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EFFICACY OF PALASHPUSHPA HIMA IN THE MANAGEMENT OF KHALITYA

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ABSTRACT

Ayurveda is one of the enormous of very old India to human being with scientific medical systems in the world with a long evidence of clinical experience. The aim of *Ayurveda* is the maintaining healthy status of healthy person and cures a disease of diseased person. To serve both the purpose, very essential thing is the drug. There are two types of drug or *Dravya*in the world viz. *AharaDravya* and *AushadhDravya*. In the present era peoples are more conscious about their health and appearance. Hair plays an important part in the personality or the appearance of the people. Today, changed life style and different dietary habits have made loss of the hairs of the people a cumulative problem. Different types of propaganda to promote the growth of hairs have made the condition worse. In *Ayurvedic* approach, increased falling of hair is termed as '*Khalitya'*. Use of *Palashpushpa* is not described in *Ayurvedic* text for the management of *Khalitya*. This is vividly used in Adivasi area of Maharashtra. Before this no clinical work has been reported on *Keshya* properties of *Palash* as a single drug therapy due to lack of classical reference. Therefore, in the present study, an attempt was made to find out Efficacy of *palashpushpahima* in the management of *Khalitya*. *Palashpushpahima* is clinically effective and safe in the management of *khalitya.*

Keywords: *Ayurveda, Dravya, Khalitya, Palashpushpa.*

INTRODUCTION

The Wealth of India is stored in the immense amount of flora that has been gifted to her. Blessed with varied agro-climatic conditions; India is virtually the medicinal plant garden of the world.

Herbal medicine remains largely an unproven, inexact science. Although Natural product were used as drugs since the dawn of human civilization but the scientific validation of it is relatively new; hence there is a concern over the quality and safety issues.

Ayurveda is one of the enormous of very old India to human being with scientific medical systems in the world with a long evidence of clinical experience. The aim of *Ayurveda* is the maintaining healthy status of healthy person and cures a disease of diseased person.[1]

Ayurveda is by and large a conceptual science where concepts have been evolved around principles of health, etiopathogenesis of disease and approaches

to treatment, which include not only drug but also therapeutic diets and therapies to correct disturbed balance of the body. Acharya Charaka described *trisutra Ayurveda*, *Hetu*o r etiology of the disease, *Linga*or signs and symptoms of the disease and *Aushadha*or the medicine appropriate to maintain the health or cure the disease.[2]

To serve both the purpose, very essential thing is the drug. There are two types of drug or *Dravya* in the world viz. *AharaDravya* and *AushadhDravya*.[3] Grossly one can say that *Ahara*

Dravya promotes health and *AushadhDravya* fights diseases. But this *Dravya* should have qualities in it to do so. There is no any plant in the world which does not have medicinal properties. The knowledge of which is absolutely necessary for a physician to undertake the treatment. Thus, the speciality *'Dravyaguna'* which deals with the properties, actions and mode of administration of the drugs attains utmost importance in the field of medicine.[4]

In the present era peoples are more conscious about their health and appearance. Hair plays an important part in the personality or the appearance of the people. There is no doubt on that the world of today is full of glamour and glory. Thus, the concept of beauty is gaining more and more attention globally, which is defined on such factors, among hair is an important one. Today, changed life style and different dietary habits have made loss of the hairs of the people a cumulative problem. Different types of propaganda to promote the growth of hairs have made the condition worse. Ovid said in brief words ―ugly is a field without grass, plants without leaves and head without hairs. So, hair adorns the most highlighting part of the body. It has a great anesthetic value and it is the crowning glory of any person. Hair fall is aphysiological phenomenon, generally after the mid-forties, but it is considered as a disease if it occurs before this period.

Now a day‘s external application of minoxidil is commonly used in the management of hair fall. It is a potassium channel opener which relaxes vascular smooth muscle and increases blood flow and most common side effect is contact dermatitis.[5]

In *ayurvedic* approach, increased falling of hair is termed as ‘*Khalitya’*. *AcharyaCharaka* describes that *Tejas* combining with*aniladidoshas* reaches the *shirakapala* and causes hair fall by*dahana* of *romakoopa,* this is named as *Khalitya*. [6]There are so many drugs were described in *Ayurvedic* text aswell as many research work held out on *Khalitya*.

