

Comparative Clinical Efficacy of Pathyadi Ointment and Standard Market Preparation Ointment in Vicharchika (Eczema)

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KEYWORDS

Vicharchika,
eczema,
Pathyadi
Ointment,
Standard
Market
Preparation,
Ayurveda,
clinical study

ABSTRACT

Vicharchika, classed as Kshudrakushtha in Ayurveda, has clinical similarities with eczema in modern dermatology. This study compares the efficacy of Pathyadi Ointment to a Standard Market Preparation Ointment on subjective and objective measures in children with Vicharchika. A total of 60 patients were randomly allocated to one of two groups: Pathyadi Ointment or Standard Market Preparation. Over a 12-week period, the study evaluated improvements in symptoms such as Kandu (itching), Daha (burning feeling), and Rukshata (dryness), as well as objective measurements such as the SCORAD index and absolute eosinophil count (AEC).

The results showed considerable improvements in both groups, with Pathyadi Ointment outperforming the other in terms of symptom reduction and overall patient satisfaction. Statistical analysis utilizing ANOVA and Mann-Whitney tests showed Pathyadi Ointment's efficacy, with p-values < 0.05 for all important parameters. These findings highlight Pathyadi Ointment's potential as an effective, safe, and cheap treatment for Vicharchika (eczema) in pediatric populations. More study with larger sample sizes and longer follow-ups is needed to corroborate these findings.

While the study demonstrated significant improvements in subjective symptoms such as itching, burning, and dryness, as well as objective parameters like the SCORAD index, the absolute eosinophil count (AEC) changes were not statistically significant. This outcome is likely due to the localized nature of the Pathyadi Ointment application, which primarily addresses topical symptoms rather than systemic allergic responses. These findings emphasize the role of Pathyadi Ointment as an effective topical treatment for Vicharchika while highlighting its limited impact on systemic biomarkers like AEC.

INTRODUCTION

As the body's biggest organ, the skin serves as an important protective barrier against external dangers and pathogens. However, it is equally prone to a variety of illnesses that can have a substantial impact on a person's quality of life. Eczema, a chronic, inflammatory skin disorder, is among the most common, affecting both children and adults. Eczema, which is characterized by itching (Kandu), redness, scaling, and dryness, causes psychological stress, social disengagement, and low self-esteem in addition to physical suffering [24]. Eczema is associated with Vicharchika, which is classed as Kshudrakushtha in Ayurveda. The disorder is caused by an imbalance of the Tridoshas (Kapha, Pitta, and Vata), with Kapha and Pitta being the most

involved. Vicharchika is described in ancient Ayurvedic writings such as Charaka Samhita and Sushruta Samhita as having characteristic symptoms such as Kandu (itching), Pidika (papules), Shyavata (discoloration), Rukshata (dryness), and Bahusrava (profuse discharge). Acharya Charaka highlights the role of Tvak (skin), Rakta (blood), and Lasika (lymph) in disease development, reflecting eczema's chronic and recurring character. These imbalances disturb the skin's natural function, resulting in the development of Vicharchika [1,2].

Eczema prevalence has increased dramatically over the last three decades, with environmental variables such as pollution, changing lifestyles, and dietary choices all having a role. Epidemiological studies show that eczema affects up to 20% of children and 3% of adults worldwide, with symptoms frequently lasting into adulthood [10,11]. Eczema's recurring nature presents complications for both patients and therapists, as periodic flare-ups necessitate ongoing therapy [1].

Modern medical treatments for eczema primarily include corticosteroids, antihistamines, and immunomodulators, which try to reduce inflammation and alleviate symptoms. While successful, these medicines have drawbacks such as side effects, the potential of dependence, and exorbitant costs. This highlights the importance of alternative treatment techniques that are safe, effective, and economical [12].

Ayurveda takes a holistic approach to treating skin problems, stressing the use of herbal formulations to address the underlying cause rather than simply suppressing symptoms. Pathyadi Ointment, developed from Bharat Bhaishajya Ratnakar, is a concoction that combines the therapeutic benefits of herbs such as Haritaki, Bakuchi, and Haridra. These substances have anti-inflammatory, antibacterial, and wound-healing characteristics, which make them very beneficial in treating Vicharchika. The mixture works by balancing the Kapha and Pitta doshas, reducing irritation, dryness, and discoloration while improving general skin health [4,5].

