWART, A. M.I

THE STORY OF "THE GLEANER" is long and interesting. Starting in December, 1889, under the backing of Lloyd Brothers, it was edited by the talented William C. Cooper, M.D., of Cleves, Ohio. Suspended in his later years, it was revived by Professor John Uri Lloyd, the design being to make it a "feeder" for the various Eclectic medical journals of which a number were then in existence, by presenting from their pages worthy articles of interest to practicing physicians. But its very success in this direction proved its undoing. Complaints came from the editors of these journals that, instead of increasing the number of their subscribers, it was actually taking from them, their readers feeling that in "THE GLEANER" they were getting the cream of *all* the Eclectic publications. This series of "THE GLEANER" was, therefore, discontinued (1905-1911).

The writer of this sketch had come to Lloyd Brothers as chemist in 1902, and for some years was occupied exclusively in that direction. Among other things, she assisted in many experiments tending to the improvement of the vegetable remedies, many of which still coagulated after leaving Lloyd Brothers' establishment. Practicing physicians helped loyally in this work by returning defective remedies for study. These were always gladly replaced by fresh stock. Numberless experiments were instituted toward betterment of these defective preparations. As time passed, her work in this line became lighter, and gradually the duties of secretary to Professor Lloyd were added to her work. Many inquiries regarding the remedies and their action came from physicians, and to assist in answering these inquiries, a series of Drug Studies was instituted. The first of these, on *Thuja Occidentalis*, was published in 1904. These little studies met with such immediate success that the demand for Lloyd Brothers' literature was soon doubled and trebled.

In 1906, Professor Lloyd was sent on a mission to Turkey and Arabia by President Theodore Roosevelt. Taking with him Mrs. Lloyd and his two daughters, he first visited Professor Thomas H. Norton, formerly Professor of Chemistry in the University of Cincinnati, then American Consul to Smyrna. Leaving his family in Smyrna, he proceeded to Aden, at the southern extremity of Arabia. Here he visited the marvelous series of recently discovered cisterns constructed in times long lost to history, and showing evidences of a high degree of civilization.

Be it said in passing, that the local traditions of Aden place the home of the Queen of Sheba at that place.

Returning from Arabia, Professor Lloyd embarked on a P. and O. steamer returning from India to England. He was kept standing at the gangway for a considerable period, for some reason to him unknown until they reached the northern end of the Suez Canal, when the passengers for Egypt and adjoining ports were informed that there was bubonic plague on board, one of the sailors having been buried in the Red Sea, and they must either go into quarantine on the banks of the Canal, or remain on board the steamer until she reached London. Professor Lloyd was then told that at Aden he had nearly been refused passage for this reason, but had finally been permitted to embark, the officers knowing that because of the plague no other boats would pass for months, and to leave him in that hot, plague-infested country, would mean his almost certain death.

Choosing quarantine, he had as companions, among others, William Jennings Bryan and his family. The little group was asked whether they wished first, second, or third-class table fare. They decided, first of all, that they would keep together as a body, and they elected Professor Lloyd, as the eldest of the party, to the place of honor at the head of the table, Bryan having the next place, at the foot. Professor Lloyd appointed a committee to investigate the problem. They reported that there was little difference between the first and second-class table fare, this consisting chiefly in a greater variety of dessert, but that there was a considerable difference between the second and third classes. It was, therefore, unanimously decided that all would take second-class fare.

While in quarantine they experienced a dust storm from the Sahara, so penetrating that even the most closely sealed openings were invaded. Not only were they themselves nearly prostrated, but their very eyes were affected, producing an inflammation from which Professor Lloyd did not recover until, having returned to Cincinnati, he had recourse to his favorite eye remedy, Ophthalmic Balsam. But even this distressing episode proved of advantage, for it resulted in one of his most beautiful descriptive sketches, "The Storm on the Desert," published in the "Eclectic Medical Journal" in August, 1906.

During Professor Lloyd's absence in the Orient, the National Pure Food and Drug Act was passed. The far-reaching consequences of this Act were not realized by any one for a considerable time, but *not a single remedy of Lloyd Brothers* had to be changed in any respect. Certain details of printing, however, such as placing the name of the manufacturer at the *top* of the label, instead of at the bottom, necessitated a reprinting of all the labels. Furthermore, the alcoholic strength of every remedy containing alcohol had to be stated on the label, and as nearly all the Specific Medicines carried alcohol as a preservative, all had to be assayed for their alcoholic strength. Strange to say, no literature was available giving directions for assaying for alcohol, though Squibb's Tables for Alcoholic Strength had long been published.

Consequently, a method for assaying for alcohol *had to be devised*, using first mixtures of *known* alcoholic strength as test solutions. A new department was then installed, with the needful apparatus. Professor Lloyd then decided to have the descriptive portion of the labels revised, and requested practicing physicians whom he knew to be skilled in the uses of the various remedies, to undertake this task, each signing his name to the label, as its authority.

The series of Drug Treatises having proved so helpful, Professor Lloyd cast about for some further means of aiding the practicing physician, and in 1913 resumed the publication of "THE GLEANER," of which he held the copyright to the name. It now became the organ of the Lloyd Laboratory. There was an abundance of material in the many queries coming to him continually from physicians regarding the action of the remedies he made. All questions relating to therapy were referred to Professor Lyman Watkins, M.D., of Blanchester, Ohio, and later to Professor A. F. Stephens, M.D., of St. Louis, Missouri.

1. Miss Stewart was for many years associate editor of "THE GLEANER." -Ed.

In the form of *Question* and *Answer*, this material was put into form for publication by the writer of this sketch, Dr. Stephens contributing the leading editorial, which was followed by an article by the Pharmaceutical Editor, John Uri Lloyd. This method of procedure was continued through "GLENER" Number 42.

HYDRASTIS-PAST & FUTURE

E. P. ZEUMER, M.D.

Cincinnati, Ohio

One should have the eloquence of an Ellingwood and knowledge and vocabulary of a Felter to adequately extol the value of this drug. It is a valuable drug, and is largely and widely used, although not a great deal is said about it these days. Less than fifty years ago it flourished in the woods and forests of Ohio, Kentucky, Indiana, and West Virginia, but is now almost extinct, and its extermination has been brought about by the drug gatherers.

I have several Hydrastis plants growing in my back yard, and they are slowly multiplying.

We will not attempt to say anything about the various preparations of the drug or its alkaloids. Some physicians like the colorless product, and others prefer the alkaloids or the plain. Locally, I prefer the colorless, but use the Specific Medicine internally in most cases. It is a valuable drug when used as a local application in the eye. In corneal ulcer and in blepharitis it is valuable.

It is useful in chronic catarrhal conditions of the ear. Some individuals allow the cerumen to accumulate to such an extent that it causes the entire external ear canal to become inflamed, and even purulent. After removal of the inspissated cerumen, Hydrastis may be used to advantage in clearing up this condition.

It is also useful in gonorrhoea, particularly valuable in the subacute or chronic forms. It may be somewhat slower in its action than some of the more powerful astringent drugs, yet by using it you will never be accused of causing stricture of the urethra. We use the colorless product locally in the form of an injection. Appropriate internal medication should also be used.

