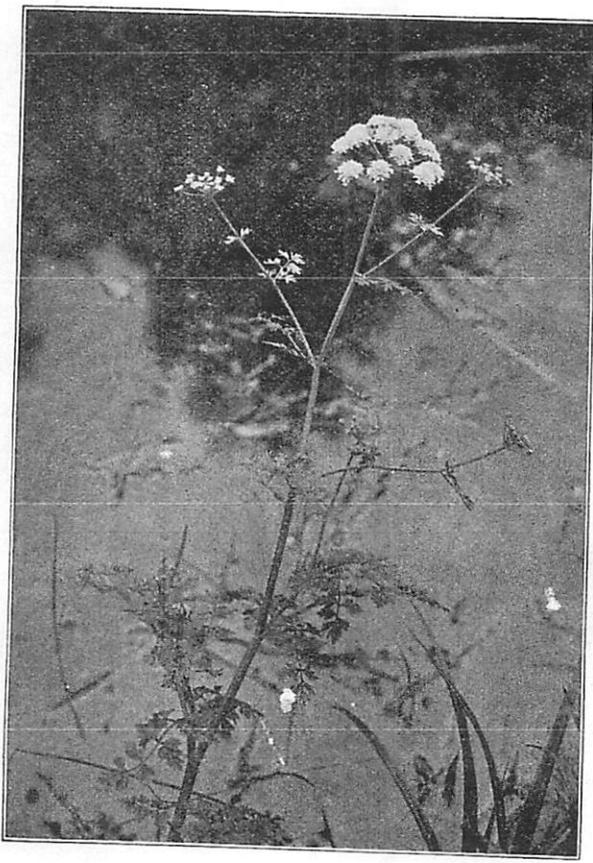


AUG 14 1924

A TREATISE
ON
OENANTHE CROCATA



OENANTHE CROCATA

Photograph by Edward Step, F. L. S., London, England.

Drug Treatise Number XI.

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INTRODUCTION

History.—This most remarkable plant, so far as qualities and history are concerned, is worthy of exceptional attention in the direction of both its record in the past and service in the present. That its qualities as an energetic or toxic plant have been known, practically from all time, is shown by the "Description and Habitat," contributed to this treatise by Miss Edith Wycoff under the title of *Oenanthe crocata*. That its medical qualities date from the very distant past is shown by the article contributed to the "Philosophical Transactions," 1772, by Dr. Richard Pulteney, for a photostat print of which we are indebted to Dr. L. F. Kebler, Department of Agriculture, Washington, D. C.

In this connection, as is the case with many drugs and medicinal plants, the original uses have been replaced by service in other directions and even now we may accept that the drug in therapy and pharmacy should not be confined to the present word.

The chemistry was for the first time systematically taken up by Frank Tutin of the Wellcome Research Laboratories. The publication was No. 132, the article having been previously printed in the *Pharmaceutical Journal and Pharmacist of England*, August 26, 1911.

The laboratory research of Lloyd Brothers has dated from 1905, the result of our investigation in a pharmaceutical direction being that no crystalline constituent or natural alkaloid exists in the green root. We decided that any crystalline material derived therefrom that had a quality connected with the action of *Oenanthe crocata* was artificially made by the chemistry applied, and that the natural structure of this drug was altogether constituted of interlaced colloidal complexities, resinous, glucosidal and otherwise. Possibly we can do no better than to reproduce the descriptive page of a "Treatise on *Oenanthe crocata*, 1905," referring readers interested in the ultra-scientific chemical side of the subject to the excellent study made by Tutin.

Constituents.—This drug is destitute of alkaloids. It largely depends for its virulence on a complex resin that is soluble in both alcohol and ether.

Pharmaceutical Preparation.—The specific Medicine only is made by us. It has a red wine color, little odor, and no characteristic taste. It imparts to water a slight herby odor, but little taste, and does not produce an immediate precipitate. The value of *Oenanthe Crocata* in America, outside the "Homoeopathic" profession, has been determined by the use of our preparation.

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Description and Habitat.—*Oenanthe crocata* is a large, perennial herb of Europe, with fleshy, tubercular roots, growing in moist situations, by the side of ditches in wet pastures and along the banks of streams. It is quite common in southern England and ranges through western and southwestern Europe. Bentley and Trimen (*Medicinal Plants*, Vol. II, 124), record it as "a specially noticeable species by the Thames near London." *Oenanthe apiifolia*, Brot. of southern Europe is very similar, possibly the same species. Various names, Hemlock Water Dropwort, Water Hemlock, Dead-tongue, etc., have been commonly applied to *Oenanthe crocata*.

This plant has attracted attention because of its exceedingly poisonous properties, the root being most active. Having a sweetish, not disagreeable taste, this has been mistaken for other roots by both human beings and animals, and eaten with fatal results. Most species of *Oenanthe* are poisonous, though none other seems to be so virulent as *crocata*. Some species, however, are harmless and there are records of their roots having been used as food in certain localities.

When cut the root and stem exude a yellowish juice, from which comes the specific name of the plant (*crocata*—saffron yellow), though this juice varies in color with the season and probably also with the locality in which it is grown and the age of the plant when collected.

Oenanthe crocata belongs to the narcotico-acrid group of poisons, producing in overdoses inflammation of the stomach, giddiness, convulsions, delirium, and resulting in coma and death in from half an hour to three hours after being eaten. *The essential remedy in cases of Oenanthe poisoning is an emetic*, and after the poison has been thoroughly ejected from the stomach, follow with demulcent drinks such as flaxseed tea, gruel, slippery elm tea, etc.



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From Gerarde's Herball, 1633.

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Therapeutic Introduction of *Oenanthe crocata* Early European Uses

The following extract from "The Herball or General Historie of Plantes gathered by John Gerarde of London, Master in Chirurgerie, Very much enlarged and amended by Thomas Johnson, Citizen and Apothecary of London," 1633, gives an early record of its poisonous qualities:

The smell of this plant is strong and grieuous; the taste hot and biting, it being full of a iuyce, at first milky, but afterwards turning yellow. The spoky tufts or rundles growing at the top are like *Cicuta*, yea in much resembleneth *Hemlocke* in propertie and qualities, and so doe they affirme that haue proued and seene the experience of it: for being eaten in sallads it did well nigh poyson those which ate of it, making them giddie in their heads, waxing very pale, staggering and reeling like drunken men. * * * * *

Pernitious and not excusable is the ignorance of some of our time, that haue bought and (as one may probably coniecture) vsed the roots of this plant in stead of those of *Peonie*; and I know they are dayly by the ignorant women in Cheap-side sold to people more ignorant than themselues, by the name of water Louage."

