

Herbs Used In Treatment of Skin Disorders

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Abstract

From neonates to elderly, the commonly affecting health problem is skin diseases, these skin diseases aren't just simple, they cause harm to the skin in numerous ways and in many cases these skin diseases are the symptoms for many complicated underlying health issues i.e., cancer, herpes and cellulitis. Hence, there is need to know in deeper about skin diseases as well as their treatment using herbs, as herbs have more pros compared to other drugs and Plants are often used for treating various diseases. These plants have been used since the start of mankind. They are cheap and safe. They are also useful raw materials for production of new synthetic agents. This review examines some plants for treating these diseases.

Key words: herbs; skin diseases; cancer; herpes; cellulitis;

Introduction

Many thousands of years ago, folk herbal medicine was used to treat skin health problems. Even our biologically close relatives, the great apes, used herbs for self-treatment. Herbs have been used differently on different continents, depending on their availability. Recently, skin diseases have become a major concern due to their association with Human Immunodeficiency Virus and Acquired Immunity Deficiency Syndrome (HIV/AIDS). According to the World Health Organization, over 80% of individuals in developing countries rely on traditional medicine to meet their primary health needs. India is considered to be the botanical garden of the world, as it is home to the largest collection of medicinal herbs globally. In addition to being nontoxic and easily accessible, medicinal plants play a vital role for pharmacological research and drug development, but they are also used as therapeutic agents directly or as starting materials for the synthesis of drugs [1, 2].

Functions of the skin the main functions of the skin include 1. Protection of the human body 2. Sensation i.e. transmitting to the brain information about surroundings 3. Temperature regulation 4. Immunity i.e. the role of the skin within the immune system 5. Enables movement and growth without injury 6. Excretion from the body of certain types of waste materials 7. Endocrine function e.g. re. Vitamin D.

SKIN DISORDERS

1) ATOPIC ECZEMA

Atopic eczema is the most common form of eczema and causes your skin to become itchy, red, dry, and cracked. This is a long-term condition for most people, although it may improve over time, especially in children. It can affect any part of the body, but usually affects the backs or fronts of

the knees, outside or inside the elbows, around the neck, hands, cheeks or scalp.

Aloe Vera

Common name: Aloe Sabar

Family : Xanthorrhoeaceae

Habit : Perennial herb

Parts used : Leaf gel

Used in treatment of Skin diseases including eczema, irritation, burns, wounds, bruises, abrasions, psoriasis, cuts, scrapes, cold sores, sun buns, inflammation, hair loss, rejuvenating, complexion improvement, cosmetic uses, microbial skin diseases.

Since *A. vera* contains antifungal and antibacterial elements, its gel is applied directly on the eczematous skin, so the skin becomes softer and wounds heal rapidly. Many people reported decrease in eczema symptoms such as skin dryness, scaling and improved skin quality and also due to its antibacterial activity it prevent secondary infection.

Avena sativa

Common name : Oat, Shofan

Family : Poaceae

Habit : Annual herb

Parts used : Colloidal oat extract, decoction

Used in treatment of Skin diseases including eczema, wounds, irritation, inflammation, erythema, burns, itching, sunburn.

Different clinical studies are undertaken to research the effect of oats on eczema and these have all showed a big decrease in skin redness, dryness, scaliness, itching and erythema after application of oat extracts. These results were observed in adults and children oat extracts. These results were observed in adults and children (Nebus et al., 2012). In vitro, a colloidal oat extract demonstrated anti-inflammatory activity – inhibited releasing of the arachidonic acid from phospholipids and therefore the subsequent metabolism into prostaglandin and leukotrienes. additionally, it inhibited the expression of phospholipase A2 (PLA2) and cyclooxygenase (COX-2) (Aries et al., 2003). A colloidal oat extract stimulated production of the anti-inflammatory transforming protein $\beta 1$ (TGF $\beta 1$) by keratinocytes, and inhibited production of interleukins [3,4] (Aries et al., 1999).

