EVALUATION OF THE EFFICACY OF PRAPAUNDRIKADI TAILA W.S.R TO PALITYA: A COMPARATIVE STUDY

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ABSTRACT :

Graying of hair has become very common in society. It is more related with cosmetic point of view. 30 diagnosed *Palitya* patients were divided in three groups and all groups were examined and tried to find out the cause of *Palitya* and made assessment parameter as subjective and objective. Subjective are Color of the hair (*Kesha Varna*), Dry split hair (*Rooksha Sphutita Kesha*), Unctous thick hair (*Snigdha Sthula*), Burning sensation (*Daha*) and objective parameter as Area of scalp involved in percentage and Random hair count all these were assessed by 0,1, 2 and 3 according to severity. Group A was treated with *Pratimarsha Nasya*, using 3-4 drops of *Prapaundrikadi Taila* every day, group B was treated with *Shiro-Abhyanga* by using 10-15 ml of same *Taila* before bed time and group C was treated with both *Shiro-Abhyanga* and *Pratimarsha Nasya* both. There was remarkably difference found in before and after treatment in all group but only group C showed significant result in all parameters.

Key words: *Palitya, Shiroabhyanga, Prapaundrikadi Taila, Pratimarsha Nasya*

INTRODUCTION: Hair pigmentation is one of the conspicuous phenotypes in humans. As time passes or age increases, hairs have a tendency to grey in almost all the people. It is a biological process, but before a particular age, graying of hairs is called as premature graying and its incidence vary according to race or country. In whites it occurs before the age of 20, 25 in Asians and 30 in Africans [1]. Now a days premature hair graying has become a cosmetic issue, although *Palitya* does not have any kind of fatal or serious effect on body but it affects an individual at psychosocial level because in Indian society black color of hair is admired and considered as a symbol of beauty. It is a normal phenomenon and in *Ayurveda* this is termed as *Palitya* and there are two types of *Palitya* described in our ancient literature one is *Kala Palitya* and second is *Akala Palitya*[2]. There are so many etiological factors responsible for the occurrence of *Palitya* but mainly due to *Krodha, Shoka*, *Shrama* etc *Sharir-Ushma* is carried to *Shirah Pradesha* by *Vata* where locally situated *Bhrajaka Pitta* which provide color to hairs[3], is also vitiated and by excessive *Paka* hair turn to gray[4]. *Prapaundikadi Taila* is admired by our *Acharyas* to have a good effect on *Palitya*[5]. It is indicated to use as *Shiro-Abhyanga* or *Nasya*, in present study both methods are used and compared.

MATERIAL & METHODS: Total 30 diagnosed patients with *Palitya* were selected and randomly divided in 3 groups. Patients of Group A were given *Pratimarsha Nasya* and patients of Group B were given *Shiro-Abhyanga* and patient of group C were treated with both *Shiro-Abhyanga* and *Pratimarsha Nasya*. All the patients were followed up after 30 days for 3 months. All results were analyzed and

compared statistically by using Mann-Whitney wilcoxon test & paired t test.

INCLUSION CRITERIA:

- Patient aged between 8-40 years, with premature greying of hair.
- Patient fit for *Nasya*.
- Patient fit for *Shiroabhyanga.*
- Patient of either sex.

EXCLUSION CRITERIA:

- Hereditary diseases like Albinism.
- Severe Nutritional deficiency.
- Patient unfit for *Nasya Karma* like thirst, hunger, hard worker, fever, *Pratishyaya*, pregnant lady.
- Patient unfit for *Shiroabhyanga*.

DIAGNOSTIC CRITERIA:

- Split/broken hair (*Sputitha*)
- Ash colored hair (*Shyava Varna*)
- Hair resembling like water (*Jala Prabham*)

- Yellowish hair (*Peetabham*)
- White hair (*Shukla Varna*)

Posology:

- Study duration : 90 days and patient follow up after 30 days
- For *Pratimasrsha Nasya* : 3-4 drops in each nostril daily.
- For *Shiro-Abhyanga* : 10-15 ml oil daily at bed time.

Parameters for *Palitya*:

For the assessment of *Palitya* 2 types of parameter were taken:

1. Subjective parameters
2. Objective parameters

SUBJECTIVE PARAMETERS:

The following four parameters were taken as subjective parameters for the assessment of results. The readings before and after the treatment were assessed for result.

