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#### RESEARCH ARTICLE

# A CLINICAL STUDY TO EVALUATE THE EFFECTIVENESS OF VAMANA KARMA AND SHAMANA CHIKITSA IN THE MANAGEMENT OF EKA KUSHTHA (PSORIASIS)

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## Abstract

Eka kushtha comes under Kshudra Kushtha division of Kushtha roga in Ayurvedic texts and primarily involves an imbalance of Vata and Kapha Doshas. This condition is characterized by symptoms such as Asvedanam (lack of sweating), Mahavastu (extensive areas of the body affected), Matsyashakalopamam (scaling resembling fish scales), Krishna Aruna Varna (dark or reddish-brown skin lesions). Kandu (itching), and Rukshata (dryness). In contemporary terms, it can be related to Psoriasis, which is chronic, non-communicable disease (NCD), with inflammatory changes in skin, this disease having no cure causing negative impact on patient's quality of life (QoL). "The World Health Organization (WHO) reported a global prevalence of Psoriasis in countries vary between 0.09% and 11.4%", in most developed countries, prevalence ranges between 1.5 and 5%. India showing a prevalence range between 0.44% and 2.88%. Psoriasis causes physical, mental and social burden leading to impaired quality of life in patients, making psoriasis a serious health concern. According to Acharya Charaka, the treatment for Eka kushtha should address the excessive Doshas involved. Since Eka kushtha is considered a Bahudosha (excessively aggravated Dosha) and Chirkari (chronic) condition, Shodhana Chikitsa (purificatory treatments) are recommended along with shamana chikitsa (palliative treatments). This study evaluated the effectiveness of Vamana Karma following Shamana Chikitsa in the management of Eka kushtha. A total of 33 patients with Eka kushtha (Psoriasis) were enrolled in the study and undergone Vamana Karma as Shodhana Chikitsa followed by local application of Vajrak Tail and Ayaskriti Paan as Shamana Chikitsa . The study depicted statistically significant improvement in PASI Score (71.28% improvement) and other subjective parameters like *matsyashaklopamam*, *kandu*, *aswedan*, bahalatva, mandal and rukshta were also reduced significantly within the sample. Overall improvement % after 50 days of study period shows that this treatment regimen (Shodhanottar Shamana Chikitsa) is highly effective with 82% markedly improved patients.

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#### INTRODUCTION

Ayurveda has a holistic approach to health and personalized medicine for every individual depending upon the status of *Doshas* and *Prakriti*. It is one of the oldest medical systems, and comprises of thousands of traditional medical concepts to procure health and treat chronic ailments. Psoriasis being one of the chronic and dreadful dermatological condition with its recurrent nature can be very well managed by *Ayurveda*. In *Ayurveda* we can relate psoriasis to *Eka kushtha* due to their close resemblance of symptoms.

Eka kushtha comes under Kshudra Kushtha division of Kushtha roga in Ayurvedic texts and primarily involves an imbalance of Vata and Kapha Doshas<sup>1</sup>. This condition is characterized by symptoms such as Aswedanam (lack of sweating), Mahavastu (extensive areas of the body affected), Matsyashakalopamam (scaling resembling fish scales), Krishna Aruna Varna (dark or reddish-brown skin lesions), Kandu (itching), and Rukshata (dryness). The contemporary of Eka kushtha is Psoriasis, which is a chronic, non-contagious skin condition marked by recurring inflammation. It is characterized by distinct, red, and dry patches of varying sizes, often covered with silvery, scalelike layers. "The World Health Organization reported a global prevalence of Psoriasis in countries vary between 0.09%<sup>2</sup> and 11.4%<sup>3</sup>", making psoriasis a serious health concern. In most of the developed countries, prevalence ranges between 1.5 and 5%. India showing a prevalence range between 0.44% and 2.88%<sup>4</sup>. Psoriasis causes physical, mental and social burden leading to impaired quality of life in patients. It is a challenge to treat because of its chronic and recurrent nature. Modern medical science treats psoriasis with combination of Psoralen and Ultraviolet A Radiation (PUVA) and corticosteroid, some other medications in use are immunosuppressants and vit-D based ointments But these therapies can give serious side effects like liver damage, increased risk of carcinoma, bone depletion (osteoporosis) etc<sup>5</sup>. And since, no promising treatment is available in the conventional medical system, traditional treatment is emerging as a satisfactory management method for the cure of psoriasis. So, we conducted this study to establish an Ayurvedic treatment protocol in the management of psoriasis.

