

GELSEMIUM.

Common Names.-Yellow Jessamine, Jessamine, Carolina Jessamine, Wild Woodbine, White Poison Vine, White Jessamine,

History.-*Gelsemium sempervirens* is a native of the Southern United States, being abundant in the swamps, woods and thickets, from Virginia to Florida. It is a handsome climber, twenty to fifty feet in length, blooming in early spring, its flowers being overpoweringly fragrant. The name, given by Jussieu, was made from the Italian word *Gelsomino*, meaning jasmine. But it is not a jessamine, and inasmuch as there is a true jessamine with yellow flowers, E. M. Holmes, of London, considers it unfortunate that the term *yellow jessamine* has been applied to it. This common name, however, is now firmly established. Its Italian name, *Gelsomino*, possibly led Eclectic authors to use the name *Gelseminum* instead of *Gelsemium*, a term found in early Eclectic literature and but recently displaced, a term perhaps, so far as derivation is concerned, more appropriate than the name commonly employed. In this connection it may be said that Professor Scudder invariably used the word *Gelseminum*.^{*1}

Medical History.-Barton and his co-laborers did not mention *Gelsemium*, but Rafinesque (1830) gave it a place, stating that "Root and flowers" are narcotic, their effluvia may cause stupor, tincture of the root is used for rheumatism in frictions," a statement taken almost literally from Elliott's *Botany of South Carolina and Georgia*, 1821.^{*3} The medical record (King) had its origin through

*1-In an English botanical work in the Lloyd Library, which I can not now locate, a long discussion appeared concerning the two words. If memory serves me correctly, the decision was in favor of *Gelseminum*.

*2-The statement has been made and possibly established that honey from the flowers of this plant is narcotic.

*3-Stephen Elliott was born in Beaufort, S. C., November and died in Charleston, March 28, 1830. He was studiously inclined, graduating from Yale in 1791. Returning to his Southern home he thereafter continued his studies, which inclined toward science, especially botany, his research in that direction being specialized in the flora of South Carolina and Georgia, through which States he traveled and lectured on the subject. He became editor of the *Southern Review*, and took a conspicuous part in founding the *Literary and Philosophical Society*, and the *Medical Society of South Carolina*, being elected President of the first named body. He was elected a Fellow of the *American Academy of Science*, received the degree of LL. D. from Yale 1819, from Harvard 1822, and from Columbia in 1825. Between 1823 and 1830 he was Professor of *Natural History and Botany* in the *Charleston Medical College*. In civil affairs he was no less interested than in science, being a member of the lower house of the *South Carolina Legislature*, 1793-1812, and was elected President of the *State Bank*, organized in 1812, which position he held during the remainder of his life. His natural history collection was very large. In 1821 he published the first volume of his "*Botany of South Carolina and Georgia*," and in 1824 the second volume appeared. This work is often referred to by Porcher, and has been freely culled by subsequent authors, serving as a foundation for the medical uses of many Southern drugs. Too often little or no credit was given the author. Witness the remarks of Rafinesque concerning *Gelsemium*, which serves as a text for this biographical note, and which has served a chain of whose references scarcely alter the words of Elliott.

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the mistake of a servant of a Southern planter who was afflicted with fever. This servant by error gave his master a decoction of Gelsemium root, instead of the garden plant intended. Immediate loss of muscular power and great depression followed, all control of the limbs was lost, the eyelids drooped and could not be voluntarily opened. Death seemed imminent. But the effects finally wore away and the man recovered, free from fever, which did not recur. An observing physician took this experience as a text and prepared from Gelsemium a remedy which he called the "Electrical Febrifuge," which attained some popularity. Finally, the name of the drug concerned was given to the profession. This statement is found in the first edition of King's American Eclectic Dispensatory' 1852, which work actually presented Gelsemium to the world of medicine' although, as will be shown later, the plant had a recorded position much earlier. King's article on Gelsemium was copied in substance by the United States Dispensatory, 1854, none of the preceding nine editions of that work having mentioned the drug. But the fact is that Porcher* commended Gelsemium in his report to the American Medical Association, 1849 and, concerning its restricted local use in gonorrhoea and rheumatism, referred to Frost's Elements of Materia Medica (South Carolina) as well as to several local journal articles.

