HAIR LOSS & HERBAL MEDICINES

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ABSTRACT

Herbs & herbal drugs are clinically proved for hair growth. Hair loss problem is of great concern to both males & females & the main problems associated with hair loss are hair fading, dandruff & falling of hair. Various synthetic medicines are available for hair loss which does not treat permanently & also shows severe side effects. This problem could be solved by the use of herbal medicines. About 1000 kinds of herbal plant extracts have been examined for hair growth. In this article we would focus the physiology of hair, synthetic treatment available & available herbal medicines.

Key words: Hair, Hair loss, Herbal medicine, Alopecia.

INTRODUCTION

Hairs are very peculiar characteristics of mammalian groups in animal kingdom. Humans have hairs that serves important role in their lives. From the ancient times hairs have been a beauty symbols for both men & women. People are now a days spending a great part of their earnings for hair care. Ayurveda has described hair diseases in three words—

1. Khalitaya means loss of hairs.
2. Palitya means premature hair graying.
3. Indralupta means Alopecia areta, totalis, univeralis.1, 2

Hairs can be defined as − “modified epithelial structure formed as a result of keratinization of germinative cells”3. Hairs are the outgrowths from the follicles present on the skin. These follicles are situated on the dermis, the second layer of the skin & extended up to the epidermis that is the outermost layer of the skin. Through these follicles grows out a hair. Hair is composed of keratin with chemical constituents like carbon, hydrogen, nitrogen, sulphur & oxygen. Hair growth varies from person to person but on an average hair grows about 5 to 10 mm per month. Maximum growth of hairs takes place at the age of about 15 to 30 years. It is also seen that hair growth is more in summers as compared to winters. Scalp (skin on head) consists of seven components. These are papilla of hairs, hair shaft, mouth of follicle, stratum granulosum, sebaceous gland & oil duct4.

Types of hairs

Morphologically there are three types of hairs –

Vellus hair: These are short, fine, soft usually non pigmented & un-medullated.

Terminal hair: These are large darkly pigmented & medullated. 90% of the hairs on the chest, trunk, shoulders, legs & arms of men are terminal hairs where as only 4500 of hair in the same region on women are terminal.

Intermediate hair: These occur on the scalp & demonstrate morphology between those of terminal & vellus hair. Intermediate hairs are medullated & contain moderate amount of pigment5, 6.

Hair cycle & its mechanism: Hair loss problem is of great concern to both males and females. If you have thinning hair, first find out the cause. Normal shedding of hair is natural. To understand what is normal hair fall we must know the basics of hair growth cycles.

The follicular life cycle can be divided into 3 phases –

1. Anagen : It is the phase of active growth.
2. Catagen : It is the phase of follicular regression.
3. Telogen : It is the resting phase.

A hair follicle goes through three stages during its life span. The first is the period of growth which lasts for about two to eight years. This is followed by resting period which may vary from two to four months. Then comes the shedding stage of the hair when new hair follicles push out of the scalp as new hair growth cycle begins & the old ones fall off to make space for new hair growth. We usually lose 50-100 hair in this normal hair shedding process7.

Hair loss: A disease common globally, which has really created chaos around the world now a days. Recent data shows tendency of hair fall has increased in past two decades.
Causes of hair fall are:

- Deficiency of useful minerals & vitamins in body.
- Mental & emotional stress.
- Prolonged illness.
- Hormonal imbalance commonly seen in hyperthyroidism, imbalance in androgen & estrogen.
- Usually after child birth due to hormonal imbalance.
- Certain medications like blood thinners, vitamin A if taken in excess amount, non-contraceptive pills, anti depressant drugs & medicines used in chemotherapy for treating cancer patients.
- Certain infections that can promote hair loss for example fungal infection on scalp.
- Diseases like diabetes may also be a precipitating factor in hair loss.
- Poor blood circulation or excess blood loss.
- Poor nutrition.
- Lack of sleep & life style disorder.
- Hereditary factors.

Main factors for the hair loss

There are several factors for the hair loss; some of the main factors are given below:

1. **Reduced hair follicle function due to male hormone:** Thinning of hair in men usually commences at the front of the head on ageing. This is known as male pattern baldness or androgen alopecia. This type of alopecia is different from alopecia areeta, in this the hair starts thinning there in number change in the number of hair on the total surface area of the head. The hair becomes more brittle due to reduction in the growth period of the hair cycle. According to Hamilton the causes of the male pattern baldness were male hormones & genetic factors based on epidemiological findings. The male hormone testosterone is converted to 5-α dehydrosterone (DHT) which has higher biological activity at the hair follicles through the action of 5-α reductase. Currently DHT is thought to be the principal cause of the hair loss.