Internally it is a valuable drug. When thinking of Hydrastis, I usually think of Aconite not because the actions of the two drugs are similar, but because I always think of Aconite in "inflammation of mucous membranes" and we invariably think of Hydrastis in "atonic condition of mucous membranes." If we had nothing to treat but mucous membranes, we could get along in most cases with Aconite and Hydrastis. Hydrastis, internally, does this one thing well, and this statement practically covers its entire field of usefulness. It stimulates the oral, gastric, and intestinal secretions particularly if there is an atonic condition present with free secretions. It acts nicely with *Phytolacca* in aphthous sore mouth. I use it constantly in gastric atonicity, but not where there is any acute inflammatory condition.

The chronically irritated stomach with excessive secretion calls for Hydrastis. The atonic alcoholic stomach responds to Hydrastis very quickly. We often prescribe:

R _x Specific Medicine Nux Yom.	gtt. v
Specific Medicine Hydrastis	3 i
Specific Medicine <i>Discorea</i>	3 iv
Elix. Lactated Pepsin	℥ iv. M.

Sig.: Teaspoonful every two or three hours.

We add the *Dioscorea* to relieve the flatulence and general abdominal tenderness that usually is present.

We frequently prescribe it with *Podophyllum*. I do not think it stimulates the liver to any great degree, but acts as a tonic to the entire gastro-intestinal tract.

We might go on and mention a number of conditions and symptoms relieved by Hydrastis, but above all we should remember its specific action on atonic and subacute conditions of the lining of the gastro-intestinal tract.

ARMAMENTARIUM

More than fifty years ago when the late Professor Lloyd commenced the manufacture of Specific Medicines, he recognized that to furnish the physician with his armamentarium was to perform a service. . . a service in which labor, research and profit must necessarily not be the first consideration. Consequently his fundamental rule might be said to have been, "Give to the physician those drugs which he wants, provided there is enough clinical observation behind them to justify their use. Make them the best way we know how. Work always to improve on them."

During this period this policy has never been deviated from, as the physicians served by Lloyd Brothers well know. A half century of continuous research and improvement in manufacture has made Specific Medicines the finest that the brilliant directing genius of Lloyd Brothers could produce. The line has grown into an imposing list. Amongst them are a large number which no Eclectic physician would be without. Still another group comprise those used only occasionally, and there are those which some physicians use regularly and with apparent results, yet some do not. favor. Such careful observers as Felter frankly admit that some of these drugs have yet to fully prove their value.

To manufacture this full line, keeping abreast at all times of the latest scientific developments in manufacture; to control manufacture in line with the physician's needs and in such manner that the more slowly moving ones are fresh and potent; to admittedly not make a profit on a number of them, but nevertheless to furnish them because they are needed, is the task inherited by today's management. . . no mean task we assure you!

But facing it as we do today, we still offer you a pledge. . . a pledge to maintain every standard of Lloyd Brothers as it has stood during the years of its building. to keep the full line as you have always known it and come to rely on it . . . to improve on the Specific Medicines if possible as our rapidly developing modern science shows us the way to do so . . . in a word we promise to keep the faith in the hope and belief that those physicians who for years have come to know Lloyd Brothers as their friend and counselor, and who have used the Specific Medicines as their trustworthy armamentarium will so continue tomorrow and in time to come.

ARE PLANT DRUGS A THING OF THE PAST?

E. P. ZEUMER, M.D.
CINCINNATI, OHIO

During a recent conversation with a detail man from one of the pharmaceutical houses, he stated that it was only a question of time when plant drugs would be obsolete and a thing of the past. We were about ready to agree with him after we surveyed the list of synthetic and coal tar preparations that are flooding the market. .

It set us thinking and wondering if his statement were true, so we consulted several of the catalogues of pharmaceutical houses that supply drugs and chemicals to physicians and druggists, and we are convinced that his statement was not correct.

We found listed by one of the leading manufacturers:

139 Fluid Extracts

42 Tinctures

7 Solid Extracts

20 Powdered Extracts

50 Pills containing plant drugs 119 Tablets containing plant drugs and numerous specialties containing one or more preparations of drugs of vegetable origin.

The salesman will, no doubt, say that these products are not used, and that the manufacturers just list them for sale and will supply them if ordered. If there were no sale for these products, they would not be listed, because it costs money to prepare bottles, labels, and catalogues. There is a constant demand for them and they just naturally sell themselves.



Still another phase of capital investment in native American drugs is in huge stocks gathered from the wild. Here is a group of gatherers splitting roots preparatory to seasoning and drying. The wages of these gatherers amount to many thousands annually.

In most instances, these drugs are all standardized and assayed and contain definite quantities of alkaloids or active principles peculiar to the drug or plant from which they came. If you ever have the opportunity to visit a large drug manufacturer, note the elaborate equipment used to extract the virtues of the plant drug and note also the care used in assaying and regulating the dosage of these products.

Some time back, we were told that Lobelia was inert, and of no value, and was not to be listed in *The United States Pharmacopeia*. Just about the time that some physicians thought Lobelia was dead, along came a scientific investigation extolling the virtues of Lobelia as a vital stimulant. I wonder if Lobelia will ever become obsolete. Then again, our old friend Mistletoe that had laid dormant for years forgotten by Eclectics and Regulars alike, and had ceased to be remembered except at Christmas time, is being introduced again. Every day or so through the mail and in our journals come advertisements and testimonials extolling the virtues of the drug in the treatment of heart disease and hypertension.

I have patients who come to me regularly for a mixture of Nux Vomica, Dioscorea, and Podophyllum. I am not their family physician, but they depend upon these plant drugs and their family physician does not supply them.

You can go into the warehouses of any pharmaceutical house in the country that manufactures the regular line of drugs, and you will find large store rooms filled with bales and barrels of plant drugs from all over the world. The woods, fields, mountains, and plains are constantly being combed for plants with medicinal value.

Many people make a living gathering plants, barks, roots, and seeds. Some plants have been almost exterminated and have to be cultivated to supply the demand. Hydrastis is one of these.

As an example of the capital invested in plant drugs consider one California farm devoted to the culture alone of Golden Seal Root from which the following pictures are taken. This farm produces a large proportion of the annual crop. Seed beds ready for straw covering necessary for winter protection. Note lattice roof over entire farm to provide 50% shading.



Just one little thought in connection with all this. Great fortunes are tied up in this business. Prior to the advent of the reformer in medicine and the Eclectic school of medicine, there were no so-called pharmaceutical houses. Practically all the large industries of this kind in the country today owe their existence originally to the making and selling of plant drugs. It is only in recent years that biological and coal tar products have become a part of their business.

So I believe that if you will give this some serious thought, you will agree with me that plant drugs will always be with us. Some of course, will die by the wayside.

So will many of the synthetic, biological, and coal tar products. There are many good drugs and biological products that cannot be discarded, but neither will we ever discard entirely the drugs that originate in the vegetable kingdom.



After several transplantings over a period of five years, the Golden Seal plants are ready for harvesting and washing.

