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Case Report

Management of *Khalitya* [Male pattern hair loss] through *Prachanna* followed by Chitrakadi *Lepa* -A case report

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ABSTRACT :

Introduction: *Khalitya* is the disease in which there is gradual hair loss caused by vitiated *pitta* and *vata*. Prevalence rate of hair fall is (58% of aged 30-50 years) more in male when compared to female. Here *Khalitya* considered as Male pattern hair loss. **Clinical findings:** A non-scaring pattern hair loss might be M, A, or V shaped assessed by Norwood scale and associated with genetic history, hair pull test will be negative. **Intervention:** *Prachanna* followed by *Chitrakadi lepa* along with internal administration of *Jeevamrutham lehyam*. **Outcomes:** Subjective and objective improvement has been noted before and after the study. Increase in diameter and thickness of hair follicle and reduced hair root gap has been noted. **Conclusion:** As part of *Khalitya chikitsa sadyo virechana* and *prachanna* followed by *chitrakadi lepa* was given along with internal *rasayana* and *pathya*, for 4 months. The drugs used are *teekshna and ushna* in nature and have *srotoshodaka*, and *keshya action*. For each setting folliscope parameters have been recorded before and after the treatment, which shows significant results.

KEYWORDS: Khalitya, Prachanna, Shodhana, Dhatu, Male pattern hair loss, Folliscope, Case report

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1. INTRODUCTION

Kesha is the one of the primordial factor for one's personality and assessment of *prakriti* of a person. It is *mala* of *asthi dhatu,* [1] *upadhatu* of *asthi dhatu.* [2] *Prakritha kesha lakshanas* are explained in *rasa dhatu sarra purusha lakshana. Kesha* is one which shows *sarva daihika swasthatha as* its linked with *rasa dhatu, asthi* and *shukra dhatu.* As a *vyadhi* for *kesha Khalitya/kesha chyuthi, indralupta /rujya, chacha* are explained in *samhithas.* [3] Alopecia is a medical term used for hair fall. Androgenic alopecia is a patterned hair loss caused by both genetic and hormonal influence. In Indian context prevalence rate of AGA 58% in males aged 30-50 years has been found. In all cases incidence gradually increased with age. [4] Alopecia may be associated with IBS(Irritable bowel syndrome), hyperthyroidism, psoriasis and stress. *Charaka samhitha* has classified *Khalitya* under *shiroroga* and *Ashtanga hrudaya* has considered it under *kapalagata rogas,* while *Sushruta samhitha*, *Yoga ratnakara, Madhavanidhana* and *Ashtanga sangraha* have included *Khalitya* under *kshudra roga*. Main cause for hair fall is *Asthi kshaya,* [5] *Svedakshaya,* [6] *Asthi Pradoshaja Vikara,* [7] *Darunaka,* [8] *Krimi Prabhava* leads to *kesha-smashru Loma-Pakshma Apadhvansha,* [9] *Lavana-Kshara Prayoga causes Khalitya,* [10] *Dushta Pratishyaya Upekshita* leads to *Khalitya.* [11] The general *samprapthi* is mainly *Pitta pradhana Tridoshaja,* where *Tejo Mahabhoota* combining with *Vatadi Dosha* reaches the *Shira Kapala* and causes hair fall by *Dahana of roma kupa* along with *srotorodha by kapha and rakta* which obstructs formation of new hair follicle. [12] In modern terminologies DHT has a key role in hair fall as it is produced by the action of 5-alpha reductase enzyme with testosterone leading to the formation of DHT which causes androgenic alopecia in males. The main line of treatment is *Sira Vyadhana, Gadha Prachanna, Shirolepa, Rasayana,* [13] *Nasya,* [14] *Shiroabhyanga and shiro basthi*. In modern aspects for Androgenic alopecia, hormonal therapy, GFC (Growth factor concentrate therapy), and hair transplantation are the main line of treatments. Topical minoxidil, and oral finestride are which are used for the same, however are not free from side effects. Side effects like loss of libido and erectile dysfunction and gynaecomastia occurs as a result of blockage of DHT. The treatment protocol adopted involves *sadyo virechana* for *shareera shodhana, gadha prachanna* for *sroto shodhana* [15] *and dhushita raktha nirharana* by *jaloukavacharana* [16] or *siravydha* and application of *keshya lepa.*

