

**A COMPARATIVE CLINICAL STUDY ON THE ROLE OF
PRATIMARSHA NASYA AND SHIROABHYANGA WITH
YASHTIMADHUKADYATAILA IN THE MANAGEMENT OF KHALITYA
(ALOPECIA)”**

Dr. Rahul Barad*¹, Dr. N. J. Trivedi ² and Dr. Kshama Gupta³

¹P.G. Scholar, Department of Kayachikitsa, Parul Institute of Ayurved, Limda, Vadodara.

²Professor, Department of Kayachikitsa, Parul Institute of Ayurved, Limda, Vadodara.

³Associate Professor, Department of Kayachikitsa, Parul Institute of Ayurved, Limda,
Vadodara.

Article Received on
20 May 2017,

Revised on 10 June 2017,
Accepted on 30 June 2017

DOI: 10.20959/wjpr20177-9111

***Corresponding Author**

Dr. Rahul Barad

P.G. Scholar, Department
of Kayachikitsa, Parul
Institute of Ayurved,
Limda, Vadodara.

ABSTRACT

Background: Khalitya is a sign of early aging process of degeneration. Still there is enough scope to work out on its aetiopathological and management aspect of Khalitya. **Aims and objectives:** The present study was carried out to evacuate combined effect of Pratimarsha Nasya with Shiro-Abhyanga and Pratimarsha Nasya alone by Yashtimadhukadya taila. **Material and methods:** 40 Patients who are fulfilling the criteria for inclusion were divided randomly into two equal groups. One group patients were treated with both Pratimarsha Nasya and Shiro Abhyanga of Yashtimadhukadya Taila and second group patients were treated with Pratimarsha Nasya of

Yashtimadhukadya Taila. **Results:** The result obtained in hair fall after statistical analysis shows that 68% of patients had statistically significant result among group A and 59% statistically significant results found among group B. On Shirah kandu (Itching on scalp), it was improved with highly significant result in group-A (66%) and in group-B (23%). On Kesha-Rukshata (Dryness of Hair), both the therapies provided highly significantly ($P \leq 0.001$) relief by 88% and 66% respectively. On Kesha-Tanutva (Thinness of Hair), group A provided significant relief (65%), whereas group B provided 38% relief which was statistically significant. Kesha-Kathinya (Hardness of Hair) was decreased to 80% in group-A while in group-B it was highly significantly decreased to 74%. **Discussion:** In our study

shaman type of Nasya and shiroabhyanga choose which were indicated especially in Khalitya. By Yashtimadhukadya taila which have Indriyabalakara, Tridoshamaka and Rasayan etc., properties respectively. **Conclusion:** When vata pitta pacifying therapy- taila with nasya and Shiro Abhyanga were performed, it relieved these symptoms in the patients of Khalitya.

KEYWORDS: Khalitya, Yashtimadhukadya Taila.

INTRODUCTION

In Ayurvedic classical texts there are four types of Ayu. Among these Sukhayu is most important. Sukhayu deals with life without physical and mental disorders having qualities like Bala, Virya, Parakrama and Soundarya.

The concept of beauty (Soundarya) is gaining more and more attention globally and hair plays an important role in it, as it has been said that hair is a barometer of one's beauty. Healthy, beautiful, long and attractive hairs add charm to the personality. It adds a great aesthetic value and it is the crowning glory of any person. Not only has that hair had protective function also. Head hair protects the scalp against the burning sun and helps hold in body heat. Hair gives insulation, protection from external factors friction buffer, differentiation and beautification and redirect sweat and water. Therefore to keep the healthy hairs in healthy state is entirely the duty of human beings, because just like face, hair is also a mirror of healthy state of the body.^[1]

Hair is one of the defining characteristics of mammals. A human have around more than 2 million hair follicles which have both positive as well as negative effect on skin health.^[2] It is one of the vital parts of our body which is derived from the ectoderm of the skin; it is work as a protective appendage for the body. Hair loss is silent but devastating problem which may occur to a healthy person also. It has been regarded as geriatric physiological phenomena, generally after the mid-forties. Early hair fall has been attributed to be the result of varied factors like hormonal imbalance, faulty hair care, pollution etc.^[3]

