



ALTERNATIVE MEDICINE FOR APHTHOUS STOMATITIS: A REVIEW

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ABSTRACT

Aphthous ulcers are a poorly understood clinical entity that causes significant pain in otherwise healthy patients. Several agents are helpful in the management of aphthous ulcers, including antibiotics, anti-inflammatory, immune modulators, and anaesthetics & have their own side effects. Over the past decade herbal medicine & homeopathic medicine has been explored. This article reviews the use of alternative medicine in oral mucosal lesions.

INTRODUCTION

Aphthous comes from the Greek word aphtha, which means ulcer. Despite the redundancy, the medical literature continues to refer to these oral lesions as aphthous ulcers. "Aphthous stomatitis" has been used interchangeably with "aphthous ulcers" and may be more accurate terminology [1]. Aphthous ulcers are among the most common oral lesions in the general population, with a frequency of 5–25% and three month recurrence rates as high as 50%. Aphthous ulcers have been reported in 2–4% of HIV-seropositive patients, although these patients suffer from larger and more frequent aphthae in advanced stages of their disease [2]. Aphthous ulcers are often quite painful; may lead to difficulty in speaking, eating, and swallowing; and may negatively affect patients' quality of life. While most aphthae are small and heal within 7–10 days, larger ulcers can persist for weeks or months. Consequently, therapy for the disease of recurrent aphthous ulcers (RAU) should address both healing and the prevention of new ulcers. There are many recommended therapeutic strategies for aphthous stomatitis. Current treatment options include topical agents, systemic and topical steroids, cauterization and antibiotics, mouth rinses containing active enzymes, laser treatments and combination therapy but none is definitive. Over the last

decade evidence based herbal medicine are being explored for the treatment of aphthae. Herbal medicine relieve pain, reduce inflammation and prevent infection in the treatment of aphthae. This article reviews the use of alternative medicine in oral mucosal lesions. Complementary and alternative medicine (CAM), as defined by the National Center for Complementary and Alternative Medicine (NCCAM), is a group of diverse medical and health care systems, practices, and products that are not presently considered to be part of conventional medicine. These resources complement or replace conventional therapies, or used as palliative therapy with a specific emphasis on research that explores the biological mechanisms of action, as well as their efficacy, safety, costs, patterns of use and/or implementation [3].

Clinical Features

Aphthous ulcers are round or oval, with a grayish yellow, crateriform base surrounded by an erythematous halo of inflamed mucosa. For 24–48 hours preceding the appearance of an ulcer, most patients have a pricking or burning sensation in the affected area. The ulcer usually occurs on the nonkeratinized oral mucosa, including the lips, the buccal mucosa, the floor of the mouth, the soft palate, and the ventral surface of the tongue. Regions of



keratinized oral mucosa, such as the hard palate, the gums, and the dorsal surface of the tongue, are uncommon locations [4].

Recurrent aphthous stomatitis (RAS) is typified by a common oral mucosal disorder that is characterized by multiple, recurrent, small, round or ovoid ulcers with circumscribed margins, erythematous haloes, and yellow or grey floors that present first in childhood or adolescence. The factors that predispose to RAS, such as behavioral factor in smoking (Noor NM et. al. 2008) and stress, trauma, food and nutritional deficiencies, systemic disease (e.g: anemia, Behcet's disease, Chron's disease), and medication (e.g. NSAIDs, β -blockers, Nicorandil, Alendronate) , genetics, diet, hormonal changes, and immunological disorders. Due to the indeterminate etiology of the disease, it is difficult to find a definitive cure and current treatments are aimed towards ameliorating the symptoms [5].

Natural Remedies for Canker Sores

These are some natural remedies that are being explored for the treatment of canker sores and are as follows:

Turmeric

It is the powdered dry rhizome of the plant *Curcuma longa*. Linn has been widely used as colouring agent, a spice and in the treatment of inflammatory conditions and other diseases. Curcumin (diferuloylmethane), the yellow pigment in turmeric is the major antioxidant and anti-inflammatory substance in turmeric. The possible mechanism of action of curcumin involves the decreased rate of release and metabolism of arachidonic acid involving diminished activities of phospholipase A2, cyclooxygenase, lipoxygenase and also by inhibiting the production of reactive oxygen and nitrogen species, which act as intermediates in many signal transduction pathways.

Several other experimental studies have revealed that curcumin is a potent antioxidant for the prevention or treatment of inflammatory processes [6]. Studies showed that curcumin could down regulate the expression of interleukin (IL)-6 protein, TNF, and various other chemokines which could suppress inflammation through multiple pathways. Externally, it has been applied to indolent ulcers, inflamed joints and have antiseptic properties [7].