PEDIATRIC MEDICATION

C. W. BEAMAN, M.D.

Cincinnati, Ohio

While preventive medicine has been stressed in the development of modern pediatrics, and rightly so, illness among children has not been banished, and the need for efficient medical care is still our concern. Oral medication is still, and I firmly believe, will continue to be the method of choice, with hypodermic administration of remedies reserved for emergency and for those relatively few conditions where parenteral methods have proved their special efficacy.

The use of medicines in infancy and childhood is governed by requirements that contribute to successful results:

- They should be palatable
- They should be well tolerated by the stomach
- They should be effective in small doses
- They should be safe (non-toxic) yet possess remedial potency in the usual dose

After many years of practice, both general and limited to pediatrics, I have learned to place reliance on the following medicines in the form specified:

Specific Medicines: Aconite, Belladonna, Bryonia, Gelsemium, Ipecac, Lobelia, Phytolacca, Nux Vomica, Echinacea, and Rhus Toxicodendron.

While this list is by no means complete, as full therapeutic equipment, I should feel quite competent to treat with them the great majority of the everyday ills in childhood. I would expect few children to refuse to take them in aqueous solution. Only two, Bryonia and Nux Vomica, might be regarded as disagreeably bitter, but in the small therapeutic dose, properly diluted, even they are usually readily accepted.

Any physician who essays to treat the diseases of childhood, and who has used the usual remedies, prepared with flavored menstruums, will be agreeably surprised at the ease of administration of the medicines listed and their all around effectiveness when given in the simple manner suggested.

GELSEMIUM IN MODERN PRACTICE

WM. L. LE BOY, M.D.

Chicago, Illinois

The name Gelsemium is from the Italian word Gelsemino, meaning jessamine. It is also known as White and Yellow Jessamine, White Poison Vine, Carolina Jessamine, Wild Woodbine and Jessamine. While the name Gelsemium is well established, Lloyd Brothers, Pharmacists Inc., to whom I am indebted for a history of this plant drug, state in one of their brochures that it is not a true jessamine.

Its habitat is in southern United States where it grows abundantly in swamps, woods, and thickets. It is a climber vine, attaining a length of from twenty to fifty feet and blooms in the Spring of the year.

The first authentic description of Gelsemium is found in Elliott's Botany of South Carolina and Georgia, published in 1821. In 1830, Rafinesque quoting Elliott, described the action of a tincture of the root of Gelsemium in the treatment of rheumatism. However, the most comprehensive description of this drug appeared in the first edition of King's American Eclectic Dispensatory, published in 1852. While Gelsemium was for nearly ten years an exclusive drug of the Eclectic school of medicine, it was given a place in the regular or allopathic practice as early as 1854, when it appeared for the first time in the tenth edition of the United States Dispensatory. In 1860, it was given some notice in the United States Pharmacopeia, but its various preparations were not mentioned until 1880.

Gelsemium is one of the most valuable and potent drugs in Eclectic Practice. The cardinal indications of its use are flushed face, bright eyes, contracted pupils, elevated temperature, and great restlessness. In any condition where there is a determination of blood to the brain, with or without mental irritability, it will work well in small and oft-repeated doses. In dentition, given alone or with Bryonia when cough is present, it will not only reduce the temperature and quiet the infant, but will also ward off convulsive seizures, if started early enough. In infantile convulsions you cannot find a better remedy than Gelsemium. I employ it alone or give small repeated injections of Gelbia, which is a combination of Gelsemium and Lobelia. It is indicated in the treatment of meningeal inflammations, whether bacterial or otherwise. Used in conjunction with convalescent serum, I believe it would enhance the value of the latter and bring about quicker and more satisfactory results. It finds a place in the treatment of chorea and good results will follow its combination with Macrotys.

It is almost a specific in vesical tenesmus when given in full dosage, but I have found Gelbia to work better in stubborn cases. I have also used Gelbia in several cases of strangulated hernia, and reduction was accomplished very shortly after the injection of from ten to fifteen minims of the drug into the muscles around the mass. Used in the first stage of Gonorrhoea, combined with Hydrangea and Kava-Kava, it reduces the inflammation and soothes the mucous tissue of the urinary canal. It also tends to lessen the discharge and the tendency to chordee.



Most headaches are relieved by Gelsemium, and it is of particular value in migraine. However, in the latter condition full doses are needed and should be repeated short of its physiological effect. In facial neuralgia or tic douloureux I find it par excellent. Gelsemium seems to have a special affinity for the trifacial nerve, and if the attack is due to a cold, its effect is like magic. Try it in torticollis or wry-neck, either alone or with Macrotys and the results will not disappoint you.

A cold can often be aborted by a single full dose, Ave drops, especially upon retiring. Where a cold has already developed, Gelsemium combined with Eupatorium given every thirty to sixty minutes will quickly bring it under control. I could not properly treat influenza without the use of Gelsemium, in which disease the indications for the use of this drug are clearly apparent. When cough is present, I combine it with Bryonia and I have rarely had a complicating pneumonia. I use it in the treatment of nervous irritability and delirium often present in pneumonia, but give it in small repeated doses, because the action of Gelsemium must be watched in acute affections where the heart is weak.

In amenorrhoea, due to cold, Gelsemium works well when combined with Pulsatilla. The same combination will relieve ovarian neuralgia. I have given Gelsemium to patients suffering from intercostal neuralgia and herpes zoster with good results, but in some cases have had to add SpeciAc Medicine Rhus Toxicodendron, or give Ave to ten grains of Strontium Salicylate to bolster its effect. Some recommend Gel semi urn in the treatment of sciatica, but I have not been able to accomplish much with this drug alone. However, when I have combined it with Apocynum and Colchicum, the results were all that I could expect from this mixture.

I use it in my obstetrical practice, giving it during the early stage of labor, both to quiet my patient and to facilitate relaxation, especially where the os is rigid and unyielding. Two drops every hour is the dose usually given.

In renal and biliary colic, the judicious use of Gelbia will often obviate the necessity of using an opiate, or when the latter must be given, the dose can be very materially reduced.

The dosage I use is elastic, varying from the fraction of a drop to ten drops of the SpeciAc Medicine Gelsemium. It is toxic in large doses, causing extreme muscular relaxation and prostration, diplopia, and ptosis of the eyelids. It is positively contraindicated in extreme cardiac weakness and in decompensation. No drug acts alike on all individuals and Gelsemium is no exception. While we may expect it to accomplish certain effects, it may fall short of its goal in some cases or act too profoundly in others. There is a difference in the results obtained on laboratory animals and the clinical effects obtained at the bedside. Our failure to get the desired result is often due to insufficient knowledge of the action of the drug we use giving it when indications for its use are absent; the dose may be too small or too large, or the preparation may be unreliable and inert.

DESCRIPTION OF PLATE

1. A flowering branch; 2. Peduncle and calyx; 3. Corolla laid open; 4. Stigmas; 5. Vertical, and 6. Transverse section of ovary; 7. Fruit after dehiscence; 8. Seed; 9. Section of the same. (2,4-6,8,9 enlarged.)