1.	Color of the hair (*Kesha Varna*)	Assessment	Score
		Krishna Varna	0
		Ash colored	1
		Yellowish	2
		White hairs	3
2.	**Dry split hair(*Rooksha Sphutita Kesha*)**	Assessment	Score
		Normal	0
		Dryness visible	1
		Dryness felt by touch	2
		Dryness felt with split hair	3
3.	**Unctous thick hair (*Snigda Sthula*)**	Assessment	Score
		Normal	0
		Unctuous visible	1
		Unctuous felt by touch	2
		Unctuous felt with split hairs	3
4.	**Burning sensation (*Daha*)**	Assessment	Score
		No burning sensation	0
		Mild (localized burning without disturbed sleep)	1

		Moderate (localized burning with disturbed sleep)	2
		Severe (burning all over the scalp with disturbed sleep)	3

Table I: Subjective parameters for *Palitya*

OBJECTIVE PARAMETERS:

1. Area of scalp involved (%): It was determined by using oslan/canfield visual aid method.

2. Random hair count: One square centimetre area of scalp was chosen where more gray hairs are present from this site gray hairs were counted randomly before and after the treatment

	Assessment	Score
Random hair count	No hairs gray	0
	1-10 grey	1
	More than 10 and less than 25 hairs grey	2
	More than 25 hairs grey	3

Results: After the completion of 90 days study results were as given below.

Group	Mean score			S.D	S.E	P value	Result
	B.T	**A.T**	**Diff.**				
Group A	2.6	2.40	0.20	0.42	0.13	0.50	N.S
Group B	2.40	1.60	0.80	0.63	0.20	0.500	N.S
Group C	2.60	1.80	0.80	0.42	0.13	0.0078	V.S

Table II: Color of hair

Group	Mean score			S.D	S.E	P value	Result
	B.T	**A.T**	**Diff.**				
Group A	1.60	1.20	0.40	0.51	0.16	0.125	N.S
Group B	1.60	1.40	0.20	0.42	0.13	0.500	N.S
Group C	2.60	1.80	0.80	0.42	0.13	0.0078	V.S

Table III: Dry split hair

Group	Mean score			S.D	S.E	P value	Result
	B.T	**A.T**	**Diff.**				
Group A	0.50	0.30	0.20	0.42	0.13	0.50	N.S
Group B	0.50	0.40	0.10	0.31	0.10	>0.99	N.S
Group C	0.40	0.20	0.20	0.42	0.13	0.50	N.S

Table IV: Unctuous thick hair

Group	Mean score			S.D	S.E	P value	Result
	B.T	**A.T**	**Diff.**				
Group A	0.40	0.10	0.30	0.48	0.15	0.250	N.S
Group B	0.40	0.10	0.30	0.67	0.21	0.500	N.S
Group C	2.60	1.80	0.80	0.42	0.13	0.0078	V.S

Table V: Burning sensation

Group	Mean score			S.D	S.E	P value	Result
	B.T	A.T	Diff.				
Group A	2.50	2.30	0.20	0.42	0.13	0.500	N.S
Group B	2.50	2.40	0.10	0.31	0.10	>0.99	N.S
Group C	2.40	1.60	0.80	0.32	0.20	0.0156	S

Table VI: Random hair count

Group	Mean score			S.D	S.E	P value	Result
	B.T	A.T	difference				
Group A	32.00	28.90	3.10	0.87	0.28	<0.0001	H.S
Group B	33.10	30.70	2.40	0.84	0.26	<0.0001	H.S
Group C	31.60	27.00	4.2	1.55	0.49	<0.0001	H.S

DISCUSSION: *Palitya* is considered as *Rasa Pradoshaja Vikara*, *Kapal Gata Roga* and *Kshudraroga* [6,7,8].. There is dominance of *Pitta* aggravating factor. In our study most of the patients were get easily irritated and angered and some were very anxiety regarding their economical problems as in our lexicon has discussed. Study were based on on parameters like color of hair, dry splited hair, thick unctuous hair, burning sensation and random hair count, the effect of *Shiro-Abhyanga* and *Pratimarsha Nasya* were found statistically found no significant and the score is different in before and after treatment.On the parameter like area of scalp involvement in two groups i.e. group A and B showed highly significant result. But when compared to each other group A and group B responded equally. This reflects that the involvement of scalp area is primary effective area. So finally it is found that in *Palitya* disease, among two methods of therapy used in the present study i.e *Shiro-Abhyanga* and *Pratimarsha Nasya*. Statistically no significant but difference in subjective and objective parameter. There is very less number of subject and to complete the pilot study in fixed time. Although *Shiro-Abhyanga* and *Pratimarsha Nasya* are said to be *Keshya*. In *Shiro-Abhyanga* drug along with oil get absorbed in scalp by pores of hair follicle and the effectiveness of *Pratimarsha Nasya* by absorption of the drug through nasal routes.