Curcuma longa

Common name : Turmeric, Kurkum

Family : Zingiberaceae

Habit : Perennial herb

Parts used : Rhizome paste, powder

Used in treatment of Skin diseases including eczema, wounds, burns, cuts, chicken pox, shingles, allergy, scabies, sores, inflammation, microbial skin diseases, complexion improvement.

The active compound curcumin is supposed to have many biological effects including antiinflammatory, antioxidant, antitumour, antibacterial and antiviral activities, which show potential in clinical medicine (Aggarwal et al., 2007). It is generally used by people for eczema treatment. It appears that the active ingredient curcumin present in turmeric has anti-inflammatory and bactericidal properties, which may assist to treat skin inflammation linked with eczema [5,6].

Matricaria chamomilla

Common name ; Chamomile, Babunaj

Family : Asteraceae

Habit : Annual herb

Parts used : Flower extracts, decoctions, oil

Used in treatment of Skin diseases including eczema, wounds, itching, irritation, inflammation, allergic conditions, dermatitis, erythema, bacterial skin diseases, nappy rash, frostbite, cosmetics uses.

It is found to be efficient in wound healing and skin inflammatory conditions, consequently employed in allergic conditions, atopic eczema. Flowers are made into tea and liquid extracts, capsules and tablets. It's applied to skin by converting them into ointment or cream (Blumenthal et al., 2000). Aertgeerts et al. (1985) performed a clinical study in 161 skin disorder patients employing a cream made up of chamomile extract, in comparison with steroidal and non-steroidal creams, it had been equally effective as steroidal cream and a lot more effective than non-steroidal cream. Chamaemelum nobile helps in skin cell regeneration.

2) PSORIASIS

Psoriasis is characterized by flaky red patches of skin coated with silver scales that occur on the elbows, knees, and lower back, and can be uncomfortable or painful and sore. Psoriasis can be a small annoyance for some people, but it can be a severe problem for others. It has a negative impact on their quality of life. Psoriasis patients frequently experience periods of no or minor symptoms. Many herbs can help with psoriasis

symptoms by reducing inflammation or slowing the proliferation of skin cells.

Mahonia aquifolium

The flowering plant Mahonia aquifolium is derived from the mahonia shrub. Oregon grape is another name for it. This herb has been used to treat inflammatory disorders like psoriasis in the past. Berberine, found in Mahonia aquifolium, may help to reduce some of the irritation caused by psoriasis. The plant also contains antiproliferative properties, which means it can halt the growth of cells.

Mahonia aquifolium has one of the strongest evidentiary bases, according to the National Center for Complementary and Integrative Health (NCCIH). All herbal cures for psoriasis are available from this reliable source [7, 8].

Several systematic reviews concur that Mahonia aquifolium can help treat the symptoms of psoriasis.

Indigo naturalis

Qing dai, also known as indigo naturalis, is a traditional Chinese herbal medication used to cure skin disorders. It is extracted from a range of plants, including Baphicacanthus cusia, by manufacturers. Recent clinical trials have suggested that the medication can help with psoriasis, and a comprehensive review published in 2015 [Complementary and alternative medicine for psoriasis: what the dermatologist needs to know], indicated that indigo naturalis, combined with Mahonia aquifolium, was an effective treatment for psoriasis.

In a recent study, 24 patients with mild psoriasis were given either indigo naturalis or a placebo for 8 weeks. People with psoriasis experienced much fewer symptoms after the experiment than those in the placebo group. They also showed reduced levels of interleukin-17 (IL-17), an inflammatory marker in psoriasis patients.

Aloe Vera

Antibacterial and anti-inflammatory effects are found in creams and gels containing Aloe vera extract. They may aid to calm the skin and prevent infection-causing bacteria.

According to the NCCIH, Aloe vera may assist with psoriasis, although there is less proof than for Mahonia aquifolium and indigo naturalis.

To treat psoriasis, use a topical aloe vera gel to the affected areas of the skin.

3) VITILIGO

Vitiligo is a skin condition that generates pale white patches on the skin that vary in size and can appear anywhere on the body.

They're more evident on parts like the face and hands that are exposed to sunlight, as well as on dark or tanned skin

Your hair may turn white if you have vitiligo on your scalp. Vitiligo is a chronic skin disorder. It's not contagious. Herbal medications of various natures and effects have been utilized for the treatment of vitiligo since ancient times.