German Chamomile

Other names are *Matricaria recutita*, German chamomile, true chamomile, Hungarian chamomile. Chamomile is a flowering plant in the daisy family. It is native to Europe and Asia. The flowers are used medicinally. It comes in capsule, liquid and tea form. It is a herb that has been used traditionally for thousands of years for a variety of conditions such as sore throat, gingivitis, eczema, psoriasis, irritable bowel syndrome, colds,

abscesses, and ulcerative colitis. It is also used to relieve pain in people with canker sores. In one preliminary study, 82% of people taking a German chamomile extract reported "excellent" pain relief. The study didn't include a placebo group, however, so it's impossible to know the true effectiveness of German chamomile in this study. It has a soothing effect on mucous membranes (including the lining of the mouth). It also has healing properties. A strong tea made from chamomile tincture can be swished in the mouth three to four times per day for treatment of aphthae [8].

Calendula Tea or Goldenseal Tea

It is used as a mouthwash three or four times daily for treatment of RAS. Mother tincture will be effective to provide local relief in the pain of RAS. It also reduces inflammation, and helps the tissues heal [9].

Myrrh (*Commiphora molmol*)

It contains high amounts of tannins. Powdered myrrh is useful for the treatment of mild inflammations of the mouth. Some herbalists suggest mixing 200-300 mg of herbal extract or 4 ml of myrrh tincture with warm water and swishing it in the mouth two to three times per day for treating aphthous ulcer [10].

Tea

Regular beverage tea has a rich supply of tannins or tea from some of the other herbs that are high in tannin, such as bearberry, eucalyptus, St.-John's-wort, sage, raspberry, peppermint and licorice can be used for treatment of aphthous ulcer [11].

Canker Root (*Coptis Groenlandica*) or Goldthread

This plant got its name because of its traditional use as a treatment for canker sores. American Indians and early settlers alike used cankerroot as a tea to treat both sore throat and canker sores [12].

Goldenseal

This herb was an American Indian favourite for treating all sorts of wounds. It contains astringent, antiseptic chemicals that help treat wounds and infections. It is used as mouth rinse for treatment of aphthous ulcer. It is very potent and should only be used in short bursts no more than a week to ten days at a time. It should never be taken during pregnancy [13].

Rockrose

Use this to rinse the mouth a couple of times per day to ease pain. It's also called sun rose [14].

Wintergreen

It used in mouthwash it makes a good antiseptic. The oil can also be rubbed directly into sores a couple of times per day to ease pain [15].



Liquorice

It is the root of Glycyrrhizaglabra from which a somewhat sweet flavor can be extracted. It contains tannin, and the compounds glycyrrhetic-acid and glycyrrhizin. All of these help speed the healing of sores. In a study the efficacy of licorice bioadhesive hydrogel patches was evaluated to control the pain and reduce the healing time of recurrent aphthous ulcer. It was concluded that it can be effective in the reduction of pain and size of the aphthous ulcer. The efficacy of the bioadhesive patches containing licorice extract in the management of recurrent aphthous stomatitis [16].

Sage

Many herbalists suggest making a strong Sage tea to treat inflammations of the mouth and throat. It can also be used to treat aphthous ulcer [17].

Wild Geranium (Geranium Maculatum)

The Cherokee Indians used wild geranium as an astringent to stop the bleeding of open wounds and as a wash to treat canker sores. It is widely used in folk medicine to treat mouth sores [18].

Echinacea

The antiviral, immune-enhancing, and wound-healing properties of echinacea make it a reasonable choice for mouth ulcers. Liquid echinacea (*Echinacea purpurea*, *E. angustifolia*, *E. pallida*) in the amount of 4 ml can be swished in the mouth for two to three minutes, then swallowed; this can be repeated three times per day. Tablets and capsules containing echinacea may also be helpful [19].

Aloe Vera

Aloe Vera is used in Ayurvedic medicine to treat canker sore. Some doctors of natural medicine recommend 1-3 tablespoons of aloe vera juice be used as a mouthwash then swallowed three times daily [20].

Tea Tree Oil

It helps to prevent infection and control parasites and candida. It can be used as a mouthwash or applied topically for treatment of aphthous ulcer.

Oregano Oil

Wild oregano oil can be unpleasant to use. It's like a very hot chilli pepper but, unlike a chilli pepper, the heat sensation completely disappears after about 2 minutes. Put a drop of oregano oil onto finger and apply it directly to each mouth ulcer. Leave it as long as up to 10 minutes without drinking anything, although feel free to swallow (the intense heat sensation will last about 2 to 3 minutes). The longer it is left in the mouth, the more effective it will be. Partial healing can be seen after only one application of wild oregano oil. Continue treatment until mouth ulcers are completely gone (usually 2 to 3

applications).