From Dr. Pulteney's letter published in the *Philosophical Transactions*, 1772, we quote as follows:

"A Letter from Richard Pulteney, M.D., F.R.S., to William Watson, M.D., F.R.S., concerning the medicinal effects of a poisonous plant exhibited instead of the Water Parsnep."

Dear Sir:

Some circumstances having lately come to my knowledge, relating to the effects of a poisonous plant, I thought them rather too remarkable not to merit further notice; and, I address them to you with the more propriety, as you have already laid before the public some observations* concerning the deleterious qualities of the plant in question, which holds a distinguished place among the poisonous ones that are indigenous in Britain.

Mr. H—n, an attorney of this place, now upwards of forty, at the age of fifteen, began to be affected (after taking cold upon violent exercise, as he thinks), with what is usually called a scorbutick disorder; which shewed itself more particularly on the outsides of his arms, about the elbows, and on the outsides of his legs, from the knees to the ancles, as well as in blotches upon other parts of his body.

"It had the appearance of a dry branny scab or scurf, which every night fell off, more or less, in scales, as is usual in leprous cases. At times it pushed out more than usual, and thickened the integuments of the limbs considerably, after which the separation of the scales would become very abundant.

"For several years past he had been trying a variety of things commonly recommended in such cases. * * * * *

"In the winter of 1770, this disorder increased upon him very rapidly. * * * * * Besides the farther spreading of the eruption itself, the integuments of the legs thickened very much, and the limbs swelled to such a degree, as to render him unable to walk. * * * * *

In this unhappy situation, even loathsome to himself, it was recommended to him to take the juice of water parsnep,† in the quantity of one common tablespoonful every morning, fasting, mixed with two spoonfuls of white mountain wine.

* See *Philosophical Transactions*, Vol. XLIV, p. 227, and Vol. L, p. 856.

† It was shown that not "water parsnip" (the juice of which to the extent of four ounces has been taken) but *Oenanthe Crocata* was used. The two plants grow wild in the same localities in England.—J. U. L.

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The first spoonful he took did not begin to give any great uneasiness for two hours, but after that time, his head began to be affected in a very extraordinary manner; a violent sickness soon succeeded, and violent vomiting; and after he was put to bed there came on cold sweats, and a very strong and long-continued rigor, so that the people about him thought him dying for some time; but in a few hours, all these symptoms wore off.

* * * * * After having omitted his medicine for one day, he repeated it, in nearly the same dose, and with similar effects, as to the sickness and vomiting, though the uncommon sensation in his head, and the succeeding rigor, were by no means so violent. * * * * *

Before he had taken this juice one month (reduced to half original dose—Ed.), he was sensible of a very great change for the better; encouraged, therefore, by these appearances, he persevered in its use until the middle of April. * * * * * He got then into a much better conditioned state, than he had experienced for many years before.

From first to last, this juice never purged him; though he says, even in its reduced dose, it never failed to occasion a dizziness of the head, a nausea, and sickness, which were not infrequently succeeded by a vomiting, that always instantly relieved his head.

From the middle of April to the middle of June he desisted from the use of the juice, but in its stead, drank, every morning for breakfast, the infusion of the leaves of the same plant. * * * * * The infusion seldom occasioned nausea, or sickness, but always brought on a small degree of vertigo, and in a slight manner produced the effects of intoxication from liquor.

* * * * *

Upon questioning him relating to the sensible qualities of this medicine, he says again, that he particularly remembers that it never once purged him, not even the first dose, which had so nearly poisoned him. He does not think that it increased the sensible perspiration, but is convinced that it was diuretick; and adds, that he thinks it occasioned, besides the increased flow of urine, a copious sediment in it, and which he believes was always wanting before.

* * * * *

This case, the nature and inveteracy of his disorder, being well known among his neighbors, was much talked of, and raised the curiosity of many people. * * * * * It was the juice of the root only, and not of the leaves and stalks, that had been administered. I might here observe, that the expression from the root is not to be depended upon after the plant has advanced towards its flowering state, as the root then becomes light, spongy, and almost destitute of juice.

If you judge this case not improper to be laid before the Royal Society, you will do me the honour of presenting it. Mr. H—n himself is so much convinced of the efficacy of the medicine, that he is desirous of its being known to the world.

I do not enter into any reasoning on his occurrence; I relate it only as a fact, and desire it may have no more weight than every judicious physician knows is due to a single instance. How far it may be proper to give this juice a farther trial, I will not take upon me to determine; but must, as an encouragement to any who may chuse to venture upon it, inform them, that it has not on all persons so much power in producing nausea and sickness, as in the case here before us. I am

SIR,

with great esteem,

Your obliged humble servant,

R. PULTENEY.

Blandford,
March 12, 1772.

P. S.—Mr. H—n is desirous that it should be known, that he "tried very fruitlessly, among other methods, the drinking of tar-water and sea-water, of each of which, he says, he did not drink less than an hog'shead."

Philosophical Transactions, Vol. 62, 1772

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From First American Study of Oenanthe Lloyd Brothers Drug Treatise, 1905

The first conspicuous reference to Oenanthe in American medical literature that has come to our notice, was the article by Dr. E. R. Waterhouse, who used the Specific Medicine Oenanthe crocata experimentally in his practice. This article together with one by Dr. F. H. Fisk in the Chicago Medical Times, and one by Dr. Wm. T. Gemmill in Ellingwood's Therapeutist, is reproduced as follows:

DOSE AND MEDICAL PROPERTIES

By E. R. WATERHOUSE, M. D.

No continued study has been made of this drug, and what is known of it has been gleaned by close observation of its action. It is, when administered in unreasonable doses, a very powerful poison, and many accounts have appeared in foreign publications indicating that death has resulted from small amounts of the plant being accidentally eaten.

