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ASSESSMENT OF EFFICACY OF DOORVADI CREAM ON PARIDAGDHA CHAVI W.S.R TO ATOPIC DERMATITIS WITH TIS SCORE

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ABSTRACT

Atopic dermatitis (AD) is the most common chronic inflammatory skin disorder in children the prevalence of AD has almost tripled in industrialized countries during last three decade. The number of AD patient is beyond the level that can be dealt with at clinics and it is time to make an effort to reduce the number of AD patients in the community. Thus, caretakers and all persons involved with AD management, including health care providers, educators, technologists and medical policy makers, should understand the development and the management of AD Atopic dermatitis is chronic inflammatory skin disease that occurs most frequently in children. The introduction of topical steroids of varying potency has rendered the therapy of inflammatory coetaneous disorders more effective and less time-consuming. However the usefulness of these has become a double edged sword. Cornerstone of therapy of AD is tropical different formulation because impaired skin barrier is pivotal in the pathogenesis of AD. So it is a need of more radical approach through ayurveda to manage AD with no side effect with help of herbal medicine in the form of cream make the herbal barrier on impaired skin.

KEYWORDS: Atopic dermatitis (AD), Paridagdhchavi, Doorvadi lepa.

INTRODUCTION

Skin disorders are among the most common reasons for medical consultations worldwide, with Atopic Dermatitis (AD) representing one of the most frequent chronic inflammatory conditions encountered in clinical practice. Characterized primarily as a long-lasting, relapsing inflammatory skin disease, AD presents with intense itching (pruritus), severely dry skin (xerosis), and eczema-like rashes that appear in specific patterns depending on the patient's age.

While AD can affect individuals of all ages, it predominantly impacts children. It is estimated that approximately 15% to 20% of the pediatric population worldwide suffers from this condition.[3] This high prevalence rate causes a substantial burden not only on healthcare systems but also profoundly impacts the quality of life for affected children and their families.[4] The disease often follows a cycle of flares and calm periods, leading to chronic sleep deprivation, reduced academic performance, and significant psychological distress, including anxiety and depression, for both the child and their caregivers.

The causes of Atopic Dermatitis are complex, involving a mixture of genetic factors, dysfunction in the skin barrier, and a dysregulated immune system. A critical aspect of AD is the impairment of the skin barrier, frequently linked to mutations in the filaggrin gene. This defect leads to increased water loss from the skin and makes it easier for allergens and pathogens to enter. From an immunological perspective, the disease is driven by a T-helper cell type 2 (Th2) cytokine imbalance, which results in elevated levels of IgE and inflammatory signals such as IL-4 and IL-13.

Conventional medical treatment focuses on breaking the itch-scratch cycle and restoring the skin's moisture barrier. The standard approach includes the daily application of moisturizers (emollients) and the use of topical corticosteroids (TCS) during active flare-ups. Although these steroids are effective at reducing inflammation, long-term use in children carries significant risks.[10] Potential side effects include thinning of the skin (atrophy), stretch marks (striae), visible blood vessels (telangiectasia), and potential suppression of the hypothalamic-pituitary-adrenal (HPA) axis, especially when applied over large areas of the body. The fear of these side effects often leads parents to avoid necessary treatments ("corticophobia"), resulting in poor management of the disease. Consequently, there is an urgent clinical need for safer, effective, and sustainable therapeutic alternatives for pediatric dermatitis.

Ayurveda, the traditional Indian system of medicine, offers a profound understanding of skin diseases categorized under the broad term Kushta Roga. Kushta is classified into Maha Kushta (major skin diseases) and Kshudra Kushta (minor skin diseases) based on severity. While not directly termed "Atopic Dermatitis" in ancient texts, the symptoms of AD closely mirror the clinical presentation of certain Kshudra Kushtas.

MATERIALS AND METHODS

Literary Data-Literary data were collected from library, electronic database, research articles, dissertations and other available sources of information.

Patients- Population of specified age group with diagnosed cases of Atopic dermatitis were included in the study. ALL patients enrolled from community health center Kalyanpur, Motihari, East champaran, Bihar

Sample size- 196

Study design-A randomized controlled clinical study.

Study period- 3-4years Study participants- Population of 6 months to 12 yr. and either sex of particular included in the study. The study protocol was approved by the institutional Ethics Committee.

Method- All Patient Divided into two group Group A & Group B

Group A Trial Drug is Doorvadi cream & Group B Control Drug Betamethasone Dipropionate Cream 0.5% w/w

Objective criteria- have mild-to-moderate AD symptoms according to the objective Scoring Atopic Dermatitis (TIS) Index (less than score 6)

Subjective Criteria- - Through history clinical examination questionnaire based on Hanifin's and Rajka's criteria related to ATOPIC DERMATITIS.

Inclusion Criteria

1- Prediagnosed case of atopic dermatitis
2- Having mild and moderate atopic dermatitis according to TIS Scoring

Exclusion criteria

The exclusion criteria are as follows:

(1) Lesions with oozing,

(2) Oral administration of corticosteroids, immune suppressant's, or antibiotics 4 weeks prior

to study entry,

(3) administration of topical glucocorticoids, immunosuppressant's, or antibiotics, or phototherapy, 2 weeks prior to study entry,