Ginkgo biloba

Ginkgo extracts have been demonstrated to be useful in the treatment of a variety of diseases, including allergies, varicose veins, premenstrual syndrome, headaches, vertigo, and more. Ginkgo extracts have also been utilised to treat vitiligo in recent years. The medicine is manufactured as a tablet with various dosages that must be taken orally once to three times daily for more than three months to be effective.

Khellin

Khellin comes from the plant *Amni visnaga* and is a naturally occurring furanochromone. Since ancient Egyptian times, the plant has been utilised as a herbal medicine for various ailments (such as kidney illness, asthma, and others). Because of khellin's negative effects, such as liver dysfunction and allergic reactions, analogues of khellin with safer profiles and higher efficacies have been developed. And have been used in medicine for the treatment of vitiligo for several decades, where they have shown to be effective when combined with UVA phototherapy. Despite the fact that the specific mechanism of action is unknown, khellin stimulates melanocyte proliferation and melanogenesis. Khellin can be used topically or systemically (oral dosing). The treatment consists of taking khellin gelatin capsules orally and then having the patient irradiated with UVA after about 2.5 hours. Two to three times a week, the therapeutic session is repeated. The treatment is completely risk-free [9, 10].

Green Tea Polyphenols

Green Tea polyphenols are compounds from green tea leaves that have been utilised in medicine since antiquity. Because of their high content of Epigallocatechin-3-gallate (EGCG), they have anti-inflammatory, antioxidant, and immunomodulatory properties. The medication can be used both systemically and topically. Recent research suggests that Green Tea polyphenols may be effective in the treatment of vitiligo by reducing oxidative stress in the melanocyte-unit.

Capsaicin

Capsaicin is an active ingredient found in chilli peppers, which belong to the genus *Capsicum*. The medication has been offered as a therapeutic strategy for vitiligo treatments due to its anti-inflammatory and antioxidant effects. An experimental investigation recently confirmed that incubating keratinocytes taken from a vitiliginous patient's perilesional skin with capsaicin prevented the cellular damage by ROS.

4) ACNE

Acne is a skin disorder that occurs when oil and dead skin cells clog your hair follicles. It causes pimples, whiteheads, and blackheads. Teenagers are the most affected by acne, yet it affects people of all ages. Although there are effective acne treatments available, acne can be stubborn. There are many different treatment regimens for acne vulgaris, but none of them are without side effects, and their specific role in therapy is unclear.

Azadirachta indica

The ethanol extracts of *Azadirachta indica*, *G. glabra*, *Andrographis paniculata*, *Ocimum sanctum*, and green tea were found to have the capacity to inhibit acne in a study on an anti-acne formulation made from herbal extracts. The anti-acne compound was found to be effective against *Propionibacterium acnes* and *Staphylococcus epidermis* in the recent investigation. Aqueous extracts of *Azadirachta indica* leaves have also been shown to be chemopreventive against skin cancer in mice. In compared to the control group, skin cancers have been observed to increase the expression of proliferating cell nuclear antigen.

Cannabis sativus

Acne rosacea, seborrheic dermatitis, eczema, dermatitis, psoriasis, and lichen planus can all be treated using *Cannabis sativus* seed oil. This plant's leaves powder can be used to treat wounds and sores. Externally, cannabis sativus extract can help reduce itching skin irritation. The seed oil protects the skin by strengthening it and making it more resistant to bacterial, fungal, and viral infections.

Echinacea angustifolia and *Echinacea purpurea*

P. acnes, the major cause of acne vulgaris, has been demonstrated to be easily killed by *Echinacea purpurea* extract. *P. acnes* caused significant

release of various pro-inflammatory cytokines, including IL-6 and IL-8, in cell culture models. The *E. purpurea*, on the other hand, was able to entirely reverse the effect on regular leaves. As a result, *E. purpurea* provided acne sufferers with a safe two-fold benefit by decreasing both bacterial-induced inflammation and organism development.