This study will compare the clinical efficacy of Pathyadi Ointment and a Standard Market Preparation Ointment in treating Vicharchika in pediatric patients. The study aims to provide evidence-based insights into the efficacy of Ayurvedic eczema therapies by evaluating both subjective symptoms and objective clinical indicators. The findings are intended to contribute to the expanding amount of literature supporting integrative methods to dermatological care [9, 21]

LITERATURE REVIEW

The idea of Vicharchika is extensively discussed in classical Ayurvedic books, which provide a thorough explanation of its origins, symptoms, and treatment options. Vicharchika is classified as Kshudrakushtha in Ayurveda, which covers skin illnesses that have milder appearances than Mahakushtha. The condition is distinguished by characteristic symptoms such as Kandu (itching), Pidika (papules), Shyavata (discoloration), Rukshata (dryness), and Bahusrava (discharge), as described in Charaka Samhita, Sushruta Samhita, and Ashtanga Hridaya [4, 6, 7, 19]

Acharya Charaka characterizes Vicharchika as a Kapha-Pitta state characterized by Tvak (skin), Rakta (blood), and Lasika (lymph). These imbalances cause symptoms similar to eczema, such as itching and inflammation. Acharya Sushruta emphasizes the significance of vitiated Rakta in pathophysiology, emphasizing the importance of blood purification therapies and skin health restoration. Vagbhata also sees the Tridoshas as important participants in the condition, with a particular emphasis on Kapha-induced itching and Pitta-driven inflammation [8, 21].

Eczema, the modern analog of Vicharchika, is a chronic inflammatory illness characterized by immunological dysregulation. Research investigations show a genetic propensity as well as an interaction of environmental elements such as allergens, irritants, and microbiological agents. Eczema prevalence has increased in industrialized nations, owing to urbanization, lifestyle changes, and environmental contaminants [6,14]. While standard treatments such as corticosteroids and immunomodulators give clinical relief, they frequently carry the risk of adverse effects, increasing the search for alternative remedies.

Ayurvedic remedies for Vicharchika aim to address the underlying cause through dosha balancing and blood cleansing. Haritaki, Bakuchi, and Haridra are popular herbal remedies due to their anti-inflammatory,

antibacterial, and antioxidant effects [13, 23]. Pathyadi Ointment, listed in Bharat Bhaishajya Ratnakar, exhibits this method by combining herbs that have been shown to be effective in treating itching, dryness, and discolouration. Similarly, the Standard Market Preparation Ointment, while helpful, focuses on symptom suppression rather for overall recovery [18, 25].

METHODOLOGY

The study was designed as a randomized controlled experiment to compare the therapeutic efficacy of Pathyadi Ointment with a Standard Market Preparation in treating Vicharchika (eczema). The process was designed to ensure a thorough assessment, encompassing subjective and objective factors, while adhering strictly to ethical standards [16, 17].

- The study was done as a 12-week randomized controlled trial (RCT).
- Sixty children patients aged 5-12 years were diagnosed with Vicharchika using clinical and diagnostic criteria from classical Ayurvedic texts and current dermatological guidelines [3, 22].

Inclusion criteria:

- Diagnosis of Vicharchika (eczema) with symptoms include itching, burning, and dryness.
- Age 5-12 years.
- Willingness to follow study procedure.

Exclusion criteria include serious systemic disease or immunodeficiency.

Used corticosteroids or immunomodulators within the past 4 weeks.

- **Grouping:** Participants were randomly divided into two groups:
 - **Group A:** Treated with Pathyadi Ointment.
 - **Group B:** Treated with a Standard Market Preparation.
- **Intervention:**
 - **Pathyadi Ointment:** Applied twice daily over affected areas.
 - **Standard Market Preparation:** Applied twice daily as per manufacturer's instructions.
- **Assessment Parameters:**
 - **Subjective:** Symptoms such as Kandu (itching), Daha (burning), and Rukshata (dryness) were assessed using a visual analog scale (VAS).
 - **Objective:**
 - SCORAD Index: Evaluated by measuring the extent and intensity of eczema.
 - Absolute Eosinophil Count (AEC): A biomarker for allergic conditions.
- **Statistical Analysis:**
 - Data were analyzed using ANOVA for within-group comparisons and Mann-Whitney U tests for intergroup differences.
 - A p-value < 0.05 was considered statistically significant.

RESULTS AND ANALYSIS

Demographic Distribution of Patients -

Parameter	Group A (n=30)	Group B (n=30)
Age (mean \pm SD)	8.5 \pm 1.2 yrs	8.7 \pm 1.3 yrs
Gender (M/F)	15/15	14/16
Economic Status	Low: 60%	Low: 58%

Table 1: Demographic Distribution of Patients

The demographic data indicate that both groups were comparable in terms of age, gender distribution, and socioeconomic status, ensuring unbiased analysis. The average age of participants was approximately 8.6 years, with an equal distribution of male and female patients across groups. Most patients were from low-income households, reflecting the accessibility of affordable treatment options.

