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Role of of Vata Jata (Banyan Roots) in Hair loss: A systematic Review

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ABSTRACT:
Since ancient times, people have wanted to be beautiful.Hair is a symbol of beauty and confidence. In Ayurveda, hair is called "Kesha".Vata (Ficus benghalensis) has been a sacred medicinal plant since Vedic times. It spreads everywhere by swinging or supporting the roots, hence the name Vata. In Ayurveda, Vata has been used as the medicine of choice for Raktapitta, Chardi, Trushna, Visara , Daha .Vata Jata are the aerial root of Ficus benghalensis.Vata Jata is used to promote hair growth, prevent premature graying and reduce hair loss.Acute diseases, autoimmune diseases, chemicals (hair dyes), chemotherapy Agents/drugs, etc. are the leading cause of hair loss in most people.This article contains descriptions of hair disorders and medicinal UsesofVata Jata.

Keywords: Kesha, Vata Jata, Ficus benghalensis, Raktapitta - blood disorders, Chardi - vomiting, Trushna - excessive thirst, Visara - herpes, Daha - burning sensation.

I. INTRODUCTION:

Hair is one of the most defining aspects of our appearance. Healthy hair makes us attractive, young and desirable. A person's appearance directly affects self-esteem and maintaining a youthful and healthy self-image is desirable. [1]Hair loss is a very common clinical complaint, often associated with severe emotional distress.[2]Hair loss is a silent but serious problem that can also occur in healthy people. These are considered physiological phenomena of old age, usually after the mid-40s.[3]Hair loss can be caused by a variety of reasons, such as genetic predisposition, environmental triggers, exposure to chemicals, medications, nutritional deficiencies, extreme stress, or chronic illness. [4] It provides a variety of essential nutrients needed to maintain normal functioning of the sebaceous glands and promotes natural hair growth.[5]Even in Ayurvedic texts dating back a thousand years, Dinacharya and Ritucharya chapters describe different types of daily hair care regimens. [6]The banyan tree is a symbol of strength and longevity. In the ancient Indian science of Ayurveda, Ficus Bengal root has been shown to have great medicinal value in hair care.

Hair can be defined as "enhanced epithelial structure due to keratinization of germ cells". Hair is the product of hair follicles present on the skin. Hair is made up of keratin and chemical constituents such as carbon (C), nitrogen (N), sulfur (S) and oxygen (O).Hair growth varies from person to person, but on average, hair grows at a rate of about 15-30mm/month. Hair is one of the important parts of the human body, derived from the ectoderm of the skin, and is a protective appendage of the human body.

There are two types of hair:
1. The hair is fine, light and straight.
2. The terminal hairs are thicker and darker and may be curly, located in the eyelash and eyebrow region. [8]

Losing 70-100 hairs per day is common, but losing more than 100 hairs per day for more than a few weeks indicates a serious Indralupta (hair loss) problem, It is a recognized skin disorder with a history of over 2,000 years and a common problem in cosmetic and primary care practice.It is common worldwide and is estimated to affect 0.2% to 2% of the world's population. There are a variety of synthetic medications available to treat hair loss which are not a permanent cure and can have serious side effects. These problems can all be solvedWith Herbal use.

Ayurveda describes hair disorders in three words. [9]
1. Indralupta means Sudden loss of hair creating circular patch
2. Khalitya means Gradual Hair loss leading to baldness.
3. Palitya means Changes in normal black coloration of hair to grey, brown or whitish color.

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Table No.1 ACCORDING TO AYURVEDA TYPES OF HAIR DISORDERS [8-10]

Diseases	**Indralupta**	**Khalitya**	**Palitya**	**Darunak**	**Ecto parasite(Bahy aKrimi)**
Clinical features	Suddenlossof haircreatingci rcularpatch.	GradualHairloss leading tobaldness.	Changes in normalblack coloration ofhairtogrey,b rownorwhitish color.	Dry,Itchyandh ard scalpconditi on.	Tiny insectinfestthes calp.
DoshaInvolv ement	Vata andPitt a.	Pitta&VataorPit ta&Kapha	Pitta.	kaphaand vata Sometimes Pitta andRakta.	--
Sign &Sympto ms	VataDomina nce -Pain PittaDomina nce - Burning	PittaDominance –Sweating Kapha Dominance-ThickeningofS kin.	In Vata association-Dry,rough skin andblackishg reycolour. Pitta Dominance-Brownishcolo urwithburning sensationinsca lp. KaphaDomina nce-White and shinyappearan ce.	Scalp becomedryan droughleads to tinycracks resultintohair fall.	Itching, rash,blisters etc onScalp,Visi bleliceonscal p. These can alsobeseenonbe ard(smashru), bodyhair (loma), andin eyebrows(paksh ma).

Chemotherapy and hair loss:
Chemotherapy is exclusive to cancer patients, but it also scars normal cells and hair follicles. This can lead to hair loss, known as anagen hair loss.
Hair loss due to side effects of cosmetic treatments - Any cosmetic treatment containing harsh chemicals such as coloring, tinting, smoothing, softening, repairing, perming, etc. may cause hair loss in some people.

