

MEDICINAL PLANTS FOR SKIN HEALTH: A HOLISTIC REVIEW OF BOTANICAL INTERVENTIONS

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ABSTRACT

Skin diseases are numerous and a occurring health problem affecting all ages from neonates to older adults and cause harm in several ways . Maintaining healthy skin is important for a healthy body .Herbal drugs are sources of great economic value in the Indian subcontinent. In recent years, the importance and value of herbal drugs and remedies for various diseases have been widely discussed. Herbal drugs have their origin in the households of Indians .They are naturally gifted with invaluable bioactive compounds derived from the backbone of traditional medicines .This paper listed the beneficial effects of certain herbal drugs for treating skin diseases .The beneficial effects of herbal drugs on skin diseases include healing wounds and burn injuries , antifungal , antiviral, antibacterial , and anti-inflammatory activity against skin infections such as acne , herpes, and scabies , and antitumor-promoting activity against skin cancer .Some wild plants and their parts are frequently used to treat these diseases .The use of plants is as old as humankind .Natural treatment is cheap and claimed to be safe .A review of some plants used for the treatment of skin diseases summarizes the recent technical advancements that have occurred in the area during the past 17 years .The main purpose of this article is to highlight the latest reviews of scientifically proven medicinal activity against various skin diseases .

Keywords: Skin Diseases, Herbal Drugs, Medicinal Plants, And Traditional Medicines (E.G., Aloe Vera And Cannabis Sativum) Etc.

I. INTRODUCTION

Human skin, the outer covering of the body, is the largest organ of the body .It contains many specialized cells and structures. It is divided into three main layers: epidermis, dermis, and hypodermis [1].

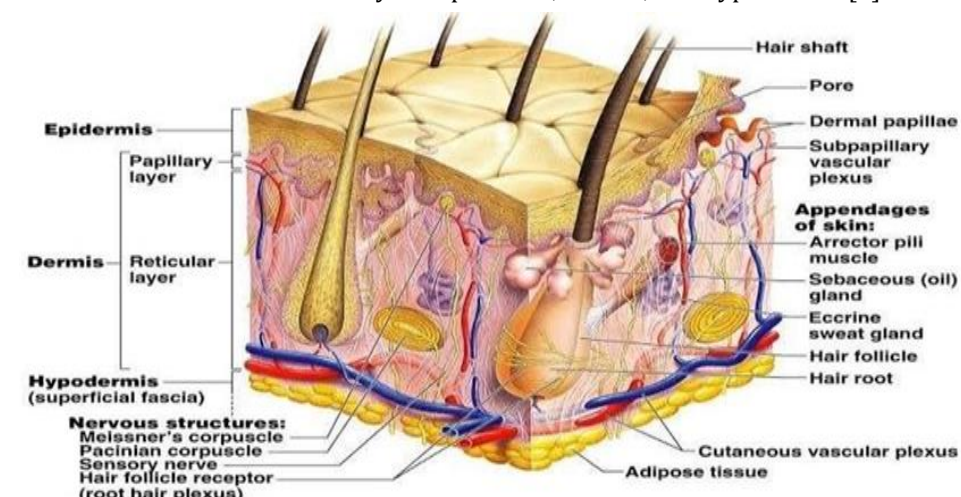


Fig 1

II. COMMON SKIN DISEASES

Skin diseases are common ailments and they affect all ages from neonates to the elderly and cause harm in a number of ways .There are more than a thousand conditions that may affect the skin, but skin diseases can be categorized into nine common types : parasitic infestation (e.g., scabies, Pediculosis),bacterial (e.g., impetigo , fungal) (e.g., dermatophytoses, candidiasis) and viral(e.g .,herpes,warts) infections as well as inflammatory diseases (e.g .,atopic dermatitis contact dermatitis seborrhoeic dermatitis) [2].