In poisonous doses it seems to produce paralysis of the vasomotor nerves, as is shown by the dilated condition of the capillaries, and is evidenced by the reddening of the surface of the body. Excruciating headache comes on with dilated pupils and violent spasms, which continue until death ensues. Some years ago I noticed an account in a magazine, of a traveler in a foreign country who plucked and chewed some of the leaves of the plant. He became dizzy, and unable to proceed farther, and was soon in spasms, became unconscious and died. The entire back of his neck and spinal column assumed a blackish color, thus showing that the action of the poison was such as to cause a violent congestion of the base of the brain and cord. I believe that in these cases the immediate cause of death is a paralysis of the respiratory nerves, while its action upon the heart is that of a stimulant. I have taken small doses of the Specific Medicine as prepared by Lloyd Brothers, and note that the headache produced by an overdose is not unlike that caused by nitro-glycerine. Like nitro-glycerine, some people may take a much greater amount of the drug without subsequent headache than others, and I observe that people who are thin in flesh, and of an extremely nervous make up, are much more susceptible to its action than those more plethoric. Headache should always be taken into account as a guide in the administration of Oenanthe Crocata. Begin with the minimum dosage and carefully increase it until the headache appears, then

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drop down until you fall short of its production, when the dose should be so continued for a long time.

In proper doses this remedy seems to steady the circulation of blood in the brain and spinal cord, and thereby give this structure its normal nourishment and promote its functions. My experience gives Oenanthe a place as an emergency remedy wherever you would think of nitro-glycerine. I used the remedy in one case where there was trouble with the optic nerve with poor sight, and continual sensation as if bits of straws and cob webs were floating through the field of vision. Oenanthe gave prompt relief, and the trouble which had been of considerable duration has never given further annoyance. The remedy should be given further consideration in this direction. I believe that Oenanthe Crocata will prove of value in cases of mal-nutrition of the brain and spinal cord concerning which use of the drug I wrote several years ago. Also where we wish to steady the supply of blood to those parts, which through some faulty condition of the nervous system (that we are so far unable to fathom) needs attention.

We notice just this condition of affairs in most cases of epilepsy, and Oenanthe has done good work in many of these cases, although some of them are not in the least benefitted. It is impossible at this time with the limited observation and study that has been given the subject, to tell exactly what cases will receive benefit, and what cases will not, but one may rest assured that, remembering the headaches as a guide to the proper dosage, no harm whatever can come from its use.

Oenanthe is also to be thought of in cases of locomotor ataxia. It has given a good account of itself in several cases in which I have used it.

The dose given upon the label of the Specific Medicine, I believe, is about right as a starting point, which good judgment will guide to an increase or decrease of the drug.

Specific Uses.—In epilepsy and diseases resulting from mal-nutrition and anæmia of the brain and spinal cord.

℞—Sp. Med. Oenanthe Crocata, gtts. iii to v.
Aqua, - - - - - four ounces.

Dose.—One teaspoonful of the dilution four times a day. Should it produce headache reduce the dose.

The following case, described by Dr. F. H. Fisk, in the Chicago

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Medical Times, is also corroborative evidence of the value of this remedy:—

“Miss H. E. G., æt. 16, sanguine temperament, well-grown, robust appearance, but dyspeptic.

“When 8 years old would have spells of absent-mindedness. Would be listless and inattentive for a few minutes, then would be all right. Health at that age good. These absent-minded spells would occur at irregular intervals, and recurred up to date of applying to me for treatment for epilepsy. Menstruation began at about the age of 12; epileptic convulsions were manifest about the age of 14, and grew more frequent and more intense with time. Had been under treatment by Allopaths, Homeopaths, and Eclectics. For the past six months the patient would have six to ten convulsions in twenty-four hours, if not kept stupefied with bromide of potash. It would require from sixty to one hundred grains per day to control the condition. The mind was beginning to show feebleness, and the functions of the body were subnormal. The convulsions did not occur at or near the menstrual period any more than at other times.

“I prescribed Specific Medicine *Oenanthe Crocata*, minims five, water six ounces, mix. Directions: Give a teaspoonful every three hours until there was some complaint of headache, then only every four or six hours, during the day, as would be necessary to control the convulsions. Result, not another spasm. The medicine was continued for three months and then omitted. At that time a little mental excitement brought on a convulsion. The medicine was resumed and continued for three months longer. No more convulsions, and the absent-minded condition had disappeared. The young lady became gay, cheerful, with active mind, and entered society and took part in social entertainments as did other of her associates.

“When the remedy would be withheld for a short time a little mental excitement or mental fatigue would cause an epileptic seizure. The remedy was continued, gradually reducing the dose, for a period of about two years. Since that time more than a year has elapsed, there have been no indications of epilepsy, and no sequelæ. I have treated five other cases with like results.”

The late Dr. Gemmill, of Forest, Ohio, has frequently made the observation in epilepsy, that *Oenanthe crocata* in the proportion of five drops in four ounces of water, given in teaspoonful dose every four hours, is specific in those cases where there is a tendency to failure of the mind, increasing mental weakness or threatened idiocy or imbecility. When this condition is present in even extreme cases, he has obtained complete and satisfactory results from the use of this remedy alone. He has not found it of much benefit in other forms of epilepsy.

Ellingwood's Therapeutist, 1908, p. 250.

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Last Studies of Oenanthe Have Been Centered On Its Service In Incipient Epilepsy

These contributions brought the drug in a general way to the attention of physicians, many of whom commenced the use of Oenanthe in their practice. Two authorities in the direction of nervous complications are now making Oenanthe a specialty. One of these is Dr. Theodore Davis Adlerman, Visiting Neurologist, Cumberland Hospital, Brooklyn, N. Y., who has used the Specific Medicine in his practice since its introduction; the other, Dr. Edward A. Tracy of Boston, a Neurologist in charge of the Clinic for Nervous and Epileptic Children, Forsyth Dental Infirmary, to whom the drug appealed more recently. Both these authorities have made careful studies of Oenanthe crocata in epilepsy, Dr. Tracy devoting his special care to incipient epilepsy as found in children. The presentation of reports from these two physician authorities will probably be all that physicians interested in similar cases will need as regards the localized sphere of influence of this most pronounced and energetic agent.

