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EFFICACY OF *AROHANAKRAMASNEHAPANA* AND *SADYO-SNEHANA* FOR *VIRECHANA KARMA* IN *EKAKUSHTA* WITH SPECIAL REFERENCE TO PSORIASIS – A COMPARATIVE STUDY

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ABSTRACT

Eka Kushta is one among the *Kshudra Kushta* presenting with *Aswedanam* (absence of sweating), *Mahavastu* (extensive localization), *Matsyashakalopama* (resembles the scales of fish) lakshana thereby affecting the somatic make-up, psychological and social aspects of an individual. In modern parlance, it simulates Psoriasis, a chronic, non-infectious skin disease characterized by well defined, slightly raised, dry, silvery erythematous macules of typical extensor distribution with its prevalence ranging from 0.1% to 3% of world population. *Virechana Karma* (purgation) occupies the prime seat in the management of *Eka Kushta* as it is dominated mainly by *Pitta* as well as *Rakta*. *Snehapana* (oleation), the *purvakarma* (pre- procedure) of *Virechana* plays a pivotal role by its action of *dosha utkleshana* (excitement of doshas) thereby mobilizing the *utklishta doshas* (excited doshas) from *Shakha* (extremities) to *Koshta* (abdomen) and can be achieved by adopting either *Arohanakrama* (increasing order of snehapana) or *Sadyo-Snehana* (1 day of snehapana). *Amruta Ghrita* is used for *Snehapana* as it is indicated in *Kushta*. Hence, a study was planned to evaluate the efficacy of *ArohanaKrama Snehapana* and *Sadyo-Snehana* for *Virechana Karma* in *Eka Kushta* with special reference to Psoriasis. The present study is a open 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. In Group A and B patient were subjected to *Pachana–Deepana* with *Panchakola Churna*. In Group A, patients were subjected to *ArohanaKrama Snehapana* with *Amruta Ghrita* followed by *Virechana* with *Trivruth Avalehya* whereas in Group B, patients were subjected to *Sadyo-Snehana* for 1 day with *Amruta Ghrita* followed by *Virechana* with *Trivruth Avalehya*. Based on *shuddhi* (amount of purification), *Samsarjana Krama* (dietary regimens) was advised in both the Groups. 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 presenting with all the lakshanas of Eka Kushta for the duration of 1-5 years. The overall result in the study revealed that both the groups showed statistically significant result and there is no statistically significant difference between the two groups since both the groups showed similar improvement in almost all the parameters with p value < 0.001. All the patients in both the groups presented with *Samyak Snigdha* (proper oleation) and *Samyak Virechana* (proper purgation) *Lakshanas*. Hence, the present study reveals that there is no significant difference between *Arohana Krama Snehapana* and *Sadyo-Snehana* for *VirechanaKarma* in *Eka Kushta*.

KEYWORDS: *Eka Kushta*, Psoriasis, *Arohana Krama, Sadyo-Snehana, Virechana.*

INTRODUCTION

In Ayurveda, all the skin diseases are categorized under *Kushta* among which Psoriasis is commonly identified with *Eka Kushta* which is one among the *Kshudra Kushta*.

Psoriasis is one of the most common skin disease equally affecting both males and females of all the age groups ranging up to 1% to 2% of the world's population.[1]

Kushta, a disease of *Bahudosha*, *Bhuridosha* and *Saptakodushyasangraha* is to be treated by adopting repeated *Shodhana* (purification), among which, *Virechana Karma* could be the best to handle this condition. *Viruddha Ahara* (unwholesome food) is being identified as the main causative factor for *Kushta Vyadhi* and the *Chikitsa* (treatment) of *Viruddha Ahara* by *Acharya Charaka* also lays emphasis on *Virechana Karma*.

Snehana, a procedure mentioned under *Shadvidha Upakram*a (six basic therapies) is being used as a part of *Shodhana* as its *Purvakarma*. *Snehapana* plays a pivotal role by its action of *doshautkleshana* thereby mobilizing the *utklishtadoshas* from *Shakha* to *Koshta* and can be achieved by adopting either *ArohanaKrama* or *Sadyo-Snehana*. *ArohanaKrama* is the most popular and commonly adopted method of *Snehapana* whereas *Sadyo-Snehana* is adopted in *Baala* (children), *Vruddha* (aged), *Snehaparihara Asahishnu* (who cannot withstand the discomforts or avoidance of things prohibited during of oleation therapy) and in conditions requiring *Ishat Snigdhata* (less oleation) as well as to reduce the duration of *Virechana Karma* in conditions where *Kramatah* (one followed by another) and *PunahPunah* (repeated purification) *Shodhana* are required.

OBJECTIVES OF THE STUDY

- To evaluate the efficacy of *Arohana Krama*[2] *Snehapana* for *Virechana Karma*[3] in *Eka-Kushta* with special reference to Psoriasis.
- To evaluate the efficacy of *Sadyo–Snehana* for *Virechana Karma* in *Eka-Kushta* with special reference to Psoriasis.
- To compare the efficacy of *Arohana Krama Snehapana* and *Sadyo–Snehana* for *Virechana Karma* in *Eka-Kushta* with special reference to Psoriasis.

MATERIALS AND METHODS

Source of data

40 patients suffering from *Eka Kushta (*Psoriasis) who were found suitable as per inclusion criteria were selected from OPD and IPD of S.K.A.M.C, H & R.C., Bangalore, were selected for the study.

Method of collection of data

It is a no blind clinical study of *Arohana Krama Snehapana* and *Sadyo–Snehana* with *Amruta Ghrita* for *Virechana Karma* in the management of *Eka Kushta* with special reference to Psoriasis consisting of 20 patients in each group where in pre–test and post–test design was done of either sex were randomly assigned into two groups comprising of 20 patients in each.