Cutaneous (skin) infection

The normal skin of healthy subjects is very resistant to invasion by most microorganisms . infection hence develops when the right combinations of causative factors exist and a particular microorganism usually represents only one of the etiologic agents. There are almost always some interacting causes for causes of infection of any body tissue, some direct , some direct , which creates circumstances driving to infection and in its recurrence [3].

a) Bacterial skin infection

Cutaneous bacterial infections may be divided into primary and secondary types. Primary infections are most frequently incited by staphylococci . Bacteria may infect the topmost layers of the skin. If not treated correctly, these infections may spread throughout the body . examples include impel folliculitis,cellulities, and Lyme disease. Bacterial infections are better treated with antibiotics [4].

b) Fungal skin infection

Harmless fungi are always present on the surface of the skin . infection occurs when these organisms enter the body . these infections are usually superficial , affecting the skin , hair, and nails and include athlete's foot, lock itch, and ringworm. However, in people with a suppressed immune system or who have been taking antibiotics for a long period, the fungi may spread deep within the body , causing more serious disease. The most common fungal skin infections are dermatophytoses (ring worm , tinea), ptyriasis versicolor, and candidiasis . dermatophytic infections are generally restricted to the non-living cornified layers of the skin, hair, and nail and are traditionally named according to the anatomic location of the infected body surface [5].

c) Rashes

A rash is an area of red , inflamed skin or a group of single spots . these can be caused by irritation, allergy, infection , or underlying diseases as well as by structural defects, such as blocked pores or malfunctioning oil glands. Examples of rashes include acne ,dermatitis ,eczema, hives, pityriasis rosea, and psoriasis.

d) Candidiasis

Candidiasis the general term for pathogenic with candida, can divided into superficial mucocutaneous infection, deep local infection , or dissemination . Candida infection of the skin and nails are most coomon infection worldwide . The candida species are commonly found in the human gastro-intestinal tract , mouth and vagina. Theinfection of candida include prolonged antibiotic therapy steroid therapy , diabetes mellitus skin truma and immunodeficiency , with the most severe infection now occurring in patients with AIDS [6].

e) Parasitic infection

These infections occur after exposure to parasites such as lice and scabies.

III. HERBAL DRUG UESD FOR SKIN DISEASES

Natural drugs from plants are gaining popularity because of several advantages such as having fewer side-effects ,better patient tolerance , being relatively inexpensive, and being acceptable because of a long history of use . In addition, herbal medicines provide a rational means for the treatment of many diseases that are obstinate and incurable in other systems of medicine. The plant has been effective in various skin diseases during the last many years (1995-2012) and goes now [7].

Aloe vera (common name :Barbados aloe , Family : Xanthorrhoeaceae)

Aloe vera is a species of aloe that is particularly popular for its medicinal properties. The name Aloe vera derives from the Arabic words 'Alloeh' meaning shining bitter substance , while vera in Latin means true. In India, it is found in Rajasthan , Andhra Pradesh , Gujarat , Tamil Nadu, and Maharashtra. In India, whole leaves ,exudates, and fresh gel of aloe are used as a cathartic, stomatic, and emenogogue . it is helpful in digestion and reduces several skin health problems . Aloe vera also contains polyasaccharides, which may help to stimulate skin growth and healing . the plant may even have immune- boosting effects due to its natural antioxidant content . Aloe vera is rich in vitamins A,C, E, and B12 [8].

Aloe vera is a well-known plant not only in tribal communities but also in modern lookouts. It is therapeutically important . Because it is used in ayurvedic, homeopathic, and allopathic medicine, the clinical administration of Aloe vera gel is generally safe and may help reduce radiation –induced skin changes . Aloe vera gel has immune-

stimulatory activities. It promotes wound healing. Aloe vera is often called the “Natural healer” .IT reduces painful effects of singles , reduces symptoms of psoriasis, and eases heartburns and ulcers [9].



Fig 2

Using aloe vera has the following benefits:

- Its anti-inflammatory properties can reduce pain , swelling, and soreness of wounds or injuries.
- It can speed up wound healing time and limit scarring .
- It supports the production and release of collagen.
- It is effective in treating fungal and bacterial infections .
- It contains 98% water , which helps moisturize, soothe and hydrates the skin [10].

