



Review Article

A CRITICAL EVALUATION ON AKALA PALITAM

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ABSTRACT

Hair color reflects the health of an individual and the discolored hair indicates the pathological state. *Palitam* is a physiological process when it occurring in old age. Whereas *Akala Palitam* (premature graying) is a pathological condition manifests in early stages of life. It is characterized by *Vivarna Kesha* (discolored hair) along with altered hair texture and the predominant *Dosha* attributes *Vivarnata* to *Kesha*.

Hair color is determined by a pigment called melanin (relative proportions of eumelanins and phaeomelanins) in hair follicles. Diffuse loss of hair melanin during early stages of liferesults in premature graying. In Ayurveda, *Bhrajaka Pitta*, one among the five types of *Pitta* located in skin is responsible for the attribution of hair colour. Thus it performs the function similar to melanin pigment in hair follicles. When there is *Pitta dosha Vridhi* in *Rasadhatu* along with vitiation of other two *Doshas* it leads to manifestation of *Vivarna Kesha* with altered hair texture thus results in *Akala Palitam*. It is a type of *Raspradoshajavikara* in which the signs and symptoms varies based on the predominant *Dosha*. Treatment option for *Akala Palitam* is also specific based on predominant *Dosha*. So a critical evaluation on *Akala Palitam* is essential to understand the etio-pathogenesis of the disease for its better management.

INTRODUCTION

Hair colour has a striking role in human characteristics. According to Acharya Charaka, *Krishna Varna Kesha* (black coloured hair) seen in child is considered as a characteristic feature indicative of long life span.^[1] Thus hair colour suggests the health of an individual. As age advances hair turns to gray naturally whereas premature graying in early stages of life is pathological. Premature graying is defined as the onset of graying of hair before the age of 20 years in Caucasians and before 30 years in Africans.^[2] Definition of premature graying with respect to the Asian population is lacking.^[2]

A recent study reported that 6-23% of people develop 50% of gray hair by 50 years of age.^[3]

In Ayurveda, *Palitam* (graying) which occurs in early stages of life can be termed as *Akala Palitam* (premature graying). It is a pathological condition where discolouration of hair is attributed by the predominant *Dosha*. A critical evaluation on *Akala Palitam* helps to understand its etio-pathogenesis and treatment.

Relation Between *Akala Palitam* and Premature Graying

Akala Palitam is a *Shirokapalagata Roga*, in which hair colour as well as texture of hair get impaired. The discolouration of hair depends upon the predominant *Dosha* (*Vata*, *Pitta*, *Kapha*). Thus *Vata*, *Pitta*, and *Kapha Dosha* results in *Shyava* (bluish black), *Peeta* (yellowish) and *Shukla* (whitish) *Varna* (colour) of hair respectively.

In humans, hair colour is determined by the relative proportions of two forms of melanin pigments such as eumelanins (brown-black) and phaeomelanins (yellow-red).^[4] It is formed by the melanocytes situated in the hair bulb epithelium around the upper half of the dermal papilla amongst cells destined to

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form hair cortex. When there is diffuse loss of melanin due to reduction in the activity of melanocytes in early stages of life, it leads to premature graying.

Among *Tridoshas*, *Pitta dosha* having predominance of *Agni Mahabhoota*, plays an important role in production of complexion. *Bhrajaka Pitta* (one among the five types of *Pitta*) located in the skin imparts and maintain the normal skin color.^[5] It is also responsible for hair color because the hair arises from the *Romakoopa* (hair follicle) located in the skin. Thus *Bhrajaka Pitta* residing in the *Shirogata Twak* has the function similar to melanin in hair follicles. When there is vitiation of *Bhrajaka Pitta* it causes *Pachana* of *Kesha* and produces discoloration of hair in association with other two *Doshas*. So in premature graying, vitiation of *Pitta Dosh* associated with vitiation of other two *Doshas* can be seen.

Nidana (Etiology)

The causative factors include *Aharaja* (dietary factors), *Viharaja* (regimens) and *Manasika* (psychological factors) *Nidanas* (causative factors) which primarily vitiates *Pitta Dosh* in association with *Vata Dosh* and *Kapha Dosh*. Similarly the etiological factors of premature graying include altered metabolism, nutritional deficiency, psychological stress, genetic factors etc., but the exact etio-pathogenesis is unknown.

Akala Palitam is enlisted under *Rasapradoshajavikara*, so *Nidana* causing *Pitta dosha vridhi* in *Rasadhatu* results altered *Dhatuparinama* and leads to *Akala Palitam*. Similarly altered metabolism due to thyroid dysfunction can hamper melanogenesis and leads to premature graying.

