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Research Article

A COMPARATIVE STUDY ON THE EFFECT OF *VIDANGADI LEPA* AND *JEEVANTYADI LEPA* IN *EKA KUSHTA* W.S.R. TO PSORIASIS

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ABSTRACT

Psoriasis is a chronic inflammatory and hyper proliferative skin disease. It is characterized by well-defined, erythematous scaly papules affecting about 0.1% to 3% of the population. Psoriasis can be correlated to *Ekakushta* which is *Kapha-vata* predominant. It presents with *Aswedana, Mahavasthu* and *Matsya Shakalopama* and is treated with *Shodhana Karma and Bahya Chikista* including *Lepa Karma* that occupies the prime place in its line of treatment. *Acharyas* have mentioned different types of *Lepas* and its effectiveness in skin disorders. Objective of study: To study the effect of *Jeevantyadi Lepa* and *Vidangadi Lepa* in *Ekakushta* and to compare its therapeutic effects in the management of *Ekakushta* w.s.r. to psoriasis **Methods:** This is a comparative clinical study with pre-test and post-test design that included 40 patients of either sex diagnosed as *Ekakusta (*psoriasis). All the 40 patients were randomly assigned into 2 groups with 20 patients in each. The procedure in group A involves application of *Vidangadi Lepa* and group B involves application of *Jeevantyadi Lepa*. **Results:** The overall results in the study revealed the statistically significant results in Group A and in Group B on all subjective and objective parameters. **Conclusions:** Group A and Group B had shown significant results but however Group A had an edge over to Group B.

INTRODUCTION

Being the largest organ of the body, skin accounts for about 15% of the total adult body weight. It plays a major role by performing many vital functions such as prevention of excess water loss from the body, thermoregulation and protection against external physical, chemical and biologic assailants. The skin is lined with the mucous membrane and is continuous.[1] Diseases of the skin has been affecting a huge proportion of the population thereby becoming the major health problem in India.[2] These pose a heavy toll on both the emotional and psychological burden making it worse physically.[3] Increased beauty consciousness among the people further aggravates their anxiety.[4]

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According to the Global Burden of Disease Study 2017, skin and subcutaneous diseases of twelve dermatoses were included under the category of skin and subcutaneous diseases such as psoriasis, dermatitis atopic, contact and seborrheic, fungal skin diseases, pruritus, viral skin diseases, acne vulgaris, scabies, bacterial skin infections, cellulitis and pyoderma, alopecia areata, urticaria and decubitus ulcer.[5] Among these, acne, psoriasis, scabies, urticaria, viral skin diseases, alopecia, bacterial skin infections, decubitus ulcers, fungal skin diseases, pruritus and other skin and subcutaneous diseases, are the common leading causes of the global disease burden for skin and subcutaneous diseases.[6] In additional, these can lead to huge long-term impact even after the disease has resolved, placing a high burden on patients, their families and the healthcare systems globally.[7]

Psoriasis is defined as a common dermatological disorder with immune mediation and genetically determined that includes skin, nails, joints and has various systemic associations. It presents with flaky and scaly skin, pain, itching, swelling, bleeding and skin damage. Prevalence of psoriasis varies

worldwide and there is a growing number of population-based studies providing the estimates of psoriasis. Prevalence of Psoriasis in different populations varies from 0% to 11.8% based on the published reports.[8] Though Psoriasis is well observed globally, it differs in different ethnic groups. According to a study, United States reported 4.4 million of adults suffering from Psoriasis and[9] in India 0.8-5.6% of population with Psoriasis is reported.[10] American Academy of Dermatology had formed a committee in the 6 Decade of 20 century to develop a task force and pursue a guideline for treatment of psoriasis.

