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A Clinical Study to Evaluate and Compare the Efficacy of *Vamana*, *Virechana* and *Shamana* in the Management of *Eka-kushtha* w. s. r. to Psoriasis

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Abstract:

BACKGROUND: *Ekakustha* has been described as *Kshudra Kustha* .In *Ayurveda*, all skin diseases have been described under umbrella of *kushtha*. *Eka-Kushtha can be accepted as psoriasis because of its distribution pattern and features like Aswedanam Mahavastu. Matsyashakalopamam.* Worldwide prevalence of psoriasis is 3%.In India its prevalence is 0.4%-2.8%. Frequent *Shodhana* is main treatment protocol mentioned by *Acharya Charak.*So,in this study *Shodhana* procedures such as *Vamana, Virechana* has been taken in the study with a particular *Vamana Yoga, Virechana Yoga* mentioned by *Acharya Charak* in *Kustha* disease. After *Kostha-Shodhana ,Snehpana* is must in *kusthi as per Charak* so, *Tiktashatpal Ghrita* has been taken in the study as *Shamana* drug after *Shodhana.* **AIM:** To evaluate and compare the efficacy of *Vamana &Virechana* along with *Tiktashatpal Ghrita* and *Tiktashatpal Ghrita* alone in the management of *Ekakushtha*. **MATERIALS AND METHODS**: Total 45 patients of Ekakustha were clinically diagnosed and in 15 patients *Vamana* was conducted followed by *Tiktashatpal Ghrita for* 30 *days*. In 15 patients *Virechana* was conducted followed by *Tiktashatpal Ghrita* for 30 days. In 15 patients only *Tiktashatpal Ghrita* was given for 30 days. Pre and post assessment was done on haematological and biochemical examination, PASI Score, Symptoms Score. **RESULT:** All the groups showed highly significant or significant results on nearly all the symptoms.There was not many significant difference found between three groups when groups were compared.However there was significant difference found between *Vamana* group and *Shamana* Group in symptoms such as Pitting, Unnati and Sleeplessness. According to PASI score Group A, B showed highly significant results whereas Group C showed significant result. No statistically significant change in haematological values, Biochemical values was found after treatment except statistically significant decrease in ESR (12.48 %) ($p < 0.04$) in group C.and significant decrease in SGOT (13.14%) ($p < 0.05$) in group A. The overall effect of therapies showed that, maximum number of patients (53.33%) had markedely improved in Group A, maximum number of patients (46.6%) had moderately improved in Group B and maximum number of patients (40%) had moderately improved in Group C. **CONCLUSION**: Based on the overall effect of therapy and PASI score it can be concluded that *Vamana karma* with *Tiktashatpal ghrita* provided better clinical management for psoriasis than *Virechana* with *Tiktashatpal ghrita or Tiktashatpal ghrita* alone.

Keywords: *Ekakustha*, *Psoriasis*, *Tiktashatpal ghrita, Vamana Yoga, Virechana Yoga*

1. Introduction:

Psoriasis, a chronic, non-contagious, multi-systemic inflammatory skin disorder, was first described and classified by Dr. Robert Willan of England around 1809 [1]. It is

characterized by reddish, scaly patches and falls under the category of papulosquamous skin diseases. Though its exact cause remains unclear, psoriasis is believed to have a strong genetic component. It typically affects the skin of the elbows, knees, scalp, and lumbosacral region, and in up to 30% of cases, it also involves the joints.

In Ayurveda, *Eka-Kushtha* is considered comparable to psoriasis due to its distribution pattern and distinct features such as *Aswedanam* (absence of sweating), rough and dry lesions, and *Matsyashakalopamam* (scales resembling fish skin). These symptoms align closely with the clinical presentation of psoriasis—well-defined erythematous macules, papules, and plaques covered with silvery scales—more than any other type of *Kushtha*.

Globally, psoriasis affects approximately 3% of the population [2]. In India, its prevalence ranges from 0.4% to 2.8% [3]. Modern medicine manages psoriasis with therapies like PUVA (psoralen combined with ultraviolet A) and corticosteroids. However, these treatments often result in serious side effects such as liver and kidney damage, bone marrow suppression, and immune complications. Additionally, the disease's psychological impact, frequent recurrence, and association with comorbidities like cardiovascular disorders add to its burden. Therefore, there is an urgent need for safer and more effective therapeutic alternatives—and Ayurveda offers promising solutions. Ayurveda's holistic approach, based on the principles of *Shodhana* (bio-purification), *Shamana* (palliative treatment), and *Nidana Parivarjana* (elimination of causative factors), provides long-lasting relief and improves patients' quality of life.

As per *Acharya Charaka* [4], **"**Bahudosha Samsodhya Kusthi**"**—frequent purification (*Shodhana*) is the main line of treatment for *Kushtha*. In this study, *Shodhana* therapies such as *Vamana* (therapeutic emesis) and *Virechana* (therapeutic purgation) have been employed using specific formulations (*Vamana Yoga* and *Virechana Yoga*) recommended by Charaka for treating *Kushtha*. Following *Koshtha Shuddhi* (cleansing of the gastrointestinal tract), *Snehapana* (internal oleation) [5] is essential, as mentioned: "Snehasya panam istam shuddhe kosthe pravahite rakte." In accordance with this, *Tiktashatpal Ghrita* has been selected as the *Shamana* drug post-*Shodhana* to provide a comprehensive and sustained therapeutic effect [6].