# **AIM AND OBJECTIVES**

#### **AIM**

To Evaluate the Effectiveness of Vamana Karma and Shamana Chikitsa in management of Eka Kushtha (Psoriasis).

#### **OBJECTIVES**

- 1. To evaluate the effectiveness of *Vamana Karma* as *Shodhana Chikitsa* followed by local application of *Vajrak Tail* and *Ayaskriti Paan* as *Shamana Chikitsa* in management of *Eka Kushtha* (Psoriasis).
- 2. To analyse and establish the result of treatment regimen (Shodhanottar Shaman Chikitsa) of Eka Kushtha.

# **MATERIALS AND METHODS**

This study received approval from the Institutional Ethics Committee (IEC) of Ch. Brahm Prakash Ayurved Charak Sansthan, Khera Dabar, Najafgarh, New Delhi, under the IEC code:CBP-IEC/2022/PK/MD/10 on 29/08/2022, and it was also registered with CTRI (CTRI/2023/03/050326 on 03/11/2022). Patients diagnosed with Eka Kushtha were enrolled from both the Outpatient department and Inpatient department of the Panchakarma at Ch. Brahm Prakash Ayurved Charak Sansthan, Khera Dabar, Najafgarh, New Delhi. Written informed consent was obtained from each patient prior to commencing treatment. Patients falling under inclusion criteria were selected. This single- arm clinical trial was conducted on 33 subjects with a study period of 50 days. The drug, Ayaskriti and Vajrak tail was procured from the GMP certified company (Arya Vaidya Sala kottakal).

# **INCLUSION CRITERIA**

- 1. Patient having sign and symptoms of Eka Kushtha as stated in Charaka samhita. (Aswedanam, Mahawastu, Matasyashaklopamam)
- 2. The patient falling within the age group of 20 50 years.
- 3. The patient has not taken corticosteroids or immunosuppressant for the past 3 months.

# **EXCLUSION CRITERIA**

- 1. Patients diagnosed with hypertension, diabetes mellitus, tuberculosis, carcinoma & other chronic illness.
- 2. Severe condition of Psoriasis like Psoriatic arthritis.
- 3. Pregnant & lactating mother.

**SAMPLE SIZE:** 33

STUDY DESIGN: Single-Arm clinical trial.

**STUDY PROTOCOL:** Patient fulfilling the inclusion criteria were selected and undergone following treatment regimen:-

PROCEDURE	DRUG & DOSE	DURATION
1. Deepan &	CHITRAKADI VATI 2 Tab twice a day (after meal)	3 days
Paachan		
2. Snehapana	MAHATIKTAKA GHRIT <sup>6</sup> (A.H.Chi.19/8-10) as per koshta	3-7 days
	and <i>agni</i> in increasing dose. (in morning ,empty stomach )	
3. Abhyanga &	Abhyanga with Til taila (35 min) and	1 day
Swedan	sarvanga swedan (10-15 min)	
4.Vamana Karma	Vamak yoga - MADANPHAL yoga <sup>7</sup>	1 day
(In morning)		
5.Sansarjana	Diet as per <i>Shuddhi</i> <sup>8</sup> (from the evening of <i>Vamana</i> day)	3-7 days
Krama		
6.Shamana	Oral Administration - AYASKRITI <sup>9</sup> Paan	30 days
chikitsa	(A.H.Chi.12/29-32)10ml twice a day (after meal)	
	Local application-VAJRAK TAIL <sup>10</sup> Abhyang	
	(A.H.Chi.19/79-80) once a day (at night)	

**DURATION OF STUDY (for one patient):** 50 Days.

**ASSESMENT DURATION:** 0<sup>th</sup>, 18<sup>th</sup>, 33<sup>rd</sup>, 50<sup>th</sup> Day

FOLLOW UP: On 50<sup>th</sup> Day

# ASSESSMENT CRITERIA

The improvement provided by the therapy will be assessed on the basis of relief in PASI SCORE & subjective parameters of the disease. All the signs and symptoms will be assigned score depending upon their severity to assess the efficacy of the treatment regimen, the details of which are as follows:

