

Whole Leaf Aloe Vera

The External Use Of Aloes

By J. E. Crewe, M.D.

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In 1935, Collins reported treating roentgen burns with the leaf of Aloe vera. About that time, I was interested in a case of palmar eczema. The lesions had been of long duration, had resisted every type of treatment and were painful and annoying. I obtained enough of the leaf for four applications, which I made on four successive nights. The leaves were split, the gelatinous surface applied to the palms and the material retained with bandages. At the end of the four treatments the lesions were healed and the patient had had no further trouble up to the time of the writing of this communication on December 20, 1936.

Further Clinical Experiences

Ointments are not generally used as surgical dressings but, in my experience, the results obtained and the ease with which the Aloes dressings were removed, without adhering or causing pain, seem to be points in favor of their use. As will appear, I used not only an ointment of Aloes, but also powdered Aloes. These preparations were applied in the routine of a general practice and on empiric grounds only. The reports of results will be faithfully, if briefly, recorded.

Ulcers On Amputation Stumps

I received a supply of the leaves from the Island of Aruba in the Dutch West Indies, and these I used in the treatment of several ulcers which had appeared, after amputation, on the stumps of the legs of a single individual. Because lymphedema had developed and the condition that was present resembled elephantiasis, amputation had been performed a second time, together with removal of some of the veins. The circulation in the stumps was poor, and in 1932 several large ulcers had developed. These had shown no inclination to heal under various kinds of treatment. On the left stump were three ulcers, one of which measured 5 by 13 cm.; the other two were about 3 cm. in diameter. On the right stump was a single, deep ulcer, also about 3 cm. in diameter. Within twenty-four hours after application of the leaf of Aloe vera, pain had practically disappeared and the edema was much reduced. The smaller ulcers healed in about two weeks, leaving practically no scar. The large ulcer made good progress but my supply of leaves became exhausted.

I had become much interested in the drug, and finding that the ordinary commercial powdered Aloes was prepared mostly by natives, who dried the pulp of the leaves in the sun, I thought this sun-dried product might retain the properties of the fresh leaf. I obtained a supply of Socotrine Aloes, the best grade of powdered Aloes. This I made into an ointment with a lanolin base and applied it to the large ulcer. The relief from pain and healing continued about as it had done when the fresh leaf had been applied. However, after several months there appeared to be little progress. I then discontinued this treatment and used hot packs, scarlet red ointment, balsam of Peru, calamine ointment and zinc oxide ointment, one after another. Healing not only stopped but the size of the ulcer seemed to be increasing. I returned to the Aloes ointment and also applied powdered Aloes; the latter seemed to be a little more effective than the ointment. At the present time* the large ulcer remains unhealed, and in the past few months has made little progress. It is now 5 cm. long and 3 cm. wide. Because of the bad circulatory condition, surgical treatment seems inadvisable.

**Note - August 11, 1937. The large ulcer has been completely healed for two months.*

Pruritus Vulvae

Seven cases of pruritus vulvae have been treated and in all but two the results have been satisfactory and prompt. Of the two cases in which the results were less satisfactory, in one the condition was of long standing and an obstinate vaginal discharge was present. Also, in this case there was persistent perspiration of the groins; the perspiration appeared to be irritating and was difficult to control. This patient, although much improved after two months, is still under treatment. She has had much relief from the itching and the skin has a much better appearance than before. Nevertheless, the irritating vaginal discharge is refractory. In the other of these two cases progress has been slow, but the condition has improved and the patient is still under treatment.

Of the cases of pruritus vulvae, the following one was particularly encouraging. The patient was sixty-four years of age. The condition was very severe and the skin about the vulva and down the inner aspects of the thighs was thick-ened and purplish. Considerable treatment had been ineffective. The woman was in a highly nervous state and was unable to sleep. When treatment was begun with the Aloes ointment, administration of sedatives was continued. The intense itching and burning was almost immediately lessened; in two weeks the skin had become practically normal in appearance and the irritation had been completely relieved.

Ulcers Of Advanced Mammary Carcinoma

A woman, eighty-six years of age, had a carcinoma of the left breast of one year's duration. Because of her age and for other reasons, the condition was considered inoperable. In March, 1936, a crater-like ulcer developed and became a little more than 3 cm. in diameter. The discharge was profuse and very foul-smelling. After various

applications had been tried without effect, Aloes ointment was applied. In a few days both the discharge and the odor were controlled. Odor could not be detected more than a few centimeters away from the lesion after removal of the dressing. The application was made on gauze and this was easily applied and easily removed twice daily. Granulation developed promptly and the crater-like ulcer became level with the surrounding tissue. This treatment was continued from the latter part of March until the patient died, December 11, of abdominal metastasis. During this time the tumor became larger and more nodular, but after the depression filled there was little change in the size or appearance of the ulcer.

Ivy Poisoning

A pregnant woman twenty-two years of age had small lesions on the wrists caused by poison ivy. However, almost the entire inner aspects of both thighs were equally involved as to area and degree. The irritation in these areas was violent and inflammation and blebs caused much distress. A solution of potassium permanganate was applied to the right thigh and the woman was given some of the solution with which to continue treatment at home. To the left thigh Aloes ointment was applied liberally and the area was covered with gauze. The patient lived in the country, but she returned as directed on the second day. The lesions on the thigh that had been treated with potassium permanganate had somewhat dried but were still inflamed and very uncomfortable. The left thigh, to which Aloes ointment had been applied only once, had caused but little discomfort and the skin was normal in appearance, with the exception of a little remaining moisture and redness where the blebs had been. The patient was given ointment for the right leg also and was not seen again until her confinement two weeks later. She stated that the condition of both thighs had cleared up promptly.