2. Methodology

2.1 Trial Design: This study was designed as a randomized clinical trial with a 1:1:1 allocation ratio. The trial received ethical approval from the Institutional Ethics Committee of I.P.G.T. & R.A., Jamnagar (Ref. No. PGT/7/-A/Ethics/2016-17/2667, dated 16/11/2016). The study was registered with the Clinical Trial Registry of India (CTRI/2017/08/009539, dated 29/08/2017).

2.2 Eligibility Criteria for Participants:

2.2.1 Inclusion Criteria: Participants who met the following conditions were included in the study: individuals aged between 18 and 60 years; those clinically diagnosed with psoriasis based on characteristic features such as red, inflamed patches with silvery scales, along with associated symptoms like pitting and discoloration of the nails; and the presence of diagnostic signs including Auspitz sign, Koebner phenomenon, and candle grease sign. Additionally, participants were required to be fit for *Vamana* and *Virechana* procedures as per Ayurvedic guidelines.

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2.2.2 Exclusion Criteria: Patients were excluded from the study if they met any of the following criteria: those below 18 years or above 60 years of age; individuals who were clinically unfit for *Vamana* or *Virechana* procedures; patients suffering from uncontrolled diabetes mellitus, uncontrolled hypertension, or any other serious systemic illness; those with a history of psoriasis extending beyond 10 years; pregnant women; and individuals who were unwilling to participate in the study.

2.3 Study Setting: Patients were recruited from the outpatient and inpatient departments of the I.P.G.T. & R.A. Hospital, Gujarat Ayurved University, Jamnagar. Participants were selected without bias regarding gender, caste, or socioeconomic background.

2.4 Informed Consent: Written informed consent was obtained from all participants prior to their inclusion in the study.

2.5 Investigations: To rule out systemic illnesses and assess baseline parameters, the following investigations were performed before initiating treatment:

- **Hematological tests:** Hemoglobin (Hb), Total Leukocyte Count (TLC), Differential Leukocyte Count (DLC), Erythrocyte Sedimentation Rate (ESR).
- **Urine analysis:** Routine and microscopic examination.
- **Biochemical tests:** Random Blood Sugar (RBS), Liver Function Test (LFT), Renal Function Test (RFT), lipid profile, and serum calcium.
- **2.6 Assessment Criteria:**

2.6.1 Clinical Assessment: The therapeutic effects of *Vamana*, *Virechana*, and subsequent *Shamana* therapy were assessed based on improvements in the signs and symptoms of psoriasis. Standard scoring patterns were used to objectively grade symptom severity.

2.6.2 Psoriasis Area and Severity Index (PASI): PASI was used as a primary outcome measure to quantify the severity and extent of psoriasis. PASI scores were recorded before and after the treatment. The standard PASI scale (unmodified) was applied for assessment throughout the study.

2.7 Criteria for Overall Assessment of Therapy: The outcomes were categorized into five levels based on the percentage of symptom relief:

(i) **Complete Remission:** 100% relief from signs and symptoms.

(ii) **Marked Improvement:** >75% to 99% relief.

(iii) **Moderate Improvement:** >50% to 75% relief.

(iv) **Mild Improvement:** >25% to 50% relief.

(v) **Unchanged:** Less than 25% relief.

2.8 Drug procurement: The ingredients of *Vaman yog, Virechan yog and Tiktashatpal Ghrita* were procured from the Pharmacy of Gujarat Ayurved University, Jamnagar. All raw drugs were authenticated and identified in the Pharmacognosy Laboratory at the Institute for Postgraduate Teaching and Research in Ayurveda (IPGT & RA), Gujarat Ayurved University.

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Tiktashatpal ghrita was prepared in RS and BK *(Rasashastra* and *Bhaishajya Kalpana)* department, Institute for Post Graduate Teaching and Research in Ayurved, Gujarat *Ayurved* University, Jamnagar, India. The *Kalka*, *Ghrita* and *Kwatha* for preparation of *Tiktashatpal ghrita* were taken in the proportion 1: 4: 16 as per classical reference.

In pharmacognostical study, macroscopic and microscopic characters of study drugs i.e. and *Trikatu Churna,Vaman Yoga,Virechana Yoga,Tiktashatpal ghrita kwath and kalk dravya* were analysed and found to be authentic.

2.9 Intervention

GROUP A- In this group classical *Vamana Karma* was administered followed by *Tiktashatpal Ghrita,* was given *as* a *Shamana* for 30 days.
GROUP B- In this group classical *Virechana Karma* was administered followed by *Tiktashatpal Ghrita* was given as a *Shamana* for 30 days.
GROUP C- In this group *Tiktashatpal Ghrita* was given as a *Shamana* for 30 days.

2.10 Procedure: These processes are described in Table 1, 2 and 3

Table 1: Procedure for group A.

Procedure	**Drug &Doses**	**Duration**
Deepana & Pachana	*Trikatu Churna* -2gm/3times a day with warm water	3-5Days.
Snehapana	Plain *Go- Ghrita*(as per *Kostha & Agni*)	3-7Days.
Abhyanga: Bashpasweda	*Bala Taila*	2Days
Vamana Karma	*VamanaYoga:Madan,Maduka,Nimba ,Kutaj,Patola (*1 part)	1Day
Sansarjan Karma	Diet (as per *Shuddhi*)	3-7 Days
Shamana:	*Tiktashatpal Ghrita(*10 ml B.D.)	30 Days

Table 2: Procedure for group B.