In the classical texts of Ayurveda, the dermatological disorders are collectively described as '*Kustha'*. The ancient *Acharyas* have described these skin diseases as cosmetic disasters, as they stated '*Kalenopekshitam Yasmat Sarvam Kusnati Tadvapi*,[11] Ayurvedic texts have enumerated eighteen clinical varieties of *Kusthas* and *Ekakustha* is one among them. Clinically it is characterized as *Ksudra Kustha. Ekakustha* can be correlated to psoriasis. *Ekakustha* is a *Vata-Kapha* predominant *Tridosaja vikara* that presents with *Aswedana, Mahavastu, Matsasakalapama* etc.[12] Diagnosis is based on the assessment of parameters such as *Vedana, Varna, Akriti, Prabhava, Poorvarupa* and *Upadrava.* [13] Clinical and therapeutic assessment of psoriasis is done by Psoriasis Area Severity index (PASI). *Ekakushta* can be correlated to Psoriasis and takes upper hand because of its chronicity, severity, difficulty in its curability involving large extent of body parts etc.

Psoriasis is managed conventionally with both topical treatments and systemic treatments. In case of mild psoriasis with less than 10% of body surface area (BSA), the preferred treatment is local topical treatment **[14]** and these include topical treatments such as corticosteroids, vitamin D_3 analogues, calcineurin inhibitors and other non-medicated moisturizers like coal tar, salicylic acid and anthralin. Based on the severity, systemic treatments will also be adopted. Though there are various standard local therapeutic approaches being applied that can help control the condition for months to years, such as however, complete recovery from psoriasis through these treatments has not been reported, but is associated with adverse effects. Therefore, researchers worldwide are working towards an effective and a safe drug and therapy to completely eradicate this condition.[15]

Ayurveda has a positive approach to give on all the stages i.e., from the formation of skin, its structure, functions and the causative factors, symptomatology and the manifold unique treatment approach. Along with *Shamana Aushadhi* importance of *Lepa* in *Kusthta* is also described in the classics. In the present study two *Lepa's* viz., *Vidangadi Lepa* and *Jeevantyaadi Lepa* is compared to know their efficacy. Details of the study are elaborated in forthcoming pages.

MATERIAL AND METHODS

Source of Data

The patients were selected from the Outpatient and Inpatient department of Kayachikitsa of Shri Shivayogeeshwara Ayurvedic Medical College and Hospital, Inchal.

Method of Collection of Data

The patients were selected irrespective of caste, religion and gender. A detailed case proforma was prepared and informed written consent was obtained from the patients.

Design of the Study

Open label double arm randomized clinical study.

Sampling Technique

The subjects who fulfill the inclusion criteria and complying with the informed consent was selected using a random sampling technique

Sample Size

This is a comparative clinical study wherein 40 patients of *Ekakushta* w.s.r to psoriasis, of either sex were randomly assigned in to two groups i.e., Group A and Group B, comprising 20 patients in each. A case Performa containing all the necessary details pertaining to the study was designed.

Diagnostic Criteria

Diagnosis was made on the basis of *Lakshanas* of *Ekakushta* such as *Matsyashakalavat Twacha* (silvery scales), *Krishnaruna Varna* (black to reddish brown skin lesions), *Abrakapatrasadrushya* (scales resembling *Abraka Patra*), *Asweda* (absence of perspiration, always dry in nature), Auspitz sign should be positive, candle grease sign should be positive

Inclusion Criteria

Patients between the age 16–70 years of either sex, patients with signs and symptoms of *Ekakushta* and patients fit for *Lepa Karma* were included for the study.

Exclusion Criteria

Patients suffering from diabetes mellitus, cancer, AIDS, TB or osteomyelitic disorder and patients aged less than 16 years and more than 70 years and patients unfit for *Lepa Karma* were excluded from the study.