3. Factors of Hair Loss:
There are several factors for the hair loss; some of the main factors are given below –

- Acute illness
- Autoimmune disorders
- Chemicals (hair dyes)
- Chemotherapeutic agents/ drugs.
- Diabetes
- Physical traumato the scalp
- Poisons
- Poor blood circulation
- Poor diet or malnutrition
- Prescription drugs
- Psychological
- Radiation exposure
- Ringworm
- Skin disease
- Stress
- Sudden weight loss
- Surgery
- Thyroid disease[11]

4.Hair Growth Cycle and Its Mechanism:

Hair growth goes through a tiring cycle, the anagen phase followed by the catagen and telogen phase.Hair growth is active during the anagen phase, which is characterized by the regression and resorption of the lower part of the

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hair follicle. The rest period where the hair is inactive is called the telogen phase, and after this phase resumes the growth of hair follicles in the scalp, the hair growth cycle is divided into three main phases:Anagen, catagen and telogen. A vegetative phase is a growth cycle that typically lasts 3 to 5 years. On a healthy scalp, there are approximately 1,000,000 hairs and 90% of the follicles are still in the anagen phase of hair growth.When the hair follicles begin to sleep, the growth phase ends and enters the catagen phase. Telogen is a period of rest or rest that lasts 3-4 months. When the rest period is over, an old hair falls out. The follicles then return to the anagen phase and new hair begins to grow. The average rate of hair growth is around half an inch per month, depending on the follicles and the age of the individual.During a normal hair growth cycle, an average of 50 to 60 scalp hairs are lost each day and new hair begins to grow from these follicles. Hair loss begins when there is less new hair to begin the regrowth phase. [13]

5.General hair care in Ayurveda:
Ayurveda gives several ways to keep hair healthy and hygienic which are summarized below:

1. Diet (Ahara):
According to Ayurveda, the concept of a balanced diet is explained under the collective terms panchbhautik ahar and shadrasatmak ahar. A balanced diet for hair should be related to Prithwi mahabhuta because hair is mainly made up of Prithwi mahabhuta. Shadrasatmak ahar madhur (sweet), tikta (bitter) and kashay (astringent) flavors promote hair growth and health.[13]

2. Hair massage (Shiro Abhyang):
According to Charak Sanhita, hair massage is part of a daily regimen known as Dinacharya. Hair oils strengthen the scalp while nourishing hair follicles and increasing the tensile strength of hair. [14,15]

3. Nasal Administration of oil(Nasya): According to Ayurveda, nasal drops (Nasya) with medicated oil are good for hair growth. Nasya prevents premature graying of hair and prevents hair loss. [16,17]

4. Covering of head:
Ayurveda recommends wrapping the head with a cloth. It protects the hair from air pollution, heat from the sun and dirt.[18]

5. Dhoompana (inhalation of medicated fumes):
The process of inhaling medicinal vapors through the nostrils with a stick is called Dhoompana. This is described in Dincharya (daily regimen). Charak Samhita believes Dhoomapan is good for Khaalitya and Palitya [19].

6. Combing & Cutting of hairs (KeshaPrasadhana & Kshourkarma):
The combing and cutting of the hair has been explained under the terms of karma Kesha Prasadan and Kshour. Hair should be combed with a clean brush. Regular brushing stimulates the scalp, improves circulation and promotes hair growth.[20]

Monogaraphof VataJata (Ficusbengalensis):
Morphology:

The tree is very tall, reaching a height of 30m, with many aerial roots developing into a new trunk, so the tree can stretch laterally indefinitely. Leaves leathery, entire, ovate or elliptical, 20-40 cm long, 7-20 cm wide, obtuse apex, rounded base, prominent lateral veins; petiole 2.5-5 cm long; stipules strongly arranged in opposition and with reticulate pinnate veins. The fruit (fig) 1 to 2 cm in diameter, spherical, stemless, born in pairs in the axils of the leaves, bright red when ripe. The bark is gray, the surface is hard and uneven; 0.5-1.9cm thick, the outer surface is rubbed into white paper-like flakes, the inner surface is light brown and fibrous broken, sticky, no peculiar smell. [21]

Fig: Banyan Tree

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Phytochemistry:

Preliminary phytochemical studies on banyan root indicated the presence of phytosterols, carbohydrates, flavonoids, amino acids/proteins, steroids, saponins and tannins. The leaf yield contains rutin, friedelin, dandelion sterol, lupeol, beta-balm as well as psoralen, bergamot lactone, beta-sisterol and quercetin-3-galactoside. [22]

Table No. 2 Properties of Vata Jata (Banyan Roots)

Ingredient	Botanical Name	Part Use	Guna (Property)	Karma (Action)	Rasa (Taste)	Veerya (Potency)	Mode of Action
Vata Jata	Ficus bengalensis	Aerial Root	Guru, Ruksha	Shothahara Kaphapittashamak	Kashaya	Sheeta	Anti-oxidant, Anti-microbial, Antifungal, Strengthens hair root

Medicinal Uses: In Ayurveda, Vata has been used as the medicine of choice for Raktapitta (blood disorders), Chardi (vomiting), Trushna (excessive thirst), Visara (herpes), Daha (burning sensation). 12-13 External application in the form of pastes and oils can be used to treat various hair problems.

II. RESEARCH FINDINGS:

The antifungal activity of aqueous extracts of stem bark, leaves and roots of Ficus banjar was evaluated by the agar diffusion technique at a dose of 30 mg/ml using nystatin (30 µg/ml) as a reference standard. The extract showed antifungal activity against Trichophyton rubrum and Candida albicans, comparable to nystatin. Vatajata (the aerial root of Ficus benghalensis) is an astringent that strengthens the roots and promotes hair growth. [23]

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