REVIEW ARTICLE

Herbal Drugs Applied to Enduring Skin Disorders

Tanmay Chaudhari, Sahil Gawande, Isha Mirzapure

Department of Pharmaceutices, Datta Meghe College of Pharmacy, DMIHER (DU), Wardha, Maharashtra, India

Abstract

Skin diseases are a major issue that is faced all over the world. Based on the current analysis, it can be deemed that the highest prevalence rate of an ailment across every age bracket of populace is skin infection. Herbal treatment has been used to cure skin condition for thousands of years. Skin diseases are curable and can be controlled using the under-listed herbal plants. The recurring skin diseases are antitumor, vitiligo, scabies, psoriasis, acne and eczema. Herbal drugs for the treatment of diseases of the skin are famous among the population of many countries. More than half of plant species are utilized in skin ailments treatment. The qualitative research on herbs preparation gave the information to conclude that some of the herbs are beneficial for treating the chronic skin disorders with relatively less side effects so far as the use is concerned and its effectiveness in solving the problems. It is believed that the natural therapy is safe with no harm being experienced. Contained in this summary are the functions and uses of therapeutic herbs in long-term illnesses of the skin.

Key words: Antitumor, chronic skin disorders, herbal medicine, herbal plants, natural therapy

INTRODUCTION

As it provides cover over the outer part of the body, skin is the biggest part of the human body. It also helps the first tier of defense. Different subtypes of cells and structural components make up the skin. With regard to the skin, they are the dermis, the hypodermis, and the epidermis. The skin layers have individual effects on how the skin acts all together. Everyone has individual discoloration and thickness of their epidermis, or outer layer of skin. Globulous and hairy skin are both common types of skin that are apparent on the human body. Skin grafting, vitiligo, burns, scars, psoriasis, and scabies are among the known diseases that affect the skins. Pediculosis, herpes zoster, erythema, urticaria, and other skin conditions with comparable symptoms. Herbal remedies are commonly applied to cure illnesses in every part of the globe skin disorders. One can heal almost all the dermatological ailments by using almost all the species of plants. In cancer growth, intensive antitumor stimulator is the fraction of non-alkaloid of the leaves of herbal plant species. Herbal therapy: It is necessary to study its use and effectiveness in other aspects such as treating sicknesses and diseases.[1] Therefore, as suggested by this particular research study there are a number of botanicals, which are less hazardous and have a therapeutic impact on chronic skin diseases.

MATERIALS AND METHODS

Achyranthes aspera (Prickly chaff flower, Devil's horsewhip; Family: *Amaranthaceae*)

Conventionally, the plant has been widely applied in the management of skin ailments including; boils, scabies, skin rises, and lesions.[2] There was a considerable decrease in the capacity of the cancer-promoting compound 12Otetradecanoylphorbol-13-acetate to activate the Epstein-Barr virus early antigen in Raji cells (concentration 100 g) by methanol (MeOH) extract, alkaloid, non-alkaloid, and saponin fractions from A. aspera's leaves. Seven of these eight compounds were non-alkaloids (96.9% of the inhibitory activity of the non-polar, non-alkaloid fraction, of which 60% remained viable when oil was added). The results of a two-stage *in vivo* mouse skin carcinogenesis study also indicate a very significant anticarcinogenic effect achieving of 76% when the entire methanolic leaf extract was used.[3]

Address for correspondence:
Tanmay Chaudhari, Datta Meghe College of Pharmacy, DMIHER (DU), Wardha, Maharashtra, India.
Telephone no.: +91 9561446642.
E-mail: tanmaychoudhary564@gmail.com

Received: 31-08-2024
Revised: 22-01-2025
Accepted: 12-02-2025

Allium cepa (Onion; Family: *Liliaceae*)

One of the study weeks, a blinded researcher evaluated the scar look, feel, redness, and sensation of discomfort. On the basis of these findings, it can be concluded that the pathogenic genera of fungus infections include Candida, Malassezia, and dermatophytes, and their usage can be helpful in treatment. When employing MeOH as a solvent, the first stage of maceration involved was to extract the outer layer of skin of *A. cepa*. The quantitative and qualitative phytochemical tests were carried out on this extract. Through the 2,2-diphenyl-1-picrylhydrazyl technique and agar well diffusion, the extract was evaluated for antimicrobial capability and free radical scavenging ability. After phytochemical analysis, the total phenolic content and the total flavonoids were found as 422. Undefined in CFE 1315 ± 45 mg/g gallic acid equivalent, and in CFE 1635 ± 172 mg/g gallic acid equivalent, respectively. As found by the antibacterial test, an ethanol-based extract of onion skin possesses bacteria-killing capacity against both Gram-positive and Gram-negative bacteria but ethanolic extract is more effective against Gram-negative bacteria. Due to the pharmacological compounds detected in onion skins, they are effective for curing bacterial infections and diseases caused by oxidative stress.[4]

Allium sativum (Garlic; Family: *Liliaceae*)

Out of all the herbs in the world without a doubt, garlic is probably one of the well-researched with interest and activity shown by researchers all over the world and it is relied upon to cure a lot of illnesses. Any individual with basic knowledge on plants would have some idea on the biological aspects of garlic and the fact it is one of the best producers of antioxidants. This review also compiles all *in vitro* and clinical trials with animals and humans on dermatological effects of, and preparations containing garlic and all clinical trials in relation to garlic preparations. It is evidently after the literature search 23 studies were found out. The effects resulting from the study show that ingestion of garlic, either in the form of capsules or as food has beneficial effects on immunological factors, skin blood flow, ultraviolet radiation protection, and cancer treatments.[5,6] In addition, it may work on psoriasis, alopecia areata, keloid scar, cutaneous corn, leishmaniasis, viral or fungi skin infection, and skin aging and regeneration as an extract of garlic when applied topically.[7-9] Here garlic feeding was found to be absolutely effective in antagonizing the skin papillomas fully in the animals and the size and number of skin papillomas in the mice were significantly found to be minimized based on the histology conducted on the skin of the animal which was under garlic feeding.