Procedure	**Drug &Doses**	**Duration**
Deepana& Pachana	*Trikatu Churna* -2gm/3times a day with warm water	3-5Days.
Snehapana	Plain *Go- Ghrita*(as per *Kostha & Agni*)	3-7Days.
Abhyanga: Bashpasweda	*Bala Taila*	4Days
Virechana Karma	*VirechanaYoga:Triphala,Trivrit,DantiKwath(*1 part)	1Day
Sansarjan Karma	Diet (as per *Shuddhi*)	3-7 Days
Shamana:	*Tiktashatpal Ghrita(*10 ml B.D.)	30 Days

Table 3: Procedure for group C.

Procedure	**Drug &Doses**	**Duration**
Deepana& Pachana	*Trikatu Churna* -2gm/3times a day with warm water	3-5Days
Shamana:	*Tiktashatpal Ghrita(*10 ml B.D.)	30 Days

2.11 Outcomes: The primary outcome of the study was the change in the severity of clinical symptoms of psoriasis. These included scaling (*Matsyashakalopamam*), erythema (*Mandala*), itching (*Kandu*), epidermal thickening (*Bahalatva*), anhydrosis (*Aswedanam*), dryness

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(*Rukshata*), burning sensation (*Daha*), discharge (*Srava*), elevation of lesions (*Unnati*), joint involvement, nail pitting, sleeplessness, candle grease sign, Auspitz sign, and Koebner phenomenon. Each of these symptoms was assessed using standard clinical criteria to determine the therapeutic response.

The secondary outcome was the change in the Psoriasis Area and Severity Index (PASI) score, which measured the extent and severity of the lesions before and after treatment. PASI was used as a quantitative tool to support the clinical assessment of the disease.

2.12 Sample Size and Randomization: A convenient sample of 45 patients, 15 in each group was randomized with computer generated randomization technique based on footfalls in the clinical department. The estimated duration of the trial was two years.

2.13 Statistical Methods The collected data were statistically analyzed to assess the effect of the therapies. Paired *t*-tests were used to evaluate the changes in subjective parameters (signs and symptoms) within each group before and after treatment. Objective parameters were also validated using the Paired *t*-test. For comparison between groups, ANOVA (Analysis of Variance) was applied for both subjective and objective criteria. A p-value of less than 0.05 was considered statistically significant, while p-values less than 0.01 or 0.001 were regarded as highly significant.

3. Clinical Observations:

In the present study, the majority of patients (34.69%) belonged to the 36–45 years age group. Female patients made up 53.06% of the total participants. Most of the patients (83.78%) were Hindus, and 91.83% were married. About 32.65% of patients were educated up to graduate level, and 32.64% were employed in service sectors. A large number (60.32%) belonged to the middle-class economic group, and 57.14% were from urban areas.Regarding Atisevana Dravya, 48.43% of patients reported regular intake of curd and its derivatives (Dadhi). Among Mithya Ahara, Asatmya Bhojana was reported by 44.89% of patients. In the case of Viruddha Ahara, 85.11% reported consumption of Khichadi and milk (Dugdha) together.In terms of Mithya Vihara, Diwaswapna (daytime sleeping) was the most common, reported by 43.75% of patients.Chinta (worry) was the most common Manasika Nidana, reported by 69.38% of patients. A majority (75.51%) of the participants were vegetarians. The dominant Rasa in their diet was Madhura (sweet), found in 87.75% of patients.Regarding dietary patterns, 42.85% of patients consumed incompatible food combinations (Viruddhashana).Concerning the nature of work, 77.55% had a sedentary lifestyle.In terms of personal history, 67.34% of patients had Vishamagni (irregular digestion). All patients consumed tea regularly, and 16.32% were addicted to tobacco. Kathina Malapravrutti (hard bowel movement) was present in 51.22% of patients, while 93.87% had Samyak Mutrapravrutti (normal urination).Plaque-type psoriasis was the most common form, observed in 87.75% of patients. Gradual onset of disease was seen in 57.81% of cases, and 48.84% of patients had a disease duration between 3 to 8 years. Climate changes were the most common precipitating factor, affecting 75.51% of patients.Family history of psoriasis was noted in 14% of patients. All participants had received some form of prior treatment.On examination of psoriatic lesions, 73.46% had lesions on the trunk, and 69.83% on the legs. Area involvement of 30–49% was seen in 40.22% of patients. Scaling was present in 75.51% of cases. Plaque-type lesions were observed in 69.38%, and symmetrical

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lesions in 67.34% of patients. Normal skin sensation was maintained in 83.67%. Well-demarcated lesion borders were seen in 67.34% of patients. Auspitz's sign was observed in 83.67%, candle grease sign in 71.4%, and Koebner's phenomenon in 55.10% of cases.Classical signs such as Matshyashakalopama (scaling), Mandala (erythema), Bahalatva (epidermal thickening), and Aswedana (anhidrosis) were each found in 95.91% of the patients.Among associated symptoms, disturbed sleep was reported by 48.43%, joint involvement by 46.93%, and palm and feet involvement by 17.18% of patients.On Prakriti (constitution) analysis, 51.02% of patients were of Vata-Kapha Prakriti, and 30.61% had Vata-Pitta Prakriti. A majority (77.55%) were of Rajasika Prakriti. Most patients had Madhyama Samhanana (77.55%), Madhyama Sara (81.6%), Madhyama Satva (42.85%), Madhyama Abhyavaharana Shakti (79.59%), Madhyama Jarana Shakti (79.59%), and Madhyama Vyayama Shakti (53.06%).