#### SUBJECTIVE CRITERIA

CRITERIA	SCALE	SCORE
1.Matsyashaklopamam (Scaling)	No Scaling	0
	Scaling off between 16-28 days	1
	Scaling off between 8-15 days	2
	Scaling of between 5-7 days	3
	Scaling off between 1-4 days	4
2.Mandala (erythema)	Normal skin	0
	Faint or Near to Normal	1
	Blanching +Red color	2
	No Blanching +Red Color	3
	Red color +Subcutaneous	4
3. Kandu (itching)	No Itching	0
	Mild/Occasional Itching	1
	Moderate (Tolerable)Infrequent	2
	Severe Itching Frequently	3
	Very severe Itching Disturbing Sleep and other activity	ity 4
4. Bahalatva (epidermal thickening)	No Bahalatva	0
	Mild Thickening	1

	Moderate Thickening	2
	Very Thick	3
	Very Thick With Induration	4
5.Aswedana (anhydrosis)	Normal	0
	Improvement	1
	Present in few lesions.	2
	Present in all Lesions.	3
	Aswedanam in lesion and uninvolved skin	4
6.Rukshta (dryness)	No line on scrubbing with nail.	0
	Faint line on scrubbing by nail.	1
	Lining and even words can be written on scrubbing by nail.	2
	Excessive Rukshta leading to Kandu.	3
	Rukshta leading to crack formation	4

# PASI SCORE (PSORIASIS AREA AND SEVERITY INDEX)

Eleme	Elements of the Psoriasis Area and Severity Index (PASI) <sup>11</sup>				
S. N.	Factor	Head	Upper limbs	Trunk	Lower limbs
1	Erythema	0-4	0-4	0-4	0-4
2	Induration	0-4	0-4	0-4	0-4
3	Scaling	0-4	0-4	0-4	0-4
4	Sum (E+I+S)				
5	Body Surface Area (1-6)				
6	Sum x BSA				
7	Area Multiplier	0.1	0.2	0.3	0.4
8	Row 6 X Row 7	A	В	С	D
9	PASI score (A+B+C+D)			•	

Ratings for Redness, Thickness and Scaling

0 = clear; 1 = Mild; 2 = Moderate; 3 = Severe; 4 = Very severe.

Area Score

0 = 0%; 1 = 1 to 10%; 2 = 10-30%; 3 = 30-50%; 4 = 50-70%; 5 = 70-90%; 6 = 90-100%.

Area Multiplier:

Head = 0.1; Upper limbs = 0.2; Trunk = 0.3; Lower limbs = 0.4'

PASI Score (0-72)	severity
<5	Mild
5.1-10	Moderate
>10	Severe

# STATISTICAL ANALYSIS

In this study 35 patients were enrolled, 2 were discontinued and 33 completed the trial. Variables on ordinal scale (gradations) were analysed using Wilcoxon Signed Rank Test. Paired t-test is carried out for pre-post analysis for quantitative data.

P > 0.05 = Insignificant

P < 0.05 = Significant

#### Criteria for the Assessment of Overall effect of the treatment:-

- 1. **Cured:** 100% relief in the subjective criteria & PASI Score.
- 2. **Marked improvement:** >70% -<100% relief in subjective criteria & PASI Score.
- 3. **Mild improvement:** >30% -<70 % relief in the subjective criteria & PASI Score.
- 4. **Unchanged:** Below 30% relief in the subjective criteria & PASI Score.

# **OBSERVATIONS AND RESULTS**

The majority of the participants were male (78.8%) and within the 26-35 years age group (51.5%). A significant proportion of patients were married (63.6%), and most of the patients belonged to the Hindu religion (93.9%). Educationally, 60.6% had completed graduation, and 48.5% came from rural areas. Regarding occupational status, 39.4% were businessmen, followed by students (21.2%) and job holders (15.2%). Among them 48.5% were having meals in *vishama* pattern and 48.5% were having irregular bowel habits, 12% were constipated. Mostly patients were *vata-pittaj* (57.6%), others were *vata-kaphaj* (27.3%) and *pitta-kaphaj* (15.2%). Maximum patients were having *krur koshtha* (63.64%), *Shudhi* after *vamana* was *pravar* in 57.6%, *madhyam* in 36.4% and *avar* in 6.1% of patients.