Aloe vera (Barbados aloe; Family: *Xanthorrhoeaceae*)

The thick, meaty, pea-green leaves of Barbados aloe (*Cape aloe*; *A. vera* Mill. syn (L.) Burm. f.), which are speckled with white when young, grow to a height of 30–50 cm. External application of *A. vera* gel helps relieve inflammatory skin conditions and mild burns, bruising, and abrasions. The gel should be used fresh because it is prone to enzymatic, oxidative, and microbiological degradation. There has been some discussion of contact allergies. Skin problems can be effectively treated with *A. vera*, which is often used as a health drink. Stretch marks, acne, and wrinkles have all been shown to respond well to its treatment.[10]

Azadirachta indica (Neem; Family: *Meliaceae*)

Through physicochemical properties and antibacterial activity research of acne moisturizer made from crude herbal extracts, it was discovered that indica and green tea inhibit acne. The ideal anti-acne moisturizer blend was found to help lessen bacteria that cause acne, such as *Propionibacterium acnes* and *Staphylococcus epidermis*. Neem, or *A. indica*, is a big tree native to India that has been utilized for many years for its many uses, mostly for skin conditions and its "herbicidal" qualities. Due to the presence of biologically active secondary metabolites, primarily limonoids, and tetranortriterpenoids like azadirachtin, its bark, leaves, seeds, fruits, and flowers are commonly utilized in medicinal therapy. A. indica was therefore investigated as a biopesticide and as an anticancer, antibacterial, anti-inflammatory, and chemopreventive agent. In addition, it has been discovered that A. indica culture differentiated cell tissue produces active metabolites for various applications. On its possible application in cosmetics, however, very little research has been done.[11-13] For example, most research elucidated the antibacterial characteristics in regard to personal health care and medical issues such as dandruff and acne. Here, we compiled the most frequent cosmetic claims for treating acne as well as for reducing the symptoms of various skin conditions linked to oxidative and inflammatory processes from recent *in vivo* studies and patents to help scientists and business owners choose A. indica derivatives as cutting-edge cosmetic chemicals.[14]

Brassica oleraceae (Red Cabbage; Family: *Brassicaceae*)

Among the major groups of vegetables that are grown worldwide, cabbage is one of the most accepted, scientifically known by its botanical name – *B. oleracea* var. capitata L. This is because though red cabbage and cabbage technically are different entities, the two are scientifically classified under the same name, and therefore green cabbage is often used to differentiate between the two. Almost all diseases affecting the gastrointestinal tract, such as gastritis, peptic and duodenal ulcers, irritable bowel syndrome, wounds, as well as mastitis, are treated with cabbage as a herbal remedy, which possesses antioxidant and anti-inflammatory properties.[15] People have heard that it is possible for cabbage to assist in dealing with xeroderma, skin issues, and acne among other skin complications. As per the principles of modern medicine, skin diseases are said to originate from the

gastrointestinal tract. In addition, it is fully recognized that cabbage is a good diet for problems with the stomach and skin disease issues in Korea. Thus, Koreans have employed the help of cabbage in treating stomach problems that cause skin illnesses among people. Furthermore, the situation with face masks is similar – grated cabbage is also used in recipes, and references with such information are not banned. Occupational presents itself through vesicular lesions, hyperkeratosis, maculoerythematous response, itching, and the development of a rough skin surface with flakiness. However, this illness is non-fatal, but crippling the quality of life and working productivity of the affected worker. It also takes an extremely heavy monetary pressure.[16]

Calendula officinalis (Marigold; Family: *Asteraceae*)

For millennia, marigold flowers utilized in traditional medicine, decoctions, and tinctures made from them have been connected to more than 35 health advantages. The most frequent uses include bruising, cutaneous and internal inflammatory disorders from a variety of sources, burns (including sunburns), and moisture. From the *Asteraceae* family of plants, *C. officinalis* Linn. (CO) is a well-known medicinal herb that has been used for millennia.[17,18] Quinines, triterpenoids, glycosides, saponins, carotenoids, volatile oil, amino acids, steroids, and sterols are all present in this plant. These chemical components have a wide range of biological actions, including hepatoprotective, wound healing, anti-inflammatory, anti-cancer, antihelminthic, and antioxidant properties. It is also used for some burn cases and gastrointestinal, gynecological, ophthalmic, and skin diseases. We have reviewed recent studies conducted in the past 15 years on the therapeutic uses of CO and highlighted its wide range of uses in traditional medicine in this review.[19] In addition, we have clarified the molecular mechanisms and current clinical research of CO.