Intervention

40 patients of *Eka-Kushta* w.s.r to psoriasis, who fulfilled the inclusion criteria were selected and randomly assigned into following 2 groups each comprising of 20 patients. In Group A, patients were subjected to *Vidangadi Lepa* application twice in a day

for 14 days and in Group B, patients were subjected to *Jeevantyadi Lepa* application twice in a day for 14 days. Raw drugs were collected from the market and authenticated by the Dept. of Dravyaguna, Shri Shivayogeeshwara Ayurvedic Medical College and Hospital, Inchal. *Vidangadi Lepa* and *Jeevantyadi Lepa* was prepared in the Teaching Pharmacy of Shri Shivayogeeshwara Ayurvedic Medical College and Hospital, Inchal.

Assessment Criteria

Assessment of clinical study was done based on following subjective and objective parameters. *Kandu* (itching), *Aswedana* (anhydrous), *Rookshata* (dryness), *Daha* (burning sensation), *Srava* (discharge), *Arunata* (erythema), *Matsyashakalopama* (scaling)

Grading for objective, subjective signs and symptoms

PASI scoring was calculated by using PASI worksheet of British Columbia a Ministry of Health Service.

Table 1: Grading of Parameters

S.No	Parameters	Features	Grading
1.	*Kandu* (Itching)	No itching	0
		Mild (occasional itching)	1
		Moderate (tolerable/infrequent itching)	2
		Severe (itching frequently)	3
2.	*Aswedanam* (Anhydrosis)	No (non-anhidrosis)	0
		Mild (present in very few lesions)	1
		Moderate (present in few lesions)	2
		Excess (present in all lesions)	3
3.	*Rookshata* (Dryness)	No (no line on scrubbing with nails on lesion)	0
		Mild (faint line on scrubbing by nails on lesion)	1
		Moderate (lining & even words can be written on scrubbing by nail on lesion)	2
		Excess (excessive dryness leading to Itching)	3
4.	*Daha* (Burning sensation)	No (no Burning sensation on lesion)	0
		Mild (burning sensation on lesion)	1
		Moderate (burning sensation on lesion)	2
		Severe (burning sensation on lesion)	3
5.	*Srava* (Discharge)	No discharge on lesion	0
		Mild (discharge on lesion after itching)	1
		Moderate (discharge on lesion after itching)	2
		Severe (discharge on lesion	3
6.	*Arunata* (Erythema)	No (normal skin)	0
		Mild (faint erythema on lesion or near to normal)	1
		Moderate (no blanching + red colour on lesion)	2
		Severe (blanching+ red colour on lesion)	3
7.	*Matsyashakalopama* (Scaling)	No scaling	0
		Scaling off between 7 – 14 days	1
		Scaling off between 4 – 6days	2
		Scaling off between 1 – 3 days	3

Statistical Analysis

For the statistical analysis the data obtained in both the groups were recorded and presented in tabulations and drawings. To infer the clinical study the objective parameter **P.A.S.I** score was subjected to Wilcoxon signed rank test with Bonnferroni's correction. Assessment was taken at BT- Before treatment, AT- After treatment.

OBSERVATIONS AND RESULTS

Out of 40 patients, 39.0% belonged to the age group of 31-40 years,14.6% to the age group 41-50 years, 36.6% belonged to age group of 51-60 years, 22.5% to age group of 51-60 and 7.3% to the age group of 18- 30 years. Regarding the religion, 65.9% were

Hindus and 31.7% belonged to Muslims. Out of 40, 85% were males and 15% were females. Maximum patients i.e., 95% were married, 5% were unmarried and no widows. 60% belonged to middle class economic status, 30% to poor class and 10% belonged to upper class economic status. Regarding diet, out of 40 patients, minimum patients i.e., 30 % were vegetarians and 70% were having mixed diet. 90% were having normal *Mala Pravritti* and 10% were having constipation.

