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A CLINICAL STUDY TO ESTABLISH THE CONCEPT OF VYADHI PRATYANIKA CHIKITSA WITH SPECIAL REFERENCE TO ARDRAKA KHANDA IN UDARDA (URTICARIA)

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Ethics Approval: This study was approved by the Institutional Ethics Committee (IEC) of SDM College of Ayurveda and Hospital, Hassan, Karnataka [IEC Approval No.: SDM/IEC/27/2023], in accordance with ICH-GCP E6(R2) and the Declaration of Helsinki.
Trial Registration: Prospectively registered with CTRI [No.: CTRI/2024/07/070620].
Informed Consent: Written informed consent was obtained from all participants in their vernacular language prior to enrolment.

Abstract: Vyadhi Pratyanika Chikitsa denotes disease-specific therapeutic intervention that directly targets the pathological process rather than focusing solely on doshic imbalance. Ardraka Khanda, a classical Ayurvedic formulation with Ardraka as its primary constituent, is traditionally indicated in Udarda (Urticaria). An open-label, single-arm prospective clinical trial was conducted in 33 diagnosed subjects of Udarda enrolled from the OPD of SDM College of Ayurveda and Hospital, Hassan, after IEC approval and written informed consent. The intervention comprised Ardraka Khanda 6 g twice daily on an empty stomach for 7 consecutive days, with an observation period of 7 days. Assessment was performed at baseline (BT), after treatment (AT), and follow-up (FU) using validated scoring tools — Urticaria Activity Score (UAS), Dermatology Life Quality Index (DLQI), Ayurvedic symptom scores, and Absolute Eosinophil Count (AEC). Data were analyzed using Friedman test, Wilcoxon Signed Rank test, and Paired Student's t-test (95% CI; $p < 0.05$ significant after Bonferroni correction). Ardraka Khanda demonstrated statistically and clinically significant improvements ($p < 0.05$) across all parameters — Kandu, Sa Utsanga Mandala, Toda, and Daha. DLQI reduced by a mean of 10.00 points ($p < 0.001$); UAS reduced from 5.00 to 2.42 ($p < 0.001$); AEC showed significant reduction ($p = 0.013$). No adverse events were recorded. The study substantiates Vyadhi Pratyanika Chikitsa Siddhanta and establishes Ardraka Khanda as a safe, effective disease-specific treatment for Udarda.

Index Terms — Ardraka Khanda, Udarda, Urticaria, Vyadhi Pratyanika Chikitsa, Ayurveda, ICH-GCP, Clinical Trial.

I. INTRODUCTION

Vyadhi Pratyanika Chikitsa is treatment aimed directly against the disease. Viparita vidhaana, Pratipakshyatva, Vikulatva and Viruddhatva are the terms described for understanding the term Pratyanika. It is specifically indicated in Vyakta Avastha, the 5th stage of Kriyakaala. When the disease is fully manifested, Vyadhi Pratyanika Chikitsa is the treatment of choice. The concept of Upashaya explains Hetu viparita, Vyadhi viparita and Hetu vyadhi viparita Ahara, Vihara and Aushadha. Vyadhi viparita Aushadha can be compared to Vyadhi Pratyanika Chikitsa. Madhukosha commentary on Madhava Nidana describes this with the phrase "Na Etat Dosham Apekshante Prabhavat Roga Prashamakarina Iti" — meaning it alleviates diseases regardless of the Dosha due to its Prabhava [3].

Udarda is described under Kaphaja Nanatmaja vyadhi involving predominantly Kapha and Vata in association with Pitta. Rasa and Rakta vahasrotas are involved in vyadhi samprapti. Though Udarda is not life-threatening, it seriously affects quality of life due to appearance, severe itching, disturbance of daily routine and social stigma.

Urticaria is a cutaneous manifestation of localized non-pitting edema affecting approximately 20% of the population at some point in their lifetime, more commonly in young adults (female > male). It presents as well-circumscribed wheals with erythematous raised serpiginous borders and blanched centres.

Ardraka Khanda is a classical Khanda kalpana formulation indicated in Sheetapitta, Udarda and Kotha chikitsa. It is cost-effective, easily available and palatable. Hence, this study was undertaken to establish the concept of Vyadhi Pratyanika Chikitsa with special reference to Ardraka Khanda in Udarda (Urticaria).