A special case proforma containing details necessary for the study was prepared.

Paired ‘t’ test and Unpaired ‘t’test were employed.

This study was conducted after taking written consent form from participant and study was done by following Helsinki declaration.

Diagnostic criteria

Symptoms of EkaKushta (Psoriasis)-*Asvedanam*, *Mahavastu* and *Matsyashakalopamalakshanas*
Koebner phenomenon
Candle grease sign
Auspitz’s sign

Inclusion criteria

Patients presenting with the symptoms of *Eka Kushta* (Psoriasis).
Patients of either sex between the age group of 16–60 years.

Exclusion criteria

Patients with major systemic diseases those who were not willing for participation in this research study.

Duration of study

Table No 1- Showing duration of study

	Group A	Group B
Pachana–Deepana in days	3	3
Snehapana in days	3 to 7	1
Vishrama Kala in days	3	3
Virechana in days	1	1
Samsarjana Krama in days	3 to 7	3 to 7
Total in days	13 to 21	11 to 15

Grouping and Posology

Group – A

Pachana–Deepana was done with 3gms *Panchakola Churna*[4] TID before food for 3 days with *Ushnajala (*hot water).

Arohana Krama Snehapana was done with *Amruta Ghrita*[5] with *Ushnajala* based on the *koshta* and *agni* of the patient till *samayak snigdha lakshanas* were seen.

For 3 days of *Vishramakala, Sarvanga Abhyanga* was done with *Suryapaki Kutajapatra Taila* followed by *Bashpa Sweda*.

Next day, following *Sarvanga Abhyanga* and *Bashpa Sweda, Virechana Karma* was done with *Trivrut Avalehya*[6] followed by *Ushnajala* based on *koshta* of the patient.

Based on *shuddhi, SamsarjanaKrama* was advised.

Group – B

Pachana–Deepana was done with *Panchakola Churna* 3gms TID before food for 3 days with *Ushnajala*.

Sadyo–Snehana[7] was done with *Amruta Ghrita* 150 ml added with *Saindhava lavana* 10 gms mixed well and given with *Ushnajala* for 1 day.

For 3 days of *Vishramakala, Sarvanga Abhyanga* was done with *Suryapaki Kutajapatra Taila* followed by *Bashpa Sweda.*

Next day, following *Sarvanga Abhyanga* and *Bashpa Sweda, Virechana Karma* was done with *Trivrut Avalehya* followed by *Ushnajala* based on *koshta* of the patient.

Based on *shuddhi, Samsarjana Krama* was advised.

Assessment criteria

The assessment of disease was done based on following Subjective and Objective parameters using different grading and scoring methods before and after the treatment.

Table No 2- Showing assessment criteria	
Subjective parameter	
Itching	
No itching	**0**
Mild / occasional itching	**1**
Moderate (tolerable) infrequent itching	**2**
Severe itching frequently	**3**
Very severe itching disturbing sleep and other activities	**4**
Erythema	
Normal skin	**0**
Faint erythema on lesions or near to normal	**1**
Blanching + red colour on lesions	**2**
No blanching + red colour on lesions	**3**
Red colour + Subcutaneous involvement on lesions	**4**
Scaling	
No Scaling	**0**
Scaling off between 15 – 28 days	**1**
Scaling off between 7 – 14 days	**2**
Scaling off between 4 – 6 days	**3**
Scaling off between 1 – 3 days	**4**
Anhydrous	
Non Anhydrous	**0**
Mild, Present in very few lesions	**1**
Moderate, Present in few lesions	**2**
Excess, Present in all lesions	**3**
Excess, Anhydrous in both lesions and uninvolved skin	**4**
Dryness	
No line on scrubbing with nail on lesions	**0**
Faint line on scrubbing by nails on lesions	**1**
Lining & even words can be written on scrubbing by nail on lesions	**2**
Excessive Dryness leading to Itching on lesions	**3**
Dryness leading to crack formation on lesions	**4**
Burning SENSATION	
No Burning sensation on lesions	**0**
Mild Burning sensation on lesions	**1**
Moderate Burning sensation on lesions	**2**
Severe Burning sensation on lesions	**3**
Severe Burning sensation on lesions affecting sleep	**4**
Epidermal thickening	
No thickening on lesions	**0**
Mild thickening on lesions	**1**
Moderate thickening on lesions	**2**
Severe thickening on lesions	**3**
Severe thickening with induration on lesions	**4**
Elevation	
No elevation on lesions	**0**
Slight elevation on lesions that cannot be felt	**1**
Elevation on lesions can be felt but depressed in middle	**2**
Elevation in all lesions but soft	**3**
Elevation in all lesions and hard	**4**
Discharge	
No Discharge on lesions.	**0**
Occasional Discharge on lesions after itching.	**1**
Mild Discharge on lesions after itching.	**2**
Moderate Discharge on lesions.	**3**
Profuse Discharge on lesions making clothes wet.	**4**
Joint involvement	
No Pain	**0**
Slight pain	**1**
Pain present but do not hinder normal activity	**2**
Pain with deformity	**3**
Pain with deformity affecting normal activity & sleep	**4**
Sleep	
Sound Sleep	**0**
Sleeps soundly when interrupted can sleep again	**1**
Sleeps soundly when interrupted can't sleep again	**2**
Disturbed sleep but can sleep for few hrs.	**3**
No sleep at all	**4**
Objective parameter	
PASI	
PASI scoring was calculated by using PASI worksheet of British Columbia, A Ministry of health service.	