**Table No.1:-** Showing Mean before treatment and after treatment.

Assessment Criteria	Mean BT	Mean AT
Matsyashaklopamam	2.30	1.18
Mandala	2.33	1.09
Kandu	2.21	0.94
Bahlatva	2.00	0.88
Aswedana	2.27	0.97
Rukshta	2.24	1.09
Sum of 6 subjective parameters	13.36	6.15
PASI Score	11.82	3.39

**Table No.2:-** Showing percentage effect post treatment.

Parameters	% Effect	P-Value	Significance
MATASYASHAKLOPAMAM	48.68	0.00000077	Sig
MANDALA	53.25	0.00000069	Sig
KANDU	57.53	0.00000122	Sig
BAHALATVA	56.06	0.00000141	Sig
ASWEDANA	57.33	0.00000028	Sig
RUKSHTA	51.35	0.00000157	Sig
Sum Of Subjective Parameters	53.97	0.00000050	Sig
PASI Score	71.28	0.000000075	Sig

This is evident from table no. 2, that among these parameters of *Eka kushtha (Matsyashaklopamam, Mandala, Kandu, Bahalatva, Aswedana, Rukshta* and PASI Score) the result was statistically significant (i.e.,p<0.05). Also the percentage effect shows a significant improvement in all the parameters and PASI Score being the highest with 71.28%, indicating a significant reduction in the severity of the condition post treatment.

Table No. 3:- Showing overall improvement

Overall Improvement	Frequency	Percentage	
Cured	0	0.00%	
Markedly improved	27	81.82%	
Mild improved	5	15.15%	
Unchanged	1	3.03%	
TOTAL	33	100.00%	

Table no. 3, signifies that:

By the 50th day of trial, 81.82% of patients were markedly improved, and 15.15% showed mild improvement, while only 3.03% remained unchanged.

No patients were fully cured, but the high percentage of marked improvements indicates the strong efficacy of the combined therapy (*Shodhanottar shamana chikitsa*) used in trial.



**Images of patient before treatment (0<sup>th</sup> day)** 



**Images of patient after treatment (50<sup>th</sup> day)** 

# DISCUSSION DISCUSSION ON DISEASE

Eka kushtha comes under Kshudra Kushtha division of Kushtha roga in Ayurvedic texts and primarily involves an imbalance of Vata and Kapha Doshas. This condition is characterized by symptoms such as Asvedanam (lack of sweating), Mahavastu (extensive areas of the body affected), Matsyashakalopamam (scaling resembling fish scales), Krishna Aruna Varna (dark or reddish-brown skin lesions), Kandu (itching), and Rukshata (dryness)<sup>12</sup>. In contemporary medical sciences, all these symptoms can be linked to psoriasis, where the most prominent feature is the presence of silvery scales. This is accompanied by well-defined, sharply demarcated erythematous papules or plaques coated with brittle, dry, silvery or greyish-white scales.

Kushtha is described as the most chronic disease (*Dirgha-Roga*) by *Acharya Charaka*<sup>13</sup>. As per *Acharyas* the treatment of *kushtha* should be done according to dosha predominancy. As *Eka Kushtha* is *vata- kapha Pradhan* so *dosha shodhan* (*snehapaan* and *vamana karma*) followed by *shamana chikitsa* (*antah parimarjan* and *bahir parimarjan chikitsa*) will give good results in management of *Eka kushtha*.

#### DISCUSSION ON THERAPY

Vamana Karma (therapeutic emesis) is a traditional Ayurvedic detoxification technique, primarily indicated for conditions associated with Kapha and Pitta doshas. Psoriasis, categorized as Eka Kushtha in Ayurveda, involves the disturbance of both Vata and Kapha doshas. Vata causes dryness, scaling, and itching, while Kapha contributes to thickening, oozing, and anhidrosis (lack of sweating). Vamana Karma is specifically designed to expel vitiated Kapha from the body along with vitiated pitta. By expelling Kapha, the treatment directly targets some of the core pathological features of psoriasis, such as Bahalatva (thickening of the skin), aswedana (anhidrosis) and kandu (itching). Normalizes Vata and prevents further damage due to its drying and rough qualities, thus control rukshta (dryness) and matsyashaklopamam (scaling).