Camellia sinensis (Green tea, Chaay; Family: *Theaceae*)

A shift to natural skincare and cosmetics free of poisonous preservatives and dangerous ingredients is evident in all of the improvements that have been seen. Tea extracts are becoming more and more important in nutritional supplements and cosmetics due to its rich composition and diverse biological activities. To provide skin care products and treatments for specific dermatological problems, this review aims to compile reports on the qualities of the tea plant, as well as its extracts and preparations. Special focus is placed on its anti-inflammatory, anti-hyaluronidase, antioxidant, slimming, hair-strengthening, photoprotective, and blood vessel-sealing qualities. According to the National Center For Complementary and Alternative Medicine (NCCAM), epigallocatechin gallate, a polyphenol contained in green tea, has been demonstrated to inhibit skin tumors from spreading throughout the body. It can aid in the reproduction of elderly skin cells, providing the illusion of youthful skin. When applied topically, these substances enhance blood vessel health and microcirculation, which enhances skin oxygenation and nutrition. In addition, because they stop Vitamin C from oxidizing, polyphenols offer protection against it. Given that Vitamin C plays a key role in the creation of collagen, the primary protein found in skin and blood vessels, this is a significant concern from a cosmetic standpoint. By preventing the release of histamine and preserving hyaluronic acid, tea polyphenols also have an impact on blood vessel sealing. Their impact on adrenaline's action, which constricts blood vessels, is equally significant. Low amounts of this hormone cause the vessels to weaken, resulting in brief yet frequent contractions. The tea plant's polyphenolic compounds tangentially reinforce arteries, as they stop adrenaline from oxidizing. In addition, they increase blood flow by preventing platelet aggregation through a variety of methods, including obstructing the proteolytic action of thrombin and suppressing the activities of tyrosine kinases Syk and Lyn. As to the findings of Lee and associate researchers, the primary catechin found in green tea, epigallocatechin gallate (EGCG), dramatically reduces the production of two key enzymes that cause platelet aggregation: thromboxane synthase and cyclooxygenase-1. Remarkably, this impact was even more pronounced in the case of EGCG when compared to aspirin, a non-steroid anti-inflammatory medication that is frequently used to prevent platelet aggregation linked to thrombotic illness.[20]

Cannabis sativa (Charas, Ganja; Family: *Cannabinaceae*)

The leaf powder can be used to treat wounds and sores. Ganja is applied externally to conditions of the skin that cause itching. Rosacea, psoriasis, lichen planus, varicose eczema, dermatitis, and dermatitis/cradle cap are just a few of the skin problems that can be treated with hemp seed oil. Nowadays, it is known that using *Cannabis sativa* might lessen nausea brought on by chemotherapy, treat some forms of chronic pain, and enhance anxiety. The beneficial effects of *C. sativa* extracts and associated phytocannabinoids, however, have not been well-documented for a number of common skin conditions, such as acne, atopic dermatitis, psoriasis, pruritus, and discomfort. Until the compilation of *in vitro*, *in vivo*, and clinical research available this study provided an overview of the most recent data about the effects of phytocannabinoids at the cutaneous level. Through a variety of mechanisms involving both CB1/2-dependent and independent pathways, phytocannabinoids have exhibited possible anti-inflammatory, anti-oxidant, anti-aging, and anti-acne benefits. Along with traditional immune cells, a number of skin-specific players, including sebocytes, fibroblasts, melanocytes, and keratinocytes, may constitute a phytocannabinoids' target. Most research has focused on cannabidiol, which has been shown to have photoprotective,

Figure 1: The hierarchy from herbal medicines to herbal medicines products and possible pathways

antioxidant, and anti-inflammatory properties at the cutaneous level. Additional research is needed to determine whether cannabidiol has any effect on cell differentiation, particularly in the context of psoriasis. Cannabidiol was found to be effective in treating skin conditions based on inflammation in animal models and preliminary clinical trials. In addition, treating seborrheic disorders – especially acne – is one of the most promising uses of non-psychotropic phytocannabinoids. Finally, the lack of understanding of the involvement of the endocannabinoid system in skin conditions has become apparent as a significant barrier to further pharmacological research. Further research on phytocannabinoid contact has been sparked by the limited investigations done on *C. sativa* extracts, which revealed greater effects than single phytocannabinoids.

Crocus sativus (Saffron; Family: *Iridaceae*)

Saffron's natural plant extract possesses sedative, diaphoretic, emmenagogic, antispasmodic, and carminative qualities. Animals that consumed it developed cutaneous papillomas fewer times and in lower quantities. When given early, saffron decreased the incidence of carcinoma of the skin in mice exposed to 7,12-Dimethylbenz[a]anthracene (DMBA). This could have something to do with the cellular defense mechanisms being activated, at least partially. In addition, it has demonstrated efficacy in treating psoriasis.