II. AIMS AND OBJECTIVES

- To study the concept of Vyadhi Pratyanika Chikitsa.
- To study the effectiveness of Ardraka Khanda in the management of Udarda (Urticaria).

III. CONCEPTUAL REVIEW — VYADHI PRATYANIKA CHIKITSA

The physician, after identifying diseases through signs and symptoms of the doshas, should treat saadhyavyadhi (curable diseases) by considering: (1) Vyadhi-pratipaksha (Vyadhi-pratyanika) — remedies that counteract the disease itself; (2) Hetu-pratipaksha (Hetu-pratyanika) — measures that counteract the causative factors [4]. Pratidwandwa includes measures acting in an opposite or contrary manner (viparita-arthakarin), working against either the disease or its cause [4].

Classical references to this principle include: Ghee (sarpi) acting as Vyadhi Pratyanika in jvara by ushma-hara action [5]; Virecana as appropriate remedy in Urdhvaga Raktapitta [6]; Vidarigandhadi Gana described as Vyadhi Pratyanika for shosha [8]; Agantu vrana chikitsa — Madhu Ghrita prayoga [9]; Apatarpana in Vataja shotha as antagonistic to pathology [10]; Shamana kalpas in Vata-shonitachikitsa [11]; oil in Prameha as Vyadhi Pratyanika [12]; Madhushigru in Apakva Vidradhi [13]; Triphala Ghrita pana in Vataja Abhishyanda [15]; Ksheera Sarpi Nasya in Pittaja Abhishyanda [16]; and medicated water in Urdhvaga Raktapitta with Kapha [19].

IV. MATERIALS AND METHODS

A. Ethical Clearance and Trial Registration

The study protocol was reviewed and approved by the IEC of SDM College of Ayurveda and Hospital, Hassan, Karnataka [IEC Approval No.: SDM/IEC/27/2023]. The study was conducted in strict compliance with ICH-GCP E6(R2) guidelines and the ethical principles of the Declaration of Helsinki (2013 revision). The clinical trial was prospectively registered with CTRI [CTRI/2024/07/070620].

B. Informed Consent Procedure

Written informed consent was obtained from each participant prior to enrolment. A bilingual Patient Information Sheet (PIS) in English and Kannada was provided. Participants were informed of their right to withdraw at any time. Data confidentiality was ensured by coding subject identifiers throughout the study.

C. Study Design

Open-label, single-arm, prospective clinical trial with baseline control (pre- and post-treatment assessment). Conducted and reported in accordance with ICH-GCP E6(R2).

D. Source of Data

Literary Data: Classical textbooks of Ayurveda, contemporary medical sciences, published journal articles and authenticated websites.

Clinical Data: Thirty-three clinically diagnosed subjects of Udarda fulfilling inclusion criteria, selected from OPD of SDM College of Ayurveda and Hospital, Hassan, Karnataka.

E. Study Parameters

table 1. study design and posology

Parameter	Details
Study type	Open-label, single-arm, prospective clinical trial
Sampling	Convenience sampling
Sample size	33 subjects
Investigational product	Ardraka Khanda (classical preparation, SDM institutional pharmacy; QC per API standards)
Dosage	6 g twice daily (12 g/day), oral, empty stomach
Duration of treatment	7 days
Observation period	7 days post-treatment
Total study duration	15 days
Assessment time points	BT (Day 0), AT (Day 8), FU (Day 15)

F. Diagnostic Criteria

Clinical features of Udarda per Ayurvedic texts: Mandalotpatti (wheals with Utsanga, Raaga, and Kandu); Toda (pricking sensation); Daha (burning sensation).

G. Inclusion Criteria

- Fulfilling diagnostic criteria for Udarda
- Age 18–60 years, either gender
- Chronicity < 6 weeks (acute urticaria)
- Willing to provide written informed consent

H. Exclusion Criteria

- Uncontrolled diabetes mellitus and/or hypertension
- Typhoid fever, Dengue fever or Malaria
- Impaired renal, hepatic or cardiac function; malignancy
- Pregnant or lactating women

- Long-term systemic corticosteroids or immunosuppressives
- Known hypersensitivity to any ingredient of Ardraka Khanda

I. Concomitant Medication

Subjects were instructed to avoid antihistamines and corticosteroids during the study. Rescue medication (Cetirizine) was permitted SOS and documented. Such use was recorded in the CRF. Rescue medication was required in 2 subjects; no drug-formulation interaction was observed.