For a long time following 1852 (at which date King's American Dispensatory appeared), Gelsemium remained an almost exclusive remedy of the Eclectic school, but in 1860 it attained a position in the U. S. Pharmacopoeia, although not until 1880 did that work give place to any preparation of Gelsemium. At present the drug is in much favor with many physicians of the Regular school, and should in justice to themselves be used by most of them, but it is generally classed as one of the Eclectic remedies' being actually one of the most important in Eclectic therapy.?

* Francis Cyre Porcher was born December 14, 1824, St. John's, Berkeley Co., S. C., being the descendant of a French Huguenot family. In 1847 he graduated from the South Carolina State Medical College, Charleston, where he afterward became a professor of Clinical Medicine and Materia Medica. For many years he was editor of the Charleston Medical Journal and Review, was corresponding member of the Academy of Natural Sciences, and Fellow of the College of Physicians, Philadelphia. He was President of the S. C. Medical Association, and during the Civil War was Surgeon in Charge of the Confederate Hospitals, Norfolk and Petersburg, Va. In 1849 he contributed a "Report on the Indigenous Medicinal Plants of South Carolina," Am. Med. Assoc., 176 pp., and in 1854 wrote for the Am. Med. Assoc. a paper on "The Medicinal and Toxicological Properties of the Cryptogamic Plants of the U. S.," 126 pp. In 1863 he wrote his (now rare) monumental production in behalf of the Confederacy, "Resources of the Southern Fields and Forests." by direction of the Surgeon General of the C. S. A. Dr. Percher died in Charleston S. C., November 19, 1896.

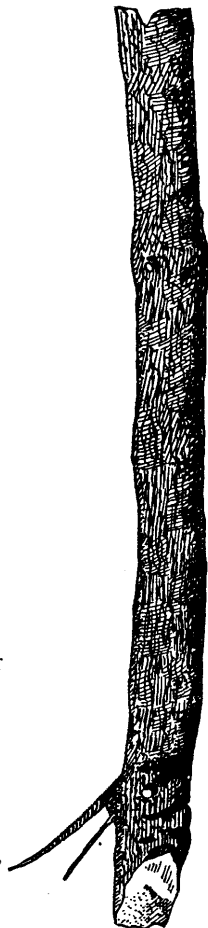
In this connection it may be stated that Gelsemium has been often presented in Regular print by such journal contributors as Drs. John Scott, Isaac Ott, E. A. Anderson, G. S. Courtright, W. C. Hull, and many others. Professor Roberts Bartholow gave it great attention in his *Materia Medica*, and also in journal contributions in both Europe and America. Professor T. J. Wormley gave its alkaloid chemical consideration, while Drs. Ringer and Murrell in the *London Lancet*, 1875-76-78, made admirable researches. The American interest in Gelsemium, outside the Eclectic school, not withstanding the clinical evidence of the authorities we have mentioned, and others who might be named, is in fact founded on the work of Bartholow, Wormley, Ringer and Murrell

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Notwithstanding its energetic effects, questions have arisen concerning the lethal powers of Gelsemium, and because in one instance a lad of twenty years swallowed six fluid drachms of the tincture without serious results, the argument has been advanced that Gelsemium is not a poison. But probably the tincture taken was at fault; we have seen specimens that need not have been feared if swallowed in any amount, short of alcoholic effect. The fact is, many authentic cases of death from Gelsemium are on record, although none have come under our immediate observation.

Description.-The rhizome and root of Gelsemium are very tough, woody and brittle when dry. The rhizome attains the length of many feet and may be one to two inches in diameter, the knot at the stem base even reaching the size of a Man's fist and weighing half a pound. The rhizome is brown externally and nearly white within. When chewed the bark imparts a bitter taste, not otherwise disagreeable, but as the virtues reside almost wholly in the bark, the wood is nearly tasteless. The rhizome-bark is thin, clings close to the wood, and carries numerous tough, silky, bast fibers, which, however, in our experience, are not as abundant as some authors have described. When green, the bruised rhizome exhales a peculiar, honey-like odor, to the writer very pleasing and characteristic. This disappears on drying the drug. For thirty years or more, Eclectic physicians have insisted that the green drug possesses qualities altogether absent in the dry. This we accept without reserve, and for decades have worked only the green drug, believing that the point as concerns its superiority is not debatable, and that, too, notwithstanding that the described alkaloids and other products broken out of the drug are fixed, and the official pharmacopœial preparations are made from the dry root.

Constituents .-In 1855 Mr. Henry Kollock identified an alkaloid which he named *gelsemim*, a resin, and a volatile oil. In 1869 both Prof. Maisch and C. L. Eberle again obtained the alkaloid, stating, however, that it was absent from the wood of the root, a



DRIED FRAGMENT OF
GELSEMIUM RHIZOME.
(Natural Size.)