CONTROL OF TOBACCO HABIT WITH LOBELIA

I.L. NICHOLS
NEW YORK CITY

CUTLER, in 1813, first wrote of the medicinal value of Lobelia (popularly known as Indian tobacco) in the treatment of asthma and related conditions. It has since been used for relief of intestinal obstruction, strangulated hernia, chronic constipation, and as an emetic, expectorant, and antispasmodic. Wright and Littauerl state that its effects are believed to be due to its action on the respiratory and vomiting functions and on the autonomic ganglions. According to Solis-Cohen and Githens² it may be injected intracardially with epinephrine when respiratory and cardiac activity has almost or wholly ceased, and such administration may save life, even in apparently hopeless cases.

Recently Dorsey³ has reported striking results with the use of lobeline (the principal alkaloid of Lobelia inflata) in relieving the symptoms of nicotine-withdrawal in inveterate smokers.

He administered doses of 0.008 gm. (1/8 gr.) by mouth in capsule form whenever the patient felt the urge to smoke. 18 such doses in 24 hours were found sufficient for the most stubborn cases, and frequently 3 to 4 doses per day were sufficient. He attributes the successes he observed to the fact that the drug relieved the distressing withdrawal symptoms. A week of treatment with gradually diminishing doses was successful in the majority of cases. Dorsey used this method in a series of cases covering a period of about 8 months, and found that with this type of replacement therapy the urge to smoke progressively diminished. With the cessation of the smoking habit, a feeling of general well-being returned, together with clearing of respiratory and pharyngeal irritations, increased resistance to fatigue, decreased nervousness, and a sharpening of the olfactory and gustatory senses.

Wright and Littauerl point out that the other alkaloids of Lobelia, viz., lobelanine, lobelanidine, and lobelidine have similar properties to lobeline. In a critical study of the action of lobeline in effecting "cures" of the tobacco habit, they studied its action and the symptoms it produced in a group of normal, healthy adults (both smokers and non-smokers), and in a group of adults suffering from heart disease or peripheral vascular disease (both smokers and non-smokers). They used the same 0.008 gm. dosage recommended by Dorsey.³ The smokers were instructed to take the drug every time the urge for tobacco was experienced, with the result that there was a definite decrease in this urge in most cases even after the ingestion of a single dose.

Aside from such symptoms as vomiting, nausea, epigastric pain, faintness, lethargy, loss of appetite, and inability to concentrate, they observed that lobeline produced in many subjects effects on skin temperature, blood sugar level, and vasoconstriction similar to the effects of nicotine. Herein, it is possible, lies the explanation of its usefulness in controlling the distressing nicotine-withdrawal symptoms.

PAMPHLET INSERT

LLOYD BROTHERS' SUMMER REMEDIES FOR THE MEDICAL PROFESSION

So many requests are received for seasonal remedies, that in answer to these questions we have selected remedies which have been found useful in the conditions met by the practicing physician and which are peculiar to the summer season.

SPECIFIC MEDICINE ACONITE-*Indications:* Small frequent pulse with impaired circulation. Dryness of skin, lack of tone of capillary circulation. Acute inflammations of mucous membranes of nose, throat, and larynx -H. W. Felter, M. D., Mat. Med. Pharm. Ther.

Usual Dosage: ℞ Sp. Med. Aconite gtt. v.
Aq. Dest. q.s. ℥iv. M.

Sig: A teaspoonful every hour.

SPECIFIC MEDICINE- BELLADONNA-*Indications:* Dull expressionless face, dilated pupils, impaired capillary circulation of skin and mucous membrane, soft oppressed easily compressed pulse. Urinary incontinence, spasm of involuntary muscles.-H. W. Felter, M. D., Mat. Med. Pharm. Ther

Usual Dosage: ℞ Sp.,Med. Belladonna gtt. v.
Aq. Dest. q. s. ℥iv. M.

Sig: A teaspoonful every three hours.

SPECIFIC MEDICINE BRYONIA-*Indications*: Sharp cutting pain in serous or synovial, membranes, increased by pressure or motion'; moderately full vibratile pulse; hacking, racking explosive cough.-H. W. Felter, M. D. Mat. Med. Pharm. Ther.

Usual Dosage: ℞ Sp. Med. Bryonia gtt. x.
Aq. Dest. q. s. ℥iv. M.

Sig: A teaspoonful every four hours.

SPECIFIC MEDICINE COLOCYNTH-*Indications*: Abdominal distress cutting, boring in character. Tormina and tenesmus, gaseous distension, dry scybalous stools.-H. W. Felter, M. D., Mat. Med. Pharm. Ther.

Usual Dosage: ℞ Sp. Med. Colocynth gtt. v.
Aq. Dest. q. s. ℥iv. M.

Sig: A teaspoonful every hour.

SPECIFIC MEDICINE DIOSCOREA *Indications*:-Spasmodic abdominal colic, nausea, with skin and conjunctiva yellow. Twisting boring distress centered at umbilicus.-H. W. Felter, M. D., Mat. Med. Pharm. Ther.

Usual Dosage: ℞ Sp. Med. Dioscorea 3ss.
Aq. Dest. q. s. ℥iv. M.

Sig: A teaspoonful every two hours.

SPECIFIC MEDICINE GERANIUM-*Indications*: Relaxed mucous tissues, with profuse debilitating discharges. Diarrhea with constant desire to defecate. Passive hemorrhage.-H. W. Felter, M. D., Mat. Med. Pharm. Ther.

Usual Dosage: ℞ Sp. Med. Geranium ʒij.
Aq. Dest. q. s. ℥iv. M.

Sig: A teaspoonful every three hours.

SPECIFIC MEDICINE HYDRASTIS (Golden Seal)-*Indications*: Relaxed mucous membranes, with feeble circulation, and profuse mucous flow of thick, tenacious, yellowish or greenish-yellow character. Gastric irritability and anorexia.-H. W. Felter, M. D., Mat. Med. Pharm. Ther.

Usual Dosage: ℞ Sp. Med. Hydrastis ʒj.
Aq. Dest. q. s. ℥iv. M.

Sig: A teaspoonful every four hours.

Related Preparations: Colorless Hydrastis (Lloyd's Hydrastis), Dose, 1 to 15 drops. Also used locally. Hydrastine Muriate (Berberine Hydrochloride). Average Dose gr. ij.

SPECIFIC MEDICINE IPECACUANHA (*Ipecac*)-*Indications*: Irritation, long pointed tongue, reddened tip and edges, nausea, and vomiting. Increased bronchial secretion and hoarseness.-H. W. Felter, M. D., Mat. Med. Pharm. Ther.

Usual Dosage: ℞ Sp. Med. Ipecacuanha, gtt. x.
Aq. Dest. q. s. ℥iv. M.

Sig: A teaspoonful every two hours.

SPECIFIC MEDICINE MATRICARIA-*Indications*: Nervous irritability, fretfulness, muscular twitching; fetid, feculent, greenish alvine discharges associated with flatulence, colic, and anal excoriation.-H. W. Felter, M. D., Mat. Med. Pharm. Ther.

Usual Dosage: ℞ Sp. Med. Matricaria ʒj.
Aq. Dest. q. s. ℥iv. M.

Sig: A teaspoonful every three hours.