In modern medical science, *Vamana Karma* can be understood as a therapy that induces a combination of detoxification, immune modulation, and stress regulation. Its effects on psoriasis are likely mediated through:

- 1. Reduction of systemic inflammation by decreasing pro-inflammatory cytokines.
- 2. Improvement in gastrointestinal health and metabolism, leading to reduced toxin accumulation.
- 3. Modulation of the immune system, preventing hyperactivity of T-cells that cause psoriasis.
- 4. Enhancing lipid metabolism and reducing oxidative stress.
- 5. Psychological and physical stress relief, which is crucial in controlling psoriasis flares.

#### DISCUSSION ON DRUGS

#### Mahatikta ghrita

It is composed of *tikta rasa dravyas* which pacifies *pitta* and *rakta*, as *kushtha* is said to be *tridoshaj raktagata vyadhi* there by it helps in reducing symptoms like itching, inflammation and erythema. *Ghrita* being the crucial component helps in pacifying *vata dosha* and helps reducing dryness and scaling. Therefore by combining anti-inflammatory, detoxifying, and nourishing effects, *Mahatikta Ghrita* plays a supportive role in alleviating psoriasis symptoms and improving skin health.

#### Madanaphala

The primary emetic agent used in *Vamana*, because of its least ill effects during *vamana* procedure. *Madanphala* have *Kapha-Vatahara* and *srotoshodhaka* properties, By inducing emesis, *Madanphal* removes excess *Kapha* from the *Aamashya* (stomach) and *Rasa Dhatu*, the first tissues affected in *Kushtha*. Its specific *tikta* (bitter) and *katu* (pungent) properties help dry out excess *Kapha* and facilitate the clearing of channels (*srotoshodhan*).

#### Ayaskriti

Ayaskriti is a classical Ayurvedic liquid formulation known for its potent Shodhana (cleansing) and Rasayana (rejuvenating) properties. It is composed of a variety of herbs processed with iron (Ayas), giving it unique therapeutic benefits, particularly in managing the chronic skin condition like Eka Kushtha (Psoriasis).

The anticipated mechanism of action of *Ayaskriti* in the management of psoriasis is due to its multifaceted therapeutic properties, including:

- 1. Detoxification: Removing *Ama* (toxins) and purifying the blood.
- 2. Anti-inflammatory: Reducing inflammation by modulating immune responses.
- 3. Immunomodulation: Regulating the immune system to prevent excessive activation of T-cells.
- 4. Metabolic regulation: Enhancing *Dhatvagni* (tissue metabolism) and promoting normal skin turnover.
- 5. Antioxidant protection: Reducing oxidative stress and protecting skin cells from damage.
- 6. Anti-pruritic action: Providing relief from itching, a common symptom of psoriasis.
- 7. Rejuvenation: Promoting the healing and regeneration of damaged skin tissues.
- 8. Improvement in digestion: Correcting digestive issues and preventing the accumulation of toxins.

#### Vajrak tail

*Vajrak Tail*, a classical *Ayurvedic* oil formulation, is used topically for various skin disorders, including *Eka Kushtha* (Psoriasis). The oil contains a combination of herbs with anti-inflammatory, keratolytic, immune-modulatory, and skin-nourishing properties. When applied externally, *Vajrak Tail* works on multiple levels to manage the symptoms of psoriasis, such as scaling, itching, inflammation, and skin thickening.

The topical application of *Vajrak Tail* in psoriasis works through multiple mechanisms:

- 1. Anti-inflammatory: Reducing inflammation in the skin.
- 2. Keratolytic: Helping exfoliate psoriatic scales and improving skin turnover.