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point Gerrard afterward supported. In 1870 Prof. Wormley identified Gelsemic Acid in a fluid extract, which substance Chas. A. Robbins, 1876, pronounced identical with *Æsculin*. Prof. Fluckiger, soon afterward, from specimens of pure Gelsemic Acid made for him by the writer, denied their identity,*⁷ and this view was supported by Wormley (1882) and Coblentz*² (1897). Since (1898) Prof. E. Schmidt gave the formula $C_{10}H_8O_4$ to Gelsemic Acid, which is the same as the formula of beta-methyl-*æsculetin*.

The qualities and constitution of the alkaloid, or rather we should say of the *alkaloids*, for the subject of their number is yet one of discussion, are yet under dispute. Sonnenschein and Robbins (1876) gave $C_{11}H_{19}NO_3$, while Gerrard (1893) gave $C_{13}H_{14}NO_3$, with which Spiegel (1893) agreed. Thompson (1887) identified *two* alkaloids, one of which he called *gelsemine*, the other *gelseminine*, and this (1893) was supported by Cushny. Prof. L. E. Sayre showed (1897) that the vine contained neither alkaloid nor acid, identifying 0.2% of alkaloid in the rhizome and 0.37% Gelsemic Acid. The root contained less alkaloid (0.17%). The difference, however, in proportion of alkaloid is only one of bark relationship. Since all the alkaloid is found in the bark, which in the rhizome bears a less proportion to the wood than in the small roots, the root yields more alkaloid than the rhizome.

Gelsemine (either or both the alkaloids) is colorless, odorless, very bitter, slightly soluble in water, soluble in dilute acids, chloroform and ether. It produces the poisonous effects of Gelsemium. This should not be confused with the so-called concentration Gelsemin (see p. 7).

Gelsemic Acid is in brilliant, colorless crystals, nearly insoluble in water, soluble in hot alcohol, from which it mostly crystallizes on cooling. It exists either free in the drug, or combined so loosely (perhaps both free and combined), as to be easily liberated from solution without the use of chemicals. Gelsemic Acid is tasteless, but traces even produce an intense blue fluorescence in alkaline water. It is the substance that gives the blue color to liquids of Gelsemium, but when isolated it has no value whatever in therapy, so far as any of the known Gelsemium qualities are concerned. If a fluorescent aqueous solution of Gelsemic Acid be exposed to the sunlight, it quickly (Miss Margaret Stewart) loses its blueness, and the **fluorescence** is not restored by ammonia.

*1—Private correspondence. So far as I know Prof. Fluckiger did not publish his results.

*2—The Gelsemic Acid used by Coblentz was also made by me, and was identical with that used by Fluckiger. It was pure white, and crystalline.

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All this problematic chemistry of Gelsemium products is however a matter **of** indifference to the physician desiring a balanced representative preparation of Gelsemium, partly because the questionable basic products on record, as well as the resin and extractives, are obtained from the dry root and not from the green. None of them carry the qualities of the preparations of Gelsemium that have made the therapeutical reputation of the drug. If the drying process did not break the natural interstructural combination, the heroic chemistry used in splitting it into fragments would accomplish that result. These alkaloids and other products are obtained from Gelsemium, but we neither comprehend how they have been created, nor what their natural relationships may be, nor yet the part they bear to the host that gives them birth, and which, as a whole, is so sensitive as to forbid even the process of drying, if one wishes the fullest and finest qualities of Gelsemium.

PHARMACEUTICAL PREPARATIONS.

Distillate.-The fact that bruised, green Gelsemium root exhales a pleasant odor, which disappears on drying, indicates that this substance should impart its qualities to water distilled from the crushed green rhizome. This, however, is not the case, the distillate being of a very different odor. The fact that certain of the qualities of the green root are not possessed by the dry, indicates also that an active, volatile substance should be obtained by distillation. However, the distillate is devoid of any Gelsemium quality. It is limpid, clear, possesses no volatile oil, differs in odor from green Gelsemium, and can be swallowed with impunity. Either the heat of distillation destroys the natural volatile compounds; or they are so evanescent as to vaporize by the touch of hot water, not to condense; or oxydation produces new substances which have the fragrance of the green drug, but are permanent as gases.* This distillate possesses none of the remedial characters of Gelsemium and is devoid of therapeutic interest.

