

JALAPA
by
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My Very Dear Sir:

As the active campaign season continues, rumors abound in the camps of the movement of our gallant army north to take this terrible conflict into Federal territory and relieve our beloved State of Virginia of this strife. This war has destroyed good southern men, families, crops, animals and lives. It is unpleasant, though just thing, that the North should share in the misery of modern warfare and its effect on the land. As we prepare to cross the great Potomac River, I shall take a moment to remind you, a medical man, of the necessity to care for the health of the men in this army. It is with this opportunity that I shall discuss with you the purgative powers of the root of a plant found south of the borders of these Confederate States, in Mexico. This plant is Ipomaea Jalapa.

Jalap was introduced in this country by Dr. John R. Cox of Philadelphia in 1827 who, after receiving living roots of Jalap from Mexico, succeeded in producing a perfect plant. This plant was described at length by Mr. Nuttall in an article published in the January 1830 issue of the American Journal of Medical Science. This plant has since been introduced into Europe in a manner similar to that of the then United States. It is the root of this plant that is of medicinal value. As I have stressed in the past, it is of necessity that the Southern Army Surgeon and Steward be familiar with the entire plant for recognition, gathering, and preparation purposes. The root of the Jalap plant is of a round, somewhat pear-shape, externally blackish and internally with long fibers proceeding from its lower part. The stem of the plant is round, smooth, and much disposed to twist. It is known to rise to considerable height upon neighboring objects about which it twines. The leaves are smooth, heart-shaped, pointed, deeply sinuated at the base, with prominent veins on their under surface, and are supported on long food stalks. The flowers are large and of a lilac-purple color. They stand upon peduncles which are about as long as the petioles. Each peduncle supports two, or occasionally three flowers. The corolla is funnel-form and the calyx possesses five leaves and is obtuse. The stamens are correspondingly five in number, white, with anthers. The stigma is simple and capitate.

As stated earlier, the Jalap plant is a native of Mexico and the name is derived from the city of Xalapa, in the state of Vera Cruz. The drug is typically imported into this country in bags containing usually between one hundred and two hundred pounds of root material. The root comes either whole, or divided longitudinally into two parts, or in transverse circular slices. They usually marked with circular or vertical incisions to facilitate their drying. The dried root is heavy, hard, compact, brittle, with a shining undulated fracture, exhibiting numerous resinous points that are distinctly visible with a microscope. As described above, it is externally blackish brown and wrinkled, internally of a whitish gray color and diversified by concentric darker circles in which the matter is denser and harder than in the intervening

spaces. The importation of whole root, rather than sliced or powdered, is preferred as this drug is liable to various adulterations, or fraudulent substitutions. Several have come under our notice, most notably the substitution of the root of *Ipomoea macrorrhiza*, also from the region of Vera Cruz, as well as in our Southern states, but possesses little or no purgative power. Powders of jalap and calomel, taken on long voyages to southern climates, are said, when brought through the blockade, to have become consolidated, and chemically altered as to plainly exhibit globules of mercury.

Jalap is commonly found in Apothecary shops in the state of powder, which is of a yellowish-gray color, and when inhaled irritates the nostrils and throat provoking sneezing and coughing. The odor of the root, when cut or broken, is heavy, sweetish, and has been described as nauseous. The taste is sweet and disagreeable.

The powder obtained from properly dried jalap root is known to yield its active properties partly to water, partly to alcohol and completely in diluted alcohol. In addition, a hard resin has been extracted from the jalap root through a series of very detailed chemical reactions too detailed to discuss at length in this communication. It is said that this resin purges violently in the dose of three or four grains, and is supposed to be the active principle of jalap. Through a fortunate oversight by one of our Medical Purveyors in the great state of Texas, a bag of the root was left for some time in a remote building of a purveying depot. It was discovered that jalap is apt to be attacked by worms which devoured the amylaceous or softer parts and left a resin. The worm eaten drug was found to be more powerfully purgative than that which is sound. It may be wise that the worm-eaten jalap should be employed for obtaining the resin, but should not be pulverized at the depot prior to distribution to medical officers without proper identification, for it is liable to afford a powder of more than the proper strength and incorrect dosing would result.

Jalap is an active cathartic, operating briskly and painfully upon the bowels producing copious amounts of watery stools. That part of the powder that mixes with water, the aqueous extract, purges moderately, without much gripping, and is said to increase the flow of urine. That portion not taken up gripes severely. The alcoholic extract, or that which dissolves in alcohol, purges actively and often produces severe gripping. From these facts, it would appear that the virtues of this cathartic do not depend exclusively on one principle.

Jalap is generally given in connection with other medicines and is applicable to most cases in which an active cathartic is required. In dropsical complaints, it is usually combined with Bitartrate of Potassa in the dose of two drachms of jalap and between ten and fifteen grains of potassa. The same mixture is employed in the treatment of hip disease and scrofulous affections of other joints.

When combined with calomel in the dose of ten grains each, it forms a cathartic compound employed in the treatment of bilious fever, and other complaints attended with congestion of the liver or portal circle. In overdoses, it may produce dangerous hypercatharsis.

It is with much regret that I must close this "stimulating" communication. The army is preparing for the campaign, the servants and enlisted are packing and I must attend to more pressing duties.

Your Humble Servant,

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