Itching

Wilcoxon signed rank test – Results on itching

	Parameters	Negative rank			Positive rank			Ties	Total	Z value	P value	Remarks
		N	MR	SR	N	MR	SR					
Group A	Itching BT to Itching AT	18	9.50	171.00	0	0	0	2	20	-3.862	0.000	S
Group B	Itching BT to Itching AT	16	8.94	143.00	1	10.00	10.00	3	20	-3.219	0.001	S

Between the groups: Mann Whitney test – Results on itching

Ranks							
	Group	N	Mean Rank	Sum of Ranks	Mann- Whitney U	Z value	P value
*Kandu*_AT	Group A	20	18.25	365.00	155.00	-1.369	.231
	Group B	20	22.75	455.00			
	Total	40					

Within the group results in study group showed that 18 participants had reduction in itching with *Vidangadi lepa* and 2 participants had no change. Itching was same as earlier but p value was 0.00 which is less than 0.05 and indicates statistically significant results which imply *Vidangadi lepa* effective in the management of itching. In control group after treatment 16 participants had reduction in itching with *Jeevantyadi lepa* and 3 participants had no change, in one participant itching was increased with the P value 0.001 which was statistically significant and implies *Jeevantyadi lepa* is shown effective in the management of itching. Between the groups, p value is 0.231 which is more than 0.05 indication of non- significance hence both groups were effective when we compare mean rank of Group 1 *(Vidangadi lepa),* Group 2 *(jeevantyadi lepa) Vidangadi lepa* shown better results than *Jeevanthyad lepa.*

Aswedanam

Wilcoxon signed rank test – Results on *Aswedanam*

	Parameters	Negative rank			Positive rank			Ties	Total	Z value	P value	Remarks
		N	MR	SR	N	MR	SR					
Group A	*Aswedan* am BT to *Aswedan* am AT	16	9.50	152.0	0	0	0	4	20	- 3.300	0.001	S
Group B	*Aswedan* am BT to Aswedan am AT	14	7.50	105.0	0	0	0	6	20	- 3.742	0.157	NS

Between the groups: Mann Whitney test – Results on Aswedanam

Ranks							
	Group	N	Mean Rank	Sum of Ranks	Mann-Whitney U	Z value	P value
Aswedanam	Group A	20	21.45	429.00	181.00	-.828	.407
	Group B	20	19.55	391.00			
	Total	40					

Within the group, in study group after treatment, 16 participants had reduction in *Aswedanam* with *Vidangadi lepa* and 4 participants had no change, itching was same as earlier with p value is 0.00 which is less than 0.05 which is statistically significant which implies *Vidangadi lepa* is shown effective in management of *Aswedanam*. In control group after treatment 14 participants were had reduction in itching with *Jeevantyadi lepa* and 6 participants had no change, with the P value 0.157 which is statistically not significant which implies *Jeevantyadi lepa* is shown not much effective in the management of itching. Between the groups, p value is 0.407 which is more than 0.05 indication of non- significance hence both groups were effective when we compare mean rank of Group 1 *(Vidangadi lepa),* Group 2 *(jeevantyadi lepa) Vidangadi lepa* shown better results than *Jeevanthyadi lepa.*

Dryness

Wilcoxon signed rank test – Results on dryness												
	Parameters	**Negative rank**			**Positive rank**			**Ties**	**Total**	**Z value**	**P value**	**Remarks**
		N	**MR**	**SR**	**N**	**MR**	**SR**					
Group A	Dryness BT to dryness AT	20	10.50	210.00	0	0	0	0	20	- 4.029	0.000	S
Group B	Dryness BT to dryness AT	20	10.50	210.00	0	0	0	0	20	- 4.064	0.000	S

Between the groups: Mann whitney test – Results on dryness

Ranks							
	Group	**N**	**Mean Rank**	**Sum of Ranks**	**Mann-Whitney U**	**Z value**	**P value**
Rookshata	Group 1	20	17.23	344.50	134.00	-2.022	.043 NS
	Group 2	20	23.78	475.50			
	Total	40					

Within the group, in study group after the treatment, 20 participants had reduction in dryness with *Vidangadi lepa* and p value is 0.00 which is less than 0.05 which is statistically significant which implies *Vidangadi lepa* is shown effective in management of Dryness. In control group, after treatment 20 participants had reduction in dryness with *Vidangadi lepa* and p value is 0.00 which is less than 0.05 and is statistically significant and implies that the *Vidangadi lepa* is effective in management of dryness. Between the group, p value is 0.043 which is less than 0.05 indication of significance hence group 1 *(Vidangadi lepa)* is effective than Group 2 *(Jeevantyadi lepa) Vidangadi lepa* shown better results than *Jeevanthyadi lepa*.