2. CASE REPORT

A 26 years old male, working as a bank employee complaints of hair fall since 3 years associated with itching and dandruff. Patient visited (reg no: OPD No: 2426803) Shalakya tantra SJGAMC, Koppala. Before starting the treatment informed consent and institutional ethical clearance was taken.

History of present illness

A 26year old patient working as a bank employee presented with complains of hair fall since 3years associated with itching and dandruff. Patient had a history of usage of minoxidil drops, oral finesteride, hair serums multi vitamin tablets for the same complaints. As soon as stopping of hair serum noticed increased hair

fall. As the results were not satisfactory to the patient, hence he approached Out Patient Department of *Shalakya tantra*, Shree Jagadguru Gavisiddeshwara Ayurvedic Medical College and Research Centre, Koppala. After detailed evaluation of the condition, the patient was diagnosed as a case of Male pattern hair loss.

History of past illness- No history of Diabetes mellitus, Hypertension and any other systemic illness.

Medical history: Minoxidil topical application and oral finasteride for 4 months, as soon as stopping of hair serum noticed increased hair fall.

Family history -Patient has a paternal history of baldness. Patient's father experienced baldness at the age of 32 years and his brother also has a history of hair-fall.

Psycho-social history:

Occupational Stress is evident in the work place. Stable living situation, healthy habits are evident.

General Examination:

Pulse: 78bpm

Respiratory rate: 20cpm

Blood pressure: 110/78mmhg

Systemic Examination:

CNS: Conscious and Oriented

CVS: S1 & S2 heard, No murmurs

RS: NVBS heard

P/A: Soft & non tender

Ashta vidha pareeksha

Nadi : *Vata - kapha prakruthi, Vata - pittta vikruthi*

Mala : Once a aday (*nirama*)

Mutra : 4-5 times per day

Jihva : *Aliptha*

Shabda : *Prakrutha* *Sparsha* : *Prakrutha*

Druk : *Prakrutha* *Akruthi* : *Madhyama*

Sthanika pareeksha

Scalp & Hair analysis

Hair Follicle Examination

Normal ( ) Shriveled ( )

Necrosis (✓) Keratinisation ( )

Inflammation ( ) Follicle Blockage ( )

Scalp Examination

Healthy( ) Oily ( )

Dry ( ) Dandruff (✓)

Subjective parameters:

Norwood Hamilton scale [17] : Grade 3

Objective parameters:

Folliscopic parameters before treatment

Hair density - 0.95/mm

Hair thickness-0.07mm

Hair root gap -1.30mm

Lab investigation

CBC - within Normal range RBS - 81mg/dl

CT - 2:13sec BT - 4:46sec

HIV - Non reactive HbSAg - Negative

Differential Diagnosis

Table -1: Differential diagnosis as per Ayurveda and Modern science

Ayurveda	Modern science
1.*Khalitya*	Alopecia areata
2.Indralupta	Telogen effluvium
	Tinea capitis
	Androgenic alopecia
	(Male pattern hair loss)

Diagnosis

Khalitya (Male pattern hair loss)

