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# A Physiological Study of *Khalitya* (Alopecia) in Different *Daihik Prakities*

Author: Smriti Pandey<sup>1</sup>

Co Authors: Brajesh Gupta<sup>2</sup>

<sup>1</sup>Department of Kriya Sharir, State Ayurvedic College Lucknow, U.P. India

<sup>2</sup>Department of Rachna Sharir, Lalit Hari Ayurvedic College Pilibhit, U.P. India

## ABSTRACT

In Ayurveda, loss of hair is termed as "Khalitya". It is a disease with vata-pitta predominance, increased pitta dosha along with vata dosha at the root of hair follicle causes hair fall. Hairfall is a universal problem, having affected both sexes of all races. Genetic predisposition and hormonal stress factors predominantly contribute to the above. Apart from hormonal factors, other reasons for hair loss in both sexes can be, improper nutrition (esp. lack of iron and protein) which is essential for maintaining healthy hair growth. In modern physiology Alopecia can be correlated with Khalitya. Prakriti or the constitution of a person is an inherent nature of an individual determined at the time of birth, which cannot be changed. The concept is useful in predicting that an individual will be susceptible to a particular disease. The aim of the study is to find that khalitya (Alopecia) is predominant in which of the three prakritis. It was found that prakriti plays its role in Alopecia and it is found mainly in pittaj prakriti individuals.

**Key Words** *Khalitya, Prakriti, Vata, Pitta, Dosha*

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## INTRODUCTION

It aims at the maintenance of the health of the healthy individual and to alleviate disorder in diseased. Health is a level of functional or metabolic efficacy of living being. It is the general condition of mind and body of a person, usually meaning free from disease. Any deviation from health leads to illness.<sup>1</sup>

According to Vahbhata also, all drugs and measures that are administered through the nasal passage are called Nasya as nasa is said to be door of entry of sira (brain)<sup>2</sup>. In Ayurveda, loss of hair

is termed as "Khalitya". Acharya Charak had described Khalitya in Trimarmiya Chikitsa Adhyaya, Acharya Sushruta has described it under the heading Kshudra Roga while Acharya Vagbhat mentioned it as one disease under Sirah Kapal Vyadhis. Khalitya is a disease with vata-pitta predominance, increased pitta dosha along with vata dosha at the root of hair follicle causes hair fall<sup>3</sup>. Hairfall is a universal problem, having affected both sexes of all races. Genetic predisposition and hormonal factors predominantly contribute to the above. Apart from



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hormonal factors, other reasons for hair loss in both sexes can be stress, improper nutrition (esp. lack of iron and protein) which is essential for maintaining healthy hair growth. In modern physiology Alopecia can be correlated with Khalitya. Prakriti(nature) is an inherent nature of an individual determined at the time of birth, which cannot be changed. The concept is useful in predicting that an individual will be susceptible to a particular disease.<sup>4</sup>

Three main doshas are vata, pitta and kapha. Vata is responsible for movement, pitta for digestion and metabolism and kapha dosha for anabolic activities in the body. The dosha which is predominant in the body of a person at the time of conception forms the prakriti of that person.<sup>5</sup>

## MATERIALS AND METHODS

1. For the study 40 cases of Khalitya roga (Alopecia) between the age group of 20-40 yrs were randomly selected irrespective of sex, occupation, religion and socio-economic conditions, from O.P.D. and I.P.D. of State Ayurvedic College & Hospital, Lucknow.

2. Careful clinical examination and all necessary lab investigation were performed as per specially prepared proforma before registering the patients.

3. The prakriti of the patients was taken out by the Prakriti questionnaire prepared by the P.G. Department of Kriya Sharir, State Ayurvedic College and Hospital, Lucknow.

## CRITERIA OF SELECTION OF CASES

The diagnosis of Khalitya roga (Alopecia) patients enrolled in this study were on the basis of clinical and biochemical lab findings as follows-

### Keshpatana (Hair Fall)

| S.N. | Severity/Grading | Keshapatana                    |
|------|------------------|--------------------------------|
| 1.   | 0/Nil            | No                             |
| 2.   | 1/Mild           | Hair fall on combing           |
| 3.   | 2/Moderate       | Hair fall on washing           |
| 4.   | 3/Severe         | Hair fall on simple stretching |