Aharaja Nidanas includes excessive consumption of food having *Katu Rasa* (pungent taste), *Amla Rasa* (sour taste), and *Lavana Rasa* (salt taste), Food having *Teekshna* (sharp), *Ushna* (hot) and *Vidahi* (cause burning) properties. Excessive use of *Katu Rasa* produces *Shareeratapa* (body heat), *Amla Rasa* results in *Vilayana* of *Kapha Dosh* (liquefaction of *Kapha*) and *Lavana Rasa* causes vitiation of *Pitta* as well as heating sensation in the body. *Teekshna* (sharp), *Ushna* (hot) and *Vidahi* (cause burning) properties increases the *Pitta Dosh*. There are studies showing that drinking alcohol impairs the absorption of vitamin B-12 and thus leads to premature graying as it is essential to maintain good skin and hair. *Madya* increases *Pittadosha* by its *Teekshna* and *Ushna Guna*. Excess

intake of salt results in premature graying by increasing the risk of free radicals in the body, it causes oxidative stress and the failure of antioxidant effect could damage melanocytes leading to decreased pigmentation.

Viharaja Nidanas include excess indulgence in *Ayasa* (physical exertion), *Upavasa* (fasting) which results in vitiation of *Pittapradhana Tridosha*. Also following sedentary lifestyle can results in *Rasadhatu Dushti* and leads to *Akala Palitam*.

Manasika Nidanas (psychological stress) such as *Krodha* (anger), *Shoka* (sadness) and *Shrama* (mental exertion) causes *Pittapradhana Tridoshakopa* and result in increased *Sareera Ushma* (body heat). These *Manasika* factors are specifically mentioned while describing the pathogenesis of *Akala Palitam*.^[6] In the manifestation of premature graying psychological stress plays a major role as it results oxidative stress.

Akala Palitam can even manifest as *Janmabalapravritta Vyadhi* (diseases occurring in children due to improper dietetics and lifestyle followed by mother during pregnancy). If a women during pregnancy consume *Lavana Rasa* in excess it leads to manifestation of *Akala Palitam* in offspring.^[7] It is also commonly seen in *Pitta prakruti* persons. Similarly premature graying can even manifest due to genetic factors.

Samprapti (Etio-pathogenesis)

Intake of *Nidanas* deranges *Pachaka Pitta* by its increased *Drava Guna* (liquid) and *Ushna Guna* (hotness). Thus produced *Ama* leads to improper separation of *Sarabhaga* and *Kittabhaga* (essence portion and waste portion of food). As a result *Dooshita Rasadhatu* and *Malaroopa Kapha* get formed. Later the aggravated *Pitta Ushma* results in *Vilayana* (liquefying) of *Malaroopa Kapha*. Simultaneously the vitiated *Pachaka Pitta* results in vitiation of *Bhrajaka Pitta*. Because of *Sthanavishesha*, increased *Kapha Dosh* shows affinity towards *Urdhajatru*. The vitiated *Vyana Vayu* takes the aggravated *Kapha* to *Shiras*. As a result, vitiated *Tarpaka Kapha* in *Shiras* and vitiated *Bhrajaka Pitta* in *Shirogata Twak* leads to *Prabhahani* and manifests *Vivarna Kesha*.