2. **Reduced metabolic functions of hair follicles & hair bulbs:** Three processes of the hair matrix at the hair roots i.e. division, proliferation & differentiation form hair & make it grow up to the dermis. The hair matrix receives the nutrients from the capillaries in the dermal papilla for the cell division. In case, the flow in the blood in the capillaries surrounding the hair follicles & dermal papilla is reduced, the supply of the nutrients to the dermal papilla will not be sufficient & will impair cell metabolism having adverse effect on the hair growth.

3. **Reductions in scalp physiological function:** In case of excessive build up of dandruff flakes, pores of the scalp, through which the hair exists the epidermis, get blocked. Such a condition adversely affects hair growth. When the dandruff is decomposed by bacteria this may cause irritation of the scalp giving rise to condition called Pityriasis. Leaving such a condition untreated may cause the hair loss. Excessive secretion of the sebum in the upper part of the hair follicles can also cause irritation because of decomposition of sebum & may give rise to seborrhoeic alopecia.

4. **Local impairment of circulation due to tension in the scalp:** Loss in flexibility in the scalp may cause the reduction in the blood flow in the peripheral blood vessels in the subcutaneous tissues to the scalp. Such a situation will adversely affects hair growth.

**Available medicines for hair loss**

- Mintop
- Rogaine
- Propeeia
- Nanominox
- Finasteride
- Dutasteride
- Ketoconazole
- Minexil
- Fluridil
- Superoxide Dismutase
- Copper Peptides
- Alfatradiol
- Spiironolactone
- Flutamid

**Side effects of available medicines for hair loss**

- Burning or irritation of the eye
- Itching
- Redness or irritation at the treated area
- Unwanted hair growth elsewhere on the body.
- Rash
- Itching
- Difficulty breathing
- Tightness in the chest
- Swelling of the mouth, face, lips, or tongue
- Chest pain
- Dizziness
- Fast heartbeat

Presently, minoxidil & finasteride are the two USFDA approved synthetic drugs finding concomitant use for the treatment of androgenic alopecia, although their side effects have abbreviated their usage. It is also concluded that when the medication of available medicine like Minoxidil is discontinued the hair loss will return to normal rate with in 30-60 days.

**Available herbal medicine for hair loss**

- Navratna Hair Oil
- Keshbeam Hair Oil
- Indulekha Hair Oil
- Kesh King Hair Oil
- DivyaKesh Tel
- Royal Hair Oil
- Herbal Heena
- Kashish Herbal Henna
- Amalaki Hair Oil
- TejusTailum
Herbs for hair loss

A lot of products available in the market have these natural herbs extract as basic ingredients. They come as hair tonics, hair promoting pills & as product for external or topical application to stop hair fall & promote new hair growth.

There are millions of natural products that help hair growth. Many essential oils as well as herbs not only help stop falling hair, they actually promote hair growth. Since ages, herbs & natural products are being used to treat hair loss or other hair related problems all over the world.

The list of regularly used herbs includes –

- Aloe (Aloe vera)
- Arnica (Arnica montana)
- Licorice (Glycyrrhiza glabra)
- Marigold (Calendula officinalis)
- Bhrungraj (Eclipta alba)
- Jatamansi (Nardostachys jatamansi)
- Brahmi (Centella asiatica)
- Nilpushpa (Indigo feratinctoria)
- Nagarmotha (Cyperus cariosus)
- Triphala (Embelica officinalis, Terminalia bellirica & Terminalia chebula)
- Gunja (Abrus precatorius)
- Chameli (Jasminum officinale)
- Heena (Lawsonia inermis)
- Sankpushpi (Convolvulus pluricaulis)
- Ratanjali (Pterocarpus santalinus)
- Rasanjan (Berberis aristata)

Hundreds of different herbs are being used alone or in various combinations. It has been proved that if used collectively, such herbs give excellent results because of their fantastic properties. Most of the herbs usually soothe or stimulate skin, dry or even moisten scalp, and / or tighten or ease the hair growth. In some cases these herbs are also used for healing, alleviating pains, dispel gas or even cleanse & purify the blood also7.

Various kinds of volatile oil available

- Menthol
- Eucalyptus oil
- Clove
- Lemon grass
- Lavender
- Rose merry

CONCLUSION

Hair loss is not a common problem that has affected men & women and it is also a psychological problem. Various investigations of hair growth including natural or synthetic based products was done but still no scientific documentation is available. Synthetic products give hair growth effect but they may cause health hazards with several side effects. In the future it is possible that many herbal plant extracts have been commercialized by doing characterization of active phytoconstituents, elucidation of mechanism & in-vivo studies on animal model.

REFERENCES