4. Results

The therapeutic effects were evaluated based on changes in both objective and subjective parameters in patients with allergic rhinitis (*Pratishyaya*), including relief in cardinal signs and symptoms.

4.1 Effect on Cardinal Symptoms

4.1.1 Scaling (*Matsyashakalopama*): All three groups showed a statistically highly significant improvement ($p < 0.001$) in scaling, with 58% improvement in Group A, 72.39% in Group B, and 64.48% in Group C. However, the difference in effect among the groups was statistically insignificant ($p = 0.320$).

4.1.2 Erythema (*Mandal*): Statistically highly significant improvements ($p < 0.001$) were observed in all groups—67.62% in Group A, 68.31% in Group B, and 57.59% in Group C. The difference between groups was not statistically significant ($p = 0.124$).

4.1.3 Itching (*Kandu*): All groups showed significant improvement in itching ($p < 0.001$), with 64.11% in Group A, 64.59% in Group B, and 54.54% in Group C. The intergroup difference was statistically insignificant ($p = 0.057$).

4.1.4 Thickening of Skin Lesion (*Bahalatva*): Significant reduction was observed in all groups ($p < 0.001$), with improvements of 64.68% in Group A, 70.38% in Group B, and 54.79% in Group C. The difference between the groups was not significant ($p = 0.061$).

4.1.5 Anhydrosis (*Aswedanam*): Group A showed 66.66% improvement, Group B 58.05%, and Group C 29.4% ($p < 0.001$). However, differences among groups were not statistically significant ($p = 0.137$).

4.1.6 Dryness (*Rukshata*): Significant improvement ($p < 0.001$) was recorded as 73.70% in Group A, 66.66% in Group B, and 86.95% in Group C. The difference among groups was statistically insignificant ($p = 0.127$).

4.1.7 Burning Sensation (*Daha*): All groups showed statistically significant improvement ($p < 0.001$): 66.68% in Group A, 93.7% in Group B, and 65.63% in Group C. The intergroup difference was insignificant ($p = 0.513$).

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4.1.8 Discharge (*Srava*): Improvements were 100% in Group A and 79.92% in both Group B and Group C ($p < 0.001$). However, intergroup differences were not significant ($p = 0.410$).

4.1.9 Elevation of Lesions (*Unnati*): Significant improvements were observed: 68.9% in Group A, 53.32% in Group B, and 40% in Group C ($p < 0.001$). The difference in effect among the groups was statistically significant ($p = 0.021$).

4.1.10 Joint Involvement: All groups showed significant improvement ($p = 0.022$): 86.70% in Group A, 68.69% in Group B, and 58.37% in Group C. The difference among the groups was not significant ($p = 0.529$).

4.1.11 Jwara (Fever): Groups A and B showed significant improvement (92.89%) ($p = 0.017$), while Group C showed only 26.18% improvement, which was statistically insignificant ($p = 1.871$). Overall, intergroup differences were not significant ($p = 0.097$).

4.1.12 Sleeplessness: Group A showed highly significant improvement ($p < 0.001$), while Groups B and C also showed significant changes ($p = 0.029$). Improvement rates were 87.66% in Group B, 76.69% in Group A, and 35.03% in Group C. The difference between Groups A and C was statistically significant ($p = 0.048$).

4.1.13 Candle Grease Sign: Highly significant improvement was observed in Groups A (80%) and B (84.99%) ($p < 0.01$), while Group C showed significant improvement (50.03%, $p = 0.003$). The intergroup difference was statistically insignificant ($p = 1.67$).

4.1.14 Auspitz Sign: Highly significant improvement was found in all groups ($p < 0.001$): 83.31% in Group B, 71.42% in Group A, and 69.76% in Group C. However, the difference among the groups was not statistically significant ($p = 0.251$).

4.1.15 Koebner's Phenomenon: Group A showed 53.52% improvement, Group B 75%, while Group C showed a 9% worsening of symptoms. Despite these changes, the results were statistically insignificant across all groups ($p = 0.843$), and intergroup comparison was also not significant ($p = 0.166$).

4.2 Psoriasis Area Severity Index (PASI): The PASI scores showed highly significant improvements in Group A (65.94%) and Group C (70.11%) ($p < 0.001$), while Group B showed significant improvement of 80.60% ($p < 0.003$). However, the difference in PASI score improvements among the groups was statistically insignificant ($p = 0.304$).

4.3 Effect of therapies on hematological values in all groups: Before and after treatment, almost all hematological parameters remained within normal limits across all groups. No statistically significant changes were observed following treatment, except in Group C, where a statistically significant decrease in ESR (12.48%) was noted ($P < 0.04$).

4.4 Effect of therapies on biochemical values in all groups: Biochemical parameters before and after treatment were also within normal ranges in all groups. No statistically significant change was observed in any of the parameters, except for a significant decrease in SGOT (13.14%) in Group A ($P < 0.05$).

