

CASCARA SAGRADA, AND ITS USE IN THE TREATMENT OF CONSTIPATION.¹

BY JOHN W. FARLOW, M.D.

CASCARA SAGRADA is the bark of the *rhamnus purshiana*, a shrub fifteen to twenty feet high, belonging to the Buckthorn family, which is found only on the Pacific coast of the United States, from Cape Mendocino north to British America, though it is not common in Washington Territory. It was first botanically described, under the name, however, of *rhamnus aluifolia*, by Frederic Pursh, a German, in 1814. De Caudolle, in 1825, first recognized that *rhamnus aluifolia* of Pursh was not the same as *rhamnus aluifolia* of L'Heritier, and he described the form which Pursh called *aluifolia* as *rhamnus purshiana*, and all subsequent writers follow De Caudolle.

Other members of the buckthorn family of medicinal value are *rhamnus frangula*, black alder, which grows extensively in Europe and *rhamnus cathartica*, common buckthorn, whose habitat is farther north than the preceding. The bark of both of these is used as a cathartic, which has caused them to be confounded with *rhamnus purshiana*. For instance, Dr. Douglas Lithgow,² in an article on *cascara sagrada* says, it was well known to early writers and was mentioned by European botanists in the thirteenth century. As this was before Columbus discovered the Eastern Coast of America, it is fair to infer that what was said by those Europeans about the botany of the West Coast was of very little value.

Cascara seems to have been used for some time, and it is probable that its resemblance to the European varieties led the early traveller and missionaries to use it as they had used *rhamnus cathartica*, and the natives, seeing it used in that way, were ready to adopt it as a cathartic.

It was first introduced to the medical world by Dr. Bundy, an electric physician of Calusa, California, who chanced to select this plant among many others having a local reputation among the natives for experiment. He, however, was ignorant of its botanical name and called it by the Spanish name known to the natives. The words *cascara sagrada*, or sacred bark, seem to have reference, not to its medicinal virtues, but to the resemblance of the wood to the chittim or shittim wood mentioned in the Bible, from which it is supposed the ark of the tabernacle was built; in fact, *cascara* is also called chittim wood in California.

The bark contains a brown resin, a red resin, a light yellow resin, a crystallizable body, tannic, malic and oxalic acids, a fat oil, a volatile oil, wax and starch in abundance. The exact nature and value of these various constituents has not yet been determined, nor has their relation with the constituents of the other *rhamnaceæ*.

The preparations of the drug used in medicine are the solid extract, powdered solid extract, fluid extract, elixir and the *cascara cordial* of Parke, Davis & Co. Of the dose and modes of administration I shall speak later.

In choosing a remedy for constipation we should select one that will do no harm and whose after-effect is not to increase the trouble for which it was given. It should not cause griping or any uncomfortable feel-

ing, even if this can be overcome by the addition of opium, belladonna or other narcotic. It is also desirable that the remedy should not have to be given in increased doses, but the contrary, and the form of administration should be such that the dose can be small and can be carefully regulated for the individual case. Dr. Jacob Bigelow used to say that "a great deal of the success of a physician depended on his understanding the constitution of his patient; in other words, how large a dose of cathartic medicine it took to move his bowels." It is not generally expected that the remedy should have very much influence on the appetite and digestion, other than as a result of emptying the bowel, but, if the medicine is of itself an aid to digestion, so much the better.

Let us look at *cascara* and see if it fulfils any or all of these indications. I have used it for two or three years and have notes of over two hundred cases which I have followed long enough to know the result. The cases in which I have ordered it and where the patients have not returned I have left out of consideration entirely. The cases have generally been those of more or less chronic constipation, and often associated with uterine or pelvic trouble as well as with disease of the rectum and anus. I have also used it in pregnancy and after labor. I have, in most instances, prescribed the fluid extract.

I do not propose to consider the various methods of treating constipation, regular habits of defæcation, exercise, diet, etc. I take it for granted that all such measures are to be tried before any medicine is given.

Is *cascara* an efficient laxative? In every case in which I have used it and have the records it has not failed to cause one or more dejections for a certain time. Several of the cases have been of very long standing, and had tried all imaginable drugs and combinations of drugs in vain. Mrs. S., for instance, forty-five years of age, had recently been in one of the Boston hospitals for six weeks for constipation. She had taken everything but *cascara* to no purpose. At the end of ten days, after taking *cascara* in gradually decreasing doses, her bowels became regular and soon she was able to have a daily stool without any medicine. Mrs. H., fifty-six years old, had always been constipated and had exhausted the usual remedies. After using *cascara*, at first in rather large doses and then diminishing, at the end of three weeks her bowels moved once a day by simply taking fruit in the morning.

Does it cause griping or any uncomfortable feeling? Very seldom, indeed, if it is correctly used and the dose rightly apportioned to the particular person. I have seen two or three cases where the patients complained of some griping, but on investigation I found that more than enough had been taken, or that, instead of diminishing the dose when it had begun to act freely, the same dose had been continued. Cases are reported by others in which griping occurred, but, according to my experience, this must be uncommon, and possibly some of these were due to too large a dose at one time. Some persons seem to be very easily affected by it, and this idiosyncrasy should be borne in mind in determining the dose.

In the administration of drugs which cause griping it is usual to combine with them something to stop the griping; in other words, to allow the drug still to irritate the intestine, but to take away the reflex contraction of the intestine causing the pain, or else to

¹ Read before the Suffolk District Medical Society, Section of Clinical Medicine, Pathology and Hygiene, June 7, 1887.