Fluid Extract.-This is the usual shop preparation, and became official in 1880. It has a dark red color, and is made from dry Gelsemium. The presence of Gelsemic Acid gives it a blue fluorescence, and, if it be a representative preparation, the presence of the poisonous alkaloid gives it a decided lethal action. **The Fluid Extract** is not used to any great extent by Eclectic physicians, and is too familiar to others to require special attention,

*It does not necessarily follow that an odoriferous substance is a condensable gas. While it is true that such bodies as oil of gaultheria are volatile and susceptible to recovery by distillation and condensation, it is also true that other odoriferous substances, e. g. musk and certain penetrating perfumes, do not parallel such bodies.

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Gelsemin.—This substance is one of the intruded* members of the old Eclectic resins (resinoids) and concentrations. It was introduced from the outside and became attached to Eclecticism, but was discarded under protest, decades ago, by Eclectic physicians. It has since been used mainly by physicians who are not conversant with modern improved Eclectic pharmacy. Gelsemin is an extractive mixture of such products of the drug as can be retained in a dry form, and is composed mostly of inert material. It should carry the alkaloids of the drug, for they are fixed, and there is no reason why a dried extract should be devoid of them. Death has resulted from the error of giving the very poisonous *alkaloid* Gelsemine for the less active “*concentration*” Gelsemin, and the principle reason for our giving space to this paragraph is to call attention to the fact that the “*resinoid*” *Gelsemin* is not the alkaloid *Gelsemine*. Since Gelsemin is an inferior product, neither certain in construction nor commendable in quality as regards even dried Gelsemium, it would be better if physicians seeking a Gelsemium product would take the experience of physicians who, half a century ago, came near having their opportunities wrecked on the uncertainties of the resinoid, alkaloid, concentrations, of which Gelsemin is a member, and which, but for the influence of Professor John King and others, might have been disastrous to the Eclectic school. In this connection, be it said, at no time did Gelsemin ever gain recognition, even in name, in any edition of the American Dispensatory.

Specific Medicine Gelsemium.—This preparation is, in our opinion, the preferable form of Gelsemium. It has a golden, amber color, and when shaken does not stain the glass. It is possessed of a delicate fragrance, reminding one of honey. When dropped into water, alcohol, syrup, or glycerin, no precipitation occurs, the liquid remaining transparent. (See footnote page 8.)

The color imparted to water by small amounts of Specific Gelsemium is slight, excepting the blue fluorescence, which can be observed on the side next the light. In looking through an aqueous mixture towards the light, no blue color is seen.† A few drops of ammonia increases the yellow color of the liquid and also enhances the fluorescence.

The taste of the Specific Gelsemium is bitter, at the same time the flavor, due to the odor, becomes apparent. When a few drops

* By “intruded” we mean the “resinoids” that were *not* introduced by Eclectics. If the interested reader will take the pains to look up the Eclectic Dispensatory record, it will be seen that dried solid extracts were never sanctioned by Eclecticism. They were introduced from outside.

† The best way to catch this blue fluorescence is, while near a window, to look down into a dilution. The side of the container next the window will be vividly marked. The substance (Gelsemic Acid) that gives this reaction is not, however, in itself (see p. 5) of any material value in therapy.

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of Specific Gelsemium is mixed with water in a test tube, the usual reactions for alkaloids are to be obtained, although, as has been repeatedly stated, we consider the alkaloidal feature but one of the fortifying qualities of this preparation. In our opinion, the care exerted in selecting material, the study made of methods and processes, the advantages possessed in apparatus devoted to this class of preparations, makes of Specific Gelsemium a thing in itself, as contrasted with other Gelsemium products. Specific Medicine Gel., **semium** is a perfect pharmaceutical preparation, of exact and uniform quality, standing the effects of any climate, and retaining its energies indefinitely.*

* Since this was written (1904) the improved pharmaceutical form of Gelsemium, "Gelsemium Red," has been evolved. This (page 17) is given a special description, accompanied by clinical therapeutic reports of physicians using it.-L.

THERAPEUTICS OF GELSEMIUM.

BY PROFESSOR FINLEY ELLINGWOOD, M. D., Chicago, Illinois

The primary influence of Gelsemium—that which probably always underlies its remedial influence upon any condition—should be borne steadily in mind in its administration. Its direct action is upon the central nervous system. It diminishes the blood supply of the brain and spinal cord by lessening nerve power, inhibiting the nerve control, slowing, retarding or staying the functional action of the nerve centers over the nerves themselves, influencing them steadily in the line of their physiological activities. It thus subdues all forms of nerve excitation of whatever character, or wherever located. It inhibits excessive nerve action. Nerve irritation, whether direct or reflex, comes uniformly under its influence.