Alchemilla Vulgaris

Alchemilla is a genus of herbaceous perennial plants in the family Rosaceae, with the common name "lady's mantle" applied generically as well as specifically to *Alchemilla mollis*. It has traditionally been used in oral hygiene and was recently shown to accelerate wound healing when used in combination with glycerine. Aphtarine is a safe, well tolerated and highly effective promising new treatment for healing common mouth ulcers. In one of the studies topical application three times daily of Aphtarine gel containing *Alchemilla vulgaris* to minor mouth ulcers relieved discomfort and produced complete healing in the majority of patients. Most patients appreciated the product's ease of application, taste and texture [21].

Lavender Oil

It is an essential oil obtained by distillation from the flower spikes of certain species of lavender. According to advocates of alternative medicine, lavender oil can be used as an antiseptic and pain reliever. In a study, RAU patients treated with lavender oil showed a significant reduction in inflammation level, ulcer size, healing time, from 2-4 days [2 days (40%), 3 days (50%), 4 days (10%)], and pain relief mostly from the first dose, compared to baseline and placebo. No side effects were reported [22].

Olive Leaf Extract

It contains phenolic compounds which have anti-oxidant, anti-viral, and anti-microbial effects. A study was performed in which therapeutic effects of olive leaf extract on the oral minor aphthous ulcers were compared with dexamethasone mouth wash. The observations demonstrated that olive leaf extract reduced the amount of pain and the size of ulcers which led to conclusion that it can be used to treat aphthous ulcers without any adverse effects [23].

Myrtle

It is a particular herb used in some cultures as treatment for mouth ulcers. In a study conducted to evaluate its clinical efficacy in the treatment of RAS, showed it to be effective in decreasing the size of ulcers, pain severity and the level of erythema and exudation, and improving the quality of life in RAS patients [24].

Longo Vital (Lv)

It is a herbal based tablet enriched with recommended doses of vitamins and herbs: Paprika, Peppermint, Peppermint leaves, Rosemary and Yarrow flowers. Various studies have been conducted to evaluate the effect of daily intake of Longo Vital vitamin tablets for 4 – 6 months in the prevention of RAS. The number of recurrences was significantly reduced. LV induced no



adverse reactions and proved to be harmless systemic treatment in the prevention of RAS [25].

Propolis

It is a golden-dark brown resinous substance that worker bees gather and pack on their hind legs from the sap of trees, shrubs and flower blossoms. It is available in form of topical cream, oral capsules, alcoholic solution and topical solution in Propyleneglycol vehicle. It is an ancient and important medicinal remedy that has antimycotic, antioxidant, and antimicrobial activities. Study using propolis buccal pastes formulation revealed significant reduction in healing time, pain intensity and size of ulcer. Brazilian green propolis is known to exert antiulcer activity in experimental animal models. It has been reported that the hydroalcoholic extract of Brazilian green propolis, the main phenolic acids in the extract, and *Baccharis dracunculifolia*, the main botanical source of Brazilian green propolis exhibit antiulcer property [26].

Rosa damascena

It has anti-inflammatory and anti nociceptive properties. A study showed that mouthwash containing *Rosa damascena* extract was more effective than the placebo in the treatment of recurrent aphthous stomatitis.²⁷

Saturejakhuzistanica Jamzad (Labiateae), (MarzeheKhuzistaniIn Persian):

A recently identified plant, is native of western and southern part of Iran . It has been used as an analgesic and antiseptic in folk medicine of the region. It is effective herbal medicine for the management of minor aphthae [28].

Camel Thorn Distillate

Camel's Thorn is a name of several plants belonging to the genus *Alhagi*. They are herbaceous or half-shrubby plants growing in the deserts of Egypt and the East, and derive their name from the fact that they afford a food relished by camels. The efficacy of camel thorn distillate is comparable to that of other drugs used to treat oral aphthous ulcers. Its therapeutic effect may be due to the Flavanones -*Alhagitin* and *Alhagidin* that are present in this plant [29].

Coriander Leaves

Add coriander leaves to water. Boil the water with leaves in it. Strain and let it cool off till it becomes lukewarm. Rinse your mouth with this water three times a day. Add coriander seeds, cumin and jaggery/cane sugar with milk. Boil this milk till it is reduced to half its quantity. Drink this spiced sweet milk twice a day. This is a good remedy for aphthous ulcers.