### Hair Pull Test

| S.N. | Severity/Grading | No. of hair fall during hair pull test |
|------|------------------|--|
| 1.   | 0/Nil            | 0                                      |
| 2.   | 1/Mild           | 6-10                                   |
| 3.   | 2/Moderate       | 10-15                                  |
| 4.   | 3/Severe         | > 15                                   |

### Hair fall after sleep on pillow

| S.N. | Severity/Grading | No. of hair fall after sleep on pillow |
|------|------------------|--|
| 1.   | 0/Nil            | 0                                      |
| 2.   | 1/Mild           | 10-30                                  |
| 3.   | 2/Moderate       | 30-50                                  |
| 4.   | 3/Severe         | > 50                                   |

### Hair fall during hair wash

| S.N. | Severity/Grading | No. of hair fall during hair wash |
|------|------------------|-----------------------------------|
| 1.   | 0/Nil            | 0                                 |
| 2.   | 1/Mild           | 10-30                             |
| 3.   | 2/Moderate       | 30-50                             |
| 4.   | 3/Severe         | > 50                              |

### Hair fall during combing Hair

| S.N. | Severity/Grading | No. of hair fall during combing hair |
|------|------------------|--------------------------------------|
| 1.   | 0/Nil            | 0                                    |
| 2.   | 1/Mild           | 10-30                                |
| 3.   | 2/Moderate       | 30-50                                |
| 4.   | 3/Severe         | > 50                                 |

2. Hair density

3. Age - between 20-40 yrs.

## CRITERIA OF EXCLUSION OF CASES:

Cases having systemic disorders like Hypertension, Diabetes mellitus, HIV, Hypothyroidism, Hyperthyroidism, Hypopituitarism, traumatic hair loss, Burns, Fungal & Bacterial infections, localised surgery



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were excluded from the study. Cases with family history of Alopecia as well as complete hair loss were excluded from this study.

### OBSERVATIONS

**Table 1.** Sex Distribution of Subjects

| Gender        | No.       | %            |
|---------------|-----------|--------------|
| <b>male</b>   | 34        | 85.0         |
| <b>female</b> | 6         | 15.0         |
| <b>Total</b>  | <b>40</b> | <b>100.0</b> |

**Table 2** Distribution of Subjects according to Prakriti

| Prakriti     | No.       | %            |
|--------------|-----------|--------------|
| <b>Vata</b>  | 12        | 30.0         |
| <b>Pitta</b> | 15        | 37.5         |
| <b>Kapha</b> | 13        | 32.5         |
| <b>Total</b> | <b>40</b> | <b>100.0</b> |

**Table 3** Incidence of Hair fall during Hair wash

| Hair Fall during Hair Wash | No.       | %            |
|----------------------------|-----------|--------------|
| <b>Mild</b>                | 10        | 25.0         |
| <b>Moderate</b>            | 23        | 57.5         |
| <b>Severe</b>              | 7         | 17.5         |
| <b>Total</b>               | <b>40</b> | <b>100.0</b> |

**Table 4** Incidence of Hair fall after sleep on Pillow according to Prakriti

| Hair fall after sleep on pillow | Vata      |               | Pitta     |               | Kapha     |               |
|---------------------------------|-----------|---------------|-----------|---------------|-----------|---------------|
|                                 | No.       | %             | No.       | %             | No.       | %             |
| <b>Mild</b>                     | 1         | 6.7%          | 3         | 16.7%         | 1         | 7.7%          |
| <b>Moderate</b>                 | 8         | 73.3%         | 9         | 52.5%         | 8         | 72.6%         |
| <b>Severe</b>                   | 3         | 20.0%         | 3         | 30.8%         | 4         | 19.7%         |
| <b>Total</b>                    | <b>12</b> | <b>100.0%</b> | <b>15</b> | <b>100.0%</b> | <b>13</b> | <b>100.0%</b> |

**Table 5** Incidence of Hair fall during Hair wash

| Hair Fall during Hair Wash | No.       | %            |
|----------------------------|-----------|--------------|
| <b>Mild</b>                | 10        | 25.0         |
| <b>Moderate</b>            | 23        | 57.5         |
| <b>Severe</b>              | 7         | 17.5         |
| <b>Total</b>               | <b>40</b> | <b>100.0</b> |