There must be, then, increased nerve tension, with its consequent irritation, and usually, local **hyperæmia** or increased and undue blood supply in sthenic conditions. It is not the remedy when asthenia prevails.

The specific symptoms which call for its administration directly are those of acute determination of blood to the brain—acute cerebral **hyperæmia**—manifested by a bright flush upon the face, bright eyes with contracted pupils, with a busy restlessness and excitability. With these there is a high degree of nerve tension and consequent irritation, with increased heat of the head and face. There is present in acute cases, elevated temperature, hot skin, usually dry, a sharp and quick pulse, but not always hard.

In the acute fevers of childhood the evidences of nerve irritation are seldom absent. Here the agent exercises its happiest **influ-**

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ence. Muscular **twitchings** with the **above** specific symptoms demand this remedy, and no agent is more immediately positive and reliable, or invariable in its action. If spasms supervene, the dose is increased in size and frequency until they are controlled. Often **no** other agent need be given.

In acute inflammation of whatever organ or part, there is likely to be a time during its early course when Gelsemium is the positively indicated remedy. Its administration should cease **when** its indications **are** no longer apparent.

In acute inflammations, especially those of childhood, or in persistent fevers, where reflex irritation threatens to induce convulsions, other fever remedies should usually be suspended for this until all irritation has abated, or until its beneficial action is no longer conspicuously apparent. If its physiological effects appear at any time during prolonged or protracted fever or inflammation, it should be suspended temporarily, or permanently, within the judgment of the prescriber, as its full physiological influence persisted in, may impair nerve tonicity, and general **tonicity** of the muscular system, or of the heart, to such a degree as to retard **recovery**, or at least to prolong convalescence.

The direct contra-indication is congestion, either of the nerve centers alone, or of any organ. The phenomena of dullness, hebetude, obstructed circulation, whether local or general, with normal or lowering temperature, with increasing weakness-asthenia-must be treated with the antitheses of Gelsemium.

Fevers of nearly all kinds in adults, in the early and sthenic stage, are influenced by Gelsemium, because the above conditions to some degree are a part of the pathology of increased temperature.

In acute cerebral, spinal, cerebra-spinal, or meningeal inflammations, its symptomatology is usually strongly marked at first, and the agent is of signal benefit. If in adults, it may be given at first in pronounced doses, lessened as the symptoms abate or as its physiological action appears. In later stages of these disorders the dosage should be much smaller, or some remedy more directly indicated should be substituted. It should never be continued beyond the sthenic stage.

There are some forms of nervous wakefulness in which no better soporific can be given than this agent. Begun early in the evening, a few full doses will produce tranquillity and restful repose. If there be busy excitability and extreme restlessness, its influence will be greatly enhanced by combination with hyoscyamus. Nervous headache, which drives away sleep, can often be removed and **sleep satis-**

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factorily induced with this **remedy**. The nervous system is in part restored during sleep so induced, and the patient is rested.

In nervous excitation of women consequent upon acute peritonitis, ovaritis, salpingitis, **metritis**, puerperal fever, or mastitis, this agent has no peer. It is especially commended in the early stages, and if hysterical phenomena develop. Given in the early stages in pronounced, but carefully watched, dosage it will occasionally abort the entire condition, especially if the cause has been removed by proper methods. Extreme full doses are sometimes admissible at first.

In puerperal convulsions this agent has a conspicuous place. If given in accord with its exact symptomatology, in sufficiently large, often heroic doses, no agent will act better, but it must be exactly so given. The symptomatology of veratrum is more often present than that of this agent.

In intestinal inflammation, it has not seemed to me to be often indicated for the actual fever, and yet the reflex nerve phenomena, especially of children, often quickly demand it. It controls nervous or spasmodic pain in these conditions, and I have found it of great service in appendicitis. It seems to retard the inflammatory processes. It is of great advantage in the tenesmus of dysentery, sometimes allaying this troublesome symptom in a **single** full dose. Usually several frequent, pronounced doses are demanded.

In inflammation within the chest I have not used the agent **as** often as bryonia and aconite. Others speak highly of it, and there are conditions when the demands for it are too plain to be ignored. Certain forms of asthma are relieved by it quite promptly. Others have had good results from its influence in whooping cough and in laryngismus stridulus. It controls certain forms of spasmodic cough and cough from reflex irritation.

