

A REVIEW ON MEDICINAL PLANTS USED IN CERTAIN SKIN DISEASES

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Abstract: *Skin diseases are common for every age group of people throughout the world. The psychosomatic aspect of the skin as an organ has interesting implications for a number of diseases. The disfiguring effect of many eczematous diseases affects not only the body, but also the psyche, and both are in constant interplay during the course of chronic skin disease. A number of common diseases account for the vast majority of the skin disease burden; therefore implementing effective treatments targeted at those conditions results in significant gain for both personal and public health. Among the various treatment modalities, the usage of herbal drugs have gained greater extent of therapeutic efficacy as well as least side effects and is getting popularity in modern ages. This article mainly focuses on certain common skin disease conditions and the herbals used in the treatment of diseases and the different formulations that are available in the pharmaceutical field.*

Key words: *Acne, Dermatitis, herbal drugs, skin diseases, treatments.*

INTRODUCTION

Human skin is the heaviest single organ of the body. It is the most extensive and diverse organ of the body which constitutes the primary line of barrier to the body with a surface area of around 2m and a weight of nearly 4 kg. Skin has sensory and metabolic functions. One of the primary function of skin is to communicate with the environment. The psychosomatic aspect of the skin as an organ has interesting implications for a number of diseases. The disfiguring effect of many eczematous diseases affects not only the body, but also the psyche, and both are in constant interplay during the course of chronic skin disease. Clear, healthy, and beautiful skin plays a decisive role in the sense of well-being and self-view of the individual. Imbalances in factors affecting the delicate homeostasis among skin cells results in wide range of skin problems such as wrinkles, hair loss blisters rashes and sometimes life threatening cancers etc. There are thousands of diseases that affect skin due to various pathological reasons. The commonly occurring skin disorders are Rashes, Skin pigmentation, Fungal infections, Scabies, virus infection, Bacterial infections, Parasitic infections Tumors, cancer, Trauma , Eczema psoriasis, Acne, furuncles (boils), neurodermatitis, leg ulceration, Warts, chilblains, hairloss, vitiligo, lymphoderma rosacea, spider veins and varicose veins etc.

The nature has provided a complete storehouse of remedies to cure all ailments of mankind. The knowledge of drugs has accumulated over thousands of years as a result of man's inquisitive nature and the history of herbal medicine is as old as human civilization. The use of herbs to treat disease is almost universal among non-industrialized societies. Development of chemical and phytochemical analysis has led to the increasing use of herbal medicine for the treatment of human diseases. Many of the pharmaceuticals currently available has long history of use as herbal medicine. The benefits of herbal drugs over synthetic drugs include more affordability, strengthen immune system, easy availability, fewer side effects, cost effectiveness etc. Herbal preparations in the form of medication as well as herbal cosmetics are used in the treatment of skin ailments. Cosmetics are an extremely various and diversified set of products including creams powders, perfumes, lotions washing products etc. The use of bioactive extracts or phytochemicals from a variety of botanicals in cosmetics accomplish two main functions namely care of the body and as ingredient to influence the biological function of the skin providing the nutrients for healthy skin. Skin Care is a very much important aspect in order to prevent various skin problems. Steps in skin care include gentle cleansing, toning, day time moisturizing and night time moisturizing.

TREATMENT OF SKIN DISEASES

Topical therapies involve the application of a topical agent on affected sites of skin. Topical agent contain a main agent and a vehicle (base) .The main agent acts on lesions whereas the vehicle acts supplementary to increase absorption of the agent. The horny cell layer of the outermost layer of skin due to its water-repellant and dense nature prevents water from evaporating from the body. The water-repellant horny cell layer generally has a thin sebum membrane on the surface that also functions as a barrier. The site below the granular cell layer is characterized by hydrophilicity and ready absorption of agents.

Preparations for application to the skin include creams, ointments, pastes, gels, collodions, paints, lotions and applications. The effectiveness of topical medicaments depends on how they are prepared as well as on their ingredients. Absorption of drugs through the skin is a complex process and is not always desirable.

HERBAL DRUG USED IN SKIN DISEASES

1. ECZEMA (DERMATITIS)

Eczema (Dermatitis) is an inflammatory response to a variety of agents acting on the skin from outside or from within the body such as chemicals and drugs, hypersensitivity to various antigens and haptens.