**Table 7** Incidence of Hair fall during combing according to Prakriti

| Hair fall during combing | Vata      |               | Pitta     |               | Kapha     |               |
|--------------------------|-----------|---------------|-----------|---------------|-----------|---------------|
|                          | No.       | %             | No.       | %             | No.       | %             |
| <b>Nil</b>               | 1         | 6.7%          | 0         | 0.0%          | 0         | 0.0%          |
| <b>Mild</b>              | 2         | 10%           | 4         | 25.0%         | 2         | 15.4%         |
| <b>Moderate</b>          | 7         | 50%           | 6         | 36.5%         | 6         | 46.2%         |
| <b>Severe</b>            | 2         | 33.3%         | 5         | 38.5%         | 5         | 20.0%         |
| <b>Total</b>             | <b>12</b> | <b>100.0%</b> | <b>15</b> | <b>100.0%</b> | <b>13</b> | <b>100.0%</b> |

**Table 6** Incidence of Hair Fall during Combing Hair

| Hair Fall during Combing Hair | No.       | %            |
|-------------------------------|-----------|--------------|
| <b>Nil</b>                    | 1         | 2.5          |
| <b>Mild</b>                   | 7         | 17.5         |
| <b>Moderate</b>               | 20        | 50.0         |
| <b>Severe</b>                 | 12        | 30.0         |
| <b>Total</b>                  | <b>40</b> | <b>100.0</b> |

### DISCUSSION

In Ayurveda, Hair fall is coined out under the caption of Shiroroga and Kshudraroga by various Acharyas. Acharya Charak has described Khalitya with its aetiological factors along with pathophysiology, line of treatments and various modalities for treatment<sup>6</sup>. Generally, hair fall is regarded a reflection of aging process, if occurs after the mid-forties, but here it has been counted as disease amongst age between 20-40 yrs. The faulty hair care methods, dislikes to apply hair oil, excessive use of various types of hair cosmetics

like hair colour, cream, dye, gel, chemical shampoos, Soaps etc., excessive use of hair equipment along with faulty dietic habits & life style, pollution, hormonal imbalance etc. are the common causes of Khalitya. In Ayurvedic literature aetiological factors of Khalitya are found scattered which can be summarized and presented into following groups.

1. Aharatmaka (Faulty dietic habits) like - Viruddhasana, Ati ushna, Katu, Lavana, Ruksha, Tikshna, Kshara sevana etc.

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2. Viharatmaka (Faulty habits regarding routine) like Vega-vidharana, Ratrijagrana, Ati tapa- Raja, faulty hair care methods etc.

3. Manasika (Psychological factors) like- Manahtapa, Krodha, Bhaya, Chinta etc.

4. Bijadoshajanya (Genetically predisposing factor).

Due to Nidana sevana Pitta (especially Bhrajaka & Pachaka) is provoked with its Ushna - Tikshna properties and Vata (especially Samana and vyana) is provoked with its Ruksha-Khara-Chala properties. These aggravate Pitta (Pachak) vitiates Deha-ushma and Bhrajaka Pitta as well as aggravated Vata (Saman) hamper the function of Jatharagni and Vyana Vayu, which are located (Sthanasamshraya) at kesha bhoomi (Scalp region) due to their Vimargaman in Shiro pradesh. They scotch the scalp and produce the disease Khalitya<sup>7</sup>. On the other hand increase of Ushna-Tikshna properties of Pitta (esp. Bhrajak pitta) decreases the snehamsha of Kapha and increased Deha-ushma burns the Keshbhoomi, leads to premature ripening of hair in scalp region, which results as Khalitya. Moreover, elevated Ushna, Tikshna, Ruksha and Khara properties of Pitta and Vata dosha, dried up snehana and Pichchilatva of Kapha within the pores of scalp skin along with vitiation of Rakta, create obstruction to the roomkoopmarga. Thus further growth of new hairs is obstructed, causing Khalitya. Hence, Ayurvedic aetiopathogenesis of Khalitya stress on the role of Pitta & Vata as main Dosha and Asthi, Rasa & Rakta Dhatu as main Dushya.

The etiological observations in this research work includes data based on 40 established cases of Khalitya. The incidence revealed that prevalence of disease was more common between 20-29 yrs. In this age group one is more conscious about their looks including his/her hairs. So he/she frequently used hair cosmetics, clinical shampoos, colours, various types of hair equipment etc. to look more attractive, but these harmful chemical based materials and excess use of hair care equipment invite hair falling sex wise the female gender comprise 6 (15%) female passing through many phases during the life like puberty, pregnancy, post delivery, premenopause and menopause etc. which take many hormonal changes too. These changes have influence on hair growth and affect hair growth cycle.