- 3. Antimicrobial: Preventing secondary infections.
- 4. Immunomodulatory: Regulating the immune response that drives psoriasis.
- 5. Nourishing and moisturizing: Restoring the skin barrier and preventing dryness and cracking.
- 6. Antioxidant: Protecting the skin from oxidative stress.
- 7. Anti-pruritic: Relieving itching and discomfort.
- 8. Circulation improvement: Enhancing blood flow to promote healing.
- 9. Dosha balancing: Pacifying the vitiated Vata and Kapha, addressing the underlying cause of psoriasis.

#### DISCUSSION ON RESULTS

#### Matsyashaklopamam

*Vamana* and *Shamana* therapies significantly reduced the scaliness of the skin by the 50th day (48.68%). The major improvement appears by the 33rd day, indicating the effectiveness of the therapies, particularly after *Vamana* (purification therapy), followed by sustained improvement during the *Shamana* phase (palliative care).

#### Mandala

*Mandala*, or the appearance of circular lesions, shows a significant reduction by the 50th day. The improvement follows a consistent trend throughout the treatment phases, with notable improvement starting by the 33rd day and continues to 50<sup>th</sup> day (53.25%). This indicates the combined effects of detoxification (*Vamana*) and palliative (Shamana) treatment in controlling lesions.

#### Kandu

The improvement in itching is one of the most pronounced outcomes, with the highest percentage of improvement (57.53%) by the 50th day. This suggests that both *Vamana* and *shamana* therapies are highly effective in controlling *Kandu*, with a significant reduction occurring as early as the 33rd day, providing rapid relief from this symptom.

#### Bahalatva

The reduction in *Bahalatva*, or thickness of the lesions, is another significant outcome. The combined *Vamana* and *Shamana* therapies show a clear impact on reducing the thickness of the lesions, with substantial improvement observed by the 33rd day and continuing through the 50th day (56.06%). This suggests that lesion thickness responds well to both stages of treatment.

#### Aswedana

Aswedana, or dryness of the skin, shows consistent improvement of **57.33%** over the course of treatment. The improvement is especially notable by the 50th day, reflecting the dual action of *Vamana* (to eliminate toxins that could lead to dryness) and *Shamana* (which aids in moisturizing and balancing the skin's natural properties).

# Rukshta

Skin roughness shows a **51.35%** improvement by the 50th day. Like dryness, roughness also improves steadily from the start of treatment, with the combined therapies working effectively to reduce these symptoms by detoxifying the body and restoring balance to the skin's texture.

# **Sum of Subjective Parameters**

The sum of subjective parameters (including all symptoms like scaling, roughness, itching, and thickness) shows a significant improvement, with a **53.97%** reduction by the 50th day. This indicates a cumulative benefit of both *Vamana* and *Shamana* therapies.

#### **PASI Score**

The PASI score, which provides a comprehensive measure of psoriasis severity, shows the most dramatic improvement. By the 50th day, there is a **71.28% reduction**, highlighting the effectiveness of the treatment protocol. The steep decline in PASI score suggests that the treatments were highly successful in reducing the severity of psoriasis, with substantial progress visible from the 33rd day onward.

## **Overall Improvement**

By the 50th day, 81.82% of patients were markedly improved, and 15.15% showed mild improvement, while only 3.03% remained unchanged. No patients were fully cured, but the high percentage of marked improvements indicates the strong efficacy of the treatment protocol under trial.

# **Statistical Significance**

The Wilcoxon Signed Rank Test, applied to ordinal variables, showed P-values less than 0.05 across all parameters, confirming the statistical significance of the results.

The Paired t-test used for the PASI score also confirmed a highly significant improvement with a P-value of 0.000000075.

Overall Improvement: 81.82% of patients were markedly improved, while 15.15% showed mild improvement. Only one patient (3.03%) showed no change in his condition.

#### **CONCLUSION**

The study demonstrated statistically significant results in both subjective parameters and objective clinical measurements of psoriasis through the combined treatment of *Vamana Karma* as *Shodhana Chikitsa* followed by local application of *Vajrak Tail* and *Ayaskriti Paan* as *Shamana Chikitsa* All parameters, including scaling, itching, erythema, and dryness, showed considerable reductions, with the PASI score reflecting a substantial decrease in disease severity. No adverse effect of treatment was found during the study. The findings suggest that this *Ayurvedic* regimen is safe and very effective in managing Psoriasis.

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