We have stated that Dr. Adlerman employed the original Specific Medicine. This preparation we improved for Dr. Tracy, who desired it non-alcoholic, and under his suggestion and clinical experimentation the pharmaceutical preparation was advantageously revised. The product, being colloidal in the extreme, was titled "Colloidal Oenanthe," the directions for use as established by Dr. Tracy being as follows:

Dosage and Use.—In the use of Colloidal Oenanthe care is necessary, as in the use of any powerful drug. I have employed as high a dosage as two and one-half minims four times daily (after meals and at bedtime), with a demonstrable hypertonia of sympathetic fibres present, but I advise a cautious approach to such dosage. A safe manner to start its use is to mix ten drops of Colloidal Oenanthe with eight ounces of water, and to give one teaspoonful of the mixture after meals and at bedtime. This dosage can be increased by doubling the amount of Colloidal Oenanthe each time bottle is refilled, every twelve days, until the mixture consists approximately of a dram of Colloidal Oenanthe in eight ounces of water. If increase of dosage causes untoward symptoms, as debility or headache, lessen the dosage. In incipient epilepsy in children, manifested by sudden pallors, dizzy attacks, periodical headaches, and fainting spells, these symptoms disappear under this medication. Medication should be persevered in for a year or more. Incipient epilepsy is associated with a demonstrable hypertonia of sympathetic fibres, and has been found responsive to Oenanthe. The drug is a sympathetic paralyzant.

EDWARD A. TRACY, M.D.

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The label devised is in facsimile here presented:

<p style="text-align: center;">COLLOIDAL OENANTHE</p> <p>A solution of Oenanthe Crocata principles as prepared for Edward A. Tracy, M.D. Each minim of this preparation represents two grains of green Oenanthe root, (non-crystallizable energetics). It mixes clear with water, glycerin, alcohol or syrup, without precipitation. It is energetic in overdoses, and should be employed only under the watchful care of a physician. See accompanying print, giving uses, by Dr. Tracy. POISONOUS IN OVERDOSES</p> <p style="text-align: center;">LLOYD BROTHERS, Cincinnati, Ohio</p>

In connection we will state that this perfected preparation is accepted by us as embodying the acme of Oenanthe's pharmaceutical investigation and has been adopted in the process for making Specific Medicine which, therefore, can be used wherever the name Colloidal Oenanthe is employed by us.

A PLEA FOR THE EARLY DIAGNOSIS OF EPILEPSY*

BY EDWARD A. TRACY, M.D., BOSTON

School Physician, Boston Public Schools; in Charge of Clinic for Nervous and Epileptic Children, Forsyth Dental Infirmary, Boston

"Genuine epilepsy is a progressive disease. It often begins with symptoms that while noticeable, yet are so brief-lasting in character, that they are not recognized at their true value, for they are the index of the presence of one of the most appalling diseases that afflicts humanity. The chronic epileptic is always in proximate danger of injury, or accidental death, and therefore the source of incessant anxiety to relatives.

"The beginning of epilepsy is frequently associated with vertigos, sudden pallors, fainting spells, and "absences" (brief lapses of consciousness in which the child stares for an instant). In an incipient

* Address made to the nurses of the Boston Public Schools, at their meeting, Sept. 3, 1919.

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epilepsy, one or more of these symptoms may be present for a year or more, and, with periods of irritability, may be the only abnormal manifestations noticed in the child. Suddenly a convulsion occurs, to be repeated at intervals. So plain then is the diagnosis of epilepsy that 'He who runs may read:' the incipient stage of the disease has ceased, the chronic stage is entered upon. The progress of the disease continues, for a majority of epileptics become demented. The brain in the beginning is but slightly or not at all touched, but as the disease progresses into dementia, the brain degeneration becomes marked. The hopelessness of curing advanced epilepsy with the brain damaged as in dementia, is based on this involvement. I do not say that treatment in chronic epilepsy before the stage of dementia is hopeless. Much can be done and is done by medication and diet to enable many chronic epileptics to live useful lives. Science undoubtedly in the future will teach more about the faulty metabolism that plays so large a part in the production of the periodical attacks of convulsions characteristic of the chronic stage of the disease. It is not too much to expect that the metabolic toxins of the disease in time will be identified and a neutralizer for them found. This means that a brilliant place in epileptology awaits the research worker in metabolism, whose work, when done, will make the treatment of chronic epilepsy truly scientific, and not the groping thing it is.

"For incipient epilepsy, science offers much more than hope, since research work has uncovered facts that indicate the essential cause of the disease to be an over-irritability, a hypertonia of the sympathetic nerve fibers, that treated early can be overcome by drug action. Research work before published* has shown that genuine epilepsy is marked by disease of the sympathetic nerve fibres. The diseased condition of these fibres is manifested by the abnormal sympathetic reflexes and chronic vasoconstriction spots found in epileptics. These diseased sympathetic manifestations in living epileptics are explainable by the diseased condition of the sympathetics and ganglia found by Echeverria in epileptics after death. The objective signs that have been discovered in epileptics, the abnormal sympathetic reactions and chronic vasoconstriction spots, phenomena that can be seen, measured and photographed, are too important to be further ignored, since they serve in the diagnosis of the disease.

"In incipient epilepsy there has been found, as before stated, a hypertonia of sympathetic nerve fibres. By hypertonia is meant a true over-irritability of the fibres, shown by the sympathetic reflexes

* Boston Medical and Surgical Journal, Vol. CLXXVIII, Nos. 23, 24, 25, and 26.

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being more intense and appearing quicker than in the normal individual. The hypertonia that is manifested by the intensity in color of the vasoconstriction reflex (the white streak on the skin which follows stroking with the vasomotor tester), there is no measure for. Appreciation of the degree of color intensity comes from observation and practice in making the tests. But the hypertonia that manifests itself by the abnormal quickness with which the reaction appears, is readily measured with the aid of a stop-watch.

"The hypertonia found in incipient epilepsy prompted the query, could the hypertonia present in these cases be overcome by drug action, and if so, with what result? The drug required to overcome an over-activity of sympathetic fibres should be, evidently, a sympathetic paralyzant. The only such drug I learned of in my readings is ergotoxin phosphate, found, by Elliott, the English physiologist, to be a sympathetic paralyzant in animals. I imported a small quantity of this drug, made a very dilute solution of it in water, and injected a few drops of the solution into my arm. The reflex vasoconstriction reactions produced near the site in injection came slower than before the injection. Control injection of plain water was negative. I therefore concluded that ergotoxin phosphate is a sympathetic paralyzant in man. At this period I had been familiar with a drug reported by Dr. E. R. Waterhouse to be durable in some cases of epilepsy—the drug *oenanthe crocata*. I injected a weak solution of this drug into my arm and found it slowed the sympathetic reaction in a similar manner to ergotoxin phosphate. The conclusion followed that *oenanthe* is a sympathetic paralyzant. The *oenanthe* preparation being a tincture, and as alcohol is a nerve irritant, I asked Prof. John Uri Lloyd if a preparation of the drug without alcohol could be prepared. He kindly prepared and supplied me with colloidal *oenanthe*, alcohol free, and this preparation I have used in the treatment of epilepsy. In incipient epilepsy it has proved curative.

