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## Botanical Medicine Monographs and Sundry

### **ANALYSIS OF A CURE FOR CANCER.**

By FRANK H. MOERK, PH. G.

Read at the Pharmaceutical Meeting, October 18.

Professor Maisch some days ago handed to me a small package of a powder, stating that he wished I would examine it, as it was said, or, more correctly, known to be a specific for cancer. The information furnished with the sample was, that it was supposed to consist largely of "horse-sorrel." Professor Maisch suggested that it might contain arsenic.

The powder was black in color, but white particles were easily discernible in it.

On treating a portion with warm water, a colorless solution was obtained after filtration, thus indicating the absence of plants or parts of plants. This solution on evaporation and heating failed to char; another indication of the absence of vegetable matter. However, on testing for arsenic, by addition of hydrochloric acid and hydrogen sulphide, a copious yellow precipitate was obtained. The yellow precipitate of arsenite of silver was gotten by the use of an aqueous solution of the powder and silver nitrate with a small quantity of ammonium hydrate.

Insoluble in water and dilute hydrochloric acid was a black powder, now entirely free from white particles, having the appearance and properties of charcoal; on ignition this left only a trace of ash.

Another experiment was made to prove the presence of both carbon and arsenious oxide; this was to introduce a small quantity of the sample into a small bulb-tube, and heating a metallic mirror and a ring of small crystals formed beyond the part heated.

The sample was now examined quantitatively as follows:

A weighed quantity was dried at 100° C. Loss due to moisture, 0.99 per cent. The residue was digested with three consecutive portions of hydrochloric acid, filtered through a weighed filter and thoroughly washed into a tared beaker. The insoluble portion on the filter consisted of a purified charcoal amounting to 26.07 per cent.

The solution in the beaker was evaporated to dryness, in doing so the arsenious oxide was volatilized, possibly as arsenious chloride. The residue, which was free from arsenic, equaled 10.75 per cent., of which 6.40 per cent. was extractive and 4.35 was ash. The amount of arsenic was taken by difference.

The result of the analysis is that the powder contains

Moisture	0.99
Charcoal	30.82
Carbon	26.07
Extractive	6.40
Ash	4.35
Arsenious oxide	62.19
Total	100.00

In a number of books examined, I found no mention of charcoal containing or yielding organic matter to solvents, so I thought it of sufficient interest to examine this point. Some willow charcoal was exhausted with dilute hydrochloric acid, and, on evaporation was obtained a residue of a brown color, agreeing with the one gotten in the above analysis. This residue amounted to several per cent., and on ignition yielded a white ash.

REMARKS BY THE EDITOR.—Years ago we had heard of this cancer cure, but did not succeed in obtaining the powder, until Dr. Pursell placed a small quantity in our hands. The quantitative results obtained by Mr. Moerk's analysis, render it probable that the powder is made by mixing two parts of arsenious acid with one part of wood charcoal, and that the deviation from this proportion is simply the result of the difference in the specific gravity of the two ingredients favoring a partial separation of the heavy arsenic. This proportion gives arsenic far in excess of that contained in the arsenical powders of Swediaur, Cosme, Dupuytren, Pluckett and others. The letter of Dr. Pursell from which we quote below, gives some particulars which are of general interest.

BRISTOL, PA., OCT. 8th, 1887.

The history of this powder is interesting inasmuch as it has undoubtedly cured many cases of epitheliome and other cancerous growths, and now has great reputation in the upper part of New Jersey and eastern Pennsylvania. I am informed that considerable amounts of money have been offered for the secret of its composition but constantly declined. The first case of which I have direct knowledge of its use was in a man over sixty, who had a rapidly growing epitheliome on the lower lip. I had attended the funeral of his brother, who had died from a precisely similar ailment, a few years before, and had but little doubt the result of this would be the same. It, however, was effectually and permanently cured by the application of this powder, the man dying some years later of another disease. It may be interesting to know that he was a great smoker of a short clay pipe.

A more prominent case is referred to and illustrated in Prof. Gross' Surgery, sixth edition, second volume, page, 138. I am very well acquainted with this man, and his disease and treatment. Prof. Gross states he diagnosed the ailment epitheliome; he operated upon it and it returned when (that is before he published the sixth edition), he lost sight of the case. Subsequently, however, this man returned to Prof. Gross,

who again removed the growth by the knife, and this time seared the surface with the actual cautery. I saw the patient frequently and the healing process was never completely established. In a few weeks it became evident the sore was enlarging and getting worse. The powder was applied for about a month, a large eschar separated, healing was induced by emollient applications, the cure was complete and he remains well to this day, although fully five years have elapsed. I could cite a number of other cases, four that I now recall, here in Bristol. I have not known of any case in which the powder has been applied where there has not been a cure; of course, there may be mistakes in diagnosis, but Dr. Gross will hardly be charged with making one.