4.5 Overall effect of therapies in all groups: In Group A (15 patients), the overall effect of therapy showed that 53.33% of patients had marked improvement, 20% had moderate

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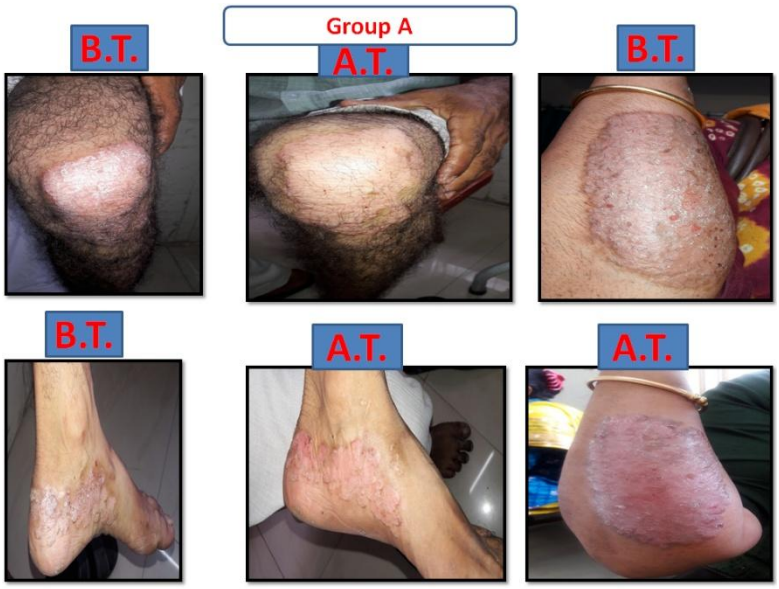
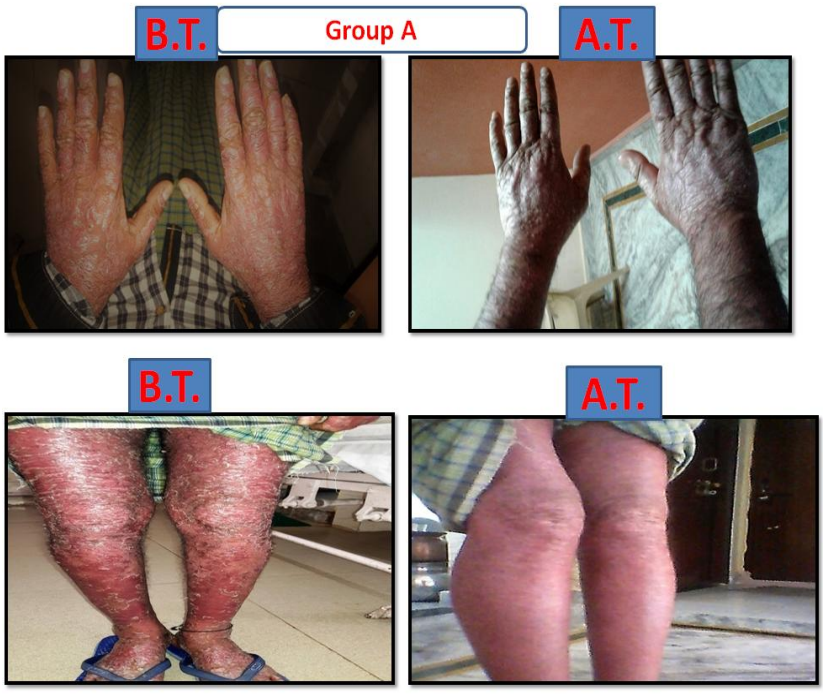


improvement, and another 20% had mild improvement. Only 6.66% of patients remained unchanged. No patient achieved complete remission or showed worsening of symptoms. A representative before and after treatment through Vamana in group A are shown in Figure 1.

In Group B (15 patients), 33.33% of patients showed marked improvement, 46.66% had moderate improvement, and 20% had mild improvement. None of the patients remained unchanged, achieved complete remission, or experienced worsening.(Figure 2)

In Group C (15 patients), 13.33% of patients showed marked improvement, 40% had moderate improvement, and 46.66% had mild improvement. None of the patients remained unchanged, showed complete remission, or worsened. (Figure 3)



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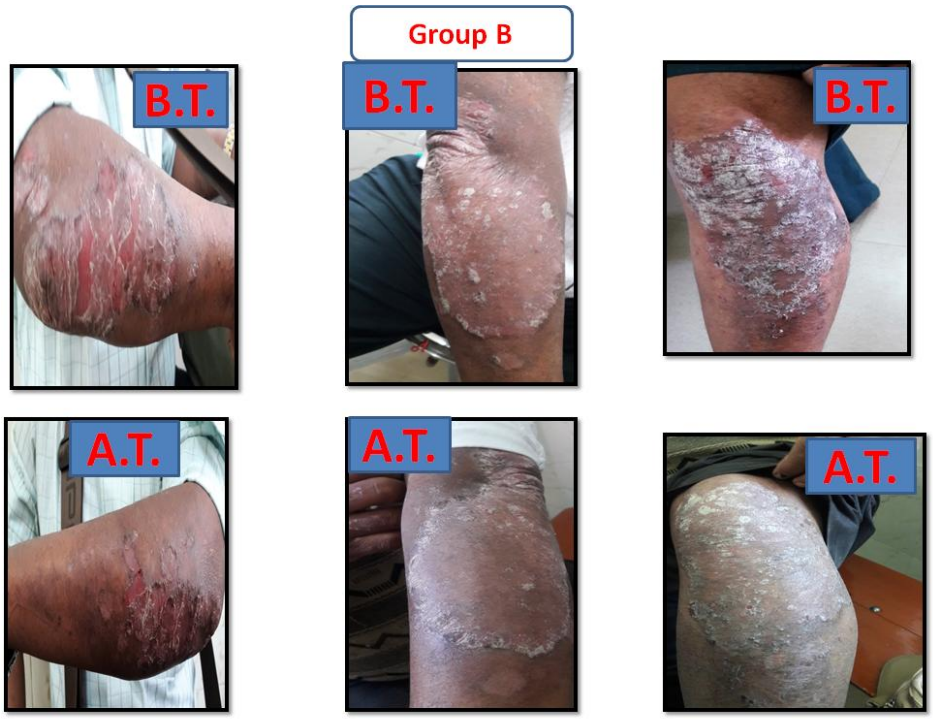