The assessment of procedure was done based on observations of *Samyak, Ayoga* and *Ati-yoga lakshanas* of *Snehapana* and *Virechana Karma*.

OBSERVATIONS

Table No 3- Showing the maximum value of various parameters along with category in group A and group B

Parameter	Group A			Group B		
	Category	Value	%	Category	Value	%
Age in Years	21-30, 31-40	7 Each	35%	31-40	6	30%
Sex	Male	13	65%	Male	11	55%
Religion	Hindu	19	95%	Hindu	19	95%
Education	HS, PUC,GR	5 Each	25%	GR	7	35%
Marital Status	Married	17	85%	Married	13	65%
Socio-economic Status	Middle class	14	70%	Middle class	14	70%
Family history	Absent	17	85%	Absent	14	70%
Occupation	House wife	4	20%	Student	6	30%
Diet	Veg, Mixed	10	50%	Mixed	13	65%
Sleep	Sound	14	70%	Disturbed	19	95%
Exposure to AC	Absent	12	60%	Absent	17	85%
Addictions	No	14	70%	No	15	75%
Built	Moderate	19	95%	Moderate	20	100%
Aswedanam	Present	20	100%	Present	20	100%
Mahavastu	Present	20	100%	Present	20	100%
Matsyashakalopama	Present	20	100%	Present	20	100%
Associated complaints	Kandu	16	80%	Kandu	12	60%
Duration of disease	1-5 years	7	35%	1-5 years	9	45%
Candle Grease Sign	Present	20	100%	Present	20	100%
Auspitz's Sign	Present	20	100%	Present	20	100%
Koebner Phenomenon	Absent	13	65%	Present, Absent	10 Each	50%
Nail Deformity	No	11	55%	No	10	50%
Prakruti	Vata Pitta	10	50%	Pitta Kapha	10	50%
Vikruti	Madhyama	20	100%	Madhyama	20	100%
Sara	Mamsa	8	40%	Mamsa	13	65%
Samhanana	Madhyama	20	100%	Madhyama	20	100%
Pramana (height)	Madhyama	176 Cms		Madhyama	166 Cms	
Satmya	Madhyama	16	80%	Madhyama	18	90%
Satva	Madhyama	20	100%	Madhyama	20	100%
Abhyavaharana Shakti	Madhyama	20	100%	Madhyama	20	100%
Jarana Shakti	Madhyama	20	100%	Madhyama	20	100%
Vyayama Shakti	Madhyama	20	100%	Madhyama	20	100%
Vaya	Yo, Sa	7	35%	Sa	7	35%
Koshta	Madhyama	17	85%	Madhyama	18	90%

RESULTS

Table No 4 - Showing result within group A and within group B; Paired 't' test

Parameter		Mean	SD	SE	t value	p value	Remarks
Itching	A	2.00	0.46	0.10	19.49	< 0.001	HS
	B	2.15	0.37	0.08	26.25	< 0.001	HS
Anhydrous	A	1.70	0.57	0.13	13.31	< 0.001	HS
	B	1.75	0.55	0.30	14.23	< 0.001	HS
Dryness	A	1.65	0.75	0.17	9.90	< 0.001	HS
	B	1.90	0.64	0.14	13.26	< 0.001	HS
Epidermal thickening	A	1.60	0.50	0.11	14.24	< 0.001	HS
	B	1.80	0.62	0.14	13.08	< 0.001	HS
Burning sensation	A	0	0	0	0	-	-
	B	0.05	0.22	0.05	1.00	> 0.05	NS
Elevation	A	1.65	0.75	0.17	9.90	< 0.001	HS
	B	1.90	0.72	0.16	11.83	< 0.001	HS
Erythema	A	2.00	0.65	0.15	13.78	< 0.001	HS
	B	2.00	0.46	0.10	19.49	< 0.001	HS
Scaling	A	1.55	0.51	0.11	13.58	< 0.001	HS
	B	1.80	0.52	0.12	15.39	< 0.001	HS
Joint involvement	A	0	0	0	0	-	-
	B	0.05	0.22	0.05	1.00	> 0.05	NS
Sleep	A	0.95	0.51	0.11	8.32	< 0.001	HS
	B	0.80	0.77	0.17	4.66	< 0.001	HS
PASI	A	14.30	7.60	1.70	8.42	< 0.001	HS
	B	17.80	10.09	2.26	7.89	< 0.001	HS

Table No 5 - Showing the result in between group A and group B; Unpaired 't' test

Parameter	BT/AT	Group	Mean	SD	SE	PSE	t value	p value	Remarks
Itching	BT	A	2.90	0.64	0.14	0.20	0.49	> 0.05	NS
		B	3.00	0.65	0.15				
	AT	A	0.90	0.72	0.16	0.21	0.24	> 0.05	NS
		B	0.85	0.59	0.13				
Anhydrous	BT	A	2.60	0.68	0.15	0.23	0.22	> 0.05	NS
		B	2.65	0.75	0.17				
	AT	A	0.90	0.55	0.12	0.17	0.00	-	-
		B	0.90	0.55	0.12				
Dryness	BT	A	2.30	0.86	0.19	0.22	1.58	> 0.05	NS
		B	2.65	0.49	0.11				
	AT	A	0.65	0.67	0.15	0.22	0.46	> 0.05	NS
		B	0.75	0.72	0.16				
Epidermal Thickening	BT	A	2.60	0.60	0.13	0.18	1.13	> 0.05	NS
		B	2.80	0.52	0.12				
	AT	A	1.00	0.56	0.13	0.21	0.00	-	-
		B	1.00	0.73	0.16				
Burning sensation	BT	A	0.00	0.00	0.00	0.10	1.00	> 0.05	NS
		B	0.10	0.45	0.10				
	AT	A	0.00	0.00	0.00	0.05	1.00	> 0.05	NS
		B	0.05	0.22	0.05				