The mode of application has been to lightly cover the surface with the powder; apply over it, to protect the powder and keep it in place, a piece of *black* silk, somewhat larger than the ulcer and made adhesive by egg albumen. Considerable pain is, of course, produced; but the first application, and all subsequent ones, is allowed to remain until the pain leaves, which will be in five or six days. A new one is then applied in the same way and repeated from time to time until an eschar is detached without force. A poultice of elm bark is applied and the ulcer allowed to heal. It may be the charcoal found by analysis is from *sheep sorrel*, as the person using it was known to collect that plant on different occasions. While the use of arsenious acid for external application has long been made, yet every writer emphasizes the danger in using it where the cuticle is removed, and I imagine most physicians like myself have feared to so use it.

H. PURSELL, M.D.

## **CASCARA SAGRADA.**

By DR. E. R. SQUIBB.

Rhamnus Purshiana is a sub-variety of the Buckthorn family of small trees and shrubs, which grow in most of the temperate climates. This sub-variety grows abundantly in California and Oregon, and the bark under the name of Chittem bark or cascara sagrada has been long known and used as a purgative, and the name cascara sagrada has more recently been usefully contracted to cascara. Some years ago it was taken up and pushed as a novelty, and by vigorous advertising, as a panacea for numerous ills, it has come into very common use, in the form of several pharmaceutical preparations.

There seems to be no doubt but that the bark of the branches, and a well-made fluid extract, and extract of this bark, are all effective simple aperients, not very disagreeable in taste or effect, easy of management, and not very liable to lose their effects by continuous use. And a prominent advantage in their use is that the dose may be adjusted in each individual case to any degree of activity or mildness without leaving a persistent reaction.

These peculiar characteristics have long been known as belonging peculiarly to the bark of Rhamnus Frangula, and the use of this both in Europe and this country long antedated the use of cascara sagrada. And this longer and better known variety of

the Buckthorn family was admitted to the present revision of the pharmacopoeia, because it was supposed to be the better medicinal agent of the two. Its supposed advantages over cascara are that while having all the advantages of cascara, it is milder, more pleasant and more manageable in effect and more agreeable in taste, and less liable to disturb stomachs and intestines which are sensitive or irritable. When properly used both are simple, mild, agreeable aperients, but the buckthorn the more simple and agreeable of the two, and required in somewhat larger quantities to give the same effect. Hence one or the other is superfluous in the materia medica, and it becomes important to know which should have the preference.

In order to assist in determining which is the better, large quantities of the two barks were carefully selected of uniform good quality, and from these exactly parallel extracts and fluid extracts were made, and have been placed in the hands of many close and careful observers, who are as little prejudiced as may be by the florid advertising, which one of the agents has received. By the parallel observations of many, made independently, it is hoped to obtain useful, if not conclusive, testimony.

Both barks are very plentiful and very cheap, and good qualities are easily obtainable of either at a cost of not more than eight or nine cents per pound by the bale. The buckthorn is much more uniform in quality than the cascara, and the inferior qualities of this, which are offered at five to seven cents per pound, are better than the inferior qualities of cascara at similar prices. Both come long distances, and the freight on the buckthorn from Germany is less than upon cascara from California, and how it is possible to pay freights and two or three profits on them and sell them at such prices, is not easy to comprehend. The very different and inferior bark of the trunks and larger branches are rarely or never seen in buckthorn. But the markets are full of such bark from the cascara, and it is difficult to get even a few bales of the smaller quill bark which should alone be used. Both barks are said to improve very much in their medicinal qualities by age, and if so, it is reasonable to suppose that the preparations made from them also improve by age, but probably not so much as the barks do. Neither bark should be used until it is over a year old in the dry state, and this condition is more easily secured in the case of buckthorn than cascara.

The menstruum used for exhausting these barks by repercolation is important, and that which the writer has for many years used with buckthorn has been very successful. And there is hardly an instance known wherein the process of repercolation is more important or more successful. In another part of this pamphlet an example is given in detail of the management of buckthorn, and cascara was and is treated in exactly the same way with corresponding results, as far as the process is concerned.

This process gives preparations easily miscible with water, wine or syrup, and therefore easily taken and easily appropriated by the stomach and first passages. —Ephemeris, Oct. 1887, page 984.

In the same number of Ephemeris, page 1045, Dr. Squibb has an elaborate article of Fluid Extract of Rhamnus Frangula. The menstruum is a mixture of 25 per cent. alcohol, 5 per cent. glycerin, and 70 per cent. water. The bark in No. 20 powder is moistened with 75 per cent. of its weight of this menstruum; after maceration for

twentyfour hours the bark is brought back to about its original condition of moisture and has swelled to the maximum. It is then sifted and packed firmly and allowed to percolate at the rate of about 60 drops per minute, when the quantity of the dry bark is about two pounds, or a kilogram. The preparation is finished by repercolation, no heat being employed.