In acute cold, the whole system is influenced by it, the **coryza** being marked and all the usual symptoms pronounced. Gelsemium given in two or three-drop doses, every half hour for a few doses, will often give relief most promptly and satisfactorily. In epidemic influenza it has been generally used with signal results in nearly all cases.

In acute nephritis it is certainly a sovereign remedy. It at first meets a wide range of the symptoms in a pronounced manner. It reduces the arterial tension, often at once, and consequently the quantity of albumin. It exercises a permanent, soothing influence upon nerves of the entire urinary apparatus in a most satisfactory manner. The quantity of urine is increased, the general nervous phenomena are delayed, the fever abates, and any pain or spasms

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are controlled. My practice has been to give macrotys with the Gelsemium in acute nephritis from cold, but I am positive the **beneficial** influence could not be obtained without Gelsemium,

In post diphtheritic or post scarlatinal nephritis it controls any undue irritation, but belladonna acts upon the actual condition more satisfactorily than Gelsemium. In post puerperal nephritis, I **should** certainly fail of a cure without this agent. In three very bad cases I gave Gelsemium in full large doses with the very best results. It anticipates the uremic symptoms, preserves tranquillity of the nervous system, and wards off the otherwise almost inevitable **convulsions**. It is of especial service in the spasmodic retention of urine of hysterical women, or in acute urinary irritation,

Spasmodic pain in the urinary organs have no more reliable antidote than Gelsemium. Spasmodic pain in the bladder, or in the cystic sphincter, are controlled quickly, and acute cystitis should be treated with Gelsemium from the first. The soothing influence of the agent upon the entire nerve distribution of these organs is soon evident. In spasmodic urethral stricture where pain is excruciating and nothing but a catheter will apparently do any good, Gelsemium is often all sufficient. I have had two marked cases where the catheter could not be passed, in one case, even under chloroform, where full repeated doses of Gelsemium relieved the irritation and retention within two hours, I give from two to five drops of the Specific Medicine every twenty or thirty minutes even if mild physiological symptoms appear. In the tenesmus of chronic catarrhal cystitis it is excellent.

In Gonorrhœa, in the first stages, it is a very prompt remedy, especially if used in conjunction with irrigation of the urethra. This remedy alone will often produce much relief in twenty-four hours. Where there is much excitement with **chordee** no remedy is more prompt.

Spasmodic types of ovarian neuralgia and neuralgic **dysmenorrhœa** are controlled with Gelsemium. It relieves uterine colic promptly. In confinement it dilates a rigid os uteri, especially when the parts are dry and hot, and the edges of the os are hard, thin and unyielding, where nervous excitability is present. It soothes the general nervous system at this time, overcomes erratic, sharp, cutting, nagging pains, that seem to be of no benefit, preserves the integrity of the nerve force, and if the pains are exaggerated, and the labor does not advance, the labor is sometimes satisfactorily suspended or retarded until all parts are ready for the expulsive effort.

It is a most soothing remedy after labor, relieving nervous excitability and preventing or controlling after pains, but I do not

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consider it a proper or safe remedy with which to control these pains, as I am confident that its influence upon the normal muscular contractility of the uterine fibre causes relaxation, permits uterine hemorrhage, and retards normal involution.

It is a valuable remedy for hysteria. It is combined with **pulsatilla** to advantage in young girls. In pregnant women with frequently recurring paroxysms, *cimicifuga*, in small doses, will facilitate its action, as will *viburnum* or *aletris*.

In diseases of the nervous system of a chronic character, the influence of *Gelsemium* is beneficial, but not so pronounced. In excitable mania it exercises a controlling influence, and if sleeplessness be present its influence is enhanced by combination with **hyoscyamus**. It has exercised a beneficial influence in epilepsy, especially in those cases where acute cerebral **hyperæmia** is pronounced.

It has prevented and controlled tetanus, especially in the initial stage. Dr. Lewis, of Momence, Ill., claims to have prevented the development of three cases by the use of *echinacea* for the toxemia, and *Gelsemium* and *passiflora* for the spasm. In the tetanus of horses it acts better than in man, and is now quite generally used, hypodermically, by veterinarians throughout America. They claim that it cures many cases. I lay claim to any honor that may be due to first suggesting to the veterinary profession its probable value for this purpose. This I did to my classes in the Chicago Veterinary College in 1884, when lecturing there upon chemistry. My suggestion received a general test at once, and the remedy a wide adoption.

