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PRACHANAM FOLLOWED BY DURDHURAPATHRA SWARASA LEPA IN THE MANAGEMENT OF ALOPECIA AREATA (INDRALUPTHA): A CASE REPORT

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ABSTRACT

Alopecia areata is a type of noncicatricial alopecia. It is a common chronic, non scarring hair loss in circular patches from the scalp and or from the body¹. Scalp is the most common site of involvement. It may occur irrespective of age & sex, but common in young adults less than 30 years of age and males are more affected than women (1.4: 1). Nowadays, Alopecia cases reporting in the Dermatology clinics, in Kerala are increasing, may be because of modern life style, change in food habits, stress etc. It makes more emotional problems due to cosmetic concerns. Various researches are going on worldwide, even though etiopathogenesis of Alopecia is still unclear. Even though, the studies revealed that, it is a T cell mediated autoimmune disease, genetic and emotional factors play key role in its development. Immune privilege mechanism of hair follicles is deranged and cause perifollicular and intrafollicular infiltration of CD8+ and CD4+ T cells lead to shortening of anagen phase². Influences of Cytokines IFN-Gamma, IL-15 are identified in its development. Different treatment methods are available but none of them are effective for long-term and causes certain side effects. While analyzing the signs and symptoms, Alopecia shows close resemblance with *Indraluptha*, a *Siroroga* mentioned in Ayurveda classics. Most of the acharyas included it under *Kshudrarogas* whereas *Vagbhatacharya* included this under *Sirorogam* and explained in *Siroroga prathishedam adyayam* of *Ashtangahridaya*, *Uttarasthanam*³. By compiling the opinions of different acharyas regarding the treatment of *Indraluptha*, an effective treatment protocol is developed here.

Key words: Alopecia areata, Immune privilege, *Indraluptha*

INTRODUCTION

Alopecia areata is an autoimmune disease and characterized by chronic, asymptomatic, non-inflammatory, patchy loss of hair from hair bearing area especially from the scalp. The incidence of Alopecia areata is about 0.7% in Indian population. One of the most important risk factors for developing Alopecia areata is family history of AA or any other autoimmune disease. As it is a T cell mediated autoimmune disease, AA exhibits HLA gene associations. Studies conducted in Columbia University found out that the gene, called ULBP3/6 (UL-16 binding protein 3/6)⁴ play key role in pathogenesis of AA. Moreover, hair is an important immune privileged area in body like brain, CNS and eyes, as a protective mechanism in body. It is a dynamic process maintained by several mechanism to suppress immune mediated inflammatory process. It is characterized by very trace level of expression of class 1 MHC molecules and by local production of immunosuppressive agents like Alpha- MHC, TGF Beta -I (Transforming growth factor). They down regulate IFN-Gamma induced MHC class I expression in human anagen hair bulb. Due to limited expression of class I MHC molecules, cells of anagen hair follicles are protected from cytotoxic T cell (CD8+ T cells) attack. i.e., Immune privilege simply means any antigen accessing the immune privileged tissues do not trigger immune responses there. Emotional disturbance is one of the main etiogenic factors in most of the cases. Some peoples report experience of very stressful event or chronic stress over a long period of time before developing AA. When a person experiences a stress, brain especially pituitary gland starts secreting stress hormone. Chemical signals from the pituitary gland stimulate adrenal glands and increases the production of cortisol. It is responsible for "fight or flight" mechanism in body. It produces a big impact on immune cells in body. Research works show that hair follicles and skin themselves produce several stress hormones. It affects hair growth and immune cells in the skin. Ultimately stress hormones imbalance the immune mechanism of body. Hereby reporting a case of Alopecia areata.