Elevation	BT	A	2.40	0.60	0.13	0.20	1.24	> 0.05	NS
		B	2.65	0.67	0.15				
	AT	A	0.75	0.55	0.12	0.21	0.00	-	-
		B	0.75	0.79	0.18				
Erythema	BT	A	2.65	0.59	0.13	0.16	1.90	> 0.05	NS
		B	2.95	0.39	0.09				
	AT	A	0.65	0.59	0.13	0.16	1.90	> 0.05	NS
		B	0.95	0.39	0.09				
Scaling	BT	A	2.70	0.57	0.13	0.17	0.58	> 0.05	NS
		B	2.80	0.52	0.12				
	AT	A	1.15	0.49	0.11	0.15	1.00	> 0.05	NS
		B	1.00	0.46	0.10				
Joint involvement	BT	A	0.00	0.00	0.00	0.15	1.00	> 0.05	NS
		B	0.15	0.67	0.15				
	AT	A	0.00	0.00	0.00	0.10	1.00	> 0.05	NS
		B	0.10	0.45	0.10				
Sleep	BT	A	1.25	0.44	0.10	0.21	0.70	> 0.05	NS
		B	1.10	0.85	0.19				
	AT	A	0.30	0.47	0.11	0.15	-	-	-
		B	0.30	0.47	0.11				
PASI	BT	A	46.80	11.5	3.64	5.521	0.56	> 0.05	NS
		B	43.70	13.1	4.15				
	AT	A	32.70	8.60	2.72	3.334	5.78	< 0.001	HS
		B	13.40	6.10	1.93				

DISCUSSION

Discussion on procedure

The procedure adopted in the present study is *Virechana Karma* which involves *Purva Karma* in the form of *Pachana-Deepana*, *Snehapana*, *Abhyanga* and *Bashpa Sweda* during *Vishrama Kala* and *Paschat Karma* in the form of *Samsarajana Krama*. As the present study deals with two different methods of *Shodhananga Snehapana*, both *Snehapana* and *Virechana* are being discussed here.

Snehapana

Course of *Shodhananga Snehapana:* *Shodhananga Snehapana* should be done for a minimum period of 3 days and a maximum period of 7 days. In certain specific conditions, *Snehapana* done for 1 day is being identified as *Sadyo-Snehana.*

Time of Administration of *Shodhananga Snehapana* According to Sushruta Samhita, *Shodhananga Snehapana* should be administered at the time of sunrise.

***Anupana*:**. In the present study, *Sukhoshna Jala* was advised as *Anupana* as *Sneha* was in the form of *Ghrita.*

Diet during *Snehapana*: The food to be administered should be *Drava* (liquid), *Ushna* (hot) and *Anabhishyandi* (not unwholesome), which are not *atisnigdha* (over oleated). In the present study, patients were advised to consume Ganji, Rice with Rasam and Hot water during *Snehapana* following *Sneha jeernata* (after sneha is digested).

Modus Operandi of *Shodhananga Snehana*

Sneha loosens the *Doshas* which are adherent to the walls of minute channels. The main purpose of *Purvakarma* is to bring *Doshas* from *Shakha* to *Koshta*. It is done by *Snehana* and *Swedana* (perspiration). Acharya Charaka has described about movement of *Doshas* from *Shakha* to the *Koshta*. Acharya Sushruta explains that due to *Snehana* and *Swedana*, the morbid *Doshas* become liquefied and brought to *Koshta* for easy elimination by the *Shodhana*. *Sneha* is having *Ap* (water) as its predominant *Mahabhuta* and spreads in the body due to its *Drava* and *Sukshma Svabahava* (minute nature) and helps in liquefying the *Doshas* due to its *Snigdha* (unctuous), *Mridu* (soft), *Drava* and *Sara* (Moving, Fluid), properties. *Sneha* increases *Agni* at all levels i.e. *Jatharagni*, *Bhutagni* and *Dhatvagni*. *Sneha* penetrates *Srotas* (channels) and removes *Sroto Sanga* (blockage in channels), which is one of the important steps in the *Samprapti Vighatana* (breaking of the causative factor), allowing proper movement of *Dosha*. This quality of *Sara guna* of *Sneha* helps in redirecting the *Dosha*, *Dhatu* and *Mala* in proper direction. As *Sneha* is having exactly opposite *Guna* to *Vata Dosha*, *Sneha* attains the proper *Gati* (speed) of *Vata* and helps

to bring the *Shakhagata Dosha* into *Koshta. Vatashamana* (reduction in vata) effect of *Snehana* can be known by observing *Vatanulomana* action. Sneha by virtue of its *Snigdha, Mrdu* qualities brings softness in *Dosha Sanghata, Srotas* and *Deha* (body), which are very important to bring *Doshas* to *Koshta* in *Utkleshana* stage.

Virechana karma

Virechana Karma is defined as the process of elimination of morbid *doshas* through *adhobhaga*.