J. Assessment Criteria

1. Scoring based on Lakshanas of Udarda (Kandu, Sa Utsanga Mandala, Saraga Mandala, Toda, Daha)
2. Urticaria Activity Score (UAS) — validated; 0–6 scale
3. Dermatology Life Quality Index (DLQI) — validated; 0–30 scale
4. Absolute Eosinophil Count (AEC) — objective laboratory parameter

K. Statistical Methods

- Friedman test for differences across three time points (BT, AT, FU)
- Wilcoxon Signed Rank test for post-hoc pairwise comparisons
- Paired Student's t-test for scale data (DLQI, UAS, AEC)
- 95% confidence interval; $p < 0.05$ significant after Bonferroni correction

L. Adverse Event Monitoring

AE monitoring was conducted throughout the study in compliance with ICH-GCP E6(R2). Subjects were assessed for new complaints and changes in vital signs at each visit. All AEs/SAEs would have been documented and reported to the IEC. Result: No AEs or SAEs were observed in any of the 33 subjects.

M. Data Management and Confidentiality

All data were collected using a pre-validated CRF. Each participant was assigned a unique subject code. CRFs and consent forms were stored securely. Data were entered into a password-protected spreadsheet. Trial Master File maintained per ICH-GCP requirements.

V. RESULTS AND OBSERVATIONS

A. Subject Disposition

A total of 38 subjects were screened; 5 were excluded (3 did not meet inclusion criteria; 2 declined participation). All 33 enrolled subjects completed the full treatment and follow-up schedule. No withdrawals, dropouts or protocol deviations occurred.

B. Demographic Observations

table 2. distribution of 33 subjects of udarda according to gender

Gender	Frequency	Percent (%)
Male	12	36.4
Female	21	63.6
Total	33	100.0

The study population was predominantly female (63.6%), consistent with published literature on higher urticaria prevalence in females.

table 3. distribution of 33 subjects of udarda according to age

Age (years)	Frequency	Percent (%)
16–30	9	27.3
31–45	14	42.4
46–60	10	30.3
Total	33	100.0

The largest group was 31–45 years (42.4%), followed by 46–60 years (30.3%) and 16–30 years (27.3%).

table 4. distribution of 33 subjects of udarda according to diet

Diet	Frequency	Percent (%)
Vegetarian	10	30.3
Mixed	23	69.7
Total	33	100.0

Majority (69.7%) consumed a mixed diet. Pseudoallergens in non-vegetarian foods are associated with urticaria by a non-IgE-mediated pathway [20].

table 5. distribution of lakshanas in 33 subjects of udarda at baseline

Symptom (Lakshana)	Frequency	Percentage
Wheals (Mandalotpatti)	33	100.0%
Itching (Kandu)	33	100.0%
Redness (Raaga)	27	81.8%
Pricking Sensation (Toda)	12	36.4%
Burning Sensation (Daha)	6	15.2%
Fever (Jwara)	0	0.0%
Vomiting (Chardi)	0	0.0%

C. Results on Subjective Parameters

table 6. wilcoxon signed rank test for kandu (itching) — n = 33

Comparison	Neg. Ranks (N)	Mean Rank	Sum of Ranks	Ties	Z Value	P Value
BT–AT	33	17.00	561.00	0	−5.224	< 0.001 (S)
AT–FU	14	7.50	105.00	19	−3.742	< 0.001 (S)
BT–FU	33	17.00	561.00	0	−5.241	< 0.001 (S)

BT = Before Treatment; AT = After Treatment; FU = Follow-Up; S = Significant; NS = Not Significant

All 33 participants showed statistically significant reduction in Kandu after intervention ($Z = -5.224$, $p < 0.001$), sustained at follow-up ($Z = -5.241$, $p < 0.001$).

table 7. wilcoxon signed rank test for sa utsanga mandala (wheals) — n = 33

Comparison	Neg. Ranks (N)	Mean Rank	Sum of Ranks	Ties	Z Value	P Value
BT–AT	32	16.50	528.00	1	−5.154	< 0.001 (S)
AT–FU	6	3.50	21.00	27	−2.449	0.014 (S)
BT–FU	32	16.50	528.00	1	−5.076	< 0.001 (S)

32 of 33 participants showed reduction in wheals after intervention ($Z = -5.154$, $p < 0.001$). Improvement was maintained at follow-up.