Figure 1: A representative before and after treatment in group A.

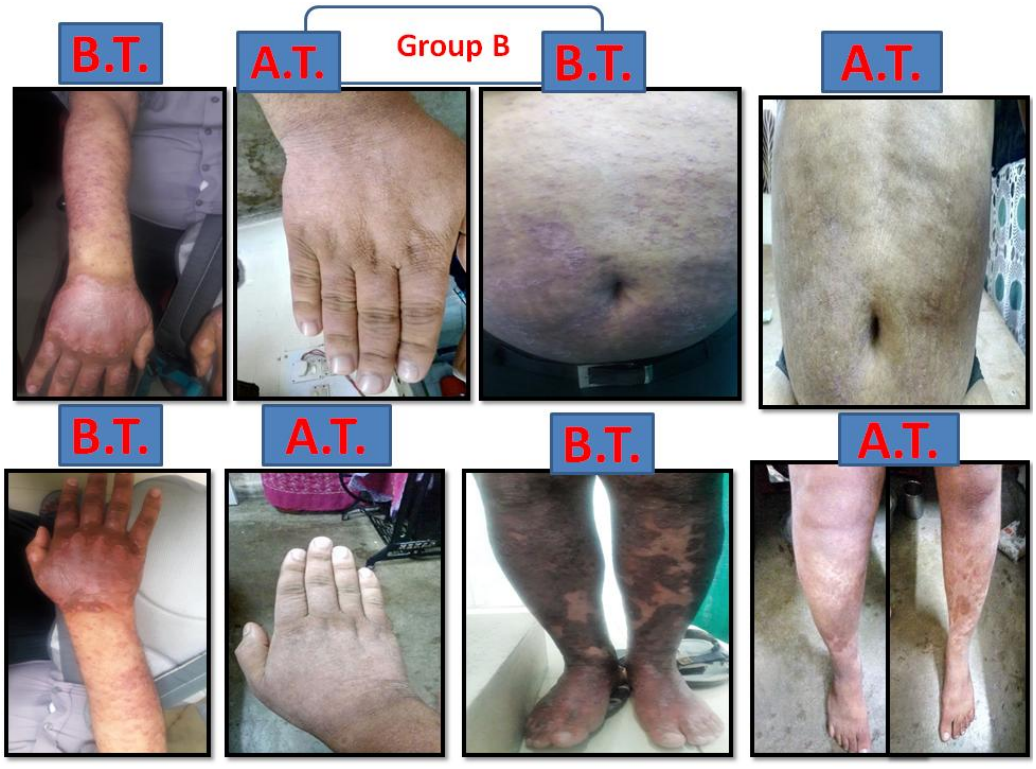

Figure 2: A representative before and after treatment in group B.

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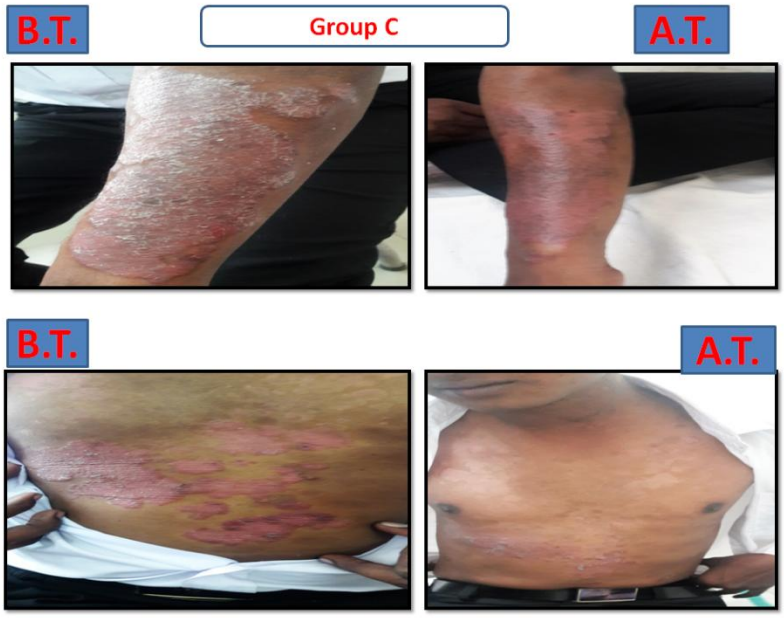

Figure 3: A representative before and after treatment in group C.