Cannabis sativus (Common name: charas , Ganja Family : Cannabinaceae)

The powder of the leaves serves as a dressing for wounds and sores . Ganja is externally applied to relieve pain in itchy skin diseases .[3] The crushed leaves are rubbed on affected areas to control scabies . By using hemp seed oil , the skin is strengthened and better able to resist bacterial , viral, and fungal infections. It helps treat inflammatory skin conditions such as eczema and psoriasis , acne scarring , and dry skin . Full-spectrum hemp oil is a type of CBD oil made from the pressed flowers and leaves of the C. sativa plant. Manufacture uses hemp oil as the carrier oil , and it contains less than 0.3 % tetrahydrocannabinol (THC) . Hemp oil is derived from the seed flowers or leaves of the cannabis sativus plant . there is some evidence that molecule and chemicals founds in hemp oil may be beneficial for skin health [11].

Hemp oil has numerous potential health benefits , such as;

- moisturizing properties
- reducing inflammation
- Reducing symptoms of premenstrual syndrome (PMS)
- protecting nerve and brain cells
- preventing seizures
- excellent source of healthy fats , proteins, and antioxidants

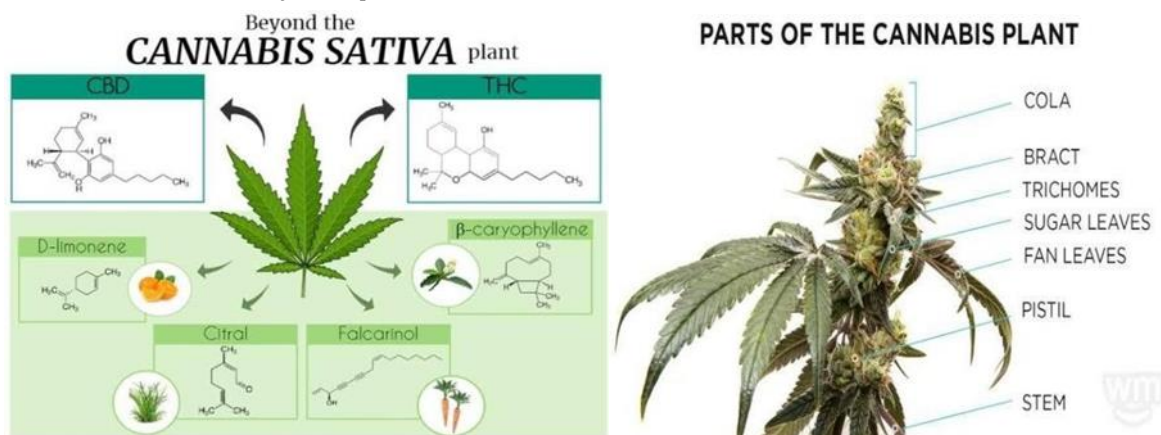


Fig 3

Cassia fistula (common name : golden shower ,purging cassia ; family : Fabaceae)

Cassia fistula is a moderate size deciduous tree 10 m tall , flowers yellow , leaves alternate , pinnate , 30-40 cm long , with 4-8 pairs of ovate , leaflets , 7.55–15cm long, 2–5 cm diameter . fruits pendulous , cylindrical, brown ,septate , 25-100 seeds .seeds lenticular , light brown , lustrous 6 [12]. Cassia fistula grows throughout Bangladesh and in many other asian countries and is used as a traditional herbal medicine in India, China, Hong Kong, the Philippines, Malaysia, Indonesia , and Thailand . In Ayurvedic medicine , the golden shower tree is known as aragvadha , meaning “ disease killer “. Fruit pulp is used as a mild laxative for cardiac conditions and stomach problems such as acid reflux. Flowers are used for fever.Roots as diuretic The seeds are recognized as antibilious ,aperitif , carminative ,and laxative, while the roots are used for curing adenopathy ,burning ,sensations, leprosy , and skin tubercular glands. The leaves of the tree are used for erysipelas , malaria ,rheumatism , ulcers [13]. The plant has a rich source of tennis flavonoid, and glycosides present in the Cassia Fistula might b medicinally important and/or nutritionally valuable. The leaves of Cassia fistula mainly contain oxalic acids ,oxy anthraquinones, and anthraquinone derivatives . It pacifies the 3 boshas of vaat , pitta ,and kapha. It expels the pitta and kapha from the body [14].