Rosmarinus officinalis

P. acnes, a type of bacteria that causes acne, has also been shown to be beneficial with *Rosmarinus officinalis* oil. The antibacterial capabilities of *R. officinalis* essential oil were tested against *P. acnes* in a study, and significant changes in the size and morphology of *P. acnes* were seen in response to treatment.

Melaleuca alternifolia

Tea tree oil applied topically in low doses offers anti-acne properties with few side effects. It works well in the treatment of persistent infected wounds and osteomyelitis [11,12].

5) BASAL CELL CARCINOMA

Dome-like, pink or red, shining, and pearly patches that may have a sunk-in core, like a crater. Raised, firm, and pale portions that may resemble a scar. Blood vessels visible on the growth. Easy bleeding or leaking sore that doesn't seem to heal, or cures but resurfaces.

Basal cell carcinoma (BCC) is a kind of skin cancer that starts in the cells of the basal layer of the skin. The epidermis is lined by normal basal cells. Skin cells that replace old cells with new ones are known as keratinocytes. Tumors on the skin's surface develop from cancer of the basal cells. Sores, growths, lumps, scars, or red patches are common symptoms of these tumours.

BCC seldom spreads to other parts of the body (metastasizes), yet it can still cause deformity. It can spread to other parts of the body in rare situations. It could become life-threatening if this happens. The most frequent type of skin cancer is BCC.

Turmeric

Turmeric is a herb or spice that has been utilised in natural medicine for hundreds of years. Turmeric is mentioned in ancient Ayurvedic treatments, and it is recognised to provide a variety of health benefits. Turmeric contains curcumin, a powerful antioxidant that aids in the prevention of malignant development. Make a thick paste with turmeric and water and apply it to the affected region for around 20 minutes. Turmeric use has also been shown to boost immunity against all diseases.

Ginkgo Biloba

Ginkgo Biloba possesses anti-cancer qualities, according to an article published in the Journal of Food Science in the January 2008 issue, making it a holistic skin cancer remedy. *Ginkgo Biloba* herb comes in a variety of forms, including pills and extracts. This natural skin cancer treatment must be followed under the supervision of a herbalist and your doctor. *Ginkgo Biloba* seeds should not be eaten raw. *Ginkgo Biloba* may induce adverse effects such as headaches, nausea, and moderate gastrointestinal problems. Giddiness is also a possibility for some folks. Those with blood issues should avoid using *Ginkgo Biloba* since it raises the risk of severe bleeding.

Green Tea

Green tea is currently a popular antioxidant source. Green tea enhances DNA repair and may prevent non-melanoma skin cancer, according to an article published in Archives and Biochemistry and Biophysics in November 2010. This natural skin cancer treatment has numerous health benefits, and drinking two cups will only enhance your health and aid in the healing of skin cancer.

Flaxseeds

Flax seed powder and flax seed oil have already established themselves in a number of cuisines. Flaxseeds include fibre, lignans, vitamins, and omega 3 fatty acids, among other things. Lignans aid in the prevention of malignant cell spread.

Astragalus

This natural skin cancer treatment boosts immunity and aids in the fight against malignant cells in the body. It is a Chinese medicinal root that can be used to treat a variety of ailments.

6) MELASMA

Dark patches on the face, neck, chest, and arms are common symptoms of this skin disorder. Pregnant women (chloasma) and people with darker skin who have had a lot of sun exposure are more likely to have it. Additional than skin darkening, there are no other symptoms. It could fade away on its own in a year or it could become permanent.

Melasma is a pigmented condition that affects women's faces and is divided into four types: centrofacial pattern, malar pattern, mandibular pattern, and mixed.

Aloe vera

Using a topical, liposome-encapsulated aloe vera preparation on pregnant women with melasma greatly improved their melasma, according to a 2017 study <https://pubmed.ncbi.nlm.nih.gov/28139161/>

7) HERPES SIMPLEX

Herpes is caused by the herpes simplex virus (HSV), which is also known as HSV. Herpes can affect any region of the body, however it most usually affects the genitals and mouth. The herpes simplex virus is divided into two types:

HSV-1 causes cold sores and fever blisters around the mouth and on the face, and is predominantly responsible for oral herpes.