Diet before and after Virechana: Diet containing *jangala mamsa rasa* (meat of animals of arid or desert-like land), *yusha, snigdha, laghu* (light), *ushna* (hot), *kapha avriddhikara aharas* (food not increasing kapha) are to be given, since *manda kapha* state is required during *Virechana.*

Time of administration of *Virechana Yoga:* *Virechana dravya* should be administered after *Shleshma gata kala* (just before the completion of kapha time). In the present study, *Trivrut Avaleha* was administered in empty stomach at around 9.30 AM followed by *Sukhoshna Jala.*

Assessment of *Virechana*: *Virechana Karma* is assessed by the following parameters.
1. *Antiki,* 2. *Vaigiki,* 3. *Maniki,* 4. *Laingiki*

***Antiki*:** It indicates that *Virechana Karma* should be stopped after ascertaining *Kaphanta lakshana* and in the present study all the patients ended with *Kaphante Virechana.*

***Vaigiki*:** *Vega* should be counted excluding initial *vegas.* 30, 20 and 10 *vegas* are considered as *Pravara* (maximum), *Madhyama* (medium) and *Avara* (minimum). In the present study, maximum number of patients had *Avara vega* with the average value of 10.15 in Group A and 10.3 in Group B.

***Maniki*:** 4, 3 & 2 *prastha* are considered as *pravara, madhyama* & *avara shuddhi* respectively.

Laingiki: *Lakshanas* of *Samyak Virechana* such as *Sroto vishuddhi* (clarity of channels), *Indriya samprasada* (improved sensory and motor functions), *Laghuta* (lightness), *Anamayatva* (subsidence of disease), Kramat (in order) *Vit Pitta Kapha Anila Nirharana* should be observed. In the present study, all the patients presented with Samyak Virechana Lakshana.

Modus Operandi of *Virechana Karma*

- Drugs which are *Ushna* (hot), *Tikshna* (quick, fast), *Sukshma* (small), *Vyavayi* (spreading) and *Vikasi* (opening channels) reach the heart by virtue of their potency and circulate through the large and small *Srotas* due to its *Sukshma* and *Vyavayi* properties and pervade the entire body. Then, they liquefy the morbid elements by virtue of their *Agneya Guna* and crumble them by virtue of its *Tikshna Guna*. Then, this liquefied and crumbled mass loses contact with the wall and the channels in the unctuous body, just like the honey, not adhering to the unctuous vessel. This morbid mass now passes through the minute capillaries and moves towards *Kostha* by virtue of the *Anu, Pravana Bhava* of the drug and ultimately reaches the *Amashaya.* From here, it throws out the morbid matter through the anal route due to the *Bhautika* predominancy of *Jala* and *Prithvi* and *Adhobhagahara Prabhava*.

- Mechanism of *Virechana* occurs due to

1. *Increased propulsive movement* - Due to its irritant property *Virechana Dravya* stimulates motor activity of GI tract. Some of them increases motility by acting on mesenteric plexuses and because of increased propulsive activity, there is less time for absorption by the colon.
2. *Reduced Absorption* - By virtue of its irritative nature, *Virechana Dravya* produces structural injury to the absorbing mucosal cells and thus, absorbing capacity of mucosal cell is decreased.
3. *Fluid Accumulation in Gut - Virechana Dravya* causes structural injury in GIT and leads to inflammation in mucosal cells. Due to inflammatory changes, vasoactive amines and polypeptides increase the membrane permeability in GIT and causes vasodilatation. Some chemical factors are also responsible which increase the permeability in response to acute inflammation.

DISCUSSION ON DRUG

Panchakola churna

Pippali: *Pippali* due to its *Katu* (pungent) *rasa, VataKaphahara* and *Deepana* property.**;** ***Pippalimula*:** *Pippalimula* due to its *Katu rasa, KaphaVatahara, Bhedana* (breaking), *Pachana-Deepana* property**;** ***Chavya:*** *Chavya* due to its *Katu rasa, KaphaVatahara, Pachana-Deepana* property.**;** ***Chitraka:*** *Chitraka* due to its *Katu rasa, VataKaphahara, Pachana-Deepana, Grahi* (astringent) property.**;** ***Nagara*:** *Nagara* due to its *Katu rasa, VataKaphahara, Deepana, Bhedana* property helps in reducing the symptoms of *Eka Kushta*.

Amruta ghrita

Guduchi: *Guduchi* because of its *Tikta* (bitter) *rasa, Tridosa shamaka, Grahi, Kandughna* (reduces itching) and *Dahaprashamana* (reduces burning) property helps in reducing *Kapha* and *Kleda*; ***Dugdha:*** *Dugdha* due to its *Ojo Vriddhikara* property (increases immunity).**;** ***Ghrita:*** *Ghrita* was selected for *Snehapana* as it possesses a unique property "*Samskarasya anuvartana*". It also acts on the *Rasa dhatu, Shukra* and *Ojus. Samskarita Ghrita* imbibes the properties of the drugs added to it and attains the specific *dosha harana* properties. *Ghrita* due to its *Pitta* and *Vatahara* property and *Ojo Vriddhikara* property helps in reducing the symptoms of *Eka Kushta.*

Suryapaki kutajapatra taila
Kutaja: *Kutaja* because of its *Tikta*, *Kashaya* (astringent) *rasa*, *Kapha Pittahara*, *Grahi* and *Deepana* property,**;** ***Tila taila:*** *Tila* because of its *Kashaya*, *Tikta rasa*, *Vatahara* and *Tvachya* (good for skin) property, was useful in reducing the symptoms of *Eka Kushta.*

Trivrut avalehya
Trivrut: *Trivrut* because of its *Tikta Katu rasa*, *Kapha Pittahara* and *Rechana* (purgative) property; ***Sharkra:*** *Sharkara* because of its *Sheeta Virya* (cold property) was useful in reducing the Symptoms of *Kushta.*

Discussion on clinical study
Age: In Group A, 7 (35%) patients belonged to the age group of 21 – 30yrs, 7 (35%) patients belonged to the age group of 31 – 40yrs, 3 (15%) patients belonged to the age group of 51 – 60yrs, 2 (10%) patients belonged to the age group of 41 – 50yrs and 1 (5%) patient belonged to the age group of 16 – 20yrs. In Group B, 6 (30%) patients belonged to the age group of 31 – 40yrs, 5 (25%) patients belonged to the age group of 21 – 30yrs, 5 (25%) patients belonged to the age group of 41– 50yrs, 3 (15%) patients belonged to the age group of 16 – 20yrs and 1 (5%) patient belonged to the age group of 51 – 60yrs. Psoriasis may begin at any age, but it is rare under the age of 10 years. It is most likely to appear first between the ages of 15 and 30 years and same was revealed from the present study.