SPECIFIC MEDICINE NUX VOMICA-Indications: Atony. Tongue pallid and uncoated or heavy pasty yellowish coating. Yellowish tinge to skin and conjunctiva, sallow line around mouth. Fullness and dull pain in right shoulder pointing toward umbilicus.-H. W. Felter, M. D., Mat. Med. Pharm. Ther.

Usual Dosage: ℞ Sp. Med. Nux Vomica gtt. v.
Aq. Dest. q. s. ℥ iv. M.

Sig: A teaspoonful every three hours.

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* * * * *

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END OF PAMPHLET

Because of its action on the cardiovascular and gastro-intestinal systems, they caution against its use in the 0.008 gm. doses in patients with cardiovascular disease or peptic ulcer. They conclude that further study with smaller doses is desirable, for it may widen the usefulness of the drug in controlling the tobacco habit in those who wish to break it.

It is possible that some of our readers have used Specific Medicine Lobelia for this purpose. We shall be grateful for reports on the clinical results obtained and the dosage which proved most satisfactory.

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1. Wright, I. S. and Littauer, D., *I.A.M.A.* 109:649 (Aug. 28) 1937.
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TREATMENT OF TOBACCO HABIT

Occasionally, we receive inquiries regarding treatment of the tobacco habit. In this day and age when few seem to have any inhibitions, it is rather entertaining to learn of someone trying to quit the use of the weed. We, personally, do not believe that tobacco is as injurious as has been many times thought. However, this statement is made with various reservations.

It has been the practice of the author in his medical work to advise the excessive user not to quit entirely, but to cut down the amount, whether it be cigarette, cigar, pipe, or chewing tobacco; or any other form in which tobacco may be used. One particular point that we stress to our patients, is that if they will put themselves on an allowance, gradually decreasing day by day, they will very soon note a wonderful feeling of well being when they reach the point of tolerance that their body has established.

It is true that from a physical standpoint there are some who should never use tobacco as there are some who should never use coffee, these individuals being of highly strung nervous temperament. Some people cannot stand the stimulation of either of these powerful drugs.

We have no desire to discuss the moral or ethical side of tobacco; but do desire to view its effects upon the human body. Mankind has tried many ingenious devices to rid itself of bad habits. Tobacco is no exception. We have personally talked to patients who have abstained from tobacco after having used it for years, and they have told us that at times the craving is so intense even after a period of years of non-use, that it had seemed that the temptation was so great they could not resist. Others have said that they had quit without any particular discomfort.

As in any other habit, there are various methods of breaking the habit. Perhaps the best way is absolute abstention. However, this method is many times quite disturbing to the nervous system and particularly to those people who come in contact with the individual. The next best method, of course, is the gradual reduction method. In the total abstention form of treatment, many substitutes have been tried, such as Licorice, Gentian, and others. We have known men who have carried the Licorice Root in the pocket, and when the desire became too strong would use a small piece to overcome this craving. Eating of an apple has been said to ease the desire for tobacco.

In a former issue of "THE GLEANER," Number 23, October, 1924, is mentioned a tobacco substitute consisting of loosely ground Gentian Root, one part, and ground Licorice Root, three parts, thoroughly mixed. The directions given were that this preparation be chewed exactly as tobacco would be chewed whenever the craving became too intense. Possibly the virtue of this substitute is in its psychological effect, diverting the mind of the addict from the tobacco and causing him to forget his desire.

There are scattered references in past "GLEANERS" and in other literature regarding this habit. In "THE GLEANER," Number 45, June, 1936, the effect of Podophyllum in destroying the desire for tobacco is mentioned.

Nux Vomica, or other bitters such as Gentian and Hydrastis have been used. We shall welcome correspondence from our readers regarding this point, as it is entirely possible that as time goes on we shall see the ill effects of the over-use of tobacco become more apparent.

Two observers at Massachusetts General Hospital report a difference in temperature of the hands and feet of normal individuals of as high as three degrees before and after smoking one-half cigarette. Naturally, as soon as the effect diminishes, which is very soon, the temperature returns to normal. The effects of both caffeine and nicotine are evanescent especially in those who have established a degree of tolerance.

DIGITALIZATION BY SMALL DOSES

I.L. NICHOLS

New York City

Experimental studies and clinical observations by Gold and a group of co-workers have shown that digitalization can be achieved by small daily doses of digitalis. This supports what many physicians have experienced in the use of Specific Medicine Digitalis.

Gold¹ showed that animals do not excrete a fixed quantity of digitalis per unit of time but rather a *fraction of the amount present in the body*. This agrees with the behavior of other drugs in the animal organism. It has long been known that digitalis displays the property of cumulation in the body—a property common to all drugs but more in evidence with those that are slowly eliminated.

Otto, Gold, and Messeloff,³ in a study of 12 individuals for periods of from 35 to 87 weeks, showed that "patients do not excrete a fixed quantity of digitalis daily but one that varies with the amount present in the body." This was further confirmation of earlier studies. 1 4, 5.

Gold and DeGraff² show that digitalis cumulation tends to be a self-limiting process. Although a fixed daily dose of digitalis shows evidence of cumulation at first, this cumulation eventually ceases upon continuance of the same daily dose of the drug. They state: "As the quantity of digitalis in the body increases, the amount eliminated daily also increases until the quantity eliminated equals the daily dose; then further cumulation no longer occurs. The intensity of the digitalis action present at the time cumulation ceases depends on the size of the daily dose."

Leveling of Effect of Digitalis Demonstrated

In a series of tests on patients they demonstrated² that cumulation ceases after a time providing the daily dose remains fixed. "When the administration of a fixed daily dose was started, progressively increasing slowing of the heart rate occurred for a time; then a level of effect was reached which was maintained unchanged for a number of weeks by the same daily dose of the drug."

Gold and DeGraff⁵ show that the size of the daily dose governs the intensity of digitalis action when the point is reached at which cumulation ceases. They state that "while a daily dose of 3 grs. (0.2 gm.) in a given patient may lower the ventricular rate from 140 to 80 a minute and keep it at 80, a daily dose of 2 grs. (0.13 gm.) may only lower the rate from 140 to 110 and keep it at that rate, or a daily dose of 6 grs. (0.4 gm.) may lower it from 140 to 50 a minute and keep the rate at this new level with continued administration of the drug.

We have shown that, in the ambulatory patient, full therapeutic effects, as judged by the usual clinical criteria of improvement, can be produced by daily repetition of a relatively small dose of the drug that can then be continued as the daily maintenance dose without production of toxic symptoms."

Summary of Observations and Clinical Application of Findings

In general the conclusions of Gold and his associates are that the average ambulatory patient does not require rapid digitalization by large initial doses of the drug. In the average case, especially where adequate supervision of the patient is impossible, full therapeutic effects and satisfactory digitalization can be induced more slowly by repetition of small daily doses.