Daha

Wilcoxon signed rank test – Results on *Daha*												
	Parameters	**Negative rank**			**Positive rank**			**Ties**	**Total**	**Z value**	**P value**	**Remarks**
		N	**MR**	**SR**	**N**	**MR**	**SR**					
Group A	*Daha* BT to *Daha* AT	18	9.50	171.00	0	0	0	2	20	- 3.808	0.000	S
Group B	*Daha* BT to *Daha* AT	16	8.50	136.00	0	0	0	4	20	- 3.624	0.000	S

Between the groups: Mann Whitney test – Results on *Daha*

Ranks							
	Group	**N**	**Mean Rank**	**Sum of Ranks**	**Mann- Whitney U**	**Z value**	**P value**
Daha	Group A	20	17.03	340.50	130.500	-2.128	.033 NS
	Group B	20	23.98	479.50			
	Total	40					

Within the group, in study group after treatment 18 participants had reduction in *Daha* with *Vidangadi lepa* and 2 participants had no change, itching was same as earlier but p value is 0.00 which is less than 0.05 which is statistically significant which implies *Vidangadi lepa* is shown effective in management of *Daha*. In control group after treatment 16 participants had reduction in *Daha* with *Jeevantyadi lepa* and 4 participants had no change and P value 0.001 which is statistically significant and implies *Jeevantyadi lepa* is effective in the management of *Daha*. Between the groups p value is 0.043 which is less than 0.05 indication of significance hence group 1 *(Vidangadi lepa)* is effective than Group 2 *(Jeevantyadi lepa) Vidangadilepa* shown better results than *Jeevanthyad lepa.*

Srava

Wilcoxon signed rank test – Results on *Srava*												
	Parameters	**Negative rank**			**Positive rank**			**Ties**	**Total**	**Z value**	**P value**	**Remarks**
		N	MR	SR	N	MR	SR					
Group A	Discharge BT to Discharge AT	19	10.00	190.00	0	0	0	1	20	- 3.895	0.000	S
Group B	Discharge BT to Discharge AT	19	10.00	190.00	0	0	0	1	20	- 3.919	0.000	S

Between the groups: Mann whitney test – Results on *Srava*

Ranks							
	Group	**N**	**Mean Rank**	**Sum of Ranks**	**Mann-Whitney U**	**Z value**	**P value**
Srava	Group A	20	17.60	352.00	142.00	-1.812	.070 NS
	Group B	20	23.40	468.00			
	Total	40					

Within the group, in study group after treatment 19 participants had reduction in discharge with *Vidangadi lepa* and 1 participant had no change, and p value is 0.00 which is less than 0.05 is statistically significant and implies that *Vidangadi lepa* is shown effective in management of discharge. In control group after treatment 19 participants had reduction in discharge with *Jeevanthyadi lepa* and 1 participant had no change, and p value is 0.00 which is less than 0.05 which is statistically significant and implies *Jeevantyadi lepa* is effective in management of discharge. Between the groups p value is 0.70 which is more than 0.05 indication of non-significance hence both groups were effective when we compare mean rank of Group 1 *(Vidangadi lepa),* Group 2 *(Jeevantyadi lepa) Vidangadi lepa* shown better results than *Jeevanthyad lepa.*

Arunata

Wilcoxon signed rank test – Results on *Arunatha*

	Parameters	**Negative rank**			**Positive rank**			**Ties**	**Total**	**Z value**	**P value**	**Remarks**
		N	**MR**	**SR**	**N**	**MR**	**SR**					
Group A	*Arunatha* BT to *Arunatha* AT	19	10.00	190.0	0	0	0	1	20	-4.359	0.000	S
Group B	*Arunatha* BT to *Arunatha* AT	18	9.50	171	0	0	0	2	20	-4.243	0.000	S