The changes in hair follicle density, size and/or changes to the hair growth cycle are the fundamentally causes of hair disorders. Hair loss, also known as alopecia is a loss of hair from the head or body.^[4]

In Ayurvedic approach, loss of hair is coined out as in term of 'Khalitya' under the broad heading of Shiroroga.^[5] Khalitya is a disease with Vata-Pitta dominancy. Increased Pittadosha along with Vatadosha at the root of hair follicle causes hair fall and at the same time Kaphadosha with Raktdosha blocks the roots of hair follicle which results into Khalitya.^[6]

रोमकूपानुगं पित्तं वातेन सह मूर्च्छितम्

प्रच्यावयति रोमाणि ततः श्लेष्मा सशोणितः।

रोमकूपान् रुण्ध्यस्य तेनान्येषामसंभवः

तदिन्द्रलुप्तं रुज्यां च प्राहुश्चाचेति चापरे

Hair fall is a universal problem, having affected both sexes of all races to different extents for as long as mankind has existed. For thousands of years, men and women of all countries and races have shared the tragedy of pre-mature hair loss.^[7] Various factors contribute to hair fall/loss. Genetic predisposition and hormonal factors predominantly contribute to the above. Apart from hormonal factors, other reasons for hair loss in both the sexes can be stress, improper nutrition (A common reason for hair loss in women of all ages is improper nutrition), especially a lack of iron and protein, which are essential for maintaining healthy hair growth. Underlying medical conditions like diabetes or lupus, diseases such as typhoid, malaria, jaundice etc, also cause hair fall. The use of chemotherapeutic agents also cause hair fall.^[8]

Alopecia is a common hair problem in cosmetics and also in Primary Health Care Practice, has been recognized for more than 2000 years. Approximately 0.2%-2% of the population has been affected from alopecia.^[9] There is hair loss and suppression of new hair growth found all over body but scalp is very common place of it. Treatment available is local application of steroid in modern medicine. Immune system mistakenly attacks hair follicles and damages it but it is not permanent. Hair regrows on its own without any treatment which requires much more time. Indralupta is not type of Khalitya. Vagbhata says Khalati and Indralupta are same. In Khalati the process of hair fall is slower.^[10] When hair loss in patches it is called as Indralupta. Irregular diet habit air pollution, lack of cleanliness are causes of this disease.

Management of hair fall is extremely complex. Although no sweeping cure exists for hair loss, a number of treatments are available to depending on their unique reasons for experiencing hair loss. Hormone therapy use of áreductase inhibitors, vasodilators like

minoxidil are widely used to reduce the hair fall / loss. The use of some of the herbal oils is also reported to reduce the hair fall / loss.^[11,12]

The herbs used in the hair care have a definite history in the system of Ayurveda. About 1000 kinds of plant extract have been examined with respect to hair growth.^[13] For Khalitya, Nasya is a choice of treatment because having a prime role in promoting hair growth. If Nasya is given of the Tail which is medicated by Vatapittahar Dravyas, then more effective result is desirable. So to fulfil the need of finding out proper and effective management present study has been selected. Therefore for the present study Yashtimadhukadya Tail was selected which has Dravyas possessing Vatapittahara and Keshya qualities^[14] with following aims and objectives. Shiroabhyanga is also a choice of treatment in promoting hair growth. Shiroabhyanga plays an important role in curing diseases of head. Shiroabhyanga strengthens and softens hairs. It is also useful in overall growth of hair.^[15]

AIMS AND OBJECTIVES

To evaluate combined effect of Pratimarsha Nasya with Shiro-Abhyanga and Pratimarsha Nasya alone by Yashtimadhukadya taila.

MATERIAL AND METHODS

GROUP DESIGN

40 Patients who are fulfilling the criteria for inclusion were divided randomly into two equal groups.

Group A: The patients were treated with both Pratimarsha Nasya and Shiro Abhyanga of Yashtimadhukadya Taila.

Group B: The patients were treated with Pratimarsha Nasya of Yashtimadhukadya Taila.

Sample size: 40.

Patients of both sexes, between the ages of 16 to 40 years with intermittent, mild to moderate persistent cases of Osteoarthritis, were registered in randomly for clinical trial from outdoor and indoor patients department of Parul Ayurved hospital, Limda. The study obtained Institutional Ethics Committee clearance (PIA/IECHR/KC/04 dated 01/05/2015) and registered at Clinical Trial Registry of India (REF/2016/05/011273). A written informed consent from each patient was taken before enrolling in the clinical trial.