"Just as the stream near its source can be controlled, while further on, from various causes, it has become the impetuous torrent that defies all the powers of man—so epilepsy in its incipiency, when the current of nerve action is but slightly awry, happily yields to treatment which restores the current to its normal bounds, while later in the progress of the disease the pathologic stream of nerve force increases so that man is powerless against it. For, since Aesculapius, physicians have witnessed the manifestations of this force in convulsions, without being able to stay them.

Facts carefully observed show the presence of hypertonia of sympathetic fibres in incipient epilepsy and the disappearance of this

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hypertonia together with the associated symptoms of vertigo, irritable spells, dizzy headaches, and fainting spells following the use of oenanthe (which experiment shows to be a sympathetic paralysant), are the reasons for this plea for the early diagnosis of epilepsy. For when the disease is allowed to progress we have not alone diseased sympathetic fibres, but a secondary hyperirritability of cortical cells (hence the convulsions), and in place of contending with the stream at its beginning, we are confronted with a very torrent of pathologic nerve energy that to science is as yet unmastered.

"Having discussed somewhat the work upon which this plea for the early diagnosis of epilepsy is based, a brief consideration of the means taken to render it effective will be in order.

"Bear in mind therefore (and let parents and teachers know the fact), that incipient epilepsy manifests itself by vertigo (dizziness), pallor, fainting spells, and brief lapses of consciousness. Children with any of these symptoms ought to be examined for the objective signs of epilepsy. If these are found present, careful treatment with colloidal oenanthe is indicated.

"In conclusion, I desire to thank Dr. Devine for the privilege of addressing you on the subject of epilepsy. I am confident that with your cooperation and that of the school teachers, we school physicians will make progress on the work that has been undertaken—the tabulation of the cases of epilepsy in the schools."

Boston Medical and Surgical Journal,
September 30, 1920, p. 401.

OENANTHE CROCATA IN EPILEPSY AND OTHER NERVOUS AFFECTIONS

T. D. ADLERMAN, M.D., BROOKLYN, N. Y.

Visiting Neurologist, Cumberland Hospital, Brooklyn, N. Y.

Mr. President and fellow members: In presenting this paper to you I am not offering you a panacea for all nervous diseases, nor do I offer you a panacea for the cure of all cases of epilepsy. I do not claim that the drug which I propose to bring to your attention will never fail, and that this remedy will give you the same uniform results in all cases, as such remedies do not exist. All remedies fail sometimes, and there is not a medicine in the U. S. Pharmacopeia which at one time or another will not disappoint you. Morphine fails at times, opium fails sometimes, and so on and so on.

My object in presenting this paper to you is to bring to your

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notice my results and conclusions with one drug in a certain line of diseases, after a trial of the same for sixteen years.

Devoting this paper mainly to the action of this medicine in certain specified ailments, I will not go very much into the description of the diseases themselves at the present time, as on former occasions I have devoted quite some time and effort in describing epilepsy, neurasthenia and other allied conditions of the nervous system, so that if at present I do not mention such things as diet, removing of cause, rest, paying attention to other necessary measures which must be taken into consideration in treating any disease, it will be understood by you and me that all of these will be given strict attention in the actual treatment.

Ever since mankind commenced to look to the medicine man for relief from bodily ills, one of the most perplexing diseases, on the border line between the functional disturbances of the nervous system and organic affections, one that taxed the utmost skill of all medical men, was epilepsy. I do not believe there is another disease which is more horrible or which has been looked upon with more despair by both physician and laity, than epilepsy.

To take up and define epilepsy to you is not the object of this paper, and I am willing to subscribe to all theories that have been advanced, or may be advanced by you, the same as I am willing for you to subscribe to all theories as to its pathology. I am not going to argue these questions in this present article of mine. Whether you will say that epilepsy is due to cortical excitability or to cortical changes, or whether you will say that epilepsy is a disease of the cerebral cortex, or that vascular and peri-vascular changes of the cortex produce it, or that changes in the pyramidal cells of the cortex are at fault, or that there is a hypertrophy of the neuroglia bundles, or that the changes in the second layer of the cortical cells produce it, I will take no issue with you, as all have their good arguments and all have some faults.

Let me assume that you claim that the seat of primary derangement is in the medulla oblongata and upper portions of the spinal cord. Let me assume that you claim that the derangement consists in an increased and perverted action of these and in these organs, and that the result of such action is the induction of a spasm in contractile fibres of the vessels supplying the brain and in the muscles of the face, pharynx, larynx, respiratory apparatus and limbs. Let me assume that you claim that by contraction of the vessels the brain is deprived of blood and consciousness is arrested, the face is deprived of blood, hence the pale color, contraction of the muscles, and there is arrest of respiration. Let me assume that you

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claim that arrest of breathing may lead to special convulsions of asphyxia. You may even claim that the loss of consciousness and the convulsions of epilepsy are the result of sudden and extreme anemia of the brain. You may claim that this anemia to cause the convulsions must be sudden and extreme. You may claim that the whole disease is nothing but an extreme irritability, a hypertonia of the sympathetic nerve fibers. You may claim that the pallor of the face, the dilatation of the pupils are produced by contraction of the vessels at base of the brain controlled by ganglia. You may also claim that the cervical ganglia and sympathetic nerve produce the whole disease. Your claims in these respects are all as good as the ones I may have, and I will take no issue with you. What interests me and all of you is, what to do with this monster and how to conquer this disease, if that is possible.

Of great interest to me is its occurrence in infancy, and not only is it of interest but of great perplexity on account of the difficulties encountered in its treatment. To differentiate the epileptic attack from the convulsions of childhood is no easy matter, but still harder is it to find the proper treatment.

Epilepsy generally begins in the first five years of life. It is less likely to begin between the sixth and tenth years. The reason why epilepsy occurs in early infancy is that at that time diseases of the brain and its membranes, as well as injuries to the head, are apt to occur and in time give rise to convulsions, and, while convulsions, the origin of which may be referred to acute diseases of the brain, may and do appear independently, genuine epilepsy will usually be recognized as a degenerative neurosis.