5. Discussion

5.1 Mode of Action of Vamana in Psoriasis: In this study, Vamana therapy demonstrated the most significant results in managing psoriasis. This efficacy can be attributed to its action on vitiated Kapha, as psoriasis is predominantly a Vata-Kaphaja disorder. Vamana is especially effective in eliminating Kapha dosha and is also beneficial in stress-related disorders due to its cleansing effect on the Murdhni Indriya Marga (cranial sensory pathways).Classical Ayurvedic texts recommend performing Vamana during *Purvahana* (early morning, approximately 6:00 am to 10:00 am), when Kapha is naturally at its peak, facilitating its elimination. Modern physiology supports this timing; levels of CRH, ACTH, and cortisol peak in the early morning, with plasma cortisol levels reaching around 20 µg/dl just before waking. These secretions during Vamana may help regulate the body's internal environment and combat systemic imbalances.Even minor stress—such as fever, injury, exercise, or gastroenteritis—can stimulate the adrenal glands to secrete around 100 mg of hydrocortisone per day (R.S. Satoskar, *Pharmacology and Pharmacotherapeutics*, 15th edition). Vamana, by repeatedly irritating the gastric mucosa using Vamanopaga Dravya followed by Vamaka Yoga, induces such physiological stress, thereby stimulating cortisol release.This process triggers a protective inflammatory response:

- Damaged tissue releases histamine, bradykinin, prostaglandins, proteolytic enzymes, and leukotrienes.
- Blood flow increases at the affected site.
- Plasma leaks from capillaries into damaged tissue.
- Leukocyte infiltration occurs.

This cortisol response inhibits inflammation and accelerates healing (Guyton & Hall, 1996). Considering that Kushtha (psoriasis) has chronic pathogenesis requiring long-term treatment,

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a single dose of Vamana is insufficient. This aligns with Vagbhata's recommendation for Vamana every 15 days in chronic skin conditions:

"पक्षात् पक्षाच्छर्दनान्यभ्युपेयान्मासान्मासात् स्रंसनं चापि देयम्। स्राव्यं रक्तं वत्सरे हि द्विरल्पं नस्यं दद्याच्च त्रिरात्रात्त्रिरात्रात् ॥" (Su.Chi. 9-43)

Regular Vamana ensures sustained cortisol levels, especially important as psychological stress can blunt cortisol response. Moreover, inflammatory mediators implicated in psoriasis pathogenesis may also be expelled through this process.

5.2 Mode of Action of *Virechana* in Psoriasis: *Virechana* primarily acts through the cleansing (*Shodhana*) of the **Mahasrotas** (alimentary tract), thereby exerting systemic effects on the body. Its mechanism can be understood through the following actions:

5.2.1 Srotoshodhana (Cleansing of Channels): *Virechana* removes inflammatory mediators, *Ama* (metabolic toxins), and vitiated *Kapha* and *Pitta* doshas from the body. This purification facilitates *Vatanulomana* (normal downward movement of Vata), restoring the balance of bodily functions.

5.2.2 Agnidipti (Enhancement of Digestive Fire: It stimulates digestive enzymes and enhances the function of *Agni* (digestive fire), improving metabolism and assimilation of nutrients.

5.2.3 Mana-Indriya Prasadana (Psychological and Neurological Well-being): Following detoxification, the stimulation of the enteric nervous system (ENS) positively influences the central nervous system (CNS). The ENS communicates with the CNS via the parasympathetic (e.g., vagus nerve) and sympathetic (e.g., prevertebral ganglia) pathways [7]. Remarkably, over 90% of the body's serotonin and around 50% of its dopamine are found in the gut. These neurotransmitters play a significant role in mental health, and a deficiency—particularly of serotonin—is linked to depression. Thus, *Virechana* may also support mental well-being by modulating gut-brain interactions [8,9].

5.3 Gastrointestinal Tract and Psoriasis: There is a probable link between the gastrointestinal (GI) tract and the development of skin disorders like psoriasis [10]. The GI tract serves as a primary entry point for allergens and antigens. By cleansing the GI tract, *Virechana* therapy may help control factors that contribute to psoriasis pathogenesis.

5.3.1 Elimination of *Pitta* through *Virechana:* Bile, a *Pitta Vargiya Dravya*, plays a central role in the elimination of *Pitta*. Its production is stimulated by the intake of fats (*Sneha*), especially polyunsaturated fatty acids, which promote the conversion of cholesterol to bile acids and enhance its excretion via the intestine. When fatty foods enter the duodenum, the hormone cholecystokinin is released, triggering gallbladder contraction and bile secretion. During the *Virechana* process, especially in the relaxation phase of intestinal peristalsis, the sphincter of Oddi also relaxes, facilitating the release of bile into the GI tract. Thus, *Snehapana* (intake of medicated ghee/oil) followed by *Virechana* effectively promotes *Pitta* elimination.

5.3.2 Elimination of *Kapha* through *Virechana*: The large intestine secretes mucus, which contains bicarbonate ions and is considered a *Kapha Vargiya Dravya*. After the elimination of *Mala* and *Pitta*, increased mucus secretion is observed. This secretion is stimulated by tactile

stimulation and local nervous reflexes in the intestinal mucosa, particularly in the crypts of Lieberkühn. During heightened parasympathetic activity, large volumes of mucus may be secreted into the colon. In this way, *Virechana* contributes to the elimination of *Kapha*.