• **Herbal medicine uses**

There are many cassia species worldwide that are used in herbal medicines . these particular families of plants are widely used for their laxative actions . Cassia fistula is no exception . it is often used as a highly effective moderate laxative that is safe even for .

Antiitching Activity:

Vicharchika (eczema) is a chronic skin disease with no permanent cure in modern medicines . Raising serum IgE levels is the most common immunological marker of eczema. This study suggests the significant efficacy of Aragvadha in patients with vicharchika (eczema) [15].

Wound healing activity :

The methanolic extract of C Fistula leaves was examined for its wound healing property in the form of an ointment in two types of wound models in rats ; the results showed wound contraction ability , epithelization period , tensile strength, and regeneration of the wound area [16].



Fig 4

Azadirachta indica : (Common name : Neem Family : Meliaceae)

Neem have been known to Indians since time immemorial . The earliest Sanskrit medical writing refers to the benefits of Neem’s fruit , seeds , oil , leaves ,roots, and bark . The neem tree has been a wonder tree for centuries in the subcontinent . Owing to Neem’s antibacterial properties ,it is effective in fighting most epidermal dysfunctions such as acne , psoriasis, and eczema . Neem is used for eye problems such as night blindness and conjunctivitis [17]. It has been used as a medicine for more than 5000 years. Neem is especially good for those with skin disorders such as eczema . As a natural eczema remedy , neem when applied to the skin relieves itching and the painful symptoms arising from your disorder. Acne-causing bacteria are killed by neem . It is useful for tiredness , cough , fever , loss of appetite , and worm infestation . It heals wounds and vitiated conditions of kapha , vomiting , skin diseases , excessive thirst , and diabetes [18].

- Treating acne
- Treat nail fungus and restore brittle nails .
- Healing wounds .
- Providing relief for skin disorders such as eczema and psoriasis

- Treating and healing fungal infection , ringworm, infected sores and burns Treating player.

Azadirachta indica is a fast-growing evergreen popular tree found commonly in India. Neem is a plant with multiple uses . It is known for its antidiabetic, anti-inflammatory ,and anticancer effects . Neem is used in hindu rituals to treat viral infections such as smallpox, chicken pox, and malaria . Neem is well known and celebrated for rejuvenating the skin and achieving an accountable appearance [19] . Owing to its severe taste , it has an unfathomably cooling impact on the body, diminishing overabundance heat that can show as skin imperfections . Herbal remedies are used to treat various types of diseases worldwide. [20].



Fig 5

Camellia sinensis (common name : Green tea , Chaay family ; Theaceae)

Camellia sinensis has been reported to have health benefits ,including the building of healthy skin .The use of herbal therapies for caring for wounds and injuries has been popular since ancient civilization. In contrast to only 1%–3% of modern drugs used for the treatment of wounds and skin disorders ,almost one-third of all traditional medicines are used for these treatments[21]. Tea [*camellia sinensis* , a cultivated evergreen plant, is native to China and later spread to india and Japan. The medicinal effects of tea have a history dating back almost 5000 years [22]. The chemical components of green tea chiefly include polyphenols, caffeine, and amino acids. A related compound found in tea is theophylline , a licensed medicine for the treatment of respiratory diseases such as asthma. Tea also contains flavonoids , which are reported to have antioxidant properties and many beneficial effects [23]. Tea flavonoids reduce inflammation ,have antimicrobial effects, and prevent tooth decay. Consumption of tea may have diuretic effects due to caffeine. There are many therapeutic values in green tea, including, aiding digestion, blood purification, ensuring regularity, lowering body temperature ,strengthening teeth and bones, boosting the immune system ,enhancing heart function ,suppressing de-ter food poisoning , fighting viruses, and lowering blood sugar levels [24].Tea is a healthy beverage . Efficacy of *Camellia sinensis* leaf Extract for treating acne. In the last 20 years, clinical and laboratory studies have identified the benefits of a series of natural ingredients for skin care Several studies with *Camellia sinensis* suggest that topical application may be potentially effective for atopic dermatitis ,acne vulgaris , rosacea , androgenetic alopecia , hirsutism , keloids , genital warts , cutaneous leishmaniasis , and candidiasis.*Camellia sinensis* is a Champion middle bush of theaceae family , known traditionally by the name of green tea.The leaves contain several polyphenols with anti-inflammatory, antiseptic, and antioxidant properties [25].*Camellia sinensis* is used in various forms , both oxidized and unoxidized , to benefit the skin .It is used for good skin Health and possesses, anti-inflammatory ,antibacterial , and astringent properties . *Camellia Sienensis* also aids in skin hydration, and its tea variety is beneficial for acne- prone skin [26].