As was said before, the early years are dangerous, and about one-fourth of all epileptic cases begin in those dangerous years, thirteen to sixteen, which in most instances constitute the period of puberty. Out of 1,450 cases which were analyzed, 422 developed epilepsy before the tenth year and 75 per cent. before the twentieth year.

Let us bear in mind that many convulsions in early infancy are erroneously ascribed to injuries, or to ingestion of food, or to pyloric obstruction in the infant; but if the supposed-to-be causative factors have been removed, and the convulsions still continue, is it not the duty of the attending physician to seek neurological aid, and in these cases I exhibit *Oenanthe crocata*. In conjunction with this let me call your attention to the importance of an early diagnosis in epilepsy, if the same is possible. Let us remember that epilepsy, being essentially a disease of early life, an early diagnosis is essential to a successful treatment; hence convulsions from any cause, at any age, at any

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time, are not to be regarded of slight significance, but rather let us suspect the possibility of the development of epilepsy in every case and give the same the necessary attention.

Let us remember that recurring convulsions in the young with a hereditary susceptibility to nervous diseases, should always be regarded as possibly epileptiform in their nature, and it is here that most careful study must be given to all symptoms, and if even a positive diagnosis of epilepsy is not possible in a given case in its early stages, let us take a chance that it is and commence the treatment, rather than to make a mistake of neglecting the case and letting it develop into the chronic stage, when the treatment may not be possible or already too late. Very often the attack in children consists of a short, piercing cry, a slight loss of consciousness lasting but a second, a few convulsive movements of the arms; and the attack is all over. All so quick and so slight, that many times the mother and the physician will ascribe it to teeth, food, etc., and pay not the slightest attention to it, and yet this is an important stage of the disease, as it is the beginning of the trouble, where the drug *Oenanthe crocata*, if administered and the administration persisted in, will prevent future trouble and future epileptic attacks.

Oenanthe crocata exerts a marked influence in epilepsy, and many of these cases can be cured if the drug is given early in the disease. *Oenanthe crocata* controls the excitability or irritability of the medulla and restrains the subsequent convulsion. After using and trying this drug in many types and in many conditions, I am prepared to say that *Oenanthe crocata* does relieve certain forms of epilepsy. There are forms of epilepsy in which anemia and defective nerve control are the prominent symptoms. The patients are women or girls, and with them the disease is apt to commence at about the first menstruation, and the attacks thereafter will occur near or about the menstrual period. The attacks commence in the form of the *petit mal*. In such cases and in children in whom the disease comes in the form of *petit mal*, the administration of *Oenanthe* will give you the most gratifying results, providing you push your drug and keep up the treatment for months to come. Your patient must realize, or those around the patient (if same is an infant) that prompt results can be obtained if the treatment is persisted in, and not otherwise.

May I not mention here one case from my records: Patient a female of nineteen years of age; general health fair, menstruation irregular, with some slight pains; family history negative, Wassermann negative; urine report (24-hour sample) negative, with the exception of some slight traces of indican. The first attack of convulsions started

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at the first menstruation, when patient was fifteen years old, the convulsive attacks keeping up every month, either some time before or during the menstrual periods. Vaginal examination did not reveal anything abnormal; clitoris normal and not adherent; rectum normal and not tight, and no constipation. This patient, under the treatment of different physicians has been saturated with bromides until she presented the typical bromide rash, and yet the attacks kept on increasing. This girl was placed upon the *Oenanthe crocata*. This was in September, 1919. The attacks kept on for three weeks after the administration of the drug, when they commenced to subside, until now we have had no attacks for the last sixteen months. The only troublesome condition at the present time is a rather persistent headache, which I ascribe to the use of *Oenanthe*, but which is not steady, and the patient is satisfied to have it instead of the convulsions. She is passing her menstrual periods without any trouble, is gaining in weight, and has brightened to a considerable degree mentally.

Oenanthe in my opinion lessens reflex irritability of the whole nervous system, and especially the morbid excitability of the brain. Let us here quote another case: Master G. H., referred to me by Dr. H. S., of Brooklyn. The boy is eleven years old. Family history, with the exception of alcoholism in an uncle on the mother's side, is good. The boy had the usual diseases of infancy, such as measles, scarlet; no diphtheria. His attacks were of a different kind, running from the very slight convulsions to the grand mal. He had the first epileptic attack at two years of age. Some days from two to four fits; some weeks one or two only for the week. Some of the attacks were slight, some very hard. Examination revealed a normal penis, prepuce normal and not tight, no adhesions, rectum normal. While the boy presented a fairly well-nourished body, yet his mentality was somewhat impaired, as he did not seem to exhibit the brightness of a boy of that age, and only with the utmost difficulty has he passed some of the Simon-Binnet tests that I gave him for that age. There is a stupid look on his face. He received the usual epilepsy treatment from his family physician, with no effects whatever. In this case, with the exception of eliminating all meats and salt from his diet, he was given the ordinary diet with a *morphological* consideration of his body, and placed upon *Oenanthe crocata*. The first three weeks the results were somewhat slow, the attacks kept on at irregular intervals, somewhat to my disappointment and to the great satisfaction of the former attending physician, who did not take kindly to my methods. On the third week, however, there were only two attacks and none on the fourth. The drug was increased in dose and the

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attacks subsided entirely. The remedy was then discontinued for a week, and the attacks, slight in nature, came on again. I am now administering Oenanthe in this case at week intervals—I mean he is taking Oenanthe one week, and does not take the drug the next week. There are no attacks of any kind, and the case is doing very well indeed. He has returned to school, is bright, and reports from school show far better results in study than he ever had before the treatment.

I presume that we all know that in cerebral palsies of children there is a tendency to the development of epilepsy; in fact, epilepsy will appear in about half of all these cases, probably due to some brain lesion. In many of these cases the initial eclamptic attack is followed by regular seizures, which seem to come at stated intervals. In these cases Oenanthe seems to exercise a most controlling and benign influence, and I was able to reduce these attacks with Oenanthe almost to a minimum.