Their observations and conclusions are well summarized in their own words "Digitalis cumulation, as occurring in the course of the daily administration of a suitable fixed dose of the drug can be shown to be a self-limiting process. The intensity of digitalis action present at the time when further cumulation ceases to occur depends on the size of the daily dose." 2 "Full therapeutic effects can be induced in the average ambulatory patient, . . . by the daily administration of quantities as small as from 3 to 4 grains of the drug, and this dosage can then be continued for many months as the daily maintenance dose without the occurrence of toxic symptoms." S

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DESCRIPTION OF PLATE

1. Plant (reduced); 2. Summit of raceme; 3. Radical leaf; 4. Corolla laid open from below; 5. Summit of Style and vertical section of ovary; 6. Transverse section of the ovary; 7. Capsule burst and the seeds fallen; 8. A seed; 9. Section of same. (5 and 6 enlarged; 8 and 9 highly magnified.)

CLINICAL NOTES BY THE EDITORS & CORRESPONDENTS

TIBIAL ULCER-*In the treatment of this common affliction of the lower limbs many factors require attention. They are also known as varicose ulcer of varix. "Varicose" is derived from the Latin "Varicosus," meaning dilated.*

The anatomy and histology of the deep and superficial veins should be thoroughly studied by the physician who essays to treat ulcer of the leg. In addition, a knowledge of the veins to their contiguous structure is necessary. Furthermore, a thorough study of the causes of dilatation of these veins and of the ensuing ulcerative processes must be had. The valve distribution, or lack of it is an important factor

in producing dilatation, and consequent trophic disturbance followed by infection and sloughing of superficial tissues.

One should be on the alert at all times to discover the presence of arterio-venous aneurysm, a rare condition comparatively, but occurring fairly often.

General systemic wrongs, such as vascular disease; cardiac deficiency; diabetes; syphilis; chronic nephritis; tumor of the abdominal cavity; and many other lesions may be causative factors, and require medical or surgical attention. X-ray examinations of the leg may give valuable information, as will also other special examinations, such as, blood-pressure, local and general; surface temperature studies; general inspection and complete history, including previous injuries or infections, pregnancies, and any and all factors tending to modify venous flow in the lower extremities.

Associated infections of the skin, such as ringworm; Staphylococcus; Streptococcus; or other pus-producing agents may complicate the problem. Tuberculosis may be a factor; malignancy (rodent ulcer); actinomycosis.

Treatment of leg ulcer considers all agencies which tend to return the circulation and innervation of the limb to a healthy condition. Support and elevation seem to be necessary parts of treatment. Cleansing of the ulcer is important. Debridement may be needed.

Antisepsis by the use of mild mercurials is useful. When a healthy granulating surface appears, ointments or solutions slightly stimulating in character are indicated.

Many physicians have a favorite formula for the local treatment of ulcer after thorough cleansing. The A. J. Howe formula furnished by Dr. C. Behymer is as follows:

R̄ Hydrargyri Bichlor.	gr. 7.3	
Dist. Hamamelis	℥ vi	
Tar Water	℥ x.	M.
Ft. Sol.		

Sig.: Apply to ulcer as wet compresses, constantly renewing by use of dropper.

Another preparation as used successfully by many physicians is in ointment form

R̄ Specific Medicine Echinacea		
Bismuth Subnitrate	aa. 3 i	
Lanolin		
White Vaseline	aa. q.s. ℥ i.	M.
Ft. Ungt.		

Sig.: Apply to ulcerated surfaces twice daily, gently but completely cleansing ulcer at each dressing.

Many of the coal tar dyes have been found useful in the stimulation of granulation tissue, namely: (1) one per cent Mercurochrome Ointment; all being mildly stimulating and of more or less antiseptic value.

Let it be repeated, that a case of tibial ulcer to be treated successfully must be treated individually, in the light of all information that it is possible to secure by modern methods of investigation with due regard to the patient as a whole, rather than limitation to local treatment.

Recently, many physicians treat the varicose veins by the injection of sclerosing solutions, thus obliterating the lumen of the over-dilated veins. This method in the hands of properly qualified operators, has met with remarkable success. Having no direct experience with the injection of varicosities either in the limb or in hemorrhoids I leave this phase to more experienced men. It is, however, rapidly becoming a useful manner of treatment in tibial ulcer.



RHUS TOXICODENDRON POISONING - A correspondent inquires regarding the use of Specific Medicine Rhus Toxicodendron in the prevention and treatment of Rhus Toxicodendron poisoning.

Specific Medicine Rhus Toxicodendron has been used in the prevention and in the treatment of Rhus poisoning. While not a great deal of literature has been written upon this subject, this method has attained a measure of success, and will bear some study. We can give no definite advice.

However, various extracts are made by manufacturers for injection subcutaneously, and these have met with considerable success.

It would be safe to use the Specific Medicine Rhus Toxicodendron starting with the small dose of about 5 drops in 4 ounces of water, and a teaspoonful of the mixture every 4 hours, increasing on the second day to 2 teaspoonfuls, and then 10 drops to 4 ounces of water and a teaspoonful of the mixture every 4 hours. This could be used both in the treatment and prevention of actual poisoning.

We have just now received a report of two cases of Rhus dermatitis treated by small doses of Rhus Toxicodendron internally—10 drops of Specific Medicine Rhus Toxicodendron in 2 ounces of Glyconda, one teaspoonful of the mixture every two hours brought relief. Both of these cases were in the very early stage, and our correspondent would like to know if others have had experience in this line, and if the internal use of Rhus Toxicodendron is effective in more advanced cases where there is the formation of blebs and other marked symptoms of Rhus dermatitis.

DIABETES MELLITUS

What Specific Medicines are useful in the treatment of diabetes mellitus ?

Various remedies have been used by the Eclectic school in the treatment of the conditions accompanying diabetes; however, there are no drugs which directly influence the output of urinary sugar to a great extent, according to our present knowledge.

One should remember in using Specific Medicines, that they are not intended, according to our method of practice, to be used as a treatment of disease per se, but are designed to take care of underlying conditions occurring in disease, which we desire to influence toward a more normal state.

If one would consider the diabetic patient as an individual and treat the conditions that he finds, using methods in accordance with modern concepts, he will find the Specific Medicines useful in assisting in the relief of the patient. Many of these drugs have been used in the past: Chionanthus, Podophyllum, Fragrant Sumach, Fluid Extract of Jumbul Seed, and others, and a study of these drugs will well repay the inquirer.

In the present light of medical knowledge, diabetes is regarded as a deficiency disease. The use of insulin, proper diet, and hygienic measures so nearly meet this deficiency that one should not depend too strongly upon the use of botanical drugs or other medication. These are but aids in the management of the disease.

CHROMIUM POISONING

A correspondent reports the use of homeopathic tablets of Kali Bichromicum 60 X, this remedy being used over a long period of time for chronic bronchitis. She received great relief for a time, and then began to have bone and joint pains and the teeth were affected.

Many authorities in medicine feel that a very small dose of a drug has little effect, yet this correspondent reports all of the characteristic symptoms of chromium poisoning; probably due to the long-continued use and the retention of the chromium in the human body.

The inquirer asked for a Specific Medicine which would remove the effect of the drug. In the case of metallic poisonings, the necessary treatment looks to overcome the effects of the disease and to hold the metal in combination with the tissues so that not too much metal is carried in the blood-stream at one time, and to our knowledge, no Specific Medicine alone entirely counteracts these effects. Possibly, the treatment as used in chronic lead and mercury poisoning would be useful: A general stimulation of elimination by the use of Magnesium Sulphate and small doses of Potassium Iodide for its alterative effect.