INCLUSION CRITERIA

- Both male and female patients of Khalitya were selected for the present study and diagnosis of the patients were done on the basis of detailed Performa which was prepared prior the selection of patients.
- Age: 16 to 40 years.

EXCLUSION CRITERIA

- Patient who has been diagnosed to have local disease like – Alopecia areata, Scarring Alopecia, Alopecia totalis, Tinea capitis, Folliculitis devaculans and in Ayurvedic terms patient of Arunshinka, Indralupta.
- Patient suffering from any sever systemic disease was excluded.
Necessary steps were taken to exclude other conditions as per facilities available in the institute.

INVESTIGATIONS: Routine hematological and urological investigations were carried out before the study. Any other investigation for excluding the patient was done if it is required.

Trial drugs

The raw material for the preparation of *Yashtimadhukadya Taila* have been formulation were prepared in Parul Ayurveda Pharmacy, Limada, Waghodia, Vadodara.

The prescribed medication to reduce hair fall, shirah kandu, kesha rukshata, kesha kathinya, kesha tanutva, keshabhoomi daha.

Ingredients of Yashtimadhukadya Taila

- **Yashtimadhu 1 part**
- **Amalaki 1 part,**
- **Tila Taila 4 parts**
- **Kshira 16 parts (godugha)**

Posology

For Pratimarhsa Nasya, Yashtimadhukadya Taila were given in the dose of 2 drops in each nostril whereas for Shiroabhyanga quantity sufficient Yashtimadhukadya Taila was used.

Criteria for assessment

The improvement in the sign and symptoms of Khalitya were assessed by two monthly after treatment 60 days.

To assess the effect of therapy, all the signs and symptoms were given scoring depending upon their severity.

A special scoring pattern was adopted for the symptomatic relief of subjective & objective parameters as follows during assessment period which are mentioned as below.

Khalitya (Hair Falling)

- | | | |
|---|---|---|
| ▪ No hair fall | - | 0 |
| ▪ Mild hair fall (by washing) | - | 1 |
| ▪ Moderate hair fall (by combing) | - | 2 |
| ▪ Severe hair fall (by just stretching) | - | 3 |

Shirah Kandu (Itching on Scalp)

- | | | |
|---|---|---|
| ▪ No itching on scalp | - | 0 |
| ▪ Mild itching on scalp (occasionally present but it doesn't disturb normal activities) | - | 1 |
| ▪ Moderate itching on scalp (often present and it disturbs normal activities) | - | 2 |
| ▪ Severe itching on scalp (continuously present and it disturbs normal activities) | - | 3 |

Kesha Rukshata (Dryness of Hair)

- | | | |
|---|---|---|
| ▪ No dryness of hair | - | 0 |
| ▪ Mild dryness of hair (dryness can be seen on hair but on touch it feels smooth and to become smooth it required approx. 15-20ml oil) | - | 1 |
| ▪ Moderate dryness of hair (dryness can be seen on hair as well as on touch also it feels dry and to become smooth it required approx. 20-25ml oil) | - | 2 |
| ▪ Severe dryness of hair (hair lost its luster as well as on touch it feels so dry and it doesn't become smooth with 25-30ml oil) | - | 3 |

Kesha Kathinya (Harshness of Hair)

- No harshness of hair - 0
- Mild harshness of hair (it feels harsh on touch and it required only 15-20ml oil to become gentle) - 1
- Moderate harshness of hair (harshness can be seen on hair as well as it feels on touch also and to become smooth it required only 20-25ml oil) - 2
- Severe harshness of hair (hair lost its curvature as well as on touch it feels so harsh and it doesn't become smooth with 25-30ml oil) - 3

Kesha Tanutva (Thinness of Hair)

- No thinness of hair (general growth is not decreased) - 0
- Mild thinness (general growth is found around 1.5 each) - 1
- Moderate thinness (general growth is found around 1 each) - 2
- Severe thinness (general growth is found around 0.5 each) - 3

Keshaboomi Daha (Burning sensation in Scalp)

- No burning sensation in scalp - 0
- Mild burning sensation (occasionally little burning sensation in scalp, but it do not disturbed normal activities) - 1
- Moderate burning sensation (often little burning sensation in scalp, that disturb normal activities) - 2
- Severe burning sensation (continue burning sensation in scalp, that disturb normal activities) - 3

Statistical analysis

Obtained data were statistically analyzed using paired and unpaired t-test.