Another form of epilepsy in which Oenanthe works with a marked degree of success is the so-called vertiginous form of epilepsy. As you know, epilepsy often exhibits the so-called aura. These warnings may occur at intervals between the attacks. In some of these cases the patient suddenly loses consciousness and falls. This is followed by some slight twitchings of the face, eyes and mouth, and then almost instantly the patient recovers himself. Oenanthe in these cases will give you very good results. These same good and prompt results from Oenanthe are obtained by me in cases in which the attacks are mainly a momentary loss of, or a momentary disturbance of consciousness, after which the patient resumes his or her condition, the patient actually having no knowledge that anything abnormal has occurred, or, if he or she does know that something has happened, they can not describe it, and the usual answer is, "Something has passed over me for a moment." Oenanthe in these cases produces results. A case in illustration:

J. K., a boy seventeen years, office boy, fairly good health, family history shows a nervous heredity, mother and father neurotics. Wassermann negative, urine report negative. Boy admitted masturbation for about a year. Has been in fair health until some months ago (case examined January 3, 1923), when some queer spells (the wording here is the boy's), have passed over him while at work in the office. These spells were momentary, during which, if talking to some one, there would be a very slight, hardly perceptible interruption of the conversation, or if he was writing the pen would stop and when he would come to after a moment the pen would be a line or two lower than the line it ought to have been on. This case was completely

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cured by Oenanthe. To-day there are no attacks, and none was reported up to this writing. He is still, however, taking the drug in very small doses.

There are other forms of epilepsy in which, besides the loss of consciousness, there is only a tonic spasm. These cases are controlled by Oenanthe crocata. The same applies to cases of epilepsy of the young in which the patient is unconscious with a very slight spasm and keeps on repeating words without any sense whatever.

There are cases of petit mal in school children. During the attacks the patient suddenly, with some visible pallor of the face, ceases his or her activity, permits an object to fall from the hands, or, if walking, will stop suddenly, looking around for a moment, and then resuming his or her walk, or whatever he or she may have been doing. These cases have given me quite some worry and trouble until I commenced the use of Oenanthe crocata.

There can be no question that Oenanthe crocata gives very good results in all cases of nocturnal epilepsy. We all know that many of these night attacks escape notice, unless they are accompanied by enuresis nocturna, which also seems to disappear quickly after the administration of Oenanthe.

It has been my rule to administer Oenanthe in all cases of epilepsy associated with puberty. Very often the first menstruation is the cause of an outbreak of epilepsy, giving rise to the so-called menstrual or pre-menstrual epilepsy. In boys with the first awakening of the sexual feelings, sometimes leading to excessive masturbation, similar attacks of epilepsy are started. In both of these forms Oenanthe will give you very good results.

The early convulsions of the second and third year of life, clonic and often persistent, associated with hypersensitiveness of the nervous system, the nodding spasms of ocular muscles of the child will call for Oenanthe, and if you exhibit the drug and persist in the administration you will prevent the development of a permanent epilepsy.

In senile epilepsy, where the heart is weak (arterio-sclerotic), it is necessary to use cardiac tonics in conjunction with the Oenanthe, and here either cactus or adonis are indicated. I find that a good fresh infusion of adonis (thirty grains to water six ounces), to which is added small doses of Oenanthe, has given the best possible results.

The so-called status epilepticus, where the severity and the number of attacks have increased, and where the damage seems to have been done to mental activity, Oenanthe produces no results whatever as far as the mentality is concerned, but it does lessen the attacks and the number of seizures. I have been using helleborus niger for the

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mental aberration, but am not as yet prepared to say much about its use.

I have seen many children who have convulsive attacks, perhaps as an accompaniment of some metabolic disorder. These children receive great relief from the administration of *Oenanthe crocata*. This relief was manifested by a prompt diminution in the number of seizures and in improvement in the general mentality of the children. If children can be prevented from having convulsive attacks until the period of puberty has been safely passed, we certainly have accomplished and gained a lot, and by exhibiting *Oenanthe* for a long period of time this can be done in most cases, if not in all of them. When you begin the treatment of *Oenanthe* you must be prepared to continue the administration of the drug for some time to come.

Leaving the epileptic field for a while, let us look into some of the diseases of the nervous system which in my hands have been benefited by the use of *Oenanthe crocata*.

In multiple neuritis the loss of muscular balance and the diminution of muscular strength may be, and often is, followed in many cases by a certain coarse, well-pronounced trembling. *Oenanthe* exhibits a controlling influence and reduces these tremblings to a minimum.

In multiple cerebro-spinal sclerosis, in very many cases the upper limbs present an intention tremor, which is so characteristic of this malady. While at rest the hands, the head and trunk are quiet, but the minute the patient tries to reach out for any article a coarse trembling appears, and to reduce these tremors, nothing will give you greater relief than the administration of *Oenanthe crocata*.

We have another tremor that is encountered while the patient is at rest. This tremor is found in different motor neuroses. The tremor may be a slow one, and may be confined to one or both arms. In those cases, too, *Oenanthe crocata* is the remedy par excellence.

In neurasthenia due to a generalized myasthenia, we also meet with a tremor, which comes on after the slightest muscular effort. The tremor may be found in about 90 per cent of these cases. The tremor is found in the knees, head, lips, face, and hands. *Oenanthe*, without any question, in conjunction with the other medicines, overcomes these tremors.

Very often you will be puzzled what to do for neurasthenic headaches. These headaches are a common symptom of neurasthenia, and are found in nearly all cases. These headaches may be slight, they may be constant, hard and severe. They may be occipital, at the base of the brain; they may be localized in spots, they may be

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frontal, they may be temporal, they may be vertical. They may be splitting, they may be dancing—of the come-and-go variety. They may be throbbing, they may be buzzing, and after you have administered all your remedies and have failed to produce the desired relief, then give Oenanthe. In my hands it produced the results. In some cases the combination of oenanthe and guarana gave me greater and more lasting results.

There are certain other complicated forms of involuntary motion, the so-called athetotic and choreic movements. As you know, athetotic movements are confined mostly to fingers and toes. There is a slow, uniform, continuous flexion and extension, abduction and adduction of the fingers. Each finger moves independently. Oenanthe given early will control these finger movements. The drug in these cases must be pushed and given persistently.

In choreic movements, which need no particular description from me, as you all know them, we administer Oenanthe with very happy results. In the milder forms of chorea, Oenanthe will give you quick results, and the continuous muscular actions subside. In some cases of long standing it is not a bad practice to combine Oenanthe with *ignatia amara*.

Oenanthe may be considered as the best remedy for spasmodic attacks. Hysterical spasmodic attacks following some emotional conditions associated with a tonic spasm without loss of consciousness will be controlled by Oenanthe *crocata*. In these cases it is also well to administer valerian every other day, continuing with Oenanthe daily.

There is a condition found in some cases of myelitis, the clonic spasm of which is known as spinal epilepsy. It is the result of increased reflex irritability, and Oenanthe exercises a wonderful influence and reduces these spasms promptly.