We feel that the use of chromium in the industries, particularly the automobile industry, in plating, makes this a very important subject for study, and so welcome any information that any correspondent may have on the subject of chromium poisoning from ingestion of the drug or any of its compounds.

HIGH BLOOD PRESSURE

A Missouri physician inquired for some remedies useful in high blood-pressure.

In the treatment of this condition, we must handle the patient as we do in any other disease-as an individual; and correct general bodily wrongs, including: diet, exercise, and hygienic measures; searching at all times for underlying causes. In the meantime, let us give the patient the benefit of those remedies which have a tendency to reduce hypertension. If the physician will study such remedies as Gelsemium, Veratrum, Lobelia, Podophyllum, Chionanthus, Rhubarb, and others, he will find one or more of them to be indicated.

In "The Gleaner" Number 45, June, 1936, we have covered rather more thoroughly the management of hypertension. It is well to repeat, however, that one should differentiate the two conditions, hypertension and arteriosclerosis. A patient may have arteriosclerosis without a great rise in blood-pressure, and he may have a rise in blood-pressure with little or no hardening of the arterial walls. On the other hand, the two conditions can and do many times exist together.

A very important part of the treatment is to recognize the mental-we might even say the psychological aspect. In taking the nonmedical public into our confidence by way of the public press, the radio, and the lecture platform regarding many of the recent advances in medicine, the laity have learned to fear hypertension, and when a patient is told that his blood-pressure is higher than normal, the shock is so great sometimes as to produce a considerable temporary rise from that cause alone. The physician should be very tactful and should not make it a game of figures; by that we mean, a patient will, if told too much, be prone to consider his progress by results of his weekly or biweekly readings of blood-pressure. It is indeed important in these cases that the physician hold his own counsel. The treatment should begin by an education of the patient to lead a different and more quiet life. We like to tell these patients to consider the tree as their pattern in life. In other words, a patient with hypertension must learn to lead a vegetative existence absorbing his nourishment in just enough amount for his needs, limiting all strenuous activities, including mental work; finding some interest in life to take his attention away from his own bodily ills. Exercise of a mild nature (if conditions permit) in open air and sunshine at some pursuit that gives the individual pleasure will do much to reduce the hypertension.

In these cases, the remedies are but instruments by which we influence the nervous and vascular systems, using the kindly and beneficial aid of drugs to produce our results.

ECHINACEA IN STREPTOCOCCUS INFECTION

What Specific Medicines are useful in Streptococcus infection?

The medical profession is still looking for a remedy for the Streptococcus infection in spite of the use, many times accompanied by marvelous results, of dyes given intravenously, subcutaneously, and orally. Among botanicals Echinacea has been found to be a very useful remedy in the treatment of all infections, particularly the Staphylococcus infection, and in all conditions characterized by general sepsis and pus formation.

In former times, the severe invasion of the Streptococcus was treated by the use of Iron, Aconite, Gelsemium, Baptisia, Veratrum, and many other agents, and many of us in present times believe in the use of these in conjunction with latest methods. However, this answer is not to be construed as being an indictment of the use of all medicines and methods that may prove useful in so serious a condition. If one could develop a preparation of Echinacea for intravenous use that would carry the full effects of the drug, the physician would be better prepared in his battle with the Streptococcus. Professor Lloyd many times has told me that he was unable to carry the full effects of Echinacea in aqueous solution. Perhaps further research will show the way to produce an active preparation for intravenous and subcutaneous use.

EXPERIMENTAL AND CLINICAL WORK WITH CRATAEGUS IN CARDIAC CONDITIONS

This drug is believed to have been used for the first time in medicine by a Dr. Green of County Clare, Ireland in the latter part of the 19th century. He acquired a wide reputation in the successful treatment of cardiac affections by means of a secret remedy. After his death in 1894, his daughter disclosed that the drug he had used was a tincture of the ripe berries of English Hawthorn.

The first notable American reference to the drug is found in the article of Jennings¹ in 1896, who stated that its effects are noted within a few minutes after oral administration. In 1900² and again in 1910³ experimental studies were published, and frequent references to the drug are found in recent medical literature 4, 6, 6,7,8. For many years it has been in increasing use by clinicians for the treatment of cardiovascular ailments.

Crataegus, or English Hawthorne, is a small tree or shrub native to Europe and Asia. It blooms in Mayor June, and the berries become fully ripe late in the fall when they are gathered and used in preparing the tincture. The chief constituent⁹ is a watersoluble, crystallizable, bitter principle which is slightly soluble in alcohol and contains trimethylamine.

Hinsdale⁴ in an extensive series of experiments with the drug, studied its effects both on the heart and on the peripheral circulation. When the tincture was applied to the turtle heart, there was a slowing of the rate and an increase of tone. This increased tone developed gradually into tetanus which disappeared after application of 1/100 grain of atropine to the heart.

The forearm of a human subject was enclosed in a plethysmograph and tracings made of the normal volume changes that occurred. 25 minims of tincture of crataegus were administered by mouth and after allowing fifteen minutes for absorption to occur, tracings were again made for a ten minute period. The tracings indicated that a dilatation of the vessels of the arm occurred, showing that crataegus lowers blood pressure by its vasodilator effect upon the peripheral circulation. Hinsdale states: "The drug is useful, in physiological doses, in the treatment of arteriosclerosis and can be given with safety for a long time. It must be given in large doses, ten to twenty minims of the tincture, three or four times a day." Accompanying the report of this experimental study is an editorial note stating, in part: "The drug is constantly increasing in popularity. Its use in hypertension, in some cases. of angina, and in early congestive heart failure, has been repeatedly verified. It is now being considered in essential hypertension."

In another experiment the drug was administered over a period of four weeks to three human subjects. Their ages ranged from 21 to 23 years. Previous physical examination and urine and blood analyses had shown them to be practically normal in every respect. The drug was administered in the form of tincture according to the following schedule of doses:

5 drops three times daily for 3 days					
10	“	“	“	“	“ 5 ”
15	“	“	“	“	“ 2 ”
20	“	“	“	“	“ 2 ”
25	“	“	“	“	“ 6 ”
30	“	“	“	“	“ 5 ”
35	“	“	“	“	“ 3 ”
45	“	“	“	“	“ 2 ”

Following doses of ten drops of the tincture three times daily there was a reduction in pulse rate which averaged 17 beats per minute. There was a continued reduction throughout the period of the experiment, but as the doses increased the rate was not proportionately decreased. Sphygmographic tracings taken at frequent intervals showed a dicrotic pulse and a pulsus inequalis. Hinsdale comments on this finding as follows: "The diagnostician will remember that a dicrotic pulse is usually associated with a low blood pressure, and that the pulsus inequalis is caused by intermissions in the peripheral pulse, dependent probably, in this case, upon a weakened heart impulse."