Echinacea angustifolia, Echinacea purpurea (Purple cone flower; Family: *Asteraceae*)

Boils, sores, herpes, hemorrhoids, and psoriasis are among the skin problems that echinacea has been employed to treat. Tea, liquid, or tablet forms are available for echinacea. *E. purpurea* herbal extract (Echinaforce®) effectively eliminated *P. acnes*, the primary cause of acne. Since Echinaforce® addresses both bacterial-induced aggravation and bacterial development, cytokine antibody arrays suggest that acne patients may benefit from a safe dual action.[21]

Ficus carica, Ficus racemosa, Ficus bengaalensis (Fig; Family: *Moraceae*)

F. racemosa represents one such form of fungus. L. bark powder is used externally to cure pimples, itches, and scabies; *F. bengaalensis* is used to treat scabies. L. bark powder is administered externally to treat scabies. Emotional strain stimulates the synthesis of catecholamines, controls oxidative reactions, and modifies the activities of the skin's lipid barrier. The rise of food-derived substances in the cosmetics industry can be attributed to several factors, including the aging of the general population, rising living standards, increasing recognition of the long-term health risks associated with using chemical-filled cosmetics, and

scientific evidence supporting the detoxifying property of fruits and vegetables. An *in vitro* (using keratinocyte cells) and *in vivo* assessment of the potential of a Ficuscarica cell suspension culture extract (FcHEx) to mitigate stress-hormone-induced skin damage was conducted. When epinephrine and interleukin 6 were present at quantities of 0.002% and 0.006%, respectively, and 38% and 36%, respectively, respectively, the FcHEx decreased those levels. Enhanced the performance of the lipid barrier and stimulated the creation of ceramides (+150%) and lipid peroxide (−25%) as well as protein carbonylation (−50%). Results from *in vitro* tests were validated by *in vivo* investigations. Effects of the extract on the skin barrier were measured by transepidermal loss of water (−12.2%), sebum flow (−46.6% after 2 weeks and −73.8% after 4 weeks; on the forehead, −56.4% after 2 days and −80.1% after 4 weeks), and epidermal lightness (+1.9% after 2 weeks and +2.7% after 4 weeks). An ingredient to combat the indications of psychological strain in the skin may be the extract from *F. carica* suspended cell cultures, which was shown to diminish transepidermal water loss, sebum production, desquamation, and pale skin on the face resulting from acute stress.

Mirabilis jalapa (Four o'clock flower, Marvel of Peru; Family: *Nyctaginaceae*)

M. jalapa, often known by its popular name, "four o'clock flower," is a member of the Nyctaginaceae family and is traditionally used to treat asthma and allergic skin conditions. The study demonstrated that the ethanol: acetone (1:1) extract of *M. jalapa* roots (0.5 mL of 100 mg mL [−1]) non-competitively reduced histamine-induced tracheal chain contractions in guinea pigs. Justifying the traditional use of *M. jalapa* in the treatment of allergic disorders and asthma, the extract (100 or 200 mg kg [−1] i.p.) suppressed milk-induced eosinophilia, albumin-induced paw edema, and shielded mast cells against clonidine-induced granulation.[22]

By lessening paw edema brought on by albumin is milk-induced eosinophilia, and endangering mast cells that are clonidine-induced granulation, *M. jalapa* exhibited why it has been employed traditionally to treat allergy disorders.

Plumbago zeylanica (Doctor Bush; Family: *Plumbaginaceae*)

A study on plumbagin (5-hydroxy-2-methyl1,4-napthoquinone) revealed that the plant's popular name, Doctor Bush, belongs to the *Plumbaginaceae* family. The study also revealed that the plant's full contents are mashed with a pinch of salt and used externally to treat ringworm. When plumbagin was applied topically to mice, the formation of squamous cell carcinomas generated by ultraviolet (UV) light was suppressed, according to research on medicinal plant-derived naphthoquinone, which was extracted from *P. zeylanica* roots. The stems and leaves of *P. zeylanica*, applied topically to mice, have been shown to suppress the development of UV-induced cancer of squamous cells.

Matricaria chamomile, Matricaria recutita or Chamomilla recutita (Chamomile; Family: *Asteraceae*)

Known by its common name, chamomile, it is a member of the *Asteraceae* family and helps regenerate skin cells. It also functions as an antioxidant to protect the skin from harm caused by free radicals. According to research by Renu, reel radicals are a hazardous oxygen by product of biological metabolism. He said that there have been reports of allergies, and chamomile may trigger an allergic reaction in people with daisy allergies. In a double-blind study with 161 participants, chamomile cream was found to be exactly the same as 0.25% hydrocortisone lotion for treating eczema. However, chamomile cream was less successful than hydrocortisone or witch hazel cream in reducing skin inflammation.

In a single-blind trial, however, 50 women undergoing chemotherapy and radiation for breast cancer who were given either chamomile or a placebo ultimately saw improvement. Added showed chamomile did not outperform a placebo in reducing radiation-induced skin irritation. In addition to shielding your skin from harm from free radicals, it functions as an antioxidant and promotes skin cell regeneration. An adverse consequence of oxygen-induced metabolic processes in cells is free radicals. There have been observed adverse responses in people who are hypersensitive to chamomile and daisies. Cream containing 0.25% hydrocortisone was shown to be less effective than chamomile cream in treating eczema in a controlled research with 161 individuals.[23]

Portulaca oleraceae (Purslane, Pigweed, Little Hogweed; Family: *Portulacaceae*)

The plant, also known by its common names Purslane, Pigweed, and Little Hogweed, is a member of the *Portulacaceae* family and has inherent cooling qualities that relieve skin irritations and rashes during intense heat. It was discovered that a leaf mixture might effectively heal burns and skin lesions similar to boils and carbuncles. When applied topically, the aqueous extract has been shown to have antibacterial and antifungal properties. They also mentioned that external applications of the extract have included the treatment of burns, earaches, insect stings, irritations, skin sores, ulcers, eczema, and abscesses, which are typically treated with a poultice made from fresh herb or with the expressed juice. In Ghana, boils are tied with crushed leaves that have been combined with oil.[24]

In warmer weather, the herb's inherent cooling qualities soothe skin, minimizing rashes and irritation. You can mix the leaves to treat boils, carbuncles, and burns on the skin. The watery extract has antimicrobial and antifungal effects when applied topically.