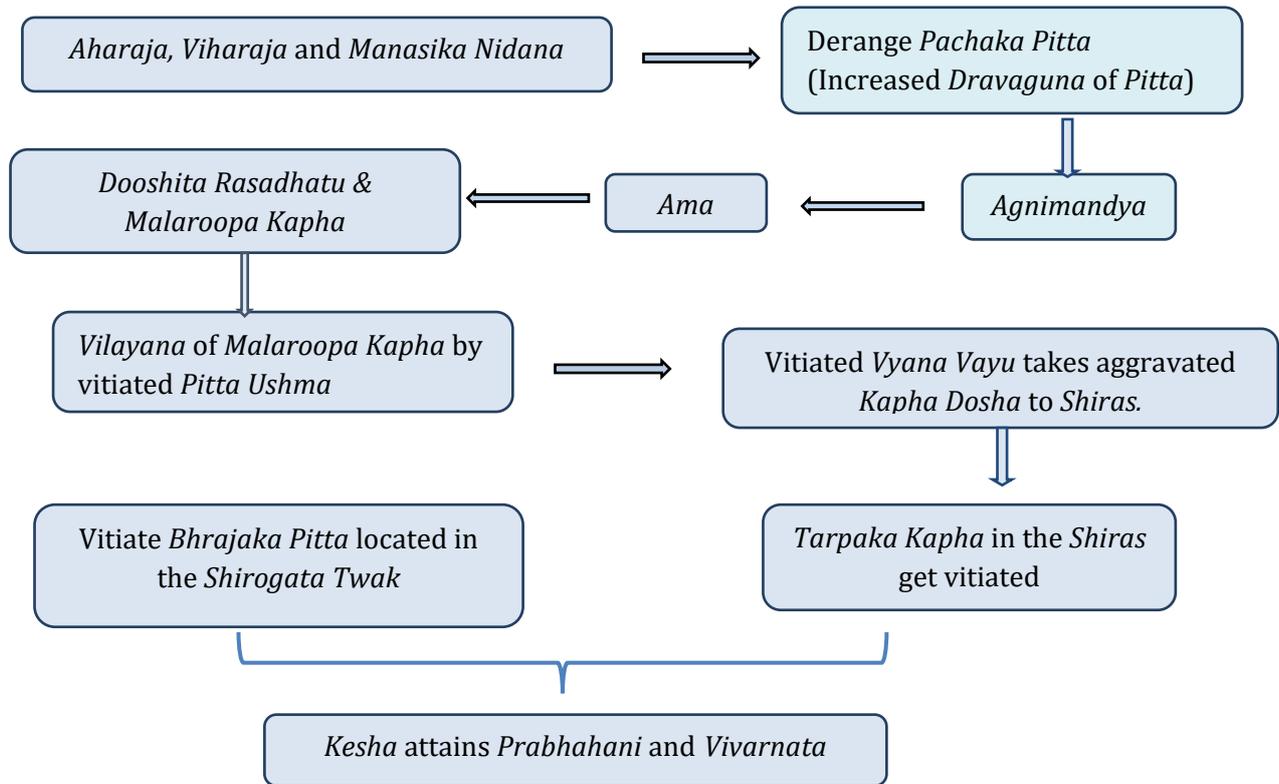


Figure 1: Samprapti

Samprapthi Ghataka

- Doshha: Tridosha
- Dushya
 - Dhātu: Rasa
 - Upadhātu: Kesha
 - Mala: Kesha
- Agni: Jataragni, Rasadhatwagni
- Srotas: Rasavaha Srotas
- Udbahva Sthana: Amashaya
- Vyadhi Adhishtana: Shiras
- Vyakta Sthana: Kesha
- Rogamarga: Bahyarogamarga

Clinical Features

Discoloration of hair is the characteristic feature of Akala Palitam and the predominant Doshha, attributes coloration. Along with discolouration, texture of hair also gets affected. There are mainly four types of Akala Palitam, based on the predominance of Doshha.

Characteristics of each type of Akala Palitam;^[8]

- Vataja- Shyava, Sphutita, Khara, Ruksha, Jalaprabha
- Pittaja- Pitabha, Dahayukta
- Kaphaja- Sweta, Snigdha, Sthula, Vivridha
- Sannipataja- Sarva Lakshna

Likewise, variation in proportions of eumelanins (brown-black) and phaeomelanins (yellow-red) result in different types of hair colour.

Probably the variation in their proportions can be attributed to the predominant Doshha vitiation in Akala Palitam.

Chikitsa (Treatment)

Akala Palitam is a Rasapradoshaja Vikara, hence Shodhana (purification therapy) can be the main treatment. Apart from this, treatment principles consists of Shamana (palliative therapy) including both internal and external administration of medicines, Nidana Parivarjana (avoid consumption of causative factors), Rasayana (rejuvenating therapy) and following Pathya (wholesome food and regimes).

- Nidana Parivarjana- Avoid consumption of causative factors like excess daily intake of Lavana Rasa, avoid sedentary lifestyle as well as reduce over exertion and emotional stress.
- Shodhana- Based on the predominant Doshha involved in the disease manifestation.^[9]
 - Kaphapradhana Akala Palitam- Vamana
 - Pittapradhana Akala Palitam- Virechana and Raktamokshana
 - Vatapradhana Akala Palitam- Vasthi
 - Nasya- for all types, because of its action in Urdhajatru Vikara (diseases affecting above the neck).
- Shamana- Includes both internal administration and external applications of medicines.

- Internal administration of medicated *Ghrita* (ghee)- Among the four types of *Snehadravya* (*Ghrita, Majja, Vasa, Taila*), *Ghrita* is considered as the best drug to pacify *Pitta* and *Vata Dosha*. It also corrects the *Ksheena Kapha*.
- External applications like *Shiro Lepa* and *Shiro Abhyanga*-
- *Shiro Lepa* (application of medicated paste on hair) with drugs having *Kesharanjana* (hair colouring) properties imparts black colour to hair.
- *Shiro Abhyanga* (application of oil on hair) is mentioned as a daily regimen. It helps in delaying ageing. So in order to manage and prevent *Akala Palitam*, it can be followed daily.
- *Rasayana*-
- *Rasayana* is beneficial for *Varna* as well as *Prabha*.^[10]
- It is mainly indicated in early or in middle age.
- Administration after proper *Shodhana* helps to manage and prevent further progression of disease.
- Following *Pathya*- Follow food and regimens which pacifies *Pittapradhana Tridosha*.
- *Pathya*-
- *Shashtika Shali, Dadima, Bhringaraja, Godugdha*
- *Shiro Abhyanga, Anutaila Nasya*

In contemporary medicine, treatment options for premature graying includes only drug therapy like nutritional supplements as well as hair coloring using different types of hair dyes. In Ayurveda, for *Akala Palitam* specific treatments are mentioned. So it can be managed in a better way after considering the predominant *Dosha*.

CONCLUSION

Akala Palitam manifests when there is *Rasadhatudushti* due to vitiated *Pitta Dosha* in association with other two *Doshas*. Hence *Shodhana* followed by *Shamana* can be adopted based on the predominant *Dosha*. After proper *Shodhana*, *Rasayana* is to be done which is beneficial for the management and prevention of *Akala Palitam*. In order to prevent

further progression of the disease it is essential to take wholesome food and regimens daily.

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