Between the groups: Mann Whitney test – Results on *Arunata*

Ranks							
	Group	**N**	**Mean Rank**	**Sum of Ranks**	**Mann-Whitney U**	**Z value**	**P value**
Arunatha	Group A	20	19.00	380.00	170.00	-1.233	.218 NS
	Group B	20	22.00	440.00			
	Total	40					

Within the group, in study group after treatment 19 participants had reduction in *Arunatha* with *Vidangadi lepa* and 1 participant had no change and p value is 0.00 which is less than 0.05 which is statistically significant and implies *Vidangadi lepa* is shown effective in management of *Arunatha*. In control group after treatment 18 participants had reduction in *Arunatha* with *Jeevantyadi lepa* and 2 participants had no change, and the P value 0.001 which is statistically significant and implies that the *Jeevantyadi lepa* is effective in the management of *Arunatha*. Between the group p value is 0.218 which is more than 0.05 indication of non-significance hence both groups were effective when we compare mean rank of Group 1 *(Vidangadi lepa),* Group 2 *(Jeevantyadi lepa) Vidangadi lepa* shown better results than *Jeevanthyad lepa*.

Matsyashakalopam

Wilcoxon signed rank test – Results on *Matsyashakalopam*

	Parameters	**Negative rank**			**Positive rank**			**Ties**	**Total**	**Z value**	**P value**	**Remarks**
		N	**MR**	**SR**	**N**	**MR**	**SR**					
Group A	*Matsyashakalopam* BT to AT	19	10.0	190.0	0	0	0	1	20	-4.359	0.000	S
Group B	*Matsyashakalopam* BT to AT	17	9	153.0	0	0	0	3	20	-4.123	0.000	S

Between the groups: Mann whitney test – Results on *Matsyashakalopam*

Ranks							
	Group	**N**	**Mean Rank**	**Sum of Ranks**	**Mann- Whitney U**	**Z value**	**P value**
Matsyasha kalopama	Group A	20	19.98	399.50	189.500	-.495	.621 NS
	Group B	20	21.03	420.50			
	Total	40					

Within the group, in study group after treatment 19 participants had reduction in *Matsyashakalopam* with *Vidangadi lepa* and 1 participant had no change, and p value is 0.00 which is less than 0.05 which is statistically significant and implies *Vidangadi lepa* is shown effective in management of *Matsyashakalopam*. In control group after treatment 17 participants had reduction in *Matsyashakalopam* with *Jeevanthyadi lepa* and 3 participants had no change, and p value is 0.00 which is less than 0.05 and is statistically significant and implies *Jeevantyadi lepa* is effective in management of *Matsyashakalopam*. Between the group p value is 0.621 which is more than 0.05 indication of non- significance hence both groups were effective when we compare mean rank of Group 1 *(Vidangadi lepa)*, Group 2 *(Jeevantyadi lepa) Vidangadi lepa* shown better results than *Jeevanthyadi lepa*.

Overall Effect Treatment of Both Groups

Group A

Criteria	%	No. of subjects in group A
No improvement (Poor)	0-25%	6
Mild Improvement (Average)	26-50%	3
Moderate Improvement (Good)	51-75%	7
Marked Improvement (Very Good)	Above 75%	2
Complete Remission (Excellent)	100%	2

Group B

Criteria	%	No. of subjects in group B
No improvement (Poor)	0-25%	3
Mild Improvement (Average)	26-50%	5
Moderate Improvement (Good)	51-75%	4
Marked Improvement (Very Good)	Above 75%	6
Complete Remission (Excellent)	100%	2