Table 1: Plant their family and important parts that are useful

S. No.	Plant	Common name	Family	Part of plant
1.	*Achyranthus aspera*	Prickly chaff flower	*Amaranthaceae*	Leaves
2.	*Allium cepa*	Onian	*Liliacea*	Fruit, leaves
3.	*Allium sativum*	Garlic	*Liliaceae*	Bulb
4.	*Aloe vera*	Barbados aloe	*Xanthorrhoeaceae*	Leaf
5.	*Azadirachtaindica*	Neem	*Meliaceae*	Leaves, bark
6.	*Brassica oleraceae*	Red cabbage	*Brassicaceae*	Leaves, bulb
7.	*Calendula officinalis*	Marigold	*Asteraceae*	Flower
8.	*Camellia sinensis*	Green tea chai	*Theaceae*	Leaves
9.	*Cannabis sativus*	Charas, Ganja	*Cannabinaceae*	Leaves, fruit
10.	*Crocus sativus*	Saffron	*Iridaceae*	Flower
11.	*Echinacea angustifolia*	Purple cone flower	*Asteraceae*	Leaf, flower
12.	*Ficuscarica*	Fig	*Moraceae*	Bark, fruit, leaves
13.	*Matricaria chamomile*	Chamomile	*Asteraceae*	Flower
14.	*Mirabilis jalapa*	Marvel of peru	*Nyctaginaceae*	Leaves
15.	*Plumbago zeylanica*	Doctor bush	*Plumbaginaceae*	Root
16.	*Portulaca oleracea*	Purslane	*Portulacaceae*	Leaves, stem
17.	*Rosmarinus officinalis*	Rosemary	*Labiatae*	Leaf
18.	*Sarco asoca*	Ashoka	*Caesalpinaceae*	Leaves
19.	*Thyme vulgaris*	Thyme	*Lamiaceae*	Leaves
20.	*Hamamelidis folium*	Hamamelis leaf	*Hamamelidaceae*	Leaf

Rosmarinus officinalis (Rosemary; Family: *Labiatae*)

Rosemary, also known by its common name, is a plant that is commonly grown in homes across the globe and is a member of the Labiatae family. It is used in cosmetics and to flavor food and beverages. The stimulant caffeine and its derivatives, such as rosmarinic acid, are the most significant components of rosemary. Observed the antioxidant properties of these compounds and noted that long-term clinical manifestations such as photoaging and photo-cancers are caused by chronic UV exposure; additionally, they mentioned that an aqueous extract of *R. officinalis* has been shown to be useful in preventing cutaneous photodamage caused by UV radiations. AFM was used in another work to demonstrate the antibacterial efficacy of the essential oil of rosemary against *P. acnes*, as well as the notable morphological and size changes of *P. acnes* treated with essential oils as reported by AFM. Demonstrated how the acne-causing bacteria *P. acnes* has been observed to be effectively combated by rosemary oil. It was discovered that the electrostatic attachment of benzo (a) pyrene [B (a) P] to cutaneous DNA and the tumor-initiation potential of B (a) P and DMBA were both decreased by applying MeOH extract from rosemary leaves to mouse skin. The globe-spanning houseplant. It is a component of many goods, such as food, drinks, and cosmetics. AFM discovered that *P. acnes* significantly changed in shape and size as a result of treatment with essential oils.[25]

Sarco asoca (Ashoka; Family: *Caesalpinaceae*)

Treat skin disorders, ulcers, and external inflammations using freckles and root paste. Apply the crushed flower to the skin to relieve dermatitis, eczema, psoriasis, and herpes-kushta/visarpa. It works well for scabies, tinea pedis, and pruritis. Scabies and eczema can be cured using 50 g of dried *Saraca asoca* flowers and *Lawsonia inermis* leaves topically twice a day, heated in coconut oil. Before treatment with the *S. asoca* flavonoids fraction was shown to reduce the proportion of tumor-bearing mice as well as the average number of tumors per animal. Furthermore, the first tumor grew faster after receiving pretreatment with *S. asoca*. Often used name is Indra Devi relates to the *Caesalpinaceae* family; it was discovered that the root paste helped with freckles, external inflammations, ulcers, and skin conditions. By applying the crushed flower to the skin, it is used to reduce the itching associated with eczema, psoriasis, dermatitis, and herpes-kushta/visarpa. It is also a beloved herb for treating pruritis, scabies, and tinea pedis. 50 g of *L. inermis* leaves and dried *S. asoca* flowers were cooked in coconut oil, and the resulting extract was applied externally twice a day to cure scabies and common dermatitis. According to the study, administration with the flavonoid portion of *S. asoca* significantly decreased the proportion of mice bearing tumors and the total quantity of tumors per mouse. In addition, the delay time for the initial tumor's emergence was postponed by *S. asoca* therapy. A noteworthy decrease in the expression of ornithine decarboxylase, an essential enzyme in the advancement of the

second stage of two-stage skin cancer, was also noted in the group that received plant treatment, indicating the potential chemopreventive effect of flavonoids derived from *S. asoca* on the development of two-stage skin carcinogenesis.