The various remedies mention in ayurveda for the treatment of *khalitya* also various researches works done carried out on different single drug and compound drugs for the assessment of *khalitya*.

Use of *Palashpushpa* is not described in *Ayurvedic* text for the management of *Khalitya*. This is vividly used in Adivasi area of Maharashtra like, Melghat, Satpuda and Gadchiroli etc. for the treatment of hair loss. The reason for selecting the drug is easily available and cost effective. Before this no clinical work has been reported on Keshya properties of Palash as a single drug therapy due to lack of classical reference.

According to Bhavaprakash, ―*Palash*‖ (Buteamonosperma) is one of the drugs which are *krimighana*. *Palash* is a drug which is found easily all over India and its *pushp* and *beej* are used internally in various diseases. *Palash*is *katu*, *tikta*, *kashaya* and *katuvipaki, deepan, vrushya, snigdha*, and used in *Gulma, vatajagrahani, arsha, krimi, varnadoshanashak, Vatajanak-Kapha-Pitta Raktavikar, mutrakruchhranashak, grahi, shital, trushna, dahashamak* and *kusthaghna*.[7]

Traditional medicines are not recognized globally, because of lacunae in quality control and safety can be achieved only by scientific evidence. Folklore medicines are the first response to simple ailments. Their economic and therapeutic importance makes the standardization, documentation and conservation of medicinal plant vital. According to World Health Organizations (WHO), more than 80% of the worlds' population relies on traditional herbal medicine for their primary health care needs. These valuable

herbal traditions found in developing countries have always been considered as an important component of the cultural heritage of the world.

Therefore, in the present study, an attempt was made to find out Efficacy of *palashpushpahima* in the management of *khalitya*.

Aim: To study the effect of *PalashPushpHima* in the management of *Khalitya*.

Objectives: To assess the efficacy of *PalashPushpHima* in the management of *Khalitya*.

MATERIAL AND METHODS

Study design- This is simple interventional clinical study.

Ethical committee approval

CLINICAL STUDY

Methodology

Study Area- Out patient department of Shree Saptshrungi Ayurved Mahavidyalaya and Hospital

Sampling – All patients were selected by simple randomization method

Sample size -30 patients of *Khalitya*

Randomization of patient:-

Patient will be randomly selected between the age group 15 to 45 years

All 30 patients who will be diagnosed as a *Khalitya.*

Drugs administration details:-

Drug – *PalashPushp*

Form of medicine –*PalashPushpHima*

Dose - 40ml orally twice a day

Duration of treatment - 35 days

Table 1: Criteria for selection of patients

Sr. no.	Criteria	Grade
A. Hair fall		
1	No Hair fall	**0**
2	Mild (hair fall on oiling)	**1**
3	Moderate (hair fall during washing & normal combing)	**2**
4	Severe (hair fall on simple strengthening)	**3**
B. *Kandu*(Itching)		
1	No itching	**0**
2	Mild itching (aware of itching on scalp while relaxing)	**1**
3	Moderate (some time disturbed sleep & day time activity)	**2**
4	Severe (consisting & frequent sleep disturbance)	**3**
C. Roughness (*Vrikashata*)		
1	Smooth hair surface	**0**
2	Occasional rough hair surface	**1**
3	Slight rough hair surface	**2**
4	Rough hair surface	**3**
D. Gradation of microscopic examination of hair root and hair shaft, Spore and hyphae		
1	No spore or hyphae	**0**
2	Occasional fungal and bacterial spores or hyphae	**1**
3	Few fungal and bacterial spores or hyphae	**2**
4	Many fungal and bacterial spores or hyphae	**3**

E. Pattern of scalp hair loss		
1	Patchy	**0**
2	Ophiasis	**1**
3	Totallis (100% hair loss)	**2**
F. 60 second hair count test		
1	0-10 Hair	**0**
2	10-50hair	**1**
3	50-100	**2**
4	above 100	**3**

Research proforma containing all signs and symptoms of *khalitya* will be prepared and patient fulfilling the criteria mentioned in proforma will be registered for the clinical trials.