CASE REPORT

This is a case report of a 22year old male patient from pattazhi, who reported on 11/2/2021 in Agadatantra OPD of Government Ayurveda College, Thiruvananthapuram with the chief complaints of asymptomatic loss of hair at the vertex for 6 months. Hair loss was circular in pattern, as it was more obvious at the center and spreading to the periphery. There was no history of similar illness in family members & he has no history of any other systemic illness and intake of drugs. But his mother had history of psoriasis and he was very stressed due to personal issues. On examination, only a single circular patch of nonscarring alopecia of 3.5cm diameter with SALTscore 6 distributed on occipital & parietal area of scalp. The area was smooth, shiny & spongy with no associated skin changes. Other systemic examinations were within normal limits. Potassium hydroxide (KOH) examination of hair showed no fungal elements. On hand lens examination, total numbers of follicles were reduced, but a few follicular ostia were found. On the basis of clinical examination & KOH test, the diagnosis of Alopecia areata was made. Before the commencement of treatment protocol, basic blood investigations were done.

On 11/2/2021

Hb- 15.1g%

TRBC- 4.6 million/cmm

TWBC- 8600 cells/cmm

ESR – 8 mm at 1 hr

T. Platelet count- 3.44

AEC – 430 cells/cmm

FBS – 101 mg%

T. Cholesterol – 135

mg%Ca – 9.7mg%

TSH- 1.08 milli IU/l

All are within normal limit with slight variation in EC. The patient was subjected for following treatments.

- 20 gm *Mahathikthakam gritham*⁵ at 7 A.M and 4 P.M in empty stomach with $\frac{1}{4}$ glass of warmwater as anupana for 7 days.
- *Ushnambusnana* after self *abhyangam* with warm *balatailam*⁶ in morning for 3days.
- 25 gm of *Avipathy choornam*⁷ with sufficient quantity of honey at 6 A.M in empty stomach. Advised to take hot water in small quantities intermittently. After the completion of *vegas* andattaining proper appetite, they were advised to take gruel or light food.
- After attaining *samyak sodhana*, *Samsarjana karma* was followed for the next 4days.
- On 16th day patient was advised to take *Sadhyasnehana*, by giving *peya* mixed with 50ml plain ghee and 3gm *saindhavam* at 6pm.
- On 17th day at our OPD, *Prachanam* done (after checking RTPCR for COVID 19). When the bleeding stopped, juice of *Durdhoorapathra* was applied on the affected area for 30 minutes.
- After 30 minutes the area was cleaned with *Thriphala kashaya*.
- Patient was observed for next 30mnts and was given 1 glass of boiled milk with sugar (prabhootha sita) as antidote⁸.

Advices

- Avoid head bath & application of oil on that day.
- Apply juice of *Durdhoorapathra* on the affected area for 30 minutes for the next 7days.
- Follow the *pathya apathya* strictly.
- After 7 days adviced to take 10 gm of *Narasimha rasayanam*⁹ with $\frac{1}{4}$ glass of warm water asanupanam in empty stomach at 6am for 1 month.
- Symptomatic managements were given, on reviewing.

Observations



B/T (11/2/2021)



During Prachanam (4/3/'21)



During lepana(4/3/'21)



After 1 week



After 3 months

Result: Area completely filled with new hairs and SALT score became zero. Patient was satisfied and feels better.

DISCUSSION

Ayurveda suggest surgical procedures like *siravedha*, *prachanna* and *parasurgical* procedures like *jaloukavacharana* and followed by external application of various herbal, mineral combinations and single drug for *Indraluptha*. *Acharya Susruta*¹⁰ advises *snehasvedha* and *sodhana* before *raktha moksham* and followed by *lepa*. *Vatapitta kopa* causes excessive shedding of hair. If it is noticed at this stage, *vatapittahara chikitsa* ie. *brimhana chikitsa* can be adopted. But commonly patients are seeking medical attention in the later stage. That is the stage of *kapharaktha* vitiation which prevent the regrowth of hairs. The treatment plan adopted for the second stage aims at resolving *srothorodha* by *kapharaktha sodhana*. *Acharya Susruta* considered it as a *Kshudraroga* and based on its *alpa hetu lakshna*, *alpa chikitsa* is needed. Hence *Vicarana snehapana* was selected as *snehana* procedure for 7 days with *Mahathikthaka gritha*. *Balataila* is taken for *bahyasnehana* due to *vatasamana karma*. *Kayasodhana* is obtained by *Virecana* to eliminate *pitta* which is the *asritha dosha* of *raktha dhathu*. For *ekadesastha raktha dushti*, adoptable modality is *prachanam* or *kuttanam* to remove *romakoopavarodha* which in turn permits the absorption of drugs easily. *Acharyas* have enlisted a number single and combination of drugs

for external application after *Prachanam*. Studies on *dathura* leaf juice showed, its hexane extract increases hair growth. It is also recommended by different *acharyas* for *lepa* and it is one of easily available plants. Hence it is selected for *lepa*.