Intervention

Shareera shodhana

Gadha prachanna

Chitrakadi lepa

Internal administration of *Jeevamrutham lehyam.*

Durdurapatradi taila for external application

Table -2: Treatment timeline

Sl.no.	Date	Treatement	Description
1	16/10/24	*Deepana - pachana*	*Chitrakadi vati* (1-1-1)A/F for 1 day
2	17/10/24	*Sadyo virechana(on day care Basis)*	*Trivruth lehya* - 80 gm with hot water at 8:45 am (11 vegas observed)
3	18/10/24	*Samsarjan krama* for 3days	*Ragi ganji(1day), kichdi with ghee(1day), and samanya bhojana(1 day)*
4	23/10/24	*Prachanna* 1st sitting with 26 1/2 inch needle (opd basis)	Followed by *chitrakadi lepa* (1hour)
5	30/10/24	*Prachanna* 2st sitting with 26 1/2 inch needle (opd basis)	Followed by *chitrakadi lepa* (1hour)
6	7/11/24	*Prachanna* 3st sitting with 26 1/2 inch needle (opd basis)	Followed by *chitrakadi lepa* (1hour)
7	14/11/24	*Prachanna* 4th sitting with 26 1/2 inch needle (opd basis)	Followed by *chitrakadi lepa* (1hour)
8	21/11/24	Prachanna 5th sitting with 26 1/2 inch needle (opd basis)	Followed by *chitrakadi lepa* (1hour)
9	23/10/24 to 17/1/25	*Rasayana*	*Jeevamrutha rasayana* with warm milk at bed time
10	Weekly once	*Taila* application	*Durdurapatradi taila* for E/A weekly once to get rid of Dandruff

Chitrakadi lepa

Table -3 *Guna*, *karma* of *Chitrakadi lepa*

Sl no	Ingredients	*Rasa*	*Guna*	*Veerya*	*Vipaka*	*Karma*
1	*Chitraka*	*Katu*	*Lagu, ruksha, teekshna*	*Ushna*	*Katu*	*Vata kaphahara, Bhedaniya, Deepana-pachana*
2	*Jatamansi*	*Tikta, kashaya, madhura*	*Lagu, snigdha*	*sheeta*	*katu*	*Keshya*
3	*Bringaraja*	*Katu, tikta*	*Lagu, ruksha*	*ushna*	*katu*	*Keshya*

Procedure

<u>*Sambhara sangarha*</u>

- 26 1/2 inch needle
- Cotton guaze

- Povidine
- Disposable gloves
- *Aushada dravya(chitraka, bringaraja, jatamansi)*

Purvakarma

- Procedure was explained to the patient.
- Patient was made to sit comfortably.
- Scalp examination for local inflammation was done, and the part for prachanna was selected.
- The selected part was mopped with povidone liquid.
- Fresh *Kalka* was prepared out of *chitraka, jatamansi, bringaraja* with quantity sufficient triphala *kwatha.*

Pradhana karma

- *Gadha prachanna* was done with and approximately 5 pricks/cm about 2-3mm depth in frontal, temporal, vertex and occipital region of scalp.
- Excess blood was wiped out from the area of *prachanna*.
- Gentle application of *chitrakadi lepa* over the treated part was done.

Observation

No irritation or burning sensation or discomfort was noticed after *lepa* application.

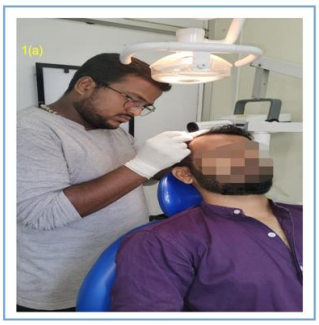

image 1(a)- Prachanna procedure

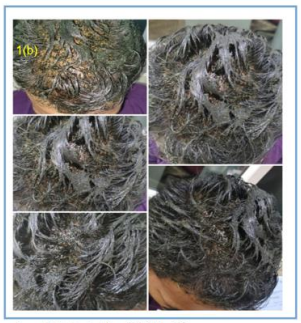

image 1(b)- Application of Chitrakadi lepa

Paschat karma

Vitals were found to be within normal limits after the procedure.

The patient was advised to take a head bath after 1hour.

Patient was advised to avoid exposure to sunlight.

Pathya & Apathya adviced

Ahara

Patient was advised to Avoid *katu, lavana, kshara pradhana ahara, and adviced to take* Drink plenty of fluids, *Nitya Ksheera grithabhyasa.*

Vihara

Patient was advised to Follow *Brahmacharya, ratrijagarana, Diwaswapna, vata atapa sevana, ushnajala snana to shiras, manasika klesha, vishada,* geyser, heaterated or hot water for head bath.