OBSERVATIONS AND RESULTS

The result obtained in hair fall after statistical analysis shows that 68% of patients had statistically significant result among group A and 59% statistically significant results found among group B. In hair fall Pitta and Vata are main Dosha. Ingredient of Yashtimadhukadyatail has mainly Madhura Rasa, maximum drug has Sheet Virya and Madhura Vipak properties. The Nasya Karma is indicated in all Urdhvajatrugatavikar. In our thesis shaman type of Nasyaand shiroabhyangachoose which were indicated especially in

Khalitya. By Yashtimadhukadyataila which have Indriyabalakara, Tridoshamaka and Rasayan etc., properties respectively.

On Shirahkandu (Itching on scalp), it was improved with highly significant result in group-A (66%) and in group-B (23%). According to Ayurveda point of view, Kandu was occur due to aggravation of Kapha Dosha. Nasya and shiroabhyanga due to its therapeutic effect as well as pharmacological effect of Yashtimadhukadyatail helps to break the pathology of Srotosanga and Tridoshshamak properties.

On Kesha-Rukshata (Dryness of Hair), both the therapies provided highly significantly ($P \leq 0.001$) relief by 88% and 66% respectively. On Kesha-Tanutva (Thinness of Hair), group A provided significant relief (65%), whereas group B provided 38% relief which was statistically significant. Kesha-Kathinya (Hardness of Hair) was decreased to 80% in group-A while in group-B it was highly significantly decreased to 74%. Due to excessive indulgence of Rukshadihara-vihara, Vata is provoked with its Rukshadi properties and manifested with the symptoms like Kesha Rukshata, Kesha Tanutva and Kesha Kathinya.^[16] Therefore when Vata pacifying therapy- Taila with Vata shamaka ingredient was performed, it relieved these symptoms in the patients of Khalitya.

On Kesha BhoomiDaha (Burning Sensation in Scalp), the 88% relief was provided by group A and only 25% provided by group B. In the aetiopathogenesis of Khalitya, Dehoshma with provoked Pitta reached to keshabhoomi and manifested as keshabhoomi daha^[17] that provoked Pitta was pacified by YashtimadhukadyaTaila. Thus highly significant relief demonstrated in group-A.

Effect of therapy on cardinal symptoms

Statistically highly significant results were observed in all the cardinal symptoms like *hair fall*, *shirah kandu*, *kesha rukshata*, *kesha kathinya*, *kesha tanutva*, *keshbhoomi daha*.

Overall effect of therapy shows after treatment that 12 number of patients were observed Markedly improved, 7 number of patients were improved, and 1 number of patients were unchanged among group A. Overall effect of therapy shows after treatment that 9 number of patients were observed Markedly improved, 9 number of patients were improved and 2 number of patients were unchanged among group B.

Table 1: Effect of therapy in group – A.

| | Mean | | % | S.D. (±) | S.E. (±) | 't' | P |
|-----------------|------|------|----|----------|----------|-------|--------|
| | B.T. | A.T | | | | | |
| Hair fall | 3.1 | 0.97 | 68 | 0.46 | 0.45 | 1.78 | <0.001 |
| Shirahkandu | 2.9 | 0.98 | 66 | 0.47 | 0.18 | 12.29 | <0.001 |
| Kesharukshata | 2.09 | 0.25 | 88 | 0.25 | 0.39 | 13.2 | <0.001 |
| Keshatanutva | 1.92 | 0.67 | 65 | 0.51 | 0.29 | 1.98 | <0.001 |
| Keshakathinya | 2.49 | 0.49 | 80 | 0.24 | 0.17 | 2.31 | <0.001 |
| Keshabhoomidaha | 1.8 | 0.2 | 88 | 0.53 | 0.29 | 5.1 | <0.001 |

Table 2: Effect of therapy in group – B.