A drop in blood pressure averaging 13 mm. was noted after doses of ten drops of the tincture three times daily. The blood pressure continued depressed throughout the period of observation, but subsequent depressions were not proportional to the size of the doses used.

In pithed frogs injection of the tincture into the anterior lymph sac caused a decided reduction in the rapidity of the heart's action within about thirty minutes. In dogs anesthetized with ether 20 cc. of the tincture were injected intravenously. Carotid pulse tracings showed a fall in blood pressure of about 25 mm., which lasted for 1 1/2 to 2 minutes and then returned to normal. These effects of crataegus in animal experiments are in close agreement with the effects observed on human subjects. Other general effects of the drug which were noted in the human experiments were: pain under the left clavicle, headache, conjunctival irritation, cough, nasal discharges, disturbed sleep, excessive perspiration, and skin eruptions associated with eosinophilia. One of the subjects had a "touch" of dyspnoea. Hinsdale states that "Attacks of dyspnoea associated with a slow pulse have been relieved so many times by crataegus as to make the symptom one of the reliable indications for the use of it."

Hinsdale points out the necessity for using appreciable doses of the tincture, and says that the results of his experiments bear out clinical experience "which is to the effect that, therapeutically, far better results are obtained with doses of the tincture, varying anywhere from five to twenty drops, than from dilutions."

In summarizing, it has been shown both experimentally and clinically that the tincture of this drug has a marked effect in reducing the heart rate and lowering the blood pressure.

Editor's Note-Possibly the most enlightening studies that have been made on crataegus in this country were reported by Dr. Albert Euclid Hinsdale, who was Professor of Materia Medica and Clinical Therapeutics at Ohio State University Homeopathic Medical College. He devoted a great part of his energies to the study of drugs whose pharmacologic actions had not previously been determined. The method he used was the usual homeopathic method of "proving." This consists of testing the pharmacologic action of drugs on "provers," who are normal human subjects to whom the drug is administered over a period of time and observations made on the symptoms produced by it.

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RENEWED INTEREST IN OLD-TIME THERAPEUTIC AGENTS

ALLEN KLEIN

New York City

A great number of old-time drugs, many of them but slightly used or discarded, are coming into their own again. Hardly a month passes without the rediscovery of the value of an ancient herbal, or, some new use for it. Botanical items which have more or less been snubbed in the past, such as raw apples, may be found in the medical literature as therapeutic aids.

Familiarity may have brought contempt, or rather disregard, for the apple, but of late, this "keep the doctor away" fruit has appeared quite frequently in the literature. Two of the most interesting reports come from Manville, Brady and McMinis,¹ and from Bittner.² The former group employed apple powder and the latter used raw apple pulp. It was found that raw apple powder was indicated in diarrheas of various types in both adults and children, chronic ulcerative colitis, and diarrhea secondary to gall bladder disease.

Apples contain goodly quantities of Vitamin A, necessary for maintenance of normal mucous membrane. Also present are the agents: tannic, mallic, acetic, butyric and lactic acids; sugars, starches, cellulose and hemicellulose and pectins. The tannic acid is astringent and helpful as a protective coating on the intestinal mucosal membrane; the mallic acid helps maintain an acid reaction; and the other acids reduce the number of viable bacteria in the large intestines. In addition to their caloric value, the sugars and starches increase the colloidal properties of pectin. The cellulose and hemicellulose aid in removing injurious substances from the bowel. The Vitamin B present in apple stimulates appetite and helps gastro-intestinal tonus. Vitamin C is materially detoxicant.

Manville thinks the apple's chief value lies in the hydrophilic colloids of high adsorptive capacity: the pectins, rendering bacilli and toxins inert. Apple powder contains twice as much pectin as fresh apple. Four ounces of the powder was given every three hours, alone or with skimmed milk.

Allantoin represents an important advance in modern therapy of ulcers, slow healing wounds, burns, osteomyelitis, and similar conditions. For thousands of years, allantoin, like digitalis and ephedrine, had been in use by the peasantry of Europe who received the benefits of this drug through concoctions of the common comfrey root. The use of comfrey, which had been listed in ancient pharmacopoeias of Europe at one time or another, was practically forgotten by medical men for over a hundred years. Even after Macalister³ of England found in 1912 that allantoin was the active ingredient of the comfrey root which he had used successfully in the treatment of a severe ulcer and other conditions, nothing was done about it until twenty-three years later.

It had been observed by various investigators that the maggots, the blow-fly left on the wounds of soldiers on the battlefield, cleared away necrotic tissue and other debris. Healthy, pink granulation occurred. Robinson⁴ proved that allantoin was the active healing principle given off by the blow-fly larvae. Thus, in 1935, this drug was again reestablished as a medical agent and is still being successfully used. The chief value of allantoin (5-carbamidihydantoin) lies in its stimulation of cell proliferation, encouraging and hastening the formation of cells. Besides its use in ulcers, it has been found helpful in fistulas, tuberculosis of the leg, unhealed amputation stumps, etc. A bow to the humble comfrey!

Variations in standards and preparations of the official preparations of ergot have always handicapped the use of this beneficial medicinal. As noted in the J.A.M.A.,⁵ "The accurate therapeutic administration of ergot has been handicapped by variations in the oxytocic (child-birth hastening) potency of different preparations and the difficulty of standardization." However, recent new assay and test methods have greatly increased the potential value of the ergot preparations.

In 1935, a rather unusual event took place. Four different research laboratories published reports of the isolation of new alkaloids of ergot. Each gave different names of their alkaloid.

After discovery that they had all been working on one and the same alkaloid, all the investigators made a statement in *Science*⁶ "that the alkaloid obtained in the four different laboratories was the same substance and that the four names given were synonymous."~ The Council on Pharmacy and Chemistry of the American Medical Association selected Ergonovine as the name. It is claimed that Ergonovine is responsible for 75% to 85% of the oxytocic effects of ergot on the human uterus, small oral doses exert a speedier, more powerful effect on the human uterus, without dangerous side reactions. Testing and assay of the new alkaloid is achieved by the cat uterus method of Thompson⁷ and by other tests on humans.

A recent issue of the *Journal of Pharmacology and Experimental Therapy* (p. 364, 1937) contains news of note in regard to that blessed specific, quinine. Johnson and associates report on the power of certain salts of quinine to destroy pneumococci of any type, in high dilution. The salts are ethylapocupreine, hydroxyethylapocupreine and ethylhydrocupreine. The compound, apocupreine, in test tube studies, exhibited similar powers. The susceptibility of most strains fell within a reasonable range of concentration, though occasional extremely resistant strains were encountered, a few of which may have exhibited an acquired fastness. The compound ethylapocupreine killed pneumococci in vitro in the highest dilutions, followed by ethylhydrocupreine, apocupreine and hydroxyethylapocupreine.

Pneumococidal power appears in the serum of animals or of men who have received as little as 10 grains by mouth of ethylapocupreine or hydroxyethylapocupreine. Such pneumococidal activity appeared from within one and one-half to two hours after administration by mouth and persisted as long as the compound was given. This new study gives promise of still greater benefits to be derived by man from quinine.

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Other examples of renewed interest and new findings on old-time drugs will be given in a future issue of "THE GLEANER."