Assessment criteria

Subjective parameters: Norwood Hamilton Scale

Before treatment - Grade 3

After treatment - Grade 2

After follow up - Grade 2

Objective parameters:

Folliscope examination

Table -4 Folliscopic readings before treatment, after treatment, after follow up

Folliscopic parameters	BT	AT	AF
Hair density	0.95/mm	1.02/mm	1.02/mm
Hair thickness	0.07mm	0.12mm	0.16mm
Hair root gap	1.30mm	0.79mm	0.94mm

Before treatement

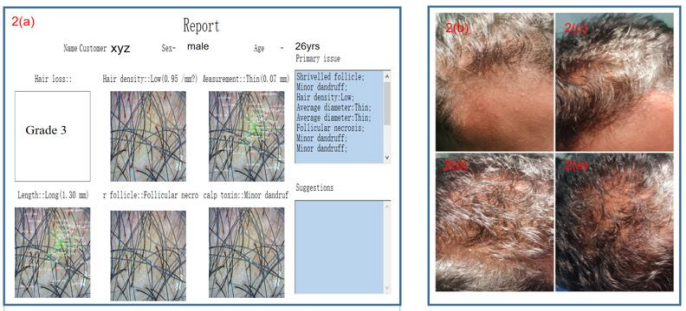

image 2(a)- Foliiscope images BT .image 2(b,c,d,e)- right temporal, left temporal,vertex, and occipital photographic image .

After treatment

image 3(a)- Foliiscope images AT .image 3(b,c,d,e)- Left temporal, Occipital ,vertex, and right temporal photographic image .

After Followup

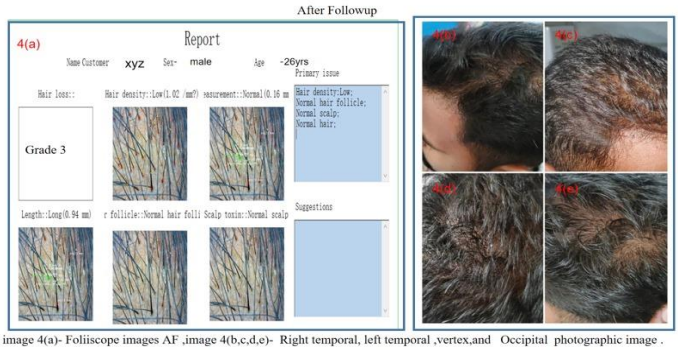

image 4(a)- Foliiscope images AF ,image 4(b,c,d,e)- Right temporal, left temporal ,vertex,and Occipital photographic image .

3. DISCUSSION

Khalitya is a disease occurs only in men, not in women according to *sushrutha samhitha* based on this here *Khalitya* is considered as male pattern hair loss which is one among the androgenetic alopecia(pattern hair loss) influenced by androgens called DHT(Di hydro testosterone). DHT is produced by action of 5 alpha reductase enzyme on testosterone. [18] The DHT is cause for secondary sexual characters and libido in males, [19] but the same DHT is not good for scalp hairs that too particularly frontal, temporal, vertex hairs since they are more sensitivity to DHT than occipital hairs, [20] these DHT's causes shrinkage of blood vessels which supplies to the base of hair bulb leading to increase the rate of hair cycle than the normal. In *samhithas* has been told that *dushita pitta and vata* takes *sthana samshraya in roma kupa* (hair bulb) leading to hair fall later the dushita kapha and rakta block *romakuapa* leading to obstruct hair follicle to come out of *romakupa (sroto rodha)*. here treatment protocol chosen to breakdown of *samprapthi* of *Khalitya by sarva daihika shodhana by sadyo virecahana* which eliminates *dushita vata, pitta and kapha, and sthanika srotorodha at romakupa* which is caused by *kapha and rakta* is removed by doing *prachanna* followed *keshya poshanartha chitrakadi kalka* applied over scalp, here *chitrakadi lepa* includes *chitraka* which does *sthanika(keshabhoomi) ama pachana and sthanika brajaka pitta deepana and sroto shodhana* and *bringaraja and jatamans*i are the *dravya*s know for *keshya karma* helps in *roma sanjana, kesha vruddhi and kesha ranjana,* here *chitraka* acts like an catalyst or a vehicle to clearing channels (*srotoshodhana), bringaraja and jatamansi* are both drugs acting on *kesha* for hair growth. *Begum et al*. conducted a study on nude mice to evaluate the hair growth promoting activity of *Eclipta Alba*. Petroleum ether extract (PEE) along with other solvent fractions of *E. Alba* was topically applied on the backs of nude mice. Prominent follicular hypertrophy was observed after the treatment with PEE. In the basal epidermal and matrix cells, follicular keratinocytes number was increased. These changes support *E. Alba* use in the growth of hair. Another study conducted by