Addictions are nothing but a psychological habit, which disturbs digestion in a long run. Apart from it, these addiction decreases natural immunity, and makes person susceptible towards the disease also.

The females pass through many hormonal variation including changes in estrogen and androgen level, The imbalance state of hormones affects the hair growth and its cycle may arrest the growth of hair, initiate hair fall.

Among surveyed patients, Vata predominance 12 (30%), Pitta predominance 15 (37.5%) & Kapha predominance 13 (32.5%) prakriti. The characteristic features of Pitta prakriti includes early greying of hair and premature loss of hair etc. Hence it can be said that person possessing

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Pitta dominant prakriti are prone towards premature and heavy hair fall.

The maximum number of patients 33 (82.5%) had madhyama sara and 7 (17.5%) Pravara sara. Madhyama sara person can be diseased due to easily vitiation on their dhatus. Maximum number of patients i.e. 36 (90%) had Madhyama samhanana followed by 4(10%) pravara samhanana. Maximum number of patients 32 (80%) has Madhyama Pramana.

To evaluate the aetiological factors of Khalitya patients of therapeutic study were evaluated for their dietary habits and life style.

**Aharaja Nidana (Causative factors related to Dietary Habits):** All the dietary habits observed in the patients of Khalitya suggested that majority of patients had habit to take Ati Amla, Ati Katu, Ati Lavana, Ati Ushna, Ati Tikshna, Ati Laghu, Ati Ruksha, Ati Kshara, Ati Snigdha and Ati Sheeta. These observed Nidanas were concordant with the aetiological factors described in Ayurvedic classics for the disease Khalitya. Hence regarding dietary habits, it can be concluded that most of the patients were indulging in Ahara which aggravates Pitta and Vata dosha and vitiates Rasa, Rakta & Asthi Dhatu, main dosha dushya of Khalitya.

### KESHA SWASTHYA PARIKSHA:

- **Density of Hair :** The 29 (72.5%) patients had medium density, followed by 11 (27.5%) low density of hair. Though decrease density of hair is one of the sign of hair falling, It is likely to found only few patients of high density in compare to medium or low density.

- **Palitya :** In surveyed patients, palitya was found in 18 (45%) while 22 (55%) doesn't have palitya.

- **Hair Oil Application:** It is tradition to apply the oil on hair. Acharya Sushruta has mentioned that every day proper siroabhyanga increases length and number of hair. It also brings smoothness, blackness of hair and makes it strong. So hair fall does not occur. In the surveyed patients of Khalitya majority were applying hair oil 2 time/week, followed 1 time/week, 3 time/week, 6 time/week and few patients were applying oil on the hair 7 time/week.

- **Use of Hair care products :** Unending race for conquering new horizons in today's fashion and craziness to acquire attention grabbing look. Leading to use of one or other hair care products which are mainly chemical based and cause hair fall untimely. Exp. conditioners, colour, cream Dye, hair lotion, eggs, spray and bleach. But majority of patients were using Heena.

- **Hair washing material:** As a hair washing material maximum patients were using shampoo, some soap, and few using both soap and shampoo and very few patients were using Crude drugs for washing hair.

- **Hair Combing Related:** It was also observed in the study that many patients had faulty habits of combing and frequency of combing.

- **Faulty Habit of Hair care:** young generation usually change their Hair style frequently. In the beginning it looks modern and

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fashionable but slowly with time it can damage the hair cuticle, hair shaft and its root. Thus, hairs becomes dull, lusterless, lifeless, and starts falling.

Falling of hair is the characteristic symptom of Khalitya, which was observed in all the patients of three therapeutic groups. In addition to hair fall associated symptoms such as shirah kandu (Itching), Kesha rukshata (Dryness of hair), Kesha Tanutva (Thinness of Hair), Kesha kathinya, Kesha bhoomi daha (Burning sensation of scalp), Kesha bhoomi sweda (Sweating in scalp) and Kesha Bhoomi daurgandhya were also observed in patients.

## CONCLUSION

Khalitya(Alopecia) is a wicked disease. Life style changes and faulty food habits may cause hair fall but the praktiti(constitution) of a person also plays a role in falling of hair. In the study it was found that Alopecia is found predominantly in Pitta prakriti individuals.

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