DISCUSSION

Approximately 2% of the world's population is affected with psoriasis including both men and women. Though psoriasis is not life threatening, its detrimental effect on quality of life that disturbs the living is compared to diabetes, depression, ischemic heart disease and cancer as per the research studies.[16] This disease is very often linked with loss of self-confidence, pain, discomfort, physical disability, social stigmatization and psychological distress.[17] Additionally moderate to extreme feelings of anxiety, anger, depression and higher frequency of suicidal ideation are also reported with many patients.[18]

In Ayurveda, most of the skin diseases have been classified under the heading of *Kushta*. It is difficult to say what psoriasis is in terms of Ayurveda. There is no disease in Ayurveda which can exactly be correlated with psoriasis. Many research workers have tried to attribute psoriasis with one or other type of *Kushta*. All the research workers included psoriasis under *Kshudrakushta*, but while on co-relation with specific type they differed i.e., some correlated it with *Kitibha* and others with *Sidhma* or *Ekakushta. Ekakushta* can be studied in correlation with psoriasis because the description and characteristic features of it are co-coinciding with description of psoriasis than any other type of *Kushta*. In *Kitibha* the lesions are *Sukshma* & *Sravi* (exudation). But in psoriasis the lesions are larger and dry. In *Sidhma* the lesions are mostly found in *Urdhvakaya* (upper portion of body) but in psoriasis the lesions are distributed all over the body. In *Sidhma* there is scaling which is like *Raj* (dust particles) and *Kandu* also present but in psoriasis there is scale formation and *Kandu* usually absent. Thus *Kitibha* and *Sidhma* are not correlated with psoriasis. Description and characteristic features of *Ekakushtha* very closely match the description of psoriasis which are as follows: In *Ekakushta* the characteristics are *Asvedana*, *Mahavastu* and *Matsyashakalopama*. Also, other symptoms pertaining to *Vata* and *Kaphadosha* are present in both e.g- *Rukshata* (dry skin- *Vata*), *Bahalatva* (macules and papules- *Kaphadosha, Kandu* (itching- *Kaphadosha*)

Mode of action of *Vidangadi Lepa*

Vidangadi Lepa contains ingredients like *Vidanga*, *Saindhava*, *Haritaki* and *Sarshapa* are having anti- prurital, antimicrobial, antifungal property so they played a major role to reduce the *Kandu*. Simultaneously *Sikta* and *Tila Taila* are *Jantughna* and *Twachya* which helps to reduce the discoloration of skin. All the drugs in *Vidangadi Lepa* are having *Snigdha* and *Picchila* property specially *Taila* so they reduced *Rookshata.*

Mode of action of *Jeevanthyadi Lepa*

Jeevanthyadi Lepa contains ingredients like *Tuttha*, *Kampillaka* and *Sarshapataila* are having anti-prurital property so they played a major role to reduce

the *Kandu*. Simultaneously *Manjistha* and *Daruharidra* are *Raktasodhaka* which helps to reduce the *Kandu*. *Jivanti* work as vitalizers of skin and they increase the immunity of skin cells, which is again responsible for reducing the itching sensation. Thus, in total *Jeevanthyadi Lepa* reduces *Kandu*. All the drugs in *Jeevanthyadi Lepa* are having *Snigdha* property specially *Taila* so they reduced *Rookshata*. Also, probable mode of action of *Jeevanthyadi Lepa* and *Vidangadi Lepa* can be understood as follows: In skin diseases, external/topical application is an important part of therapy. To understand the mode of action of *Jeevanthyadi Lepa* and *Vidangadi Lepa*, we firstly have to think about the pharmaceutical aspects of *Lepa*. Acharya Sushruta has explained the efficacy of *Lepa* in following manner: By pouring water over a burning house, the fire is extinguished immediately; in the same manner the *Lepa* pacifies the provoked local *Doshas* by local application. Moreover, it has also actions like *Shodhana, Utsadana*, and *Ropana* and *Prahladana*.