Begum et al. supported the use of *Eclipta Alba* for hair growth on nude mice models which were genetically suffering from hair loss due to abnormal keratinization. It was revealed from the study that topical application of methanol extract of *E. Alba* had significant impact on the hair growth of mice models. It was observed that hair follicle number had increased after the treatment which shows that *E. Alba* is a brilliant hair growth promoter. Since it contains alkaloids falvanoids, saponins sterols, terpenoids, phenolic acid, which promotes hair growth. [21] Since jatamansi contains terpenoids alakloids support hair growth. Internal administration of jeevamrutham lehyam of Malabar Ayurveda ashram having active Key Ingredients like *Amalaki* (*Emblica officinalis*) rich in vitamin C, it nourishes hair follicles, strengthens the scalp, and boosts immunity. *Bhringaraja* (*Eclipta Alba*) promotes hair growth, prevents hair fall, and improves scalp circulation. *Guduchi* (*Tinospora cordifolia*) supports immunity, purifies blood, and nourishes skin and hair. *Brahmi* (*Bacopa monnieri*) relieves stress, improves circulation, and strengthens hair follicles. *Mandookaparni* (*Centella asiatica*) boosts circulation and revitalizes hair follicles. Key Benefits are Promotes Hair Growth, Nourishes follicles and boosts scalp circulation. Improves Follicle Nutrition, Provides essential vitamins and minerals for healthier hair. Strengthens the body's natural defense. Purifies Blood as Cleanses and improves circulation for healthier skin and hair.

4. CONCLUSION

Prachanna will do *sroto shodhana*, *Dushita rakta nirharana*, followed by external *lepas* and internal medicines will enhance hair growth, here *pathya* is plays equal role as same as *chikitsa*, even in modern science there is lacuna of following *pathya* and as soon as stopping of hair serum and oral steroids which increases hair fall. The medicines and therapies of *Ayurveda* having anti-oxidant properties and anti DHT but won't give negative effect on libido and secondary sexual characteristic but *vrushya* (aphrodisiac) in nature, this point needed to be proved statistically by further researches on anti DHT activity of *Ayurvedic keshya* drugs. In this case the treatment duration is only 60 days, so only appreciate changes in diameter and thickness and hair root gap but to know growth of new hair follicles it will take upto 3 months.

Declaration of Patient Consent – The authors confirm that they have acquired a patient consent form, in which the patient or caregiver has granted permission for the publication of the case, including accompanying images and other clinical details, in the journal. The patient or caregiver acknowledges that their name and initials will not be disclosed, and sincere attempts will be undertaken to safeguard their identity. However, complete anonymity cannot be assured.

Patient perspective - I have used so many medications like minoxidil, oral finesteride, hair serums multi vitamin tablets for the same complaints. As soon as stopping of hair serum noticed increased hair fall. After this treatment I have noticed increased thickness of hairs, stopped hair fall and I'm satisfied with the treatment, thanks to all the doctors who treated me and gave timely advice throughout the entire treatment.

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