Sex: In Group A, 13 (65%) patients were Males and 7 (35%) patients were Females. In Group B, 11 (55%) patients were Males and 9 (45%) patients were Females. Psoriasis affects males and females equally which is justified in the present study since there is no much difference between the two.

Religion: In both Group A and Group B, 19 (95%) patients were Hindu and 1 (5%) patient was Muslim. The religion wise distribution of the patients was a projection of geographical predominance of Hindu community in the selected area of study.

Marital Status: In Group A, 17 (85%) patients were married and 3 (15%) patients were unmarried where as in Group B, 13 (65%) patients were married and 7 (35%) patients were unmarried. Stress is being identified as a predisposing factor of Psoriasis and married people are prone to develop stress due to varied reasons such as financial commitment, children education, fulfilling the demands and needs of family, etc. Hence, the present study showing higher incidence of the diseases in married people can be justified.

Educational Status: In Group A, maximum of 5 (25%) patients had studied up to High School, PUC and Graduation followed by 3 (15%) patients who were Post Graduates, 1 (5%) patient had studied up to Primary School and 1 (5%) patient was Illiterate. In Group B, maximum of 7 (35%) patients had studied up to Graduation followed by 4 (20%) patients who studied up to PUC and Post-Graduation, 2 (10%) patients studied up to High School, 1 (5%) patient had studied up to Middle School and Primary School and 1 (5%) patient was Illiterate. The education status of the patients was just a projection of geographical predominance in the selected area of study.

Socio-economic Status: In Group A, maximum of 14 (70%) patients belonged to Middle class, 4 (20%) patients belonged to Lower Middle class and 1 (5%) patient each belonged to Upper Middle class and Rich class. In Group B, maximum of 14 (70%) patients belonged to Middle class, 5 (25%) patients belonged to Lower Middle class and 1 (5%) patient belonged to Upper Middle class. The patients attending to the hospital mainly belonged to middle; lower middle and upper middle class and rarely rich class which was just a projection of geographical predominance in that area.

Family history: In Group A, 3 (15%) patients and in Group B, 6 (30%) patients had the family history of similar complaint where as in Group A, 17 (85%) patients and in Group B, 14 (70%) patients had no family history of similar complaint. The more recent studies have suggested that Psoriasis is a polygenic disorder, i.e., several genes are involved in the pathogenesis. In addition, the Etiology of Psoriasis is multifactorial, i.e., with environmental as well as genetic factors interacting to produce the disease. This interaction and the involvement of several genes are now referred to as a complex multifactorial disease.

Occupation: In Group A, 12 (60%) patients were Others (Retired - 1, Artist - 2, Driver - 2, Temple Worker - 1, Designer - 1, Company Employee - 2, Lecturer - 1, Factory Worker - 1, Advocate - 1), 4 (20%) patients were House wives, 2 (10%) patients were Engineer, 1 (5%) patient was Businessman and 1 (5%) patient was Student. In Group B, 6 (30%) patients were Student, 6 (30%) patients were others (Welding Worker - 2, Sales man - 1, Aaya - 1, Publicity worker - 1, Jobless - 1), 4 (20%) patients were House wives, 3 (15%) patients were Businessmen and 1 (5%) patient was Engineer. In accordance to the working atmosphere of Bangalore, stress is in excess in all types and spheres of work. Disease was seen in patients who were indulging in various types of work and of various classes of jobs. Thus, it can be inferred that there is strong relation to stress and the disease.

Exposure to AC: In Group A, 8 (40%) patients and in Group B, 3 (15%), patients presented with the history of Exposure to AC. In Group A, 12 (60%) patients and in Group B, 17 (85%) patients had no history of Exposure to AC. Even though exposure to AC may trigger the condition, as the sample size is small and many patients belong to middle class who are not used to AC exposure, it is difficult to draw a specific conclusion.

Diet: In Group A, 10 (50%) patients and in Group B, 7 (35%) patients were of Vegetarian diet. In Group A, 10 (50%) patients and in Group B, 13 (65%), patients were of Mixed diet. *Viruddha Ahara* is one of the causative factors for the causation and aggravation of the disease which may be seen more in mixed type of diet as revealed in the study.

Sleep: In Group A, 14 (70%) patients and in Group B, 1 (5%) patient was having Sound Sleep. In Group A, 4 (20%) patients and in Group B, 19 (95%) patients were having Disturbed Sleep. In Group A, 2 (10%) patients were having Delayed Sleep. As itching usually occurs in Psoriasis which may be a cause of Disturbed Sleep.

Addictions: In Group A, 14 (70%) patients were not addicted, 3 (15%) patients were addicted to Alcohol, 2 (10%) patients were addicted to Smoking and 1 (5%) patient was addicted to both Smoking & Alcohol. In Group B, 15 (75%) patients were not addicted, 2 (10%) patients were addicted to both Alcohol & Tobacco, 1 (5%) patient was addicted to Smoking, 1 (5%) patient was addicted to Alcohol and 1 (5%) patient was addicted to Tobacco. Smoking and Alcohol are the predisposing factors of the disease.