Inclusion criteria:

1. Patients coming within age limit of 15 to 45 years will be included without any bar of caste, sex, religion and occupation.
2. Chronicity less than 1 year.
3. Patient having diagnosis of *khalitya*.
4. Patient having diagnosis of alpocia as per modern medicine.

Exclusion criteria:

1. Patients whose age is less than 15 and above 45 years.
2. Patients who have been diagnosed to have local disease like Alopeliaerreota, Alopeliatotalis, Tineucapitis, folliculisis devaculans and in Ayurvedic terms patients of Arunshinka, Indralupta.
3. Patient suffered from any severe systemic disease is excluded.

Assessment criteria -

CRITERIA FOR ASSESSMENT

To facilitate the statistical analysis of the effect of therapy, scoring system was adopted. Cessation of hair fall was counted as a main feature to assess the effect of therapy. Other associated symptoms like *KeshyaRuskshatva, Darunaka, KeshabhoomiDaha, Keshabhoomi Kandu, KeshaKathinya, KeshaTanutva* were also considered but main emphasis was laid on the stoppage of hair fall.

a) Subjective criteria

b) Objective criteria

The most commonly used chart for men is the one developed by Dr. Hamilton and then later modified by Dr. Norwood called the **Norwood– Hamilton scale**. Women who suffer from

Androgenic Alopecia has a pattern of hair loss called Female Pattern Loss. This loss does not occur in the same pattern as men but appears as a diffuse thinning throughout the scalp. There is a chart designed to classify Female Pattern loss called the **Ludwig Scale**. There are however always exceptions and in some cases men may suffer from a diffuse type thinning and women may experience a similar hair loss pattern to men.

Follow up:

- Follow up on 7th, 14th, 21st and 28th and35th day.
- Post treatment - follow up on 1 month after clinical trial.
- The patients were advice to take routine light diet.

Overall Assessment Criteria

Cured 100% relief in signs and symptoms

Mark relief > 75 % relief in signs and symptoms

Mild Relief 50 %-75 % relief in signs and symptoms

Mild Relief 25 % - 50 % relief in signs and symptoms

Unchanged Up to 25 % relief in signs and symptoms

CLINICAL STUDY

OBSERVATIONS AND RESULTS

Statistical analysis was done by using descriptive and inferential statistics using chi-square test and student's paired t test and software used in the analysis were SPSS22.0 version and Graph Pad Prism 6.0 version and $p<0.05$ is considered as level of significance.

Total 30 patients of age group between 15 to 45 years were selected for the study. Out of that 40, 40 and 20 % were between age group of 15-25, 26-35 and 36-45 years respectively.

Total 30 patients were selected, out of that 53.33% were male and 46. 67% were female.

Total 30 patients of different religions were selected for study; among them maximum patients belong to Hindu religion i.e. 53.33% and remaining of Muslim and others i.e. 23.33 and 23.33 % respectively.

Maximum patients were students i.e. 43.33% followed by business, service and housewife i.e. 23.33, 16.67 and 16.67 % respectively.

In Prakruti, it was found that 36.67 % patients were *Pittapradhanvata* followed by *Vatapradhan pitta, Kaphapradhan pitta* and *Pittapradhankapha* 33.33, 16.67 and 13.33 % respectively.

Table 2: Maximum number of patients i.e. 70 % was taking mixed diet, while 17.14 % were vegetarian.