Burns

A man, aged twenty-six years, had stepped into a pit containing boiling water emptied from a cooker in a canning factory. The injured foot and leg were scalded to within 8 cm. of the patella. Most of the outer layers of skin came off when the stocking was removed. Over the malleoli, burns extended through the entire integument. In a first aid station a proprietary ointment had been applied. In an effort to remove the ointment and dead skin, I applied, at first, warm, moist packs of solution of boric acid. On the following day, and thereafter, liberal applications of Aloes ointment were made. The patient had little pain and the dressings were easily removed. There was no evidence of infection. In ten days there were no raw areas, although the skin looked thin, red and shiny. The patient was dismissed and returned to work on the nineteenth day after the accident.

In another case, in which a large area had been scalded, and in several cases of moderate burn, treatment and results were similar.

Other Conditions

In addition to the cases cited, the ointment or powder was used in place of ordinary antiseptic substances in treatment of carbuncle, small infections and abrasions. In one case of "winter itch" also, a very dilute alcoholic solution was employed.

Unfavorable Effects In Three Cases

In one case of ulcer of the leg in which Aloes ointment was employed catharsis was present for one day. This may have been attributable to the Aloes. Because of possible absorption, therefore, Aloes probably should not be used on mucous surfaces, such as those of the vagina, except with caution.

Moreover, in two cases of psoriasis, there developed what appeared to be allergic erythema bordering the original patches. With the exception of these cases, I have not seen any untoward results from the use of the ointment or the powder.

Ancient And Modern Uses Of Aloes

(Please note: this was written in 1937)

The drug has maintained a place in the history of medicine since the time of King Tutankhamen, 4,000 years ago. It was known to the ancient Egyptians, is mentioned in Arabian medicine, and was employed down through biblical times and the dark ages to modern times. Aloes is used but little at present in the United States, except by veterinarians; nevertheless in the Twenty-second United States Dispensatory six pages are devoted to it. In former times Aloes was said to be useful in amenorrhea and as an abortifacient. It has long been used as a stimulant to the lower bowel in constipation and as a general tonic. It is mentioned as being useful in the treatment of abrasions, fissures, and so forth, and is a component in the official compound tincture of benzoin. Aloes was formerly used as an embalming agent and perhaps was one of the substances used by the ancient Egyptians in their now lost art of embalming. In the Bible, John 19, verses 39 and 40, is the following passage: "And there came also Nicodemus, and brought a mixture of myrrh and Aloes, about an hundred pounds. Then they took the body of Jesus and wound it in linen clothes and the spices, as the manner of the Jews is to bury."

The fresh leaf of the plant is still used by the natives of various countries. The Seminole Indians in the Everglades of Florida use it for treatment of wounds and burns. A friend from South Africa reported to me that the natives there used the leaf for treatment of sores and wounds. Another friend has told me that he has often seen it used by the peasants in southern Italy for treatment of ulcers, wounds, and so forth, and that he himself has used it for severe sunburn with great relief.

The Plant And Its Preparations

The genus Aloe embraces about a hundred species, which grow from a few centimeters in height to plants 6 meters high. The leaves of Aloe vera somewhat resemble the leaves of the century plant. They are about 40 cm. long and are dark green; sometimes they are mottled with brownish spots. The leaves are flat on the upper surface and convex on the under surface and the margins are armed with reddish thorns. The base of the leaf is about 1.5 cm. thick. The integument is thin and fibrous and the interior of the leaf is filled with a gelatinous substance resembling lemon gelatin.

The plant grows widely in warm countries. It is found wild and is cultivated in countries bordering the Mediterranean Sea and in India, Africa, China, and the Islands of the Indian Ocean. It is cultivated in many of the Islands of the West Indies, especially in Barbados, Curaçao and Aruba, and it is found in Mexico and Florida. I have not seen mention of its cultivation in any of the Pacific regions.

The various commercial products are named principally from the localities where they are produced. Socotrine Aloes, made principally from the species Aloe perryi, but also from Aloe vera, comes from the Island of Socotra in the Indian ocean. Barbados and Curacao Aloes are produced mostly from the species Aloe vera, which is grown on various islands in the West Indies. There are many other kinds of Aloes which are known by the following descriptive adjectives: "Cape," "Natal," "Zanzibar," "Aganda" and "Crown." Besides the preparation from Aloe vera and Aloe perryi, a number of preparations, mostly inferior, are made from other species and are official in the United States Pharmacopeia.

Because commercial Aloes, it is said, is prepared principally by natives, who remove the jelly-like interior of the leaves and dry it in troughs or other containers in the sun, it often contains much foreign matter. For this reason, in the United States Pharmacopeia it is advised that a purified Aloes be made by dissolving the powder in alcohol and then straining and drying the filtrate. I have used the crude powder, as I said before, because I thought some of the properties might be impaired by the alcoholic treatment.

Owing to the fact that there are so many varieties of commercial Aloes, it seems possible that the results may not always be uniform. The material I have used has been the best grade of Socotrine Aloes, and the results have been fairly uniform. The ointment which I made contains 1 drachm (4 gm.) of powdered Aloes and 1 drachm of calamine to the ounce (30 gm.) of white petrolatum. The calamine forms a sort of paste and makes the ointment more adherent. The dusting powder which I also have said that I used in some cases, has not caused any irritation or other undesirable effects.

Summary

The fresh leaves and the Aloes ointment and the powder appear to have the following properties:

1. They relieve pain, burning and itching.
2. They have some sort of antiseptic action. Infected lesions quickly become clean and exude little or no pus.
3. They seem to stimulate rapid granulation and formation of new tissue so that denuded areas appear to heal more rapidly than with other agents. They are effective in eliminating the foul odors that accompany infection of broken down carcinomas, ulcers and so forth.