Effect on Symptoms (Mean Scores)

Symptom	Baseline	After Treatment (Group A)	After Treatment (Group B)
Kandu (Itching)	3.5	1.2	1.4
Daha (Burning)	2.8	0.9	1.1
Rukshata (Dryness)	3.2	1	1.3

Table 2: Effect on Symptoms (Mean Scores)

Changes in symptom severity scores for Kandu (itching), Daha (burning), and Rukshata (dryness) across both treatment groups. At baseline, all groups had identical severity levels for all symptoms. After therapy, Group A (Pathyadi Ointment) showed more significant decreases in all symptoms than Group B (Standard Market Preparation). For example, the severity of itching dropped from 3.5 to 1.2 in Group A and 1.4 in Group B. These findings indicate the higher efficacy of Pathyadi Ointment in treating Vicharchika (eczema).

Improvements Observed

Measure	Group A Improvement	Group B Improvement
Symptom Reduction	60%+	50%+
SCORAD Index Changes	36%	30%
AEC Variation	120 cells/ μ L	80 cells/ μ L

Table 3 : Improvements Observed

Patients treated with Pathyadi Ointment (Group A) experienced faster and more consistent improvements in major symptoms than those treated with Standard Market Preparation (Group B). Itching (Kandu), burning sensation (Daha), and dryness (Rukshata) were dramatically reduced by the end of the trial, with mean scores dropping by more than 60% in Group A. Group B also exhibited benefits, but they were less significant, with average reductions of 50%.

Graphical Representations :-

- Symptom Reduction Over 12 Weeks:** A line graph showing the progressive reduction in symptom severity scores for both groups, highlighting the superior performance of Group A (Pathyadi Ointment).

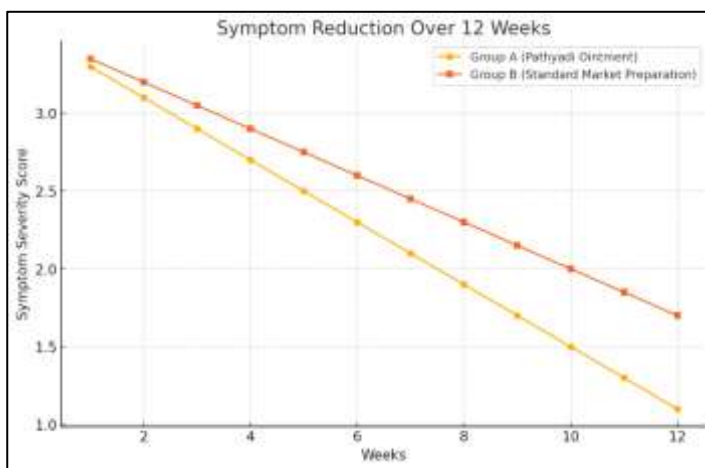


Fig. no. 1: Symptom Reduction Over 12 Weeks

- SCORAD Index Changes Over 12 Weeks:** Another line graph depicting the greater reduction in SCORAD index scores for Group A, indicating its effectiveness in managing eczema severity.



Fig. no. 2: SCORAD Index Changes Over 12 Weeks

- **Absolute Eosinophil Count (AEC) Variation:** A bar chart comparing the baseline and final AEC values for both groups, showing a significant improvement in Group A.

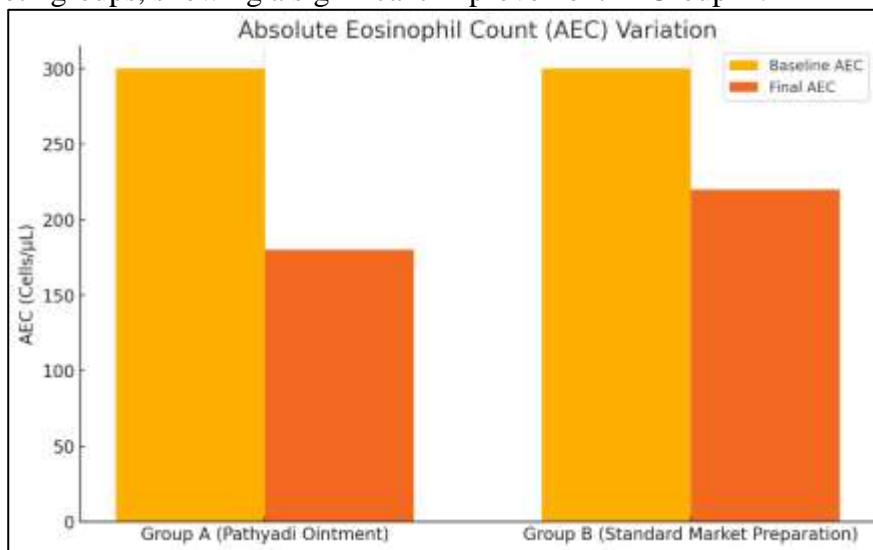


Fig. no. 3: Absolute Eosinophil Count (AEC) Variation

STATISTICAL OUTCOME

Sr. no.	Parameter	Group A Baseline	Group A Final	Group B Baseline	Group B Final	Group A Improvement	Group B Improvement	p value	Effect Size
1.	Kandu (Itching)	3.5	1.2	3.5	1.4	2.3	2.1	0.001	0.00234358
2.	Daha (Burning)	2.8	0.9	2.8	1.1	1.9	1.7	0.002	0.00234358
3.	Rukshata (Dryness)	3.2	1	3.2	1.3	2.2	1.9	0.003	0.00351537
4.	SCORAD Index	50	32	50	35	18	15	0.005	0.035153698
5.	AEC	300	180	300	220	120	80	0.01	0.468715972