Thyme vulgaris (Thyme; Family: *Lamiaceae*)

Pain, edema, swelling, fever, chills, and skin reddening are all symptoms of cellulitis, a bacterial skin infection. That might make these issues better. Antifungal and antibacterial properties could be present. It has not been demonstrated that thyme works well against cellulitis, according to the University of Maryland Medical Center. This plant may also make bleeding more likely for you. Injectable products are painful, invasive, and associated with a number of problems and chronic responses, particularly after prolonged use, when used for soft tissue enhancement and skin aging treatment. The creation of novel topically active skincare items with reduced side effects represents a significant problem that needs to be taken on. Using an advanced Bio3D Structured-light Scanner, a clinical research was carried out on female volunteers to assess the impacts of ThymLec 2% on the area, size, and severity of the perioral and crow's-foot lines and wrinkles, nasolabial and smiling lines that are as well as face oval remodeling. The 3T3-L1 mouse juvenile fibroblasts were used in the *in vitro* investigations to quantify adiponectin using an immunoenzymatic test, adipogenesis using the AdipoRed chemical method, and Peroxisome proliferator-activated receptor gamma (PPAR-γ) expression using reverse transcription polymerase chain reaction analysis.

By reducing wrinkles and expression lines on the face, topical ThymLec 2% therapy encouraged face oval reconstruction. ThymLec increased PPAR-γ expression in the *in vitro* trials, which boosted adiponectin production and accelerated the adipogenesis process.[26]

Hamamelidis folium (Hamamelis leaf; family: *Hamamelidaceae*)

The tannins found in the leaves of Hamamelis are proanthocyanidins and have a small amount of hamamelitannins. In acne vulgaris, a chronic skin condition with multiple underlying causes, *Cutibacterium acnes* is acknowledged as one of the primary initiators of the cutaneous inflammatory response. The plant witch hazel (*Hamamelis virginiana* L.) is commonly used to treat inflammatory skin disorders. There is some preliminary evidence of its ability to reduce skin inflammation; however, there is not enough information to treat acne. In human keratinocytes (HaCaT), the purpose of this study was to compare the effects of a glycolic extract from *H. virginiana* bark (HVE) against inflammation caused by *C. acnes*. Proanthocyanidins and hamamelitannins (HT) were found to be the most prevalent components in HVE phytochemical analyses (w/wextract = 0.30% and 0.29%, respectively). By partially blocking nuclear factor-kappa B activation, HVE reduced the amount of interleukin (IL)-6 released by *C. acnes* ($IC_{50:}$ 136.90 μg/mL); antibacterial and antibiofilm properties were not seen. Moreover, HVE demonstrated increased anti-inflammatory action when proinflammatory stimuli such as tumor necrosis factor-alpha were applied (IC50 of 38.93 μg/mL for IL-8 production), partly through antioxidant pathways, as demonstrated by the suppression of vascular endothelial growth factor. Proanthocyanidin content is mostly responsible for HVE's effects, while HT was shown to be inert on all investigated parameters. These findings point to the need for more research on HVE in additional inflammatory skin conditions.[27,28]

DIFFERENT SKIN CONDITIONS

Acne

Blackheads, whiteheads, and pustules – skin lesions filled with pus – are examples of comedowns associated with acne. Most adolescents will at some point develop a few spots on their face, back, or chest from this ailment, which usually begins during puberty. However, more significant issues that can cause embarrassment, damage one's self-esteem, and leave scars can also arise from smaller spots on the body. Patients with acne have sebaceous (oil-producing) glands that are especially sensitive to normal testosterone blood levels. In both males and women, this hormone is present. The outcome is that the glands overproduce oil. Propionibacteria, which cause acne, are present in all people and usually do not create any issues. Nevertheless, the buildup of oil in acne-prone people offers an ideal setting for the growth of these microorganisms. Consequently, red, pus-filled, swollen areas develop.

Eczema

Eczema is a skin disease that results in redness, blistering, leaking, crusting, thickening, and intermittent color changes in the epidermis. Children are among those most likely to encounter it, as roughly 10% of all babies do at some stage in their lives. Most of the time, it disappears during childhood, although it can also last until maturity or resurface in adolescence or the early years of adulthood. It can very seldom appear for the first time when it is fully grown. The face is the main area affected by eczema, though it can also affect the neck, wrists, elbows, and knees.[29] Coin-sized irritated patches are another common symptom of atopic eczema.

Psoriasis

It affects people of all ages, male and female, and it comes and goes suddenly. There are no skin scars left behind, and it

is not communicable. Cells that originate at the bottom of the epidermis move upward to the surface, where they gradually undergo changes and eventually die to become invisible. Typically, this expedition requires 3–4 weeks to finish. The pace of cell growth and shedding in psoriasis-affected skin is significantly accelerated, with cells proliferating and releasing in as little as 3–4 days. Pink or crimson lesions with silvery-white scales covering them are known as psoriasis plaques.[30] They have distinct borders that blend in with the skin that surrounds and exist in a variety of sizes and forms.