Built: In Group A, 19 (95%) patients were moderately built and 1 (5%) patient was well built whereas in Group B, all 20 (100%) patients were moderately built. Obesity is one among the risk factor for excess formation of *Kleda* paving way for the disease, but in the present study, since moderately built patients were more, a specific conclusion cannot be drawn.

Chief Complaints

***Aswedanam, Mahavastu; Matsyashakalopama* :** In both Group A and Group B, all 20 (100%) patients presented with chief complaint.

Associated Complaints: In Group A, 16 (80%) patients and in Group B, 12 (60%) patients presented with Kandu. In Group A, 1 (5%) patient and in Group B, 5 (25%) patients presented with *Kandu* and *Daha*. In Group B, 1 (5%) patient presented with *Kandu* (burning) & *Shotha* (Swelling). In Group B, 1 (5%) patient presented with *Kandu, Sarvanga Sandhi Shula* (full body joint pain) & *Shotha* (Psoriatic Arthritis). In Group A, 1 (5%) patient presented with *Kati* (low back) *Shula* & *Janu* (knee) *Sandhi Shula*.

Kandu indicates the predominance of *Kaphaja dosha*. *Kandu* and *Daha* indicate the predominance of *Kapha dosha* associated with *Pitta dosha*. *Kandu* and *Shula* indicate of *Kapha dosha* associated with *Vata dosha.*

Duration of the disease: Duration of the disease was less than 1 year in 4 (20%) patients and 1 (5%) patient in Group A & Group B respectively. Duration of the disease was in between 1 to 5 years in 7 (35%) patients and 9 (45%) patients in Group A & Group B respectively. Duration of the disease was in between 6 to 10 years in 4 (20%) patients and 7 (35%) patients in Group A & Group B respectively. Duration of the disease was in between 11 to 15 years in 3 (15%) patients in Group B. Duration of the disease was in between 16 to 20 years in 4 (20%) patients in Group A. Duration of the disease was in between 31 to 35 years in 1 (5%) patient in Group A.

Candle Grease Sign: In both Group A and Group B, all 20 (100%) patients presented with Candle Grease Sign.

Auspitz's Sign: In both Group A and Group B, all 20 (100%) patients presented with Auspitz's Sign.

Koebner Phenomenon: Koebner Phenomenon was present in 07 (35%) patients in Group A and 10 (50%) patients Group B respectively.

Nail Deformity: In Group A, 11 (55%) patients and in Group B, 10 (50%) patients presented without any Nail deformity. In Group A, 04 (20%) patients and in Group B, 05 (25%) patients presented with Nail Pitting. In Group A, 03 (15%) patients and in Group B, 05 (25%) patients presented with Onycholysis. In Group A, 02 (10%) patients presented with Subungual Hyperkeratosis. Most of the patient had a chronicity of more than 5 years. Nail changes usually occurs in chronic patients.

Atura Bala Pramana Pareeksha

Prakruti: In Group A, 10 (50%) patients belonged to *Vata Pittaja prakruti* and 9 (45%) patients belonged to *Pitta Kaphaja Prakruti* and 1 (5%) patient belonged to *Vata Kaphaja Prakruti*. In Group B, 10 (50%) patients belonged to *Pitta Kaphaja prakruti* and 9 (45%) patients belonged to *Vata Pittaja prakruti* and 1 (5%) belonged to *Vata Kaphaja Prakruti.* Only 2 patients, one from each group were of *Vata Kaphaja prakruti* which could be one of the supporting factors in getting good result as the disease is of *Vata Kaphaja* predominant resulting in *Atulya Prakruti* and *Dosha.*

Vikruti: All patients in both the groups belonged to *Madhyama Vikruti.*

All patients presented with *Atulya* (not matching) *Hetu* (causative factor), *Dosha*, *Dushya*, *Prakruti*, *Desha* (location) and *Kala* (time) to moderate extent, due to which, the *Vikruti* can be considered as *Madhyama* which is a supporting factor in getting good result.

***Sara*:** In Group A, 8 (40%) patients were of *Mamsa Sara*, 6 (30%) were of *Rakta sara*, 4 (20%) were of *Meda Sara* and 2 (10%) patients were of *Asthi Sara*. In Group B, 13 (65%) patients were of *Mamsa Sara* and 6 (30%) patients were of *Rakta Sara* and 1 (5%) patient was of *Meda Sara*.

***Samhanana*:** All patients in both the groups belonged to *Madhyama Samhanana.*

Probably, the *Samhanana* of the patients which was *Madhyama* reflecting the status of *Rogi Bala* which might have favored in reducing the Symptoms of the disease to a moderate extent in both the groups.

Pramana

Height: An average Height of patients in Group A was 170 cms where as in Group B, it was 166 Cms. By considering the mean height, *Pramana* in both the groups can be taken as *Madhyama.*

***Satmya*:** In Group A, 16 (80%) patients belonged to *Madhyama Satmya* and 4 (20%) patients belonged to *Pravara Satmya* where as in Group B, 18 (90%) patients belonged to *Madhyama Satmya* and 2 (10%) patients belonged to *Pravara Satmya*.

***Satva*:** All patients in both the groups belonged to *Madhyama Satva.*

Since, maximum number of patients belonged to *Madhyama Satva*, they actively accepted the treatment without any hindrance and responded well.

