Ethnomedicinal Properties Of Some Medicinal Plants For Skin Diseases-A Review

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Abstract: Skin is one of the prime among other organs which protects our body from the external environmental pathogens and excessive water loss. Dermatological infections are a common disease due to improper cleanliness and unhealthy diet. The utilization of medicinal plants in treatment of dermatological skin diseases predicted their influence on different forms of causative agent causing infection. The current paper reviewed about the ethno medicinal uses of common plants specimen, active ingredients along with their formulation to cure dermatological diseases. The ethno medical uses mainly due to the presence of certain active constituents present in the plant compound, natural origin and less side effects. The natural recovery from the different types of microorganisms may due to the synergistic effect of the formulation.

IndexTerms - **Skin Diseases, Medicinal plants, Formulation, Active constituents.**

INTRODUCTION:

India is one of the largest consumers of medicinal plants and their effective formulation used in folk medicines in rural communities. About 7500 species of higher plants are reported to possess medicinal value among 17,000 species of Indian flora (Anand *et al*.,2010). Medicinal plants are nontoxic, affordable rate and plays a major role in pharmacological activity and also for the drug development. Medicinal plants provide various active constituents to cure several diseases among human mankind. Topical therapeutic and cosmeceutical delivery is a growing field founded on selectively overcoming this barrier.

The nature of active ingredient in the formulation must be aligned for efficient transcutaneous delivery to the skin. Types of skin infections characterized are skin rashes, skin pigmentation, fungal infections, scabies etc., Rashes are mainly manifested by the change in appearance, surface and shading of skin (Arif *et al*. 2015). Rash can last 5 to 20 days, the finding may affirm any number of conditions depends upon the patient environmental condition. (Maiti *et al*. 2016, van de Kerkhof , 2003).

Skin pigmentation implies shading of your skin due to the imbalance production of melanin. Symptoms may due to pregnancy, addisons disease and introduction to sun which causes the increased production of melanin and accumulates under the skin produces pigmentation (Opinde *et al*. 2016). Fungal infections induced by Innocuous parasites are constantly present on surface of the skin and protrudes into the skin causes genuine sickness. The fungal diseases are typically superficial, influencing mainly the skin, hair, nails and foot.(Alcántara Quintana , *et al*. 2015 & Lephart, 2015). Parasitic infections happen after presentation to parasites, for example, lice and scabies(Izagirre, *et al*. 2006 & Parra , *et al*. 2004). Scabies is a skin infestation which is caused by a tiny mite known as Sarcoptes scabiei. These mites can live on our skin for up to 2 months(Debar , *et al*. 2012). Besides the skin infection, there is a consecutive treatment criteria for the infection. The topical agents may be ointment or powdered form. Ointments are the best agent to use. They are less stimulative , easily absorbable, highly protective, transparent and transculnet (Chaudhary, *et al*., 2015).

Creams are semi solid mixtures in which water emulsive in oil vehicles. Creams are less sticky than ointments (vanishing cream) (Hawkey and Lewis . (Eds.) 1989 & Mateen Ayesha, *et al*. 2010).
Lotions are usually water base liquid with medicinal agent. When applied topically, the liquid evaporates, bringing cooling, astringent, protective with pharmacological effects. (Udhayasankar, 2012 & Ananthanarayanan and Paniker, 2008).The list of plants showing the Traditional medicine, Bioactive components and its Formulation as follows:

***Achyranthes* aspera (Family: Amaranthaceae)**

Traditional medicine: *Achyranthes aspera* is traditionally used in the treatment of inflammation, diabetes, pain, hypertension, pneumonia, diarrhea, wounds, dysentery, asthma, cough, dropsy, ulcers, piles, rheumatism, scabies and other skin diseases. and fever etc) (Binit Baraik et al.,2014)

Bioactive components: It contains triterpenoid saponins, Ecdysterone(insect moulting hormone), and long chain alcohols. Other chemical constituents such as *achyranthine*, *betaine*, *pentatriacontane*, *6-pentatriacontanone*, *hexatriacontane*, and *tritriacontane* are also present. Indian Herbal Pharmacopia . Principal Constituents Betaine (Ram et.al, 1971 and Bhattacharjee & De,1991) are the principal alkaloids, identified from the whole plant.

Formulation: Leaf juice is useful remedy for skin diseases like prutitis and scabies. Leaves paste is applied externally for toxic bites and skin diseases.

***Aloe Vera* (Family: Liliaceae)**
Traditional medicine: Aloe Vera gel mainly helps to relieve skin injuries such as skin burning, skin irritations, cuts insect bites, and its bactericidal properties relieve itching and skin swellings. It is well-known that it help to slow down the appearance of wrinkles and actively rejuvante the damaged skin cells.
Bioactive components: Aloe Vera contains mixture of glucosides collectively called „aloin" which is the active constituent of various drugs. (Jyotsana *et al*.,2008). The plant sterols or phytosteroids in Aloe Vera include cholesterol, campesterol, lupeol, and β-sitosterol (Hayes, 1999).

Formulation: Aloe Vera leaf gel mixed with traditionally prepared double distilled alcohol and few drops of sesame oil mix it properly for homogeneous mixtureOf minor burns and wounds blande of lemon juice and paste of young leaves (1:3)(Rajeswari *et al*,2012).