Probable Mode of Action of *Lepa*

The probable mode of action of *Lepa* can be described in two steps as follows:

I) Pilosebaceous Uptake

When a *Lepa* is applied over the surface of skin opposite to the direction of hairs on it, through a proper base, the active principles of the ingredients of *Lepa* are released into that base. After that, this combination enters the *Romakupa* and further gets absorbed through the *Svedavahi srotas* and *Siramukha*. However, it should be kept in mind that the pilosebaceous uptake i.e., absorption of *Lepa* differs as per the site variation, skin condition and more important is the base through which it is applied.

II) Cutaneous Biotransformation

Thereafter it is subjected for *Pachana* by *Bhrajakagni* viz., the viable epidermis starts off the catabolic degradation of the absorbed material with the help of essential enzymes. *Ekakushta* is *Kapha-Vata* dominant disease. Upon topical application, the active principle of the *Lepa* reaches to the deeper tissues through *Siramukha* and *Svedavahi srotas* and stains it with its *Sukshma* and *Tikshna* property. Due to its *Ushna*, *Tikshna, Vishada* and *Sukshma* properties it deblocks the obstruction in *Svedavahisrotas* and allows the local toxins to flow out through the *Sveda*, thus clearing out the micro channels. The *Ushna Virya* of *Vidangadi Lepa* and *Snigdha Guna* of its vehicle i.e., *Siktha*, *Sarshapa taila* causes pacification of *Vata* and *Kapha* which forms the *Samprapti* thus alleviating the symptoms. In most of the patients *Kandu* was relieved significantly due to the *Kandughna* property of *Daruharidra* and *Sarshapa taila*. The abatement in scaling should be attributed to the Anti-scaling property of *Siktha* used as base.

Kushta is caused by simultaneous vitiation of all *Tridoshas*. Even then it is classified as *Vatika, Pittika* and *Kaphaja* because of dominance of *Dosha*. All the types of *Kushta* are presented invariably with *Sapthako darvya sangraha*. *Ekakushta* is one such type of *Kushta* which is having *Vata kapha* as the dominant *Dosha* with both *Rookshata* and *Kandu* invariably. Local dryness and inflammation of the dermis is one among the main reason for *Kandu*. In the present study *Vidangadi lepa* and *Jeevantyadi lepa* which are containing *Snigdha* and *Picchila guna* drugs helps in reducing localized *Rookshata* of the body followed by reduction in itching.

CONCLUSION

The present study is a comparative clinical study with pre - test and post - test design where in 40 patients of either sex diagnosed as *Eka Kushta* w.s.r. to psoriasis were randomly assigned into two groups comprising of 20 patients in each. The patients in Group A were subjected to *Vidangadi Lepa* as external application whereas the patients in Group B were subjected to *Jeevantyadi Lepa.* The overall observation in the study revealed that the maximum number of patients were males in the age group of 31-40 years belonging to middle class, Hindu Religion, married, graduated having mixed diet and disturbed sleep presenting with all the *Lakshanas* of *Ekakushta* for the duration of 1-5 years. The effect of treatment in both the groups has shown statistically highly significant results (P value <0.001) in all the parameters like *Kandu*, *Aswedanam*, *Rookshata, Daha*, erythema, *Matsyashakalopama*, epidermal thickening, *Mahavastu*, PASI score. This study shows that the treatment was highly effective in both the groups and was more significant in Group A compared to Group B. The overall result in the study showed that there is no statistically significant difference between the two groups since both the groups showed statistically highly significant improvement after treatment with p value <0.001. Based on observation and results following hypothesis are accepted. There is statistically significant effect of *Vidangadi Lepa* as *Bahya upakrama* in reducing signs and symptoms of *Ekakushta*. There is statistically significant effect of *Jeevantyadi Lepa* as *Bahya upakrama* in reducing signs and symptoms of *Ekakushta*. Though both the line of treatments showed significant results in *Ekakushta* w.s.r to psoriasis, *Vidangadi Lepa* was more effective compared to *Jeevantyadi Lepa*.

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