There are occasional epileptiform attacks met with in *tabes dorsalis* (though they really do not belong to the pathologic picture of *tabes*) of a rather mild form. These attacks are easily overcome by the administration of Oenanthe *crocata*.

It has been my good fortune to see some tetany cases which had typical epileptic spasms. There certainly is some connection between tetanic and epileptic spasms, and to overcome these tetany spasms very often taxes all our medical skill. The combination here of Oenanthe with *solanum* places in your hands a wonderful weapon. These two drugs must be administered in oft-repeated doses.

In spasms of cortical origin, which are characterized by marked contractions of a slow rhythm; in *chorea rhythmica*, as well as in the

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so-called chorea electrica, very satisfactory results were obtained by me in most cases. In fact, in the few failures that I had in the beginning the persistent administration of Oenanthe produced marked improvement.

There are some clonic contractions which are produced by irritative factors in the pelvic cavity. These contractions may be in the region of the crural and obturator nerves, as well as the lightning-like contractions of myoclonia, which may be confined to the muscles of the thigh and to the abdominal muscles. These contractions, as any medical man can tell you, are hard to overcome, yet the administration of Oenanthe, given for some time, will give very good results.

In sexual neurasthenia of the young, with repeated seminal emissions associated with erotic dreams, Oenanthe is a very good remedy; in fact, it will give you better results than salix nigra or any other remedy.

I consider Oenanthe a most wonderful drug in the pre-juvenile sexual neurasthenia associated with masturbation, in which seminal emission occurs during the day and not at night. There are some natures of a highly sensitive erotic disposition, who are, so to say, blessed (?) or plagued (?) with sex. Oenanthe will control the sexual passion. The masturbator who, upon his marriage, finds that he is not able to perform his marital duties because of a too hasty ejaculation will be able to delay his orgasm if you put him on small doses of Oenanthe, administered for several weeks. In some of these cases I combine coniium with Oenanthe, and the two drugs in these cases produce the best results. In the treatment of sexual derangements, the excitability and irritability of over-active reflexes call for the administration of Oenanthe crocata.

Conclusions.—From the study of this drug I find that Oenanthe has a wide action upon the cerebro-spinal and muscular systems, as well as on the end-organs of motor nerves. Oenanthe crocata is a sedative, antispasmodic and narcotic of great power, and should be used slowly and with intelligence. The fact that it is poisonous in overdoses, the fact that it produces violent headaches when not used properly, are no reasons why it should not be used as a medicine in certain classes of disease where it seems to benefit the poor sufferers. Oenanthe crocata is indicated in all excitations of the nervous and muscular systems in which the voluntary muscles are abnormally influenced. In all cases of exalted muscular movements, in spasmodic action of voluntary and involuntary muscles, as tetany, hysteria, epilepsy, chorea, hydrophobia, etc.

Preparation used: In the very beginning my experiments and

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treatments were with the specific medicine *Oenanthe crocata*, prepared by Lloyd Brothers, and later on with the colloidal *Oenanthe*, which was also brought forward for the medical profession by Lloyd Brothers, of Cincinnati.*

Dosage.—As with all my other drugs or diets given to any patient in any case, I always first consider the morphology of my patient, the bodily makeup of all my patients, and prescribe accordingly. For those of you, however, who are not acquainted with the morphological theory of disease I would suggest as the beginning dose for *Oenanthe*, one-sixth of a drop, give for about a week, then increased slowly according to results obtained or effects produced. I have given thirty drops in five ounces of water, in teaspoonful doses, as the highest dose administered. In administering *Oenanthe* the increase in dose, if same is necessary, should be gradual, never jumping from a small dose to the highest at once. Small doses persistently given will produce results, but increases are necessary in some cases.—National Eclectic Medical Quarterly, September, 1923.

696 St. Marks Ave., Brooklyn, N. Y.

LATER.

536 Commonwealth Avenue, Boston, Mass.

Lloyd Brothers,
Cincinnati, Ohio.

April 21, 1924.

Dear Sir:

I received proof of your pamphlet descriptive of *Oenanthe Crocata* and believe it will do much good in bringing to the attention of many in the profession this important drug. But as there has been considerable productive research in epilepsy done at the Forsyth clinic since my address to the Boston School Nurses in 1919 (which you have reprinted in your pamphlet) I ask you, in the interest of children afflicted with this disease and who are curable with correct treatment, to let me briefly note some of this research; and to publish this communication with your pamphlet.

The *accurate* diagnosis of incipient epilepsy is possible by means of the objective signs that accompany the disease: chronic white spots, and abnormal cutaneous vaso-motor reactions which have been described in a paper entitled "Incipient Epilepsy: Its Diagnosis and Treatment," read at the Boston meeting of the American Medical

* Now the only preparation made by them. See page 9.

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Association, in 1921, and published in the N. Y. Medical Record, March 11, 1922.

A *calcium deficiency* has been demonstrated in this clinic in children with chronic epilepsy accompanied with frequent convulsions. This means that plenty of calcium should be administered to the epileptic. Calcium lactate, 5 to 20 grains, in a glass of milk, four times a day, accompanied with a parathyroid tablet has been used effectively to fulfill this indication. Sedation of the cortex is accomplished by calcium bromide and colloidal Valerian in suitable dosage. This treatment, with oenanthe is curative in epilepsy in children.

Research in the clinic has shown that many cases of epilepsy arise in bottle-fed infants. These cases are accompanied with delayed dentition; thus indicating a lack of assimilable calcium in the diet.

From the observation of cases of epilepsy in animals (monkeys and guinea pigs) arising from diet modification, including vitamins, in the research laboratory conducted by Dr. Percy R. Howe (Assistant Professor of Dental Research, Harvard), here in the Forsyth Dental Infirmary, I am convinced that diet, including the vitamins, is very important in the etiology of epilepsy. It is, therefore, advisable with bottle-fed infants to provide for the correct calcium intake, say 2 to 10 grains of calcium lactate a day; and to give orange juice, a teaspoonful upwards, with 3 to 10 drops of cod liver oil a day, to insure the vitamin intake that is natural in the mother's milk.

The importance of bringing this research in epilepsy at the Forsyth Clinic to the attention of the general practitioner is obvious. Genuine epilepsy in children is a conquerable disease, treated perseveringly as above outlined.

Sincerely,

EDWARD A. TRACY, M.D.