This agent has its place in **chorea**, but only when its specific indications are present, not in those cases characterized by anemia.

In the treatment of facial neuralgia, especially of the fifth pair, its influence is pronounced. I am of the opinion that the influence of the agent upon the nerve centers is from the brain downward, and that a large dose given for its influence upon the lower spinal nerves will exercise a too pronounced effect upon the nerves of the head and face, and upon the respiration. It is, therefore, seldom given in sufficient doses to control sciatica. It should be used hypodermically over the sciatic nerves. It controls headaches from cerebral engorgement with nervous irritability and excitability.

It is a serviceable remedy for migraine and *tic douloureux*. In persistent stitch, like pains in the deep muscles of the back, which often completely incapacitate a man for work of any kind, full doses just short of its apparent physiological action will act in a most specific manner. I obtained this suggestion from Dr. Lyman Watkins, and it has been fully verified.

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In rheumatic stiffness of the muscles of the neck, often accompanied with sharp pain, this agent should be freely given. In acute rheumatism and in rheumatic fever it is often sharply indicated. Given in connection with aconite, bryonia or rhus tox., as these are indicated, no better treatment can be instituted.

I consider Gelsemium a most important heart remedy. The cases are those of rapid heart from over excitability, irritability, with exaltation of nerve force, excitability induced from general nervous excitability, but where the patient is in full strength. No other remedy need be given in some of these cases. It relieves palpitation so induced and cures cardiac neuralgia. It is especially useful in the irritable heart of hysteria, influencing the entire train of symptoms at once. It is contra-indicated in weak **heart**, and where there are valvular lesions of any considerable character.

In sea-sickness, Specific Medicine Gelsemium has been used with marked success. Dr. **Perce** commended it, and in one instance two ladies on a European voyage, who followed his directions, escaped, while nearly all the other voyagers suffered. A teaspoonful of a mixture of thirty drops Specific Medicine in four ounces of water was taken at the time of sailing, and repeated hourly the first day. Afterward it was taken less frequently. Neither party was sick. On the return journey, although the sea was very rough, the same course of indications was pursued with the same result. In this connection, be it said, in sea-sickness the remedy that cures one person may fail in another, and it is not to be hoped that Gelsemium will affect all alike.

I am inclined to the belief that in the South, its natural habitat, the conditions assumed by acute disease are more directly and specifically influenced by Gelsemium than in the colder climates, Perhaps those factors of disease in which Gelsemium is specifically indicated are more frequently induced or increased by the climatic influences of that locality. At least, our physicians in the South, who use the remedy to any extent, use it much more freely, and seem to find its indications present more often than we do in the North.

Dr. Smith, of Leesburg, Florida, told me that in the malarial disorders which prevail in his locality he found indications for its use in nearly all acute cases and almost invariably obtained prompt and satisfactory results. He has occasion to prescribe larger quantities of it than of all other fever and sedative remedies combined. Dr. Wm. M. Durham, of Atlanta, Georgia, and several other physicians of the South confirmed Dr. Smith's opinion as to the frequency of the occurrence of its indications. All these physicians unite in

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the opinion that Gelsemium quickly induces or brings about that condition in periodical malarial disorders in which the antiperiodic, quinine, can exercise its happiest influence. It restores secretion, softens and slows the pulse, reduces nerve excitation and irritation, causes a mild transpiration from the skin, and assists in cleaning the tongue. All these conditions must be present if quinine be given to marked advantage and with no unpleasant results. These physicians claim further, that given during the time of the administration of quinine, it prevents undue stimulation of a sensitive nervous system, does away entirely in most cases with the tinnitus aurium, and other unpleasant phenomena, and enhances the influence of the quinine in all lines of its action, the desired effect being obtainable by a less quantity of this antiperiodic than would otherwise be required. These suggestions are no doubt applicable in other localities to a degree.

I have heard physicians say that they believed there were times or seasons when Gelsemium influenced their patients with the same indications much more directly and positively than at other times. Perhaps this is in line with the theory of "epidemic remedial influence" or "epidemic remedial conditions" advanced by Rademacher and referred to by Scudder and other writers.

The necessity of a uniformly active form of Gelsemium, and the fact that in commerce preparations of the dried drug prevail, has led Eclectic physicians to use the Specific Medicine.