| | Mean | | % | S.D. (±) | S.E. (±) | 't' | P |
|-----------------|------|------|----|----------|----------|------|--------|
| | B.T. | A.T | | | | | |
| Hair fall | 2.94 | 1.2 | 59 | 0.89 | 0.66 | 9.67 | <0.001 |
| Shirahkandu | 2.12 | 1.62 | 23 | 0.53 | 0.18 | 7.93 | <0.001 |
| Kesharukshata | 1.87 | 0.62 | 66 | 0.46 | 0.16 | 7.63 | <0.001 |
| Keshatanutva | 1.59 | 0.97 | 38 | 0.63 | 0.16 | 8.01 | <0.001 |
| Keshakathinya | 2.21 | 0.57 | 74 | 0.63 | 0.16 | 9.7 | <0.001 |
| Keshabhoomidaha | 2 | 1.5 | 25 | 1.81 | 0.54 | 9.3 | <0.001 |

Table 4.41: Comparative effect of therapy between Group A and B.

| Groups | Mean score B.T.-A.T | % | S.D. (±) | S.E. (±) | ‘t’ | P |
|-----------------|---------------------|------|----------|----------|------|-------|
| hair fall | | | | | | |
| A | 2.13 | 1.9 | 0.47 | 0.102 | 0.66 | >0.05 |
| B | 1.74 | | 0.42 | 0.09 | | |
| Shirahkandu | | | | | | |
| A | 1.92 | 7.1 | 0.59 | 0.12 | 2.08 | >0.01 |
| B | 0.5 | | 0.35 | 0.82 | | |
| Kesharukshata | | | | | | |
| A | 1.84 | 2.95 | 0.55 | 0.18 | 4.61 | >0.05 |
| B | 1.25 | | 0.25 | 0.17 | | |
| Keshatanutva | | | | | | |
| A | 0.62 | 3.15 | 0.44 | 0.15 | 1.71 | >0.05 |
| B | 1.25 | | 0.02 | 0.19 | | |
| Keshakathinya | | | | | | |
| A | 2 | 1.8 | 0.21 | 0.04 | 1.39 | >0.05 |
| B | 1.64 | | 0.07 | 0.16 | | |
| Keshabhoomidaha | | | | | | |
| A | 1.6 | 5.5 | 0.4 | 0.12 | 1.39 | <0.05 |
| B | 0.5 | | 1.8 | 1.19 | | |

DISCUSSION

The result obtained in hair fall after statistical analysis shows that 68% of patients had statistically significant result among group A and 59% statistically significant results found among group B. In hair fall Pitta and Vata are main Dosha. Ingredient of

Yashtimadhukadyatail has mainly Madhura Rasa, maximum drug has Sheet Virya and Madhura Vipak properties. The Nasya Karma is indicated in all Urdhvajatrugatavikar. In our thesis shaman type of Nasya and shiroabhyanga choose which were indicated especially in Khalitya. By Yashtimadhukadyataila which have Indriyabalakara, Tridoshamaka and Rasayan etc., properties respectively.

On Shirahkandu (Itching on scalp), it was improved with highly significant result in group-A (66%) and in group-B (23%). According to Ayurveda point of view, Kandu was occur due to aggravation of Kapha Dosha. Nasya and shiroabhyanga due to its therapeutic effect as well as pharmacological effect of Yashtimadhukadyatail helps to break the pathology of Srotosanga and Tridoshamak properties.

On Kesha-Rukshata (Dryness of Hair), both the therapies provided highly significantly ($P \leq 0.001$) relief by 88% and 66% respectively. On Kesha-Tanutva (Thinness of Hair), group A provided significant relief (65%), whereas group B provided 38% relief which was statistically significant. Kesha-Kathinya (Hardness of Hair) was decreased to 80% in group-A while in group-B it was highly significantly decreased to 74%. Due to excessive indulgence of Rukshadihara-vihara, Vata is provoked with its Rukshadi properties and manifested with the symptoms like Kesha Rukshata, Kesha Tanutva and Kesha Kathinya.^[16] Therefore when Vata pacifying therapy- Taila with Vata shamaka ingredient was performed, it relieved these symptoms in the patients of Khalitya.