PLANTS USED IN ECZEMA

S.No	Name of plant	Scientific name	Family	Part used and other uses
1	Aloe vera	Aloe barbadensis	Liliaceae	Leaf gel. Used for Psoriasis and anti-inflammatory activity
2	Shofan	Avena sativa	oleaceae	Colloidal oat extract. Anti-itching and anti-inflammatory.
3	Turmeric	Curcuma Longa	Zingiberaceae	Rhizome paste or powder
4	Chamomlie	Matricaria chammolima	Asteraceae	Flower extract, decoction, oil
5	Oak	Quercus branti	Fagaceae	Tannins prevent infection
6	Bakki	Vallis solanacea	Apocynaceae	Plant paste. Latex on wounds.
7	Bankheera	Cucumis sativus	Cucurbitaceae	Seed paste
8	Talli	Dalbergia	Fabaceae	Leaves and bark mixed paste
9	Tamni	Urena lobata	Malvaceae	Whole plant paste
10	Magh	Cocculus hirsutus	Malvaceae	The paste of leaves is applied on eczema.
11	Chitrajadi	Plumbago zeylanica	Plumbaginaceae	Leaf paste. Root paste in skin allergy and boils.
12	Jod-thod	Anagallis arvensis	Primulaceae	The plant paste. Used over boils.
13	Brahmi	Bacopa monnieri	Scrophularaceae	Whole plant
14	Baigni/ Simra	Torenia cordifolia	Scrophularaceae	Whole plant paste
15	Chutri	Triumfetta rhomboidea	Tiliaceae	Leaf paste

2. PSORIASIS

Psoriasis is a chronic inflammatory dermatitis associated with arthritis, myopathy, enteropathy and heart disease, mainly affects skin of elbow, knees, scalp and lumbosacral areas.

PLANTS USED IN PSORIASIS

Sl No.	Common/local name	Botanical name	Family	Part uses
1	Milk thistle	Silybum mariannum	Asteraceae	Sylimarin is the active constituent
2	Burdock	Articu lappa, A.ninus , Lappa major	Asteraceae	Antiinflammatory antimicrobial Neoplastic used for inflammation
3	Devils claw	Harpagophytum procumbens	Pedaliaceae	Anti inflammamatory
4	Feverfew	Tanacetum parthenium	Compositae	Root extract
5	Licorice	Glycirrhiza glabra	Leguminosae	

3 .ACNE

Acne vulgaris is a chronic inflammatory disease of the pilosebaceous unit owing to its prolonged course, pattern of recurrence and relapse, and manifestations such as acute outbreaks or slow onset. Acne causes profound negative psychological and social effects on the quality of life of patients.

PLANTS USED IN ACNE

Sl no	Name of plant	Scientific name	Family	Use, Part used
1	Amaranthus	Amaranthus hypochondriacus	Amaranthaceae	Leaves are used in acne, eczema, psoriasis
2	Arnica	Arnica Montana	Asteraceae	Shoot extract
3	Asparagus	Asparagus officinalis	Liliaceae	Used in acne
4	Birch	Betula alba	Betulaceae	Used in several skin problems
5	Celandrine	Chelidonium majus	Papaveraceae	Sticky juice is used for the treatment

				of pimple
6	Coriander	Coriandrum sativum	Apiaceae	Also antibacterial and antifungal activity
7	Lavender	Lavendula angustifolia	Lamiaceae	Volatile oil is used
8	Jjoba	Simmondsia chinensis	Buxaceae	Oil is used
9	Labrodor tree	Ledum groenlandicum	Ericaceae	Leaves are used also in itching
10	Orange	Citrus Aurantium	Rutaceae	Fruit juice and peel
11	Lemon	Citrus limonene	Rutaceae	Acne, sunburn, warts
12	Neem	Azadirachta indica	Meliaceae	Leaves are used, also antimicrobial and antiinflammatory
13	Pine	Pinus sylvistris	pinaceae	Used in acne
14	Poplar	Populus candicans	Salicaceae	Bark and leaves used
15	Rhubarb	Rheum officinale	polygonaceae	Also used In Psoriasis
16	Rose	Rosa species	Rosaceae	Aqueous petal extract for daily skin care, acne blackheads
17	Soapwort	Saponaria officinale	Caryophyllaceae	Acne, Psoriasis, boil
18	Stinging nettle	Urtica oleoica	Urticaceae	Alcoholic solution is used
19	Tea tree oil	Melaleuca alternifolia	Myrtaceae	Leaf oil
20	Thyme	Thymus Linn.	Lamiaceae	Essential oil is used in burns rashes

4. FURUNCLES (BOILS)

A boil is an infection of the skin, usually caused by Staphylococcus aureus bacteria (commonly known as golden staph). Boils occur when bacteria get through broken skin and causes tender, swollen sores, which are full of pus.