The principle of treatment for any disease is the *Samprapti Vighatan*. In this clinical study the probable mode of action of *Prapaundrikadi Taila* can be understood on the basis of the two major factors. The drugs which are used in the preparation of *Prapaundrikadi Taila* are *Prapaundrika*, *Madhuyasthi*, *Rakta Chandana*, *Utpala*, *Pippali*, *Amlaki* and *Tila Taila*. Almost all of these *Dravya* have *Sheeta Virya*, *Keshya* and *Pitta-Shamaka* Property by which the effect of the *Prapaundrikadi Taila* on *Palitya* is considerable. It is discussed earlier that *Shiroabhyanga* is done by using appropriate *Sneha*, generally it is done by *Taila*. All the *Taila* have more or less similar property but among all types of *Taila*, *Tila Taila* is considered best for several purposes. *Tila Taila* receives all the properties of the drugs which are processed in it [9] .*Prapaundrikadi Taila* is prepared in *Tila Taila* and as described earlier that almost all the drugs used in the preparation of *Prapaundrikadi Taila* are having *Pitta Shamak* Properties[10].*Shiroabyanga* with *Prapaundrikadi Taila* would carry out the functions as *Keshya* and *Kesharanjaka*.

Prapaundrikadi Taila has *Snigdha, Laghu, Shita* and *Sukshma* properties. *Snigdha Guna* composed of *Parthiva* and *Apya Mahabhuta*. *Charaka* said that *Kesha* is *Parthivabhava* predominent, so *Snigdha Guna* increases *Kesha* because of *Samanyavishesha Siddhanta*. *Sheeta Guna* would act on *Pitta Dosha*, which is a main causative factor of *Palitya*. The obstruction of *Srotas* is cleared by the *Sukshma Guna*, which affects the *Varna-Utpatti*.

Shiro-Abhyanga process is known for its *Keshya* effect[11]. By this process the local blood supply of scalp is increased result in increased nutrient supply to the hair follicle. Rubbing during *Shiro-Abhyanga* promotes relaxation and aids in stress reduction. Reduced levels of stress hormones allow the body to function with increased efficiency and this, in turn enhances the ability of the hair follicles to grow hair properly so *Shiro - Abhayanga* has a good role in *Palitya*.

Acharya charaka "Dwaram hi Shirso Nasa"[12]. *Shirogata* diseases are cured by the use of *Nasya*. *Pratimarsha Nasya* being as a type of *Nasya* is used in the treatment of *Palitya* as it is considered a *Kapalgata Kshudra Roga*. *Nasya* has been mentioned as an effective treatment in *Palitya* by most of our all *Acharayas*. It is very scientific and effective method to treat all type of *Shiro-Gata Roga*. *Partimasrha Nasya* is effective and safe method that's why in disease like *Palitya* it can be taken to long time[13]. If we go through the mechanism of *Nasya*, it is observed that the drug which is administered by nasal route it is absorbed by three process in nasal mucosa. The olfactory neurons, second by supporting cells and surrounding capillaries and the third way by cerebro-spinal fluid (CSF). The transneuronal absorption is generally slow

where as by supporting cells and capillary network it is rapid. The posture involved during the *Nasya* process in such a way that head is lying down leads to momentary hyperaemia and capillary are get dilated and results in 150% blood flow. There is also possibilities of falling arterial pressure and may encounter Cushing's reaction. When the ratio between CSF pressure and cerebral artery pressure is reduced, the increased CSF pressure leads to compress the artery in brain resulting a transient ischemia in brain. As a result the arterial "ischemic response" will raise the arterial pressure in reference to limbic system the olfactory pathway influencing hypothalamus which in turn may cause the inhibitors effect through the pituitary to secrete MSH.

The absorption of drug is dependent on the nature of drug and the molecular weight. Some of drugs which can cross the blood brain barrier also follow the systemic pathway to reach the brain to the facial vein and enter the cavernous sinuses in brain in reverse direction. This phenomena is performed by lowering head in *Nasya* Process, also drug pass by the lymphatic path can reach directly into CSF via cribriform plate. The arachnoid matter sleeve is extended to the sub-mucosal area of the nose along with olfactory nerve. In group C, patient shown significant result due to the synergic effect of both therapy. All the discussion above indicates the importance and the effect of *Shiro-Abhyanga* and *Pratimarsha Nasya* in the management of *Palitya*.

CONCLUSION: *Palitya* is more commonly associated with the *Pitta* dominant *Doshika Prakriti*. In the present study among 30 patients, 16 were of *Vata-paittika prakriti*, 9 were of *Pitta-kaphaja prakriti* and 05 were of *Vata- Kaphaja*

Parakriti. As it is clear that Pitta dosha is mainly responsible for *Palitya* but other etiological factor of *Palitya* are anger and anxiety which aggravates the *Pitta* and contribute in the pathogenesis of *Palitya*. The effect of *Prapaundrikadi Taila* is beneficial and adjuvant in *Palitya* by using *Pratimarsha Nasya* and *Shiroabhyanga*. Application of *Prapaundrikadi Taila* as *Pratimarsha Nasya* and *Shiro-Abhyanga* both was found more effective.

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Source of support: Nil
Conflict of interest:None
Declared