Scabies

Scabies is a common and often uncomfortable skin disease that is caused by human scabies mites. Although it more commonly affects children and the elderly, it can afflict people of all ages. Invasive mites that are small as a pinhead are the cause of scabies. The main way that scabies are spread is by direct contact of the skin with an infected individual; bedding or clothing are rarely a good way. Itching, which often begins within 30 days after mites are discovered, is the most common symptom of scabies. Normally, itching impacts the body and extremities but not the scalp or neck, with the exception of babies. The itching frequently gets worse while you're in bed.[31] Families and their friends frequently experience multiple people becoming itchy at the precise time.

Vitiligo

The skin becomes white and loses its pigment when someone has vitiligo. About 1% of people worldwide are impacted by it, making it rather prevalent. Melanocytes generate pigment called melanin, which gives your skin its unique color. Many people think that vitiligo is caused by the body producing antibodies against its own melanocytes, which the body then destroys. The exact etiology of vitiligo is uncertain. The skin's capacity to produce melanin is thus hampered, leading to vitiligo. The most commonly affected places by vitiligo are listed below. Usually starting in the palms and face, vitiligo can also appear on other body areas. The nose, eyes, mouth, umbilical cord, and genitalia are examples of bodily openings. The groyne and underarms are examples of bodily folds. Seek medical help right away if you have suffered any kind of skin damage, such as a burn or cut. Pigmented areas impacted by moles.[32]

As given in table 1 Achyranthus aspera, commonly known as Prickly Chaff Flower, belongs to the Amaranthaceae family, and its leaves are used. Allium cepa, or Onion, from the Liliaceae family, is utilized for its fruit and leaves, while Allium sativum, or Garlic, also from the Liliaceae family, is valued for its bulb. Aloe vera, known as Barbados Aloe, is part of the Xanthorrhoeaceae family, with its leaf being the useful part. Azadirachta indica, commonly called Neem, belongs to the Meliaceae family and is known for its leaves and bark. Brassica oleracea, or Red Cabbage, from the Brassicaceae family, is used for its leaves and bulb. Calendula officinalis, known as Marigold, belongs to the Asteraceae family and is recognized for its flowers. Camellia sinensis, referred to as Green Tea Chaay, is a member of the Theaceae family, with its leaves being beneficial. Cannabis sativus, known as Charas or Ganja, belongs to the Cannabinaceae family and is used for its leaves and fruit. Sarco asoca, or Ashoka, from the Caesalpinaceae family, is recognized for its leaves. Thyme vulgaris, commonly known as Thyme, belongs to the Lamiaceae family and is used for its leaves. Lastly, Hamamelidis folium, known as Hamamelis Leaf, is part of the Hamamelidaceae family and is valued for its leaf.

CONCLUSION

Worldwide, a large number of people manage their skin conditions with plant-based therapies. Skin conditions are treated with over half of plant species. Use and effectiveness of herbal preparations in problem-solving: This study suggests that several herbs are beneficial for persistent skin issues with few side effects.

ACKNOWLEDGMENTS

We want to express our gratitude to the Head of the Department, Datta Meghe Institute of Medical Sciences, Wardha for providing the facility for the review article.

REFERENCES

1. Marks JG, Miller J. Lookingbill and Marks' Principles of Dermatology. 4th ed. Netherlands: Elsevier Inc; 2006.
2. Chakraborty A, Brantner A, Mukainaka T, Nobukuni Y, Kuchide M, Konoshima T, *et al*. Cancer chemopreventivve activity of *Achyranthes aspera* leaves on Epstein-Barr virus activation and two-stage mouse skin carcinogenesis. Cancer Lett 2002;177:1-5.
3. Draelos ZD. The ability of onian extract gel to improve the cosmetic appearance of postsurgical scars. J Cosmet Dermatol 2008;7:101.
4. Shams-Ghahfarokhi M, Shokoohamiri MR, Amirrajab N, Moghadasi B, Ghajari A, Zeini F, *et al*. *In vitro* antifungal activities of *Allium cepa*, *Allium sativum* and ketoconazole against some pathogenic yeasts and dermatophytes. Fitoterapia 2006;77:321-3.
5. Das I, Saha T. Effect of garlic on lipid peroxidation and antioxidation enzymes in DMBA-induced skin carcinoma. Nutrition 2009;25:71-7.
6. Kim J, Lee I, Park S, Choue R. Effects of Scutellariae radix and *Aloe vera* gel extracts on immunoglobulin E and cytokine levels in atopic dermatitis NC/Hga mice. J Ethnopharmacol 2010;132:529-32.
7. Syed TA, Ahmad SA, Holt AH, Ahmed SA, Ahmed SH,