Ahara Shakti

a) *Abhyavarna Shakti*: All patients in both the groups had *Madhyama Abhyavarana Shakti.*

b) *Jarana Shakti*: All patients in both the groups had *Madhyama Jarana Shakti.*

Ahara Shakti is assessed by *Abhyavaharana Shakti* and *Jarana Shakti* which altogether reflects the status of *Agni*, the abnormalcy of which is the prime cause for the manifestation of the disease. In the present study, all the patients presented with *Madhyama Ahara Shakti* which favoured the improvement of patients from the point of signs and symptoms of the disease.

***Vyayama Shakti*:** All patients in both the Groups presented with *Madhyama Vyayama Shakti*. *Vyayama Shakti* denotes the power to carry out physical work. Due to busy mental work, most of the patients were into sedentary life style and were performing very little physical work which may be the cause of formation of excess of *Kleda* in the body leading to *Eka Kushta.*

***Vaya*:** In Group A, 1 (5%) patient belonged to *Vruddhi Avastha*, 7 (35%) patients belonged to *Youvana Avastha*, 7 (35%) patients belonged to *Sampurna Avastha* and 5 (25%) patients belonged to *Parihani Avastha*. In Group B, 2 (10%) patients belonged to *Vruddhi Avastha*, 6 (30%) patients belonged to *Youvana Avastha*, 7 (35%) patients belonged to *Sampurna Avastha* and 5 (25%) patients belonged to *Parihani Avastha*. All patients belonged to *Madhyama Vaya*. Psoriasis is no way associated to age and it can occur at any age.

RESULTS

Effect of Treatment on Itching: On Itching, before treatment and after *Snehapana*, before treatment and after *Virechana*, before treatment and after *Samsarjana krama*, the p value **(< 0.001)** revealed statistically highly significant result in both Group A and Group B. Before treatment and after *Pachana-Deepana*, the p value (< 0.001) revealed statistically highly significant result in Group A.

Effect of Treatment on Erythema: On Erythema, before treatment and after *Snehapana*, before treatment and after *Virechana*, before treatment and after *Samsarjana krama*, the p value (< 0.001) revealed statistically highly significant result in both Group A and Group B.

Effect of Treatment on Scaling: On Scaling, before treatment and after *Virechana*, before treatment and after *Samsarjana krama*, the p value (< 0.001) revealed statistically highly significant result in both Group A and Group B. Before treatment and after *Snehapana*, the p value (< 0.001) revealed statistically highly significant result in Group A.

Effect of Treatment on Anhydrous: On Anhydrous, before treatment and after *Snehapana*, before treatment and after *Virechana*, before treatment and after *Samsarjana krama*, the p value (< 0.001) revealed statistically highly significant result in both Group A and B.

Effect of Treatment on Dryness: On Dryness, before treatment and after *Snehapana*, before treatment and after *Virechana*, before treatment and after *Samsarjana krama*, the p value (< 0.001) revealed statistically highly significant result in both Group A and B.

Effect of Treatment on Burning sensation: On Burning Sensation, before treatment and after *Virechana*, before treatment and after *Samsarjana krama*, the p value (> 0.05) revealed statistically no significant result in Group B.

Effect of Treatment on Epidermal thickening: On Epidermal Thickening, before treatment and after *Snehapana*, before treatment and after *Virechana*, before treatment and after *Samsarjana krama*, the p value (< 0.001) revealed statistically highly significant result in both Group A and Group B.

Effect of Treatment on Elevation: On Elevation, before treatment and after *Snehapana*, before treatment and after *Virechana*, before treatment and after *Samsarjana krama*, the p value (< 0.001) revealed statistically highly significant result in both Group A and B.

Effect of Treatment on Discharge: Both Group A and Group B had no patients presenting with the complaint of Discharge.

Effect of Treatment on Joint involvement: On Joint involvement, before treatment and after *Snehapana*, before treatment and after *Virechana*, before treatment and after *Samjarjana krama*, the p value **(> 0.05)** revealed statistically no significant result in Group B.

Effect of Treatment on Sleep: On Sleep, before treatment and after *Samsarjana krama*, the p value **(< 0.001)** revealed statistically highly significant result in both Group A and Group B.

Effect of Treatment on P.A.S.I.: On P.A.S.I., before treatment and after *Snehapana*, before treatment and after *Virechana*, before treatment and after *Samsarjana krama*, the p value (< 0.001) revealed statistically highly significant result in both Group A and Group B. Before treatment and after *Pachana-Deepana*, the p value (< 0.001) revealed statistically highly significant result in Group A.

Both the groups showed good result on Itching, Erythema, Scaling, Anhydrous, Dryness, Epidermal thickening, Elevation, Sleep and P.A.S.I., this may be due to the reason that both *Arohana Krama Snehapana* and *Sadyo-Snehana* could have produced *Utkleshana* of *doshas* bringing *doshas* from *Shaka* to *Koshta* and thereby helping in dissecting *Dosha-dushya Sammurchana* which was the main aim of giving *Snehapana*.

CONCLUSION

Kushta, a disease of *bahudosha*, *bhuridosha* and *saptakodushyasangraha* is to be treated by adopting repeated *Shodhana*, among which, *Virechana Karma* could be the best to handle this condition as it is dominated mainly by *Pitta* as well as *Rakta*. *Arohana Krama* is the most popular and commonly adopted method of *Snehapana* whereas *Sadyo-Snehana* is adopted in *Baala*, *Vruddha*, *Snehaparihara Asahishnu* and in conditions requiring *Ishat Snigdhata* as well as to reduce the duration of *Virechana Karma* in conditions where *Kramatah* and *Punah Punah Shodhana* are required. The overall result in the study revealed that there is no statistically significant difference between *Arohana Krama Snehapana* and *Sadyo-Snehana* for *Virechana Karma* in *Eka Kushta.*

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