(4) Burn or trauma on the lesions,

(5) Active skin diseases without AD,

(6) Renal or liver dysfunction,

(7) Other uncontrolled chronic diseases,

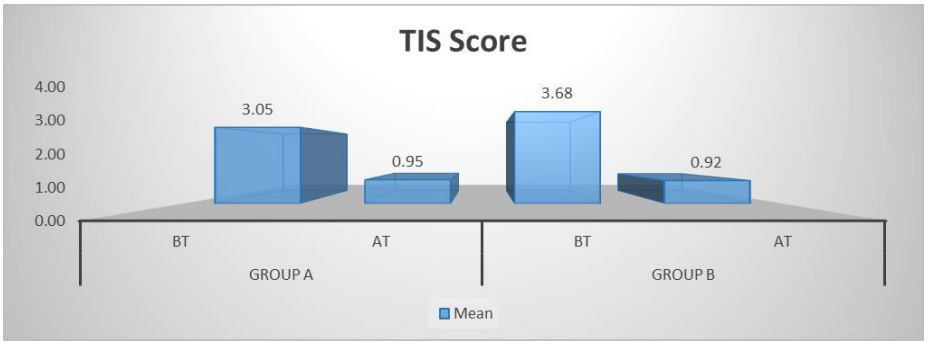
(8) Participation in other clinical trials within 1 month

CLINICAL PARAMETER

TIS Score

1) The TIS score is the sum of 3 intensity items scored on a scale from 0 to 3 (Erythema, Oedema/papulation, Excoriations should be scored on the most representative lesion.
2) This means that different items may be scored on different sites.
3) The range of the TIS score lies between 0 and 9.

Instrument	Mild	Moderate	sever
Erythema	0-2	3-5	6-9
Oedema	0-2	3-5	6-9
Excoriation	0-2	3-5	6-9



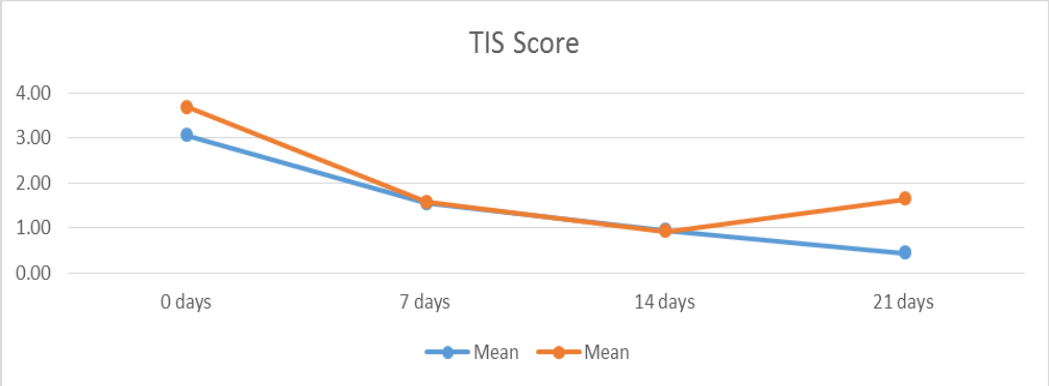
Graph 1: Comparison of Both Group TIS Score.

Day wise Effect on TIS Score

Table 1: Day wise Comparison of TIS score.

TIS SCORE	Mean		SD		% Change	
	Group A	Group B	Group A	Group B	Group A	Group B
0 days	3.05	3.68	1.15	1.26	-	-
7 days	1.55	1.58	1.04	1.07	49.18	57.07
14 days	0.95	0.92	0.78	0.75	68.85	75.00
21 days	0.45	1.65	0.59	0.86	85.25	55.16

The mean TIS scores in both groups showed a progressive reduction from baseline to Day 14, indicating an effective therapeutic response during the treatment period. In Group A, the mean score decreased from 3.05 at baseline to 0.95 by Day 14 (68.85% reduction), while in Group B it reduced from 3.68 to 0.92 (75.00% reduction). However, as the treatment duration was up to 14 days, the observations recorded on Day 21 represent the post-treatment phase. At Day 21, Group B demonstrated an increase in mean TIS score (1.65) compared to Day 14, suggesting recurrence of symptoms after cessation of therapy. Although Group A continued to show improvement at Day 21, the overall findings indicate that the treatment was effective up to 14 days, and the Day 21 assessment suggests recurrence of symptoms following discontinuation of treatment.



DISCUSSION

TIS score combines erythema, oedema, and excoriation and reflects overall disease severity

Within-Group Analysis

• Group A: 68.85% reduction at Day 14.

• Group B: 75.00% reduction at Day 14.

Both results were highly significant ($p < 0.001$).

Day 21 Findings

• Group A: Continued improvement (85.25%).

• Group B: Recurrence (55.16%).

The significant intergroup difference ($p = 0.000$) indicates better overall sustained control in Group A.

OVERALL DISCUSSION

Average Percentage Effect Day 14 (During Treatment)

• Group A: 64.85%

• Group B: 73.12%

Betamethasone showed slightly superior short-term symptomatic relief, consistent with its strong anti-inflammatory corticosteroid action.

Day 21 (Post-Treatment)

• Group A: 83.97%

• Group B: 55.75%

Doorvadi cream demonstrated superior sustained improvement, whereas Group B showed

Clinical Significance of Findings

1. Both treatments were statistically effective during the 14-day treatment period.
2. Betamethasone produced faster short-term relief.
3. Doorvadi cream showed superior sustainability of therapeutic response.
4. Recurrence was more evident in the corticosteroid group after cessation.
5. The findings support the potential of Doorvadi cream as a safe and effective alternative in pediatric Atopic Dermatitis management.

CONCLUSION

These findings suggest that while corticosteroids provide rapid symptomatic suppression, Doorvadi cream may act more holistically by addressing underlying inflammatory and pathological factors, thereby offering prolonged relief with minimal recurrence. Overall, the study concludes that Doorvadi cream is a safe, stable, and clinically effective Ayurvedic formulation for the management of Atopic Dermatitis in the paediatric age group. It demonstrates sustained therapeutic benefit with good tolerability and may serve as a safer alternative to topical corticosteroids, especially for long-term management.

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