On Kesha Bhoomi Daha (Burning Sensation in Scalp), the 88% relief was provided by group A and only 25% provided by group B. In the aetiopathogenesis of Khalitya, Dehoshma with provoked Pitta reached to keshabhoomi and manifested as keshabhoomi daha.^[17] that provoked Pitta was pacified by Yashtimadhukadya Taila. Thus highly significant relief demonstrated in group-A.

CONCLUSION

☞ Premature hair fall is a sign of early aging and Ayurvedic aetiopathogenesis of Khalitya stresses on Pitta and Vata as main Dosha and Asthi, Rasa & Rakta dhatu as main Dushya. Hence, that type of therapy would be recommended, which possessing Keshya property with ability to improve vitiated dosha and dushya to disintegrate entire pathophysiology.

- ☞ The groups B therapy provided significant improvement in sign and symptoms among Dosha dushti, Dushya dusti and hair fallen but when it is performed along with nasya technique with Shiro Abhyanga (groups A) provided more relief in more pronounced way.
- ☞ The plus point of Ayurvedic management is absence of any hazardous effect, which is a great benefit to the patient in view of acceptance of Ayurveda, globally to lead a healthy life.

Conflicts of interest

There are no conflicts of interest.

REFERENCES

1. Pramodani MPN, and Peiris KPP. "a clinical study to evaluate the efficacy of kashmaryadi oil (traditional formula) in the management of khalitya." International Journal of Research – Granthaalayah, 2017; 5(1): 137-143. <https://doi.org/10.5281/zenodo.260328>.
2. Yu M. Hair follicles and their role in skin health, Exp. Rev. Dermatol, 2006; 1: 855-71.
3. Ebling FIG. The biology of hair. Dermatol. Clin, 1987; 5: 467-81.
4. Borakhade VR, Khot VS. Treatment of Indralupta with Local Jalaukavacharan and Application of Gunja Beeja Lepa: A case Report. International Journal of Herbal Medicine, 2015; 3(2): 24-5.
5. Ashtanga Hridaya translated by V. D. Munshi, 3rd ed., Sastu Sahitya, Ahmedabad Uttarasthana, 23/26: 806.
6. Vagbhata, Harishankar shastri Paradkar Ashtang Hridaya, chikitsasthana, Chukhambhasurbharti prakashan Varansi, 2016; Ch. 23. Verse 23-25: 859.
7. Yadav P, Verma P, Khandelwal N, Prajapati PK. Clinical evaluation of kesharaja taila in the management of khalitya. J Res Educ Indian Med, 2014; XX(2): 113-119.
8. Rathi V, Rathi JC, Tamizharasia S and Pathak AK. Plants used for hair growth promotion: A Review. Pharmacognosy Reviews, 2008; 2(3): 185-187.
9. Srikanth Murthy SR, Ashtang Hridya. 5th edition, Choukhambha Krishnadas academy Varanasi, 2009; 222-9.
10. Garde Ganesh, Ashtang Hridya. 7th edition, Choukhambha surbharati prakashan, Varanasi, 2008; 424-6.
11. Alastair JJ, Wood MD. Treatment of hair loss. New Engl J Med, 1999; 241(13): 964-76.

12. Krishnamoorthy JR, Ranganathan S, Gokulshankar S and Ranjith MS. A novel herbal formulation enhancing protein synthesis specific for hair growth- A northern blot analysis. *Journal of Applied Cosmetology*, 2003; 21: 167-175.
13. Kapoor VP. Herbal cosmetics for skin and hair care. *Indian Journal of Natural Products and Resources*, 2005; 4(4): 306-314.
14. Chakradatta of Sri Chakrapanidatta with the “vaidayaprabha” hindi commentary by Indradeva Tripathi, Chaukhambha Sanskrit Prakashana, Varanasi, chapter, 55: 321.
15. *Susrut Samhita of maharasi Susruta* by Kaviraj Ambikadutta Shastri. Chapter 24, shloka 25, Chaukhambha Sanskrit Sansthan, 133.
16. *AshtangaHridaya* translated by V.D. Munshi, 3rd ed., SastuSahitya, Ahmedabad Uttarardha, 24/24-26, 806.
17. *Charaka Samhita with Chakrapanidatta Commentary*, edited by Vaidya Jadavaji Trikamji Acharya, Chaukhambha Surbharati Prakashana, Varanasi, 2000, Chakrapani comm. on Chikitsasthana, 26/132, 606.