Papaya Leaves

Chewing papaya leaves to release its juices is a folk remedy for canker sore. Some people swear by its efficacy

for treating canker sores [30].

Lactobacillus Acidophilus

Chew four *Lactobacillus* tablets three times per day to reduce soreness. Some people with recurrent canker sores have been reported to respond to *Lactobacillus acidophilus* and *Lactobacillus bulgaricus* [3].

Onion Remedy

Place onion slices on aphthous ulcers for about 15 minutes. Wash mouth with cold water. It will be a little uncomfortable initially but onions remedy is good for healing sores as well as relieving pain.

Plum Juice

Rinse mouth with 3-4 table spoonful plum juice. Do this 2-3 times a day. Alternatively, soak a cotton ball in plum juice and hold this cotton ball against aphthous ulcers for few minutes.

Grapefruit Remedy for Canker Sores

Add about 5-6 drops of grapefruit juice to water and mix well. Rinse your mouth with this water twice a day.

Slippery Elm Remedy for Canker Sores

Mix slippery elm powder with water to get a paste. Apply some paste on ulcers. Rinse mouth with this tea. It will dry out the sores in mouth.

Alum Powder

Place some alum powder on the aphthae inside mouth. It may give you a burning sensation initially which disappears within few seconds. Do this 2-3 times a day. It provides relief from pain.

Baking Soda

This is a cheap and very effective home remedy for treating sores. Make a paste of baking soda or can apply baking soda directly on the canker sore. Baking soda neutralizes the acids which cause the ulceration. Baking soda also has antibacterial qualities, and it can enhance the healing of the sore [32].

Homoeopathic Medicine[33].

Arsenicum album

A person who breaks out in burning, painful mouth sores, and also feels anxious and tired, is likely to benefit from this remedy.

Borax

This remedy is often helpful when canker sores feel hot and sensitive. Acidic foods—especially citrus fruits—may be irritating. Sores may break out on the inside of the cheeks, on the gums, and on the tongue. The person produces profuse saliva, yet still feels dry inside the mouth.



Calcareacarbonica

This remedy is often indicated when infants and small children have recurring canker sores. A child who needs this remedy may also have head-sweats during sleep, and be slow to teeth or learn to walk. It may help with RAS in adults who are chilly, stout and easily fatigued.

HeparsulphurisCalcareum:

If a person develops painful mouth sores that become infected—with pus formation, extreme sensitivity, and aggravation from cold drinks—this remedy may be indicated. A person needing Heparsulph often feels extremely chilly, vulnerable, and oversensitive.

MercuriusSolubilis

Bleeding gums, a swollen coated tongue, and offensive breath are seen along with canker sores when this remedy is needed. The painful, burning sores feel worse at night, and salivation is profuse, with drooling during sleep. The person tends to sweat at night and is very sensitive to any change in temperature.

Natrummuriaticum

Pearly sores that erupt inside the mouth, especially on the gums or tongue, may respond to this remedy. The mouth feels dry, and the tongue may have a tingling feeling. People who need this remedy often are troubled by cold sores around the corners of the mouth or chin, and have chapped or cracking lips. A craving for salt, strong thirst and a tendency to feel worse from being in the sun are other indications for Natrummuriaticum.

Nuxvomica

A person who needs this remedy may break out in canker sores after overindulging in sweets, strong spicy foods, stimulants, or alcoholic beverages. The sores are often small, and the person may have swollen gums, a

coated tongue, and bloody salivation. Irritability, impatience, and a general chilliness are often seen when this remedy is needed.

Sulphur

This remedy may be helpful for sores that are painful, red and inflamed, with burning pain that is worse from warm drinks and aggravated by heat of any kind. The mouth may have a bitter taste, and the gums can be swollen and throbbing. A person who needs this remedy often has reddish lips and mucous membranes, and a tendency toward itching and skin irritations.

Lifestyle Changes.

Dental work

Irritation from poor-fitting dentures, rough fillings, or braces can aggravate canker sores and should be treated by a dentist.

Sodium Lauryl Sulfate (SLS)

SLS, a component of most toothpaste, is a potential cause of RAS. It seems to attack the upper layers of the mucous membrane. Try an SLS-free toothpaste and mouthwash for several months to see if such a change helps.

CONCLUSION

Nature cares not for our human type of logic. She has her own, which we may not recognize & may not acknowledge until crunches come. In today's world of artificiality, it is high time we recalled the blessings of things created naturally. There is no iota of doubt that nature is the best healer & she heals with assurance but an assurance with different logic. Alternative medicine can provide relief in aphthous stomatitis with no side effects & is inexpensive.

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