Sr. No	Symptoms	Before treatment score	After treatment score	Relief	Relief %
1	Hair fall	77	34	43	55.84
2	*Kandu* (Itching)	76	20	56	73.68
3	Roughness (*Vrikashata*)	63	26	37	58.73
4	Microscopic examination of hair	60	23	37	61.67
5	Pattern of scalp hair loss	12	12	0	0.00
6	60 second hair count test	49	20	29	59.18

DISCUSSION

In present study the maximum number of patients was found in the age group o 15-35 year, i.e. 80 %. Diffuse hair loss can affect both sexes at any age. Triggers that interrupt the normal hair cycle, such as physiologic or emotional stresses, nutritional deficiencies and endocrine imbalances, may cause diffuse hair loss. This age group had a predominance of *pitta dosha*. With age growing *VataDosha* increases in body which in turns both combined and causes the hair loss in particulars.

Maximum number of patient was male found in current study. According to survey up to 40% of men and 25% of women in India are victims of hair fall.

The maximum number of the patients reported in this study53.33% comprised of Hindus. However, this data is not suggestive of any confirmed finding regarding the *Khalitya* in any aspect but this might have occurred due to the predominance of the Hindu community in this region.

Education factor also effects of hair falling. In current study it was found that student followed by business patients are more prone to hair falling due to stress. The ever-increasing tension of studies followed by averting sleep till late night for reading and due to constant worries, irregular food habits, over indulgence in sleep, addictions like tea, tobacco etc. aggravating the *Vata* and *Pitta Doshas* create *Khalitya* in a long run.

Pittapradhanavata and *vatapradhana pitta* patients were found in current study. In this regard we can say that the *PittaPrakriti* persons are more prone or have more severe *Khalitya* rather than other remaining *Prakriti*.

Maximum numbers were having mix type of diet in current study. We Indians take non vegetarian diet with excessive salt and spice which accumulates the

Pitta Dosha and causes of hair falling, while non veg food is a good source of protein but due to the way of preparing it increases the *Pitta Dosha* and ultimately it cause hair falling.

Effect of therapy

There is significant result was found in all the subjective parameters except pattern of hair loss. But there is no change found in objective parameters.

In case of hair loss 55.84% improvement noted. *Buteamonosperma* inhibits degeneration of hair follicles, extends the anagen phase of hair growth cycle and enhances proliferation and maturation of precursor epithelial cells of the final hair strand. It prevents the massive apoptosis in the proximal hair bulb and stimulates the multiplication of hair fiber cells with the stimulation of anagenic phase, and reduce the catagenic and telogenic phase.[8]

In this way it acts and prevent further hair fall.

73.68% improvement was found in kandu. *B. monosperma* displays antifungal activity against *Cladosporium cladosporioides*;[9] it also has a significant bactericidal effect[10] and potential antiviralactivities[11]. *B. monosperma* has astringent action,[12,13] from this it can be said that by this action it acts on *Kandu*. Ayurvrdic point of view it is *pitta-kaphashamak* and hence it gives relief in *kandu*.

Roughness was decreased by 58.73%. 61.67 and 59.18% improvement is found in Microscopic examination of hair root and60 second hair count test respectively.

Palashpushpa is *sheetavirya* and *snigdhaguna* and due to *himakalpana* the potency of

snigdhaguna again increased and hence it reduced roughness which can be seen in current study i.e., Significant result was noted in roughness. There was significant improvement found in microscopic examination of hair root it may be due to the chemical constituents founds in *palash* which is acts antifungal and bactericidal in nature. There was no change found in pattern of hair loss, it may be due to short period of study. Pattern of hair loss changes if there is regeneration of hair which was loosed.

Also significant result was noted in 60 second hair count test, it indicates that further hair loss stopped. Improvement may be due to balance conditions of *pitta-vatadosha* due to *tiktakatu* and *kashay rasa, snigdha, laghuguna* of *palashpushpahima.*

CONCLUSION

The following conclusions can be drawn from the entire study

From the results it can be concluded that age between 15-35are more prone, male are more prone than female and *pittapradhanprakruti*, non-vegetarian are more prone for *khalitya*.

There was significant reduction in all the subjective parameters except pattern of hair loss and there is no change in objective parameter. It can be concluded that *Palashpushpahima* is clinically effective and safe in the management of *khalitya*. Further study can be held for determination of chemical constituents which acts on *khalitya* and on more patients with long duration.

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