PLANT USED IN BOIL

Sl no	Common/ local name	Botanical name	Family	Part/uses
1.	Kamliya	Eranthemum pulchellum	Asteraceae	Plant paste. Leaves applied externally on cracked feet.
2.	Gunphru	Lepidagathis cuspidata	Acanthaeae	Paste of leaves on boils and blisters.
3.	Chaleri	Amaranthus spinosus	Amaranthaceae	Paste of roots on boils and carbuncle.
4.	Mango tree	Mangifera indica	Anacardaceae	The gum is applied externally on boils.
5.	Malabar spinach	Basella alba	Basilaceae	Paste with milk on leucoderma, leaf with mustard oil on boils.
6	Patharchatta	Bryophyllum pinnatum	Crasullaceae	Paste of leaves on boils and sores.
7	Kamela	Mallotus philippensis	Ehritaceae	Powder of fruits with ghee.
8	Kaith	Flacourtia indica	Flacourtiaceae	Paste of bark on boils or carbuncle
9	Garlic	Allium sativum	Liliaceae	Paste of bulb
10	Onion	Allium cepa	Liliaceae	Pulb paste on skin allergy.
11.	Flax	Linum usitatissimum	Linaceae	Paste of seeds
12.	Paadha/Simrubel	Cissampelos pareira, Climber	Menispermaceae	Paste of leaves
13.	Gulbans	Mirabilis jalapa	Nyctaginaceae	Leaf juice
14	Pangru	Vanda tessellata	Orchidaceae	Root paste

15	Kyankodi	Solanum americanum	Solanaeae	Fruit powder with milk orally in boil.
16	Talwaada	Withania somnifera	Solanaeae	Paste of leaves, stem burnt with mustard
17	Maala	Vitex negundo	Verbenaceae	Leaves fried in mustard oil made on boils
18	Rasoliya	Cheilocostus speciosus	Zinziberaceae	Leaf paste on boils. Root paste with oil of Cinnamomum tamala also on boils.

5. SCABIES

Scabies is a common ectoparasitic infestation caused by *Sarcoptes scabiei*, a human-specific mite that is highly prevalent in some areas of the developing world. Scabies is transmitted by direct contact.

PLANTS USED IN SCABIES

Sl No	Common/Local name	Botanical name	Family	Part/uses
1	Jule	Hibiscus	Malvaceae	Paste of leaves is applied
2	Rudravanty	Crissacretica	Convolvulaceae	Paste of burnt plant is applied with oil
3	Flame of forest	Buteamonosperma	Leguminosae	Decotion of leaves and flower is applied

6. WARTS

Warts are infection of the epidermis caused by human papillomavirus (HPV) of different genotypes. Different HPV types may preferentially infect either cornified stratified squamous epithelium of skin or uncornified mucous membranes.

DRUGS USED IN WARTS

Sl No.	Common/Local name	Botanical name	Family	Part,use
1	Haldi curcuma	Curcuma longa	zingiberaceaea	Rhizome paste is applied
2	Dudhi	Euphorbia hirata	Euphorbiaceae	Latex of plant is applied
3	Podophyllum	Podophyllum hexandrum	Berberidaceae	Alcoholic extract is applied
4	Rurchaii	Tephrosiavdlosa	Pappilonaceae	Tea of fresh root is taken internally
5	Khaskas	Vetiverzizanoids	Graminae	Paste of root powder is applied

7. HAIRLOSS

Alopecia is distressing to patients because of its effect on appearance, have much importance, either as a cosmetic problem or as a sign of a potentially serious underlying condition.

Plants used

Sl.	Common/Local name	Botanical name	Family	Part/use
1	Shikakai	Acacia rogeta	Fabaceae	Fruit
2	Burdock root	Arctium lappa	Asteraceae	Leaves
3	Mustard	Brassica spp	Brassicaceae	Seeds
4	Arnica	Arnica montana	Asteraceae	Flowers
5	Papri	Buxus wallichiana	Buxaceae	Wood
6	Lal-mircha	Capsicum annum	Solanceae	Fruit
7	Bitter cucumber	Citrullus colocynthis	Cucurbitaceae	Fruits
8	Nariyal	Coccus nucifera	Arecaceae	Kernel
9	Shank puspi	.Convolvulus pluricaulis	Euphorbiaceae	Entire herb
10	Swarna lata	Cuscuta reflexa	Convolvulaceae	Stem
11	Nagarmotha	Cyperus rotundus	Cyperacaceae	Rhizome
12	Bhangra/Bringraj	Eclipta alba	Asteraceae	Entire plant parts
13	Ginseng	Ginseng radix	Araliaceae	Roots and stem
14	Shoe flower	Hibiscus rosa-sinensis	Malvaceae	Leaves, flowers
15	Kapoor Kachari	Hydychium spicatum	Zingiberaceae	Leaves and rhizomes
16	Henna	Lawsonia inermis	Lytheraceae	Leaves
17	Jatamansi	Nardotachys jatamansi	Valerianaceae	Rhizome