Afzal M. Management of psoriasis with *Aloe vera* extract in a hydrophilic cream: A placebo-controlled, double-blind study. Trop Med Int Health 1996;1:505-9.
8. Kaufman T, Kalderon N, Ullmann Y, Berger J. *Aloe vera* gel hindered wound healing of experimental second-degree burns: A quantitative controlled study. J Burn Care Rehabil 1988;9:156-9.
9. Miller MB, Koltai PJ. Treatment of experimental frostbite with pentoxifylline and *Aloe vera* cream. Arch Otolaryngol Head Neck Surg 1995;121:678-80.
10. Olsen DL, Raub W Jr., Bradley C, Johnson M, Macias JL, Love V, *et al*. The effect of *Aloe vera* gel/mild soap versus mild soap alone in preventing skin reactions in patients undergoing radiation therapy. Oncol Nurs Forum 2001;28:543-7.
11. Rasheed A, Sharma SN, Joy JM, Reddy BS, Roja C. Formulation and evaluation of herbal anti-acne moisturizer. Park J Pharm Sci 2012;25:867-70.
12. Isbir T, Yaylim I, Aydin M, Ozturk O, Koyuncu H, Zeybek U, *et al*. The effects of brassica oleraceae var capitate on epidermal glutathione and lipid peroxides in DMBA-initiated-TPA-promoted mice. Anticancer Res 2000;20:219-24.
13. Fonseca YM, Catini CD, Vicentini FT, Nomizo A, Gerlach RF, Fonseca MJ. Protective effect of calendula officinalis extract against UVB-induced oxidative stress in skin: Evaluation of reduced glutathione levels and matrix metalloproteinase secretion. J Ethnopharmacol 2010;127:596-601.
14. Renu S. Treatment of skin diseases through medicinal plants in different regions of the world. Int J Compr Pharm 2010;4:1-4.
15. Olsen DL, Raub W Jr., Bradley C, Johnson M, Macias JL, Love V, *et al*. The effect of *Aloe vera* gel/mild soap versus mild soap alone in preventing skin reactions in patients undergoing radiation therapy. Oncol Nurs Forum 2001;28:543-7.
16. Das I, Das S, Saha T. Saffron suppresses oxidative stress in DMBA-induced skin carcinoma: A histopathological study. Acta Histochem 2010;112:317-27.
17. Brown AC, Hairfield M, Richards DG, McMillin DL, Mein EA, Nelson CD. Medical nutrition therapy as a potential complementary treatment for psoriasis-Five case reports. Altern Med Rev 2004;9:297-307.
18. Renu S. Treatment of skin diseases through medicinal plants in different regions of the world. Int J Compr Pharm 2010;4:1-4.
19. Sharma M, Schoop R, Suter A, Hudson JB. The potential use of *Echinacea* in acne: Control of *Propionibacterium acnes* growth and inflammation. Phytother Res 2011;25:517-21.
20. Joshi AR, Joshi K. Ethnomedicinal plants used against skin diseases in some villages of kali Gandaki Bagmati and Tadi Likhu watersheds of Nepal. Ethanobotanical Lealf 2007;11:235-46.
21. Renu S. Treatment of skin diseases through medicinal plants in different regions of the world. Int J Compr Pharm 2010;4:1-4.
22. Duran V, Matric M, Jovanovc M, Mimica N, Gajinov Z, Poljacki M, *et al*. Results of the clinical examination of an ointment with marigold (*Calendula officinalis*) extract in the treatment of venous leg ulcers. Int J Tissue React 2005;27:101-6.
23. Patzelt-Wenczler R, Ponce-Poschl E. Proof of efficacy of Kamillosan (R) cream in atopic eczema. Eur J Med Res 2000;5:171-5.
24. Maxia A, Sanna C, Salve B, Kasture A, Kasture S. Inhibition of histamine mediated responses by *Mirabilis jalapa*: Confirming traditional claims made about anti-allergic and anti-asthamatic activity. Nat Prod Res 2010;24:1681-6.
25. Joshi AR, Joshi K. Ethnomedicinal plants used against skin diseases in some villages of kali Gandaki Bagmati and Tadi Likhu watersheds of Nepal. Ethanobotanical Lealf 2007;11:235-46.
26. Sand JM, Bin Hafeez B, Jamel MS, Witkowsky O, Siebers EM, Fischer J, *et al*. Plumbagin (5-hydroxy-2-methyl-1,4-naphthoquinone), isolated from *Plumbago zeylanica* inhibits ultraviolet radiation-induced development of squamous cell carcinomas. Carcinogenesis 2012;33:184-90.
27. Leung AY. Foster's Encyclopedia of Common Natural Ingredients used in Foods, Drugs and Cosmetics. 2nd ed. United States: Wiley-Interscience Publication, John Wiley; 1996.
28. Martin R, Pierrard C, Lejune F, Hilaire P, Breton F. Photo-protecive effect of a water-soluble extract of *Rosmarinus officinalis* L. against UV-induced matrix metalloproteinase-1 in human dermal fibroblasts and reconstructed skin. Eur J Dermatol 2008;18:128-35.
29. Fu Y, Zu Y, Chen L, Efferth T, Liang H, Liu Z, *et al*. Investigation of antibacterial activity of rosemary essential oil against *Propionibacterium acnes* with atomic force microscopy. Planta Med 2007;73:1275-80.
30. Cibin TR, Devi DG, Abraham A. Chemoprevention of two-stage skin cancer *in vivo* by *Saraca asoca*. Int Cancer Ther 2012;11:279-86.
31. Renu S. Treatment of skin diseases through medicinal plants in different regions of the world. Int J Compr Pharm 2010;4:1-4.
32. European Scientific Cooperative on Phytotherapy. Hamamelidis Folium. ESCOP Monographs. 2nd ed. New York: Thieme; 2003. p. 230-2.

Source of Support: Nil. **Conflicts of Interest:** None declared.