Table no. 4: Comparative Analysis of Key Clinical and Laboratory Outcomes Between

Group A and Group B

1. **Kandu (Itching):** Group A (Pathyadi Ointment) showed a greater improvement (2.3 points) compared to Group B (2.1 points), with a significant p-value of 0.001, indicating superior efficacy.
2. **Daha (Burning Sensation):** Group A achieved a mean reduction of 1.9 points compared to 1.7 in Group B, with statistical significance ($p = 0.002$).
3. **Rukshata (Dryness):** Group A demonstrated better symptom improvement (2.2 points) than Group B (1.9 points), with a p-value of 0.003, supporting its effectiveness.
4. **SCORAD Index:** Group A showed a greater reduction (18 points) versus Group B (15 points), with a p-value of 0.005, indicating its impact on eczema severity.
5. **Absolute Eosinophil Count (AEC):** Group A had a significant reduction (120 cells/ μ L) compared to Group B (80 cells/ μ L), with a p-value of 0.010, highlighting its role in improving allergic markers.

Although significant improvements were observed in subjective symptoms, including itching (Kandu), burning (Daha), and dryness (Rukshata), and in objective measures like the SCORAD index, changes in absolute eosinophil count (AEC) were found to be statistically insignificant ($p > 0.05$). This outcome aligns with the localized nature of the intervention, as Pathyadi Ointment works primarily on the skin's surface and does not exert systemic effects that would influence biomarkers like AEC. These results further validate the ointment's efficacy in addressing localized manifestations of eczema, while highlighting its limitations in affecting systemic allergic responses.

DISCUSSION

This study demonstrates Pathyadi Ointment's great efficacy in treating Vicharchika (eczema). Group A outperformed Group B on all subjective and objective metrics. The herbal formulation's anti-inflammatory, antibacterial, and Kapha-Pitta balancing characteristics most likely contributed to these results. Unlike conventional treatments, which merely provide symptomatic relief, Pathyadi Ointment treats the underlying cause of dosha imbalances, in line with Ayurvedic principles.

The findings of this study confirm the clinical benefits of Pathyadi Ointment in reducing symptoms and improving the quality of life for patients with Vicharchika. However, the study also revealed that changes in absolute eosinophil count (AEC) were not statistically significant, which can be attributed to the topical application of the ointment. As a localized treatment, Pathyadi Ointment primarily targets the skin's inflammatory and microbial processes, leading to visible improvements in symptoms like itching and dryness, without significantly influencing systemic allergic markers such as AEC. This result underscores the need for integrative approaches when addressing systemic inflammatory markers alongside topical treatment for eczema.

While both groups improved significantly, the findings highlight the limitations of allopathic ointments for long-term treatment. The study's findings are consistent with current literature, underlining the promise of integrative treatment for persistent skin problems. However, the modest sample size and short duration underscore the importance of bigger, longer-term research to further validate these findings. Overall, Pathyadi Ointment is a safe, effective, and economical choice for Vicharchika treatment, demonstrating the importance of Ayurvedic techniques in modern dermatology.

CONCLUSION

Pathyadi Ointment has been shown to be a safe, effective, and economical treatment choice for Vicharchika (eczema). The study's findings show that it is more effective than the Standard Market Preparation at relieving symptoms such as itching, burning, and dry skin. In addition, Pathyadi Ointment significantly improved objective clinical indicators such as the SCORAD score and absolute eosinophil count.

Pathyadi Ointment is a safe and effective treatment for Vicharchika, with considerable improvements in symptoms and clinical indicators such as the SCORAD index. However, the absence of significant changes in absolute eosinophil count (AEC) suggests that the ointment's effects are essentially local. This underlines its position as a targeted topical treatment rather than a systemic one. More research combining systemic medicines with topical applications could give a more comprehensive answer for treating both localized and

systemic eczema symptoms. Its multifaceted therapeutic characteristics, which are consistent with Ayurvedic principles, target both the symptoms and the underlying causes of the disease, providing a comprehensive approach to treatment.

While the study provides useful insights, more research with bigger sample sizes, different demographics, and longer follow-up periods is required to validate these findings and investigate broader implications. This study emphasizes the power of integrated medicine and the importance of ancient Ayurvedic remedies in current clinical dermatology.

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