18	Tobacco	Nicotiana tabacum	Solanaceae	Leaves
19	Harsinghar	Nyctanthes arbor-tristis	Oleaceae	Leaves, flower, oil
20	Wild basil	Ocimum gratissimum	Lamiaceae	Leaves
21	Leaves	Piper nigrum	Piperaceae	Leaf
22	Ninjin	Panax ginseng	Araliaceae	Root and stem
23	Rosemary	Rosmarinus officinalis	Labiatae	Leaves, flowers
24	Reetha	Sapindus trifoliatus	Sapindaceae	Fruit
25	Bahera	Terminalia bellerica	Combretaceae	Fruit
26	Methi	Trigonella foenum-graecum	Fabaceae	Seeds
27	Sugandha bala	Valeriana wallichii	Valerianaceae	Rhizome
28	Jujube red date	Ziziphus jujuba	Rhamnaceae	Seed

8. LEG ULCERATION

A loss of skin below the knee on the leg or foot which takes more than six weeks to heal.

Herbal Remedies

SI No.	Local/common name	Botanical name	Family	Parts Used
1	Kappa	Hibiscus sabdariffa	Malvaceae	Leaf powder with Lawsonia inermis paste
2	Pauns	Argemone mexicana	Papaveraceae	Latex. Latex with cow milk in leucoderma.
3	Gokhru	Tribulus terrestris	Zygophyllaceae	paste of whole plant

9. ITCHING

Itching (pruritus) may develop because of any one of several factors and these should be elicited whenever possible. For example, the presence of parasites (scabies, especially in children) causes intolerable itching, so the underlying complaint should be treated

SI No.	Local/Common Name	Botanical name	Family	Parts /Used
1	Perkanda	Achyranthes aspera	Amaranthaceae	Paste of leaves is applied on skin allergy.
2	Gamla	Celosia argentea	Amaranthaceae	The decoction to wash skin of leaves is used allergy.
3	Pindar	Crinum viviparum	Amarylidaceae	Paste of bulb is on boils and skin allergy.
4	Dhudla	Wrightia arborea	Apocyanaceae	Latex in cuts, wounds and on skin allergy
5	Koi	Basella alba	Basellaceae	Paste with milk on leucoderma, leaf with mustard oil on boils.
6	Asin	Terminalia alata	Combretaceae	Paste of leaves
7	Ajwain	Cynoglossum lanceolatum	Boraginaceae	Juice of leaves
8	Czern.	Brassica juncea	Brassicaceae	Paste of seeds
9	Choti hedma	Senna tora	Caesalpinaceae	Paste of seed powder mixed with wheat flour made used on boils
10	Seeton	Stellaria media	Caryophyllaceae	Paste of leaves
11	Sisiya/Talli	Celastrus paniculatus	Celastraceae	Paste leaves on eczema and allergy
12	Hulhar	Cleome gynandra	Cleomaceae	Plant paste
12	Tamalki	Phyllanthus amarus	Ehritaceae	Leaf paste
13	Chuklai	Alysicarpus vaginalis	Fabaceae	Leaf paste
14	Jangli dhaniya	Fumaria indica	Fumariaceae	Plant paste
15	Kali musli	Curculigo orchioides	Hypoxidaceae	Paste of leaves
16	Karanju	Pongamia pinnata	Fabaceae	Oil from seeds
17	Chilla	Casearia elliptica	Flacourtiaceae	Paste of leaves

18	Jangli dhaniya	Fumaria indica	Fumariaceae	Plant paste
19	Kali musli	Curculigo orchioides	Hypoxidaceae	Paste of leaves
20	Chariyata	Leonotis nepetifolia	Lamiaceae	Pasted Inflorescence
21	Adu	Prunus persica	Rosaceae	Seed oil
22	Ettingsh Globel	Dendrophthoe falcata	Loranthaceae	Roots juice
23	Baikan	Melia azedarach	Meliaceae	The fruit paste is applied externally on skin allergy.