Gelsemium in Chorea.—I have often stated to my students that I regarded Gelsemium as being the most important remedy in the entire materia medica. I base my statement upon the fact that there is no other drug that will fulfill so many important conditions. We may get several distinct actions from the same drug, according to the size of the dose, and the condition of the patient. Many practitioners believe that they know all that is to be known regarding such a common remedy as this, but will be surprised at the many unrecorded uses that they will find for it, by giving it their close attention for a period of a year's time.

Within the last two years I have entirely cured several of the most aggravated cases of chorea that I have ever seen with Gelsemium, and the cure was accomplished in about thirty days in each instance. In September, 1888, Benny L., aged 12 years, was brought to the college for treatment. The history of the case was that the boy had been healthy up to his sixth year, when he was severely sick with diphtheria, chorea following the subsidence of the diphtheria, and for the following six years it remained about the same, in spite of continual treatment from "regular" physicians, a dozen or more of whom were employed. I prescribed ʒss Specific Medicine Gelsemium, to be taken in doses of gtt. ij four times a day. Within thirty days the boy was well.

CASE 2.—This case was a bright little fellow of 11 years. Had been a victim of chorea for over a year, was under treatment in this city for some time, when he was taken to Philadelphia and put under the treatment of a physician of world-wide reputation. Under his treatment the boy improved to some extent, and was

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brought back to this city, but within a week after returning was as bad as ever. He came into my hands on June 3, 1889, about a month after his return from the East. He was not able to stand alone, to articulate understandingly, or to feed himself. I gave him a vial of homœopathic globules No. 60, each globule having absorbed a single drop of Specific Medicine Gelsemium, by putting them in a shallow dish, and applying the Specific Medicine with an ordinary medicine dropper. Of this I directed that he take two of the pellets before each meal and one at bed-time. He was brought to my office four times, the last call being on July 5th, when I discharged him as being entirely well, he having taken about one drachm of Specific Medicine Gelsemium. I have seen him often since that time and there has not been the slightest symptom of the trouble manifest.—*Prof. E. R. Waterhouse, California Medical Journal.*

Uses of Gelsemium.—This is one of our sheet anchors, and has a very wide field of usefulness. Its indications are bright eyes, contracted pupils, flushed face, elevated temperature and fast pulse. You can thus see that it is frequently called for in acute inflammatory affections of all kinds, and we do thus use it, and many times combine it with the indicated special sedative. It is of use in spasmodic affections. In reflex spasms of childhood we would not exchange it for any other remedy we possess. It is also of great use in spasms of centric origin. In retention of urine from a spasmodic contraction of the neck of the bladder we know of no better remedy; but for this purpose it must be given in full-sized doses. In suppression of the menses from cold, combined with pulsatilla, it has no equal. The dosage has a wide range—from the fraction of a drop to half a drachm. It is seldom necessary to give the latter dose, though we have done so, in the retention of urine, as stated above, and in a few cases of puerperal eclampsia and meningitis. Gelsemium is the remedy in the early stages of meningitis; belladonna in the latter.—*W. N. Mundy, M. D., Eclectic Medical Journal.*

Uses of Gelsemium.—Dose, the fraction of a drop to twenty drops. To tell all the good things about Gelsemium would require a separate article. It is almost daily used by me. I cure coryza with a single dose given at night. Those “catches” in lumbar muscles, sometimes causing the patient to fall, are always benefited, and many times cured with Gelsemium. In the acute stage of gonorrhœa it is one of the best internal agents. In many lesions of the kidneys, bladder, and nervous system it is of paramount importance. Specific indications are flushed face, bright eyes, contracted pupils, and general excitation of the nervous system. Equally as good an indication is the pallid face with bounding carotids.—*Benj. L. Simmons, M. D., Eclectic Medical Gleaner.*

Uses of Gelsemium.—

R. Specific Medicine Gelsemium, gtt. xx.
Simple Syrup, $\frac{3}{4}$ iv.
M. Sig.—Teaspoonful every half hour to two hours.

Indications.—Great restlessness, flushed face, bright eyes, and contracted pupils. Add to this, elevated temperature, full quick and bounding pulse, and we will have the combined indication for both Gelsemium and Veratrum vir. When such symptoms prevail Gelsemium and Veratrum should be put up in the same solution, and they will fulfill all expectations. Gelsemium is seldom if ever indicated alone, and is not called for in connection with any other remedy than veratrum. It is the special remedy in determination of blood to the nerve centers, especially to the roots of the spinal motors.—*A. J. Smith, M. D., Eclectic Medical Journal.*