***Argemone Mexicana* (Family: Papaveraceae)**
Traditional medicine: The seed extract is used to cold sores, cutaneous infections, itches, jaundice, cure warts, and dropsy.
Formulation: Juice of the plant cures ophthalmic and opacity of cornea. Oil of the seed is used to treat skin diseases. The root paste is mixed with sugar (4:1) and taken orally with water when affected with skin disease mainly in fungal infection.
Bioactive components: Chemical investigations of this plant have revealed the presence of alkaloids amino acids (Dinda.,1986), phenolics(Harborne,1983) and fatty acids (Gunstone.,1977). The aerial part of the plant contains Isoquinoline and Benzylisoquinoline alkaloids. Alkaloids like Berberine and Tetrahydroberberine, Protopine, Benzophenanthridines has been isolated from the plant (Kenneth,2001, Valsaraj *et al*., 1997, Das Misra, 1987).

***Aristolochia indica* (Family: Aristolochiaceae)**
Traditional medicine: It has been recommended for the treatment of dry cough, joints pain, inflammation, biliousness, dysphoea of children, snake bite and also used as abortifacient. **Bioactive components:** Aristolochia sp. contains aristolochic acids and aristolactams. The plant Ishwari, especially roots, contains Aristochine, Aristolochene, Ishwaronw, Aristolochine acid, Ishwarane, Cephaeradiones and Aritistolindiquinone.

Formulation: Leaves of *A. indica* are made in to fine paste and then boiled with coconut oil and it can be applied externally. For leucoderma, skin diseases, wounds and swelling the paste of leaves is applied topically on affected areas.

***Azadirachta indica* (Family: Meliaceae)**

Traditional medicine: In India, *A. indica* plant has been used since ancient times as a traditional medicine against various human ailments.

Bioactive components: The most important active constituent is azadirachtin and the others are nimbolinin, nimbin, nimbidin, nimbidol, sodium nimbinate, gedunin, salannin, and quercetin. Leaves contain ingredients such as nimbin, 6-desacetylnimbinene, nimbanene , nimbandiol, ascorbic acid, nimbolide, n-hexacosanol and amino acid, 7-desacetyl-7-benzoylazadiradione, 7-desacetyl-7-benzoylgedunin, 17-hydroxyazadiradione, and nimbiol (Ali ,1993, Hossain *et al*.,2011 & Kokate *et al*.,2010).

Formulation: There is numerous formulations for skin diseases in which one of the formulation where Neem oil from the kernel boiled with nux vomica seeds are useful in eczema. Leaves heated over boiling water to form a paste and mixed with honey can be applied to pustules, boils, ulcers and skin diseases.

***Carica papaya*(Family: Caricaceae)**

Carapine, an alkaloid present in papaya, can be used as a heart depressant, amoebicide and diuretic. The fruit and juice are eaten for gastrointestinal ailments; a fresh leaf poultice is used to treat sores. The fresh root with sugarcane alcohol can be taken orally or as a massage to soothe rheumatism. A flower crushed and heated with a boiling water and the decoction is taken orally for bronchitis, coughs, chest colds and asthma. In some countries, the seeds are used as an abortifacient and vermifuge. (Orwa *et al*.2009)

Bioactive components: Volatile compounds from the fruit benzylisothiocyanate, linalool, Alkaloid, α; carpaine, benzyl- β -D glucoside, 2- phenylethyl -β-D-glucoside, 4-hydroxy- phenyl-2 ethyl-β-D-glucoside and four isomeric malonated benzyl-β-D-glucosides. From latex Proteolytic enzymes, papain and chemopapain, glutamine cyclotransferase, chymopapains A, B and C, peptidase A and B.

Formulation: It can act as soothe and moisturizers the skin when mixed with honey (Aravind, Debjit, 2013) Papaya can be used also externally as a treatment for skin wounds that doesn‘t heal quickly, for this anybody can be used papaya peel or ointments made out of papaya. Latex is useful in skin diseases but it causes severe irritant(Aravind Debjit, 2013)

***Cassia fistula* (Family: Caesalpiniaceae)**

Traditional medicine: The root is prescribed as an astringent, tonic and strong purgative. The leaves are laxative and used externally as emollient, a poultice is used for chilblains, in insect bites, swelling, rheumatism and facial paralysis. Leaves posses anti periodic and laxative properties, the leaves are used in jaundice, piles, rheumatism ulcers and also externally skin eruptions, ring worms, eczema(Gupta *et al*.,2010)

Bioactive components: Pulp of the pod contains, anthraquinone glycosides, sennosides A & B barbaloin, formic acid, butyric acid and their ethyl esters, aloin, oxalic acid.

Formulation: Ground roots, leaf juice and flowers are also useful in skin diseases.

***Clerodendum viscosum* (Family: Verbenaceae)**

Traditional medicine: Whole plants of *Clerodendrum indicum* were used for treatment of coughs, rheumatoid arthritis, jaundice, skin diseases, edema, cancer, diabetes, and boils, while leaves were used for treatment of skin lesions. Mainly for the removal of scars from face and body along with skin rash, whooping cough, allergy, and abscesses. The stems of the same plant were used for treatment of eczema, itches, and toothache. A combination of leaves and bark was used for treatment of skin disorders.

Bioactive components: 3-Deoxy-d-mannoic lactone is predominant followed by alcoholic compounds, glycerin and xylitol(Goutam ghosh et al.,2015)

Formulation: Decoction of the leaves are useful in skin diseases.

Conclusion:

The most common reasons for using herbal medicine for skin treatment are it is more affordable, satisfies a desire for more personalized health care, more closely corresponds to the patient's ideology, concerns about the adverse effects of chemical (synthetic) medicines and mainly relay on the health issue. As a conclusion, herbal products are the symbol of safety in contrast to the modern drugs, that are regarded as unsafe measure to human environment.

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