By the *sookshma guna* of *snehana dravya*, it can reach up to the cellular level. Digestion, absorption & delivery to target organ system are crucial in obtaining the maximum benefit from any formulation. *Gritha* contains 8% lower saturated fatty acids, which makes it easily digestible. Lipophilic action of *gritha*, facilitate entry of the formulation into the cell and its delivery to the mitochondria, microsomes & nuclear membrane. When it is processed with herbs, their activity and utility potentiate many

times. Herbs are rich in antioxidants. Moreover this, *gritha* contains Beta carotene and Vit. E & A. These are antioxidants. Antioxidants are molecules in cells that prevent free radicals from taking electron and causing damage to cell membranes and cell organelle. They are able to give electron to free radical without becoming destabilized themselves. In this way, it terminates the chain reaction by removing free radical intermediate and inhibit other oxidation reaction. This will prevent further formation of free radicals.

As it is an autoimmune disease, concepts of xenobiotics, free radicals and epigenetic transformation are helpful to explain genetic transformation occurring in the development of disease. While analysing the *nidan*s of *Indraluptha*, most of them are directly or indirectly influencing factors for development of *dooshivisham*. In *Ayurveda*, it is not a type of *visha*, but it is a transformational state of *visha*. Due to *apaki* quality of *visha* and neither get digested nor eliminated from the body. It is less potent and exist in body for a long time without causing any ailments being *avrita* by *chirakari kapha*. When favorable conditions occur, it will vitiate *doshas* and *dhatus* and causes diseases.

“*Dooshivishartham suswinnam oordham cha adhascha sodhitham*¹¹...”. But *Indraluptha* is a disease associated with *tridosha* along with *raktha* hence *suswinnam* is not advisable. In the later stage of disease *srothorodha* occur by vitiation of *kapha* along with *raktha*. *Asritha dosha* of *raktha* is *pitta*, hence *pittadushti* is also present there. In *pitta raktha* conditions and *pitta prakrithi*, *swedanam* is contraindicated. Even though *swedana* is to be done, being a major channel excretion of water-soluble waste products only mild *swedana* by means of *ushnodhaka snanam* is adopted here. *Virecana* eliminate *dooshitha pitha* which is the *asrita dosha* of *raktha dhathu*. This helps to obtain *sarvadehika raktha sudhi*. More over *virecana* result *kaphasodhana* to some extent.

Avipathy choornam being special for *pitta samana* and good for all types *visha*, with the *phalasruthi* as “*Alpe agnou sasthan sarvavisheshu cha*”, was selected. *Gaaddaprachana* is mentioned in *Indraluptha* as it reaches the hair follicles seated in the dermis and remove local obstruction caused by *kapha* & *raktha*. Accumulation of inflammatory infiltrate in

the intra bulbar and peribulbar area causes narrowing of hair follicles, which prevent the growth of new hairs.

While doing *prachanam*, narrowed or obstructed hair follicles open due to increased circulation towards the area and eliminates vitiated blood. It slows down the inflammatory processes. Previous studies conducted in albino rats showed increased hair growth after the application hexane extract from leaf juice of datura. Due to its anti-inflammatory and antifungal activity, it reduces the inflammation and promote hair growth.

CONCLUSION

The treatment protocol used in this case study were validated formulations of Ayurveda as per the classics. This attempt was aimed at revalidating them for suffering younger generation affected with Alopecia areata. Ayurveda is blessed with a number of miraculous treatments. But all of them are not revealed yet, or not widely practiced yet. During the course of treatment, patient didn't feel any side effects or worsening of condition, further appearance of lesions was not noticed. Generalized and localized purification procedures may be eliminating the toxic contents in the body and reduces the triggering factors of the immune system.

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