5.3.4 Hormonal and Secretory Actions: *Virechana* induces mild irritation of the liver and pancreas, leading to increased secretions, including digestive enzymes and bile. Hormones such as **secretin** and **cholecystokinin** further stimulate the small intestinal secretions. When segments of the large intestine become irritated, the mucosa secretes copious amounts of water, electrolytes, and alkaline mucus. This response dilutes irritants and promotes the rapid expulsion of fecal matter, completing the detoxification process.

5.4 Mode of Action of Tiktashatpal Ghrita in Psoriasis

5.4.1 Effect on Doshas in Ekakushtha: Tiktashatpal Ghrita is effective in the management of Ekakushtha (psoriasis) due to the predominance of Tikta (bitter) and Kashaya (astringent) rasa, along with laghu (light), ruksha (dry) guna, ushna veerya (hot potency), and katu vipaka (pungent post-digestive effect). The formulation exhibits kapha-pitta shaman, kusthaghna (anti-skin disease), krimighna (antimicrobial), and kandughna (anti-itching) properties. The snigdha (unctuous) property of ghrita helps pacify vitiated Vata. Hence, as a Tridosha-shamaka, it acts on the root cause of Ekakushtha.

5.4.2 Effect on Skin: Tikta rasa has specific actions such as twak-mamsa sthirikarana (strengthening of skin and muscles), kandughna, kusthaghna, krimighna, kledashoshana (drying of excess fluid), and lasika-puya-pitta-prashamana (alleviating lymphatic discharge and inflammatory Pitta) [11]. Kashaya rasa contributes to shamana (palliation), sandhankara (healing), pidan (compression), ropan (wound healing), and sleshma-pitta-rakta prashamana (balancing Kapha, Pitta, and Rakta). Drugs like Nimba [12], Katuki [13], Chirayata [14], and Patola [15] possess proven anti-inflammatory activity, which helps manage the inflammatory pathology of psoriasis.

5.4.3 Effect on Drug Delivery and Absorption: The lipophilic nature of ghrita facilitates deeper penetration of the active ingredients into the dhatus (tissues) and enhances cellular absorption, as the cell membrane also contains lipids [16]. Studies have shown that herbal drugs administered with ghrita are more effective than in powder or tablet forms [17]. Ghrita also contains natural antioxidants such as vitamin A and E, which support cell membrane integrity and function.

5.4.4 Effect on Gastrointestinal Tract: The Tikta and Kashaya rasa, due to their ruksha and laghu guna, possess dipan-pachan (digestive stimulant), kledashoshana (fluid-absorbing), and lekhan (scraping) properties that help in ama pachana (digestion of toxins) [11]. The diptagni (increased digestive fire) action of ghrita enhances digestion [18]. Modern studies show that butyric acid in ghee can reduce gastrointestinal inflammation, supporting its use in conditions like psoriasis which may have gut-related triggers [19].

5.4.5 Effect on Brain and Mental Health: Psoriasis has a known correlation with psychological stress [20]. Nearly 60% of the brain is composed of fat, and each neuron is insulated by a myelin sheath made of fatty material. Ghee provides high-quality fats, including DHA, omega-3 fatty acids, and antioxidants like vitamin A and E, which are beneficial for

brain health. These nutrients help stabilize neuronal membranes and reduce oxidative stress, potentially improving mental well-being in individuals with psoriasis.

6. Conclusion:

This study suggests that specific dietary and lifestyle factors significantly aggravate and precipitate psoriasis. Incompatible foods (Viruddha Ahara), especially heavy items like curd (Dadhi) and milk (Ksheera), improper lifestyle habits such as day sleep (Diwaswapna), consumption of pungent or spicy foods (Vidahi Ahara), and psychological stress (Chinta) were found to worsen psoriasis. Additionally, climate change and emotional stress emerged as major precipitating factors.All three treatment modalities—Vamana followed by Tiktashatpal Ghrita (Group A), Virechana followed by Tiktashatpal Ghrita (Group B), and Tiktashatpal Ghrita alone (Group C)—provided statistically highly significant relief in the clinical signs and symptoms of psoriasis. When comparing the groups, overall symptom relief was similar, except for differences observed in pitting, sleeplessness, and elevation of lesions (Unnati). Group A demonstrated better results in reducing scaling, anhydrosis (Aswedanam), thickening of skin lesions (Bahalatvam), discharge (Srava), lesion elevation (Unnati), candle grease sign, and itching (Kandu). In contrast, Group B showed superior improvement in reducing erythema (Mandal), burning sensation (Daha), fever-like symptoms (Jwara), sleeplessness, Koebner phenomenon, and discharge. Group A also achieved better outcomes for the candle grease and Auspitz signs, whereas in Group C, the Koebner phenomenon tended to worsen.According to the Psoriasis Area and Severity Index (PASI), Groups A and B exhibited highly significant improvements, while Group C showed significant improvements, albeit to a lesser degree. No significant changes were observed in hematological parameters after treatment, except for a significant decrease in ESR (12.48%, $p < 0.04$) in Group C and a significant reduction in SGOT (13.14%, $p < 0.05$) in Group A.

Overall, 53.33% of patients in Group A showed marked improvement, whereas 46.6% of patients in Group B and 40% in Group C demonstrated moderate improvement. Based on these findings, it can be concluded that Vamana Karma with Tiktashatpal Ghrita provides better clinical management for psoriasis compared to Virechana with Tiktashatpal Ghrita or Tiktashatpal Ghrita alone.

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