Fig 6

LIST OF SOME MEDICINAL PLANT USED TO CURE OF SKIN DISEASES

Botanical Name	Family	Common Name	Plant Part Used	USES
1. Aloe vera	Xanthorrhoeaceae	Barbados aloe	Leaves	The leaf juice is used for skin diseases.
2. Cannabis sativus	Cannabaceae	Charas , Ganja	Leaves oil	The powder of leaves work as dressing for wounds and sores.
3. Azadirachta indica	Meliaceae	Nimba	Leaves , bark	Leaf, bark and oil from seed is used in treatment of skin diseases.
4. Catharanthus roseus	Apocynaceae	Periwinkle , annual vinca	Flowers, leaf	Leaf paste are applied externally as a cure to pimples.
5. Ricinus communis	Euphorbiaceae	Castor oil plants	Flowers , seeds .	Oil extracted from the seeds is used in the children for skin diseases.
6. Cassia fistula	Caesalpiniaceae	Sunari pujariguda	Leaves , flowers	Leaves crushed and applied directly for skin diseases.
7. Achyranthes aspera	Amaranthaceae	Prickly chaff flower	leaves	Leaves crushed and applied directly for skin diseases.
8. Marsipia quadrifolia L.	Marsipaleaceae	Sunsunia sago.	Leaf , seeds	Leaf powder mixed with karanja (seed oil of pogamia pinnata) oil and applied externally to cure disease.
9. Bauhinia variegata	Fabaceae	Orchid tree ,	Bark ,buds,flowers ,root , stem, leaves .	bark is internally administered skin disease.
10. Datura metel L.	Sunsiaceae	Durdura	Leaves	Leaves juice externally apply to the lesions of ezema.
11. Mirabilis jalapa	Nicotianaceae	Four 'o' clock flower ,Marvel of peru	Flower , leaves	Root decoction to wash wounds and treat skin conditions such as leprosy .
12. Allium Cepa	Amaryllidaceae	Garden onion	Bulbs	Skin allergy , anti aging, stimulates

				blood circulation .
13. Glycyrrhiza glabra	Leguminosae	Black Sugar	Root	Antiviral , skin lightning ,Allergic dermatitis . mild laxative
14.Curcuma longa	Zingiberaceae	Turmeric	Roots	Usefull in skin disorders such as ringworm , itching ,eczema and parasitic skin diseases .
15. Eucalyptus globules	Myrtaceae	Blue gum ,camphor oil .	Seed oil	Uses in mouthwashes ,cold remedies and helath problems.
16. crocus sativus	Iridoceae	Saffron crocus	Stigma	Reduce redness or rashes and inflammation.
17.Ocimum Sanctum L	Lamiaceae	Tulsi	Leaves	Antiaging, treat kidney stones, fights acne.
18.Vernonia Cinerea	Asteraceae	Biitterleaf ,Congo bololo	Whole plant	Antiseptic , Skin disease ,rheumatism .
19.Cyperus rotundus	Cyperaceae	Nutgrass ,purple nutsedge .	Whole plant	Rhizomes made into paste with water and applied externally.
20.Butea monosperma [Lam taub]	Fabaceae	palso		Deodation of flowers applied on the affected area of leprosy and other skin diseases.

IV. CONCLUSION

The preference for traditional medicine over allopathic medicines in most interviews strengthens previous studies on the importance of traditional medicine in the primary health care system in this rural community .Studies to validate the potential of these plants independently and in their various combinations are underway to provide insight into the anti-infective role of each plant.

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