² Brit. Med. Jour., ii, 1883, p. 68.

blunt or remove the perception of the pain. This I hold to be a mistake, as the irritation of the bowel is injurious in many cases and the pain should be the signal that such is the case. The irritation is just as bad for the bowel, even when the pain is not allowed to manifest itself.

Most laxatives have a secondary, constipating effect, necessitating an increase of the dose or a change to some other drug. This is not the case with cascara, as the usual method of giving it is to diminish the dose after a few days.

What is its effect on the digestive system? Its use does not impair the appetite or digestion, but, on the contrary, increases the appetite and promotes digestion. On the intestine it seems to have a tonic action and is particularly adapted to conditions of atony of the stomach and bowels. The stools caused by it are soft, or semi-solid and not watery, unless too large a dose has been taken.

I have also found it of good service in the treatment of hæmorrhoids, by relieving the congestion and causing a soft, painless stool. It seems to have a beneficial effect apart from and in addition to its laxative effect in these cases as well as in some cases of fissure. The following is a good illustration: Mrs. F., aged thirty-one, mother of five children, had always suffered from constipation and piles, particularly after labor, and had never found anything to relieve her. I attended her in a difficult labor with breech presentation. She had very marked hæmorrhoids, which caused her so much trouble after labor that she could not sit on a chair, and every movement was painful. She obtained entire relief by using cascara in twenty-drop doses of the fluid extract, four times a day for three days.

The importance and at the same time the difficulty of regulating the bowels in gynecological cases is well recognized, but my experience with cascara in such cases leads me to give it the highest rank. I have notes of its very satisfactory use in several cases of endometritis, large uterine fibroids, flexions and versions, large and tender ovaries, one case of retroflexed pregnant uterus requiring forcible reposition, and a number where there were tender places and bands in Douglas's pouch, readily felt per rectum.

According to my experience, the cases for which cascara is particularly adapted are the chronic cases and especially those with weak and atonic digestive organs. For such patients it is far superior to rhubarb, senna, aloes, licorice powder and the usual laxatives, either alone or in their various combinations. For acute cases its peculiar qualities are not so much required, although it generally acts promptly, surely, and without secondary constipating effect.

I have generally used the fluid extract, for several reasons. It is an active and reliable preparation, the dose is small and can be easily regulated by increasing or diminishing the number of drops taken at a time. The taste is bitter, to which some object, while others find it not unpleasant. To the latter it can be given in water or with equal parts of glycerine in water. Most of the substances supposed to disguise the taste only add a sweet to a bitter and the combination is to many worse than either alone. I should say that the fluid extract of licorice, is perhaps, as good an excipient as any. Cascara cordial has an agreeable taste, and is preferred by many. The dose is, of course, larger and is not so easily regulated as

the fluid extract. The solid extract is given in pill form, and consequently can be taken without the bitter being tasted. If, however, the dose in each pill proves too large, a new lot with a smaller dose has to be procured, which is a disadvantage as compared with the fluid extract.

The dose of the cordial is about a teaspoonful morning and night, or oftener. The solid extract is given in doses of two grains or less, three times a day. The dose of the fluid extract is from five to twenty-five drops, and I generally order it to be taken as follows: If the case is of long standing and one in which many drugs have been tried, I direct ten or fifteen drops to be taken in water before each meal and at night. If that does not cause one soft defecation a day, in two or three days I increase the dose to twenty-five drops four times a day, and tell the patient to take sufficient to have one defecation a day. Then in a few days, at any rate, or immediately, if he has more than one stool, a day, he is to diminish the dose from thirty to twenty-five, twenty or fifteen drops, but always enough for one soft stool a day. It is better to diminish the quantity taken at a time than to lessen the number of times. It will be found that five or ten drops at night often prove sufficient. It is well to omit the medicine from time to time and it can frequently be dispensed with altogether. If necessary to resume it, let only the amount be taken that was previously found to be sufficient.

REPORT ON PROGRESS IN SURGERY.¹

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FRACTURE OF PATELLA.

VON BERGMANN reports²⁰ a case of transverse fracture of the right patella, treated in the following manner: A sailor, aged twenty-two, sustained a fracture of the right femur, and a transverse fracture of the right patella. Result: union of femur, with seven centimeters shortening (subsequently relieved by osteotomy); non-union of patella. On failure to approximate the fragments during an attempt to suture them together, Von Bergmann made a curved incision around the tuberositas tibiæ, and chiselled obliquely through the bone, from below, anteriorly upwards and backwards into the joint. He then, by pushing up the fragment, united the patella. Bony union subsequently united the tibiæ fragment. The patient, when shown about sixteen months after the operation, is reported as walking well, but the motion of the right knee is quite limited.

TAUBER'S AMPUTATION AT THE ANKLE-JOINT.

Professor Tauber, of St. Petersburg,²¹ has demonstrated his operation, which is a modification of Pirogoff's. "He begins an incision at the attachment of the tendo Achillis, and carries the knife forward, below the external malleolus, to the Chopart's line, and then across to the dorsum of the foot. On having reached the middle line on the plantar surface, the knife is carried backward to the heel, and then upward to the starting point.

"In this first stage of the operation, Dr. Tauber cuts the skin and other soft tissues to the bone. In the

¹ Concluded from page 383.

²⁰ Versammlung deutscher Naturforscher und Aerzte zu Berlin. Berl. Klin. Wochschr., October 4, 1886.

²¹ Ann. of Surg., January, 1887.