

Brief Review on Medicinal Plants used in Hair Care

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Abstract: *Hair loss is a common and ever increasing problem in cosmetics as well as primary health care practice. It is a universal problem, having affected both sexes of all races to different extents for as long as mankind has existed. Herbal cosmetics are now emerged as the appropriate solution to the current problem, natural product are fancy in cosmetics and about 1000 kinds of plant extract have been examined with respect to hair growth and still it is a fast growing segment with a vast scope of manifold expansion in coming years. This review describe the use of some natural products for hair growth promotion, with a brief description of the major use, plant parts used, the active responsible for effect and the benefit of such product.*

Keywords: Medicinal plant Hair Care, Natural, Alopecia

I. INTRODUCTION

Hair is one of the vital parts of the body derived from ectoderm of the skin, is protective appendages on the body and considered accessory structure of the integument along with sebaceous glands, sweat glands and nails (1). They are also known as epidermal derivatives as they originate from the epidermis during embryological development. Hair is an important of the overall appeal of the human body (2-4). Alopecia is a dermatological disorder that has been recognized for more than 2000 years. It is a synonym of baldness, involves absence or loss of hair, especially of the head (5). It is common throughout the world and has been estimated to affect between 0.2% and 2% of the world population. Alopecia has also been observed as major side effect of anticancer drugs, immunosuppressant and many other drug treatments. Mental shock, emotional strain, focal infection, errors of refraction, endocrine disturbance, neuro-circulation instability and genetic predisposition are also the known cause of alopecia (6). Ayurveda has described hair disease in three words, which are as under (7-8).

- Khalitya : Means loss of hairs
- Palitya : Means prematured hair graying
- Indralupta : Mean alopecia areata, totalis, universalis

The search for treatment results into few drugs of synthetic origin, but side effects associated with them can not be neglected. Herbal drugs or their formulation are viable alternative to synthetic drugs. Natural remedies have been used for centuries for treating alopecia (9-11). In traditional Indian system of medicine many plants and herbal formulations are reported for hair growth promotion as well as improvement of quality of hairs (12). About 100 hair growth products are available in the markets which are prepared by combination of one or more herbal drugs (13). Some of hair growth products available in the market are listed in table 1. Although they are currently widely accepted by the patient, their scientific respect among dermatologists in particular is limited. The alternative medicines seem promising, although their true effects are unknown so further investigation must be performed. Recently, various plant extract have been patented for use in hair growth or hair tonic products, and for prevention of alopecia. The patents claim that the effect are due to stimulation of the hair follicle or scalp metabolism, possibility due to an acceleration of blood circulation, activation of dermal papilla, antitestosterone action or increased nutrition to the hair follicles through accelerated blood flow but the mechanism are not yet clear(14-15). The article present a review of those used more frequently.



II. REVIEW

1. Hibiscus (*Hibiscus rosa-sinensis* L):(Malvaceae)

Part Use: flower

Hibiscus offers numerous benefits for hair care, including promoting hair growth, strengthening hair follicles, reducing hair fall, and improving overall hair health. It can be used in various forms like masks, oils, rinses, and even in shampoos. Hibiscus is rich in vitamins and amino acids that nourish hair follicles and stimulate new hair growth. The natural compounds in hibiscus can strengthen hair follicles, reducing breakage and promoting healthier hair.



Fig. No.1 Hibiscus

2. Neem (*Azadirachta indica*): (Meliaceae)

Part Use: Leaves



Fig. No. 2 Neem

Neem actively cleanses and strengthens hair follicles. This has a lot of benefits of neem for hair. Increased blood circulation in your scalp gives you stronger and healthier roots, therefore lustrous, stronger, and healthier hair as well. You could use neem leaves and neem oil to make a pack and apply it to your scalp and hair.

3. Marigold (*Calendula*)¹¹: (Asteraceae)

It is a family of Asteraceae of herbaceous annual and perennial plants, sometimes referred to as marigold.^{16,17} it is used because of its nematocide, cosmetic and pharmaceutical properties. Antioxidants are present in the essential oil of the flower.¹⁸ Calendula is used topically to treat acne, minimize inflammation, control bleeding, and soothe irritated tissue in suspension or in tincture.¹⁹ Some bacteria provide growth-promoting substances to plants and play an important role in phosphate solubilization.²⁰



Fig. 1 Marigold



4. *Acacia concinna* (Shikakai): (Mimosaceae)

Part Used- Leaves and Pods

Commercially, *Acacia concinna* is grown in India and Far East Asia. Spinasterol, acacic acid, lactone, and the natural sugars glucose, arabinose, and rhamnose are all produced when the shikakai plant is hydrolyzed. Shikakai can reinforce your hair strands and reduce hair fall if you use it on a daily basis. It is high in Vitamin C, as well as Vitamins A, D, E, K, and other antioxidants, all of which are essential for healthy and rapid hair growth.^{21,22}



Fig.2 *Acacia concinna*

5. *Emblica officinalis* (Amla): (Euphorbiaceae)

• Part used-Fruit

It is one of the most commonly used herbs in Indian homes and indigenous medicine texts.²³ In Traditional medicine, *Emblica* is used to stimulate hair Growth. The fruits contain tannins as well as antioxidants Emblicanin A and B, and when hydrolyzed, one yields Gallic acid, ellagic acid, and glucose, while the other Yields only ellagic acid and glucose.²⁴ *Emblica* is said to Help with iron metabolism. It is necessary for normal hair Growth and good hair care.²⁵



Fig. No.5 Amla

6. *Ashwagandha* (*Withaniasomnifera*): (Salonaceae)

• Part Used- Roots

It is also commonly planted in the Salonaceae or nightshade family as winter cherry.^{26,27} It aids in the fight against free radicals in the scalp and hair follicles, promoting healthy hair development. Multiple other species are morphologically similar in the genus *withania*.¹⁷ It is commonly used in the treatment of various illnesses, such as asthma, bronchitis, inflammatory disorders, ulcers, issues with the stomach.²⁸ Several studies have shown that *ashwagandha* is a very effective solution to treating neurological conditions such as Parkinson's and Alzheimer's²⁹



Fig No.6 Ashwagandha



7. Fenugreek:

Part Use: Seeds

Fenugreek seeds are often used in hair care for their potential to promote hair growth, strengthen hair follicles, and reduce hair fall. They are rich in nutrients like proteins and nicotinic acid, which can nourish the scalp and hair, contributing to healthier and more lustrous hair. Fenugreek can also help combat dandruff and dryness.



Fig No. 7 Fenugreek

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