CONCLUSION

Herbal drugs have found to possess great potential in the treatment of various kinds of skin diseases. The active ingredients of various chemical nature enable them to cure such diseases. The cost effectiveness, availability and greater curative potential and lesser side effects of herbal drugs over allopathic medications make them more popular among common people nowadays. As skin disorders have personal and social relevance, the area should be considered relevantly and discovery of plant based medicine is necessary. Results indicate that scientific studies carried out on medicinal plants having traditional claims of effectiveness warrants fruitful results. Further studies might aim at the isolation and identification of active substances from the active plant extracts which could also disclose compounds with better therapeutic value. Therefore, ayurvedic knowledge supported by modern science is necessary to isolate, characterise, and standardise the active constituents from herbal source. This combination of traditional and modern knowledge can produce novel drugs for skin diseases. A brief search of the literature reveals many therapies used for dermatological disease however there are fortunately fewer reports of their side effects. It is important for dermatologists to become aware of these adverse events and interactions in order to better educate their patients and possibly prevent potential and unexpected adverse reactions.

References

- [1] Ashima M (2016 August). Medicinal plants used in the treatment of skin disease. A Review Journal of Agriculture and Allied Sciences.
- [2] Nahida, Tabassum and Hamdani (2014 January). Plants used in skin diseases, A publication of phcog Net Pharmacognosy Review Vol; 8(15):52-60.
- [3] Shadi T. Zari1 and Talal A Zari (2015 June). A Review of four common medicinal plants used to treat eczema; Journal of Medicinal plants Research; Vol. 9(24) 702-711.
- [4] Fabiane Mulinari, Brenner MD, Wilma F. Bergfel. (2003 August) Hair loss: Diagnosis and management, Cleveland clinic journal of medicine Vol. 70 No.8 705-712.
- [5] J.C.Sterling, S.Handfield-Jones, P.M.Hudson. Guidelines for the management of cutaneous warts British Journal of Dermatology 2001; 144: 4-11.
- [6] Ann Sofia Ribeiro, Marilene Estanqueiro, M.Beatriz Oliveira and Jose Manuel Sousa Lobo, Main Benefits and applicability of plant Extracts in skin care products. Cosmetics 2015, 2(2), 48-65; <https://doi.org/10.3390/cosmetics2020048>.
- [7] Mahmoud Bahmani, Shirin Foruzan, Ezatollah Fazeli – Moghadam, Mahmoud Rafieian Kopaei, Ahmad Adineh and Shiri Sabeeirianpour. Oak (*Quercus branti*): An overview. Journal of chemical and pharmaceutical research 2015, 7(1):634-639.
- [8] Sunita Verma. Medicinal plants used in cure of skin diseases. Advances in Applied Science Research, 2016, 7(3):65-67.
- [9] Shadi T. Zari1 and Talal A. Zari (2015 June). A review of four common medicinal plants used to treat eczema. Journal of Medicinal Plants Research, Vol. 9(24), PP. 702-711, 25.
- [10] Retana David Pac. Medicinal plants used in treatment of inflammatory skin diseases Postepy_Dermatol_Alergol. 2013 Jun; 30(3):170–177.
- [11] Nahida Tabassum, Mariya Hamdani. Plants used to treat skin diseases. Pharmacognosy Review (2014), Jan-Jun vol 8(15): 52-60.
- [12] Azadeh Izadyari Aghmiuni and Azim Akbarzadeh Khiavi. Medicinal Plants to Calm and Treat Psoriasis Diseases. Intechopen.com.
- [13] Roderick Hay, Sandra, E. Bendeck, Suephy Chen, and others skin diseases Disease Control Priorities in Developing Countries Chapter 37. <https://www.ncbi.nlm.nih.gov/books/NBK11733/>.
- [14] Sara Moradi Tuchayi, Evgenia Makrantonaki, Ruta Ganceviciene, Clio Dessinioti, Steven R. Feldman1, and Christos C. Zouboulis (2015 September) Acne vulgaris, Nature Reviews Disease Primers Vol-1. <https://www.nature.com/articles/nrdp201533>.
- [15] Jyotsana Sharma, R D Gaur, Sumeet Gairola, R M Painuli and T O Siddiqi.(2012 October) Traditional herbal medicines used for the treatment of skin disorders by the Gujjar tribe of Sub-Himalayan tract, Indian Journal of Traditional Knowledge. Vol. 12(4), 736-746.
- [16] Geethika Khanna, Bhattacharya, Concise Pathology 2nd edition Elsevier publication 586-597.
- [17] S. Chanda and Y. Baravalia. Novel leads from herbal drugs for infectious skin diseases. Formatex 2010. Current Research, Technology and Education Topics in Applied Microbiology and Microbial Biotechnology. A. Mendez Vilas (Ed.).
- [18] Gita Faghihi, Mohammadreza Radan March (2011) Side Effects of Herbal Drugs Used in Dermatologic Disorders, Journal of Cosmetics, Dermatological Sciences and Applications, 1, 1-3 . ISSN Online 2161-4512.