HSV-2 It is predominantly responsible for genital herpes outbreaks and is the primary cause of genital herpes.

Lemon balm (*Melissa officinalis*) is a mint family member with a lemon fragrance. The chopped leaves can be steam-distilled to produce an essential oil. Treatment of herpes simplex and small wounds are two examples of topical applications. After using 1% balm extract cream five times a day for eight days, 96 percent of 116 patients with herpes simplex lesions reported total clearing of lesions on day eight. Another study indicated that when balm extract was applied to lesions within 72 hours of the onset of symptoms, the size of the lesions and the time it took for them to heal were statistically better in the balm extract group. The antiviral properties of the balm appear to be due to tannin and polyphenols. Echinacea spp., sweet marjoram, peppermint, and propolis are some of the other herbal formulations that have shown in-vitro effectiveness against herpes simplex [13, 14].

8) SCABIES

Sarcoptes scabiei, a microscopic burrowing mite, causes scabies, an itchy skin disorder. In the place where the mite burrows, there is a lot of itching. At night, the desire to itch may be extremely powerful.

Seeds of the anise plant (*Pimpinella anisum*) contain an essential oil that has antibacterial and insecticidal properties in vitro and is used topically to treat scabies and head lice. Neem (*Azadirachta indica*) is a plant native to India that is utilised medicinally in all parts. A paste of neem and turmeric used topically was found to heal chronic ulcers and scabies in a trial involving more than 800 villagers in India. It appears to be safe for

adults to use, but it can be harmful to youngsters. In India and China, a variety of different herbs have been used to cure scabies for ages.

9) PRURITUS

Itchy skin is a distressing, annoying sensation that causes you to scratch. Itchy skin, also known as pruritus (proo-RIE-tus), is frequently caused by dry skin. It's more frequent in older people because their skin becomes drier as they become older.

Camphor is made from the wood of the camphor tree (*Cinnamomum camphora*) and is classified as a 2b and 2d distillate (McGuffin et al. 1997, 30). In large doses, it is poisonous. It can be applied to lotions or creams at a half-percent concentration as an antipruritic. Menthol comes from Japanese mint (*M. arvensis*), which is classified as a Class 1 plant (McGuffin et al. 1997). It possesses antimicrobial, cooling, and antipruritic properties.

Antipruritic and antiproliferative tars obtained from birch (*Betula* spp.), beech (*Fagus* spp.), and juniper (*Juniperus* spp.) trees (van Wyk and Wink 2004). They're found in creams, gels, and soaps in a concentration of 5–10%. They are photosensitizing substances, and exposing them to sunlight in moderation can be advantageous [15, 16].

10) WOUNDS AND BURNS

The leaves of Aloe vera (*A. vera*) create a gel as well as a juice or latex. The gel is extracted from the leaf's centre core and has been used topically to treat wounds and burns for millennia. The juice, also known as latex, is a bitter yellow fluid collected from the inner leaf skin and marketed dry as a powder with strong laxative properties (Peirce, Fargis, and Scordato 1999). Aloe vera reduces the burning, itching, and scarring associated with radiation dermatitis, according to several case reports and animal studies (Klein and Penneys 1988). Chronic leg ulcers, medically caused wounds, and frostbite have all been proven to recover faster with aloe vera [17, 18].

Conclusion

Herbs have a lot of potential for treating a variety of skin conditions. In India, more than 80% of people rely on traditional medicine and employ a variety of plant-based medicines to treat skin disorders. They are relatively inexpensive when compared to conventional allopathic drugs and can be of tremendous benefit to India's population in general, and poor people specifically. Herbs are high in active components and can be a safer and more cost-effective treatment for skin conditions ranging from rashes to deadly skin cancer. Because more than half of the plant species effective for treating skin illnesses tend to be restricted to forests, deforestation, habitat degradation, urbanisation, and other human activities may pose a severe threat to these species. The necessity of the hour is to conserve these plants with the support of local involvement and to conduct comprehensive research in this area to widen the prospects of herbal medications in the treatment of skin diseases.

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