table 8. wilcoxon signed rank test for toda (pricking sensation) — n = 33

Comparison	Neg. Ranks (N)	Mean Rank	Sum of Ranks	Ties	Z Value	P Value
BT–AT	10	5.50	55.00	23	−3.051	0.002 (S)
AT–FU	6	3.50	21.00	27	−2.449	0.014 (S)
BT–FU	10	5.50	55.00	23	−2.919	0.004 (S)

table 9. wilcoxon signed rank test for daha (burning sensation) — n = 33

Comparison	Neg. Ranks (N)	Mean Rank	Sum of Ranks	Ties	Z Value	P Value
BT–AT	6	3.50	21.00	27	−2.333	0.020 (S)
AT–FU	3	2.00	6.00	30	−1.732	0.083 (NS)
BT–FU	6	3.50	21.00	27	−2.271	0.023 (S)

Daha showed significant improvement BT–AT ($p = 0.020$) and BT–FU ($p = 0.023$). AT–FU was not significant ($p = 0.083$), indicating stability of improvement after treatment cessation.

table 10. paired t-test — dlqi total score before and after treatment (n = 33)

Parameter	Mean BT	Mean AT	Mean Diff. (95% CI)	t-value	P Value
DLQI Total Score	15.97 (SD=2.70)	5.97 (SD=1.91)	10.00 [9.24, 10.76]	26.712	< 0.001 (S)

A 10-point reduction in DLQI is considered a very large and clinically meaningful improvement per established thresholds. Treatment significantly alleviated burden on daily activities, social life, personal relationships and emotional well-being.

table 11. paired t-test — urticaria activity score (uas) before and after treatment (n = 33)

Parameter	Mean BT	Mean AT	Mean Diff. (95% CI)	t-value	P Value
UAS Total Score	5.00 (SD=0.75)	2.42 (SD=0.83)	2.58 [2.36, 2.79]	24.102	< 0.001 (S)

The post-treatment UAS of 2.42 indicates a shift from high to moderate disease activity, confirming clinically meaningful improvement.

D. Results on Objective Parameters

table 12. paired t-test — absolute eosinophil count (aec) before and after treatment (n = 33)

Parameter	Mean BT	Mean AT	Mean Diff. (95% CI)	t-value	P Value
AEC (cells/µL)	409.33 (SD=203.51)	372.17 (SD=164.36)	37.17 [8.28, 66.06]	2.631	0.013 (S)

The statistically significant reduction in AEC ($p = 0.013$) provides objective evidence of immunological and anti-inflammatory action. A strong positive correlation was found between pre- and post-treatment AEC levels, $r(28) = 0.933$, $p < 0.001$.

E. Safety and Adverse Event Summary

No adverse events (AEs), serious adverse events (SAEs), or clinically significant changes in vital parameters were observed in any of the 33 subjects throughout the study period. Ardraka Khanda was well-tolerated by all participants.

VI. DISCUSSION

A. Discussion on Observations

Diet: Majority of participants (69.7%) consumed a mixed diet. Pseudoallergens and histamine-releasing foods — including wheat, meat, fish, alcohol and caffeine — may aggravate urticaria by a non-IgE-mediated pathway [20]. Since non-vegetarian food is rich in protein, its intolerance can trigger histamine release causing urticaria.

Exposure to Cold Air: In this study, 75.8% of subjects had constant exposure to cold air. Acharyas mention Sheeta maruta samsparsha as the nidana vitiating Kapha and Vata, leading to Udarda. Cold wind acts as a physical stimulus inducing neo-antigens that stimulate IgE production, producing symptoms of urticaria.

Divaswapna: Only 24.2% of subjects had a habit of regular daytime sleep. Divaswapna increases Kapha and Kleda in the body, aggravating Kandu, and can be a predisposing factor for Udarda.

B. Discussion on Results

Kandu: Significant reduction in Kandu ($p < 0.001$) was sustained at follow-up. Ardraka's Katu Rasa possesses Kandughna and Udarda shamana properties. By counteracting the Sheeta Guna of Kapha and Vata, it alleviates cold-type itching sensations, reducing hypersensitivity responses in the skin — consistent with the Vyadhi Pratyanika principle.

Sa Utsanga Mandala: Significant reduction in wheals ($p < 0.001$) in 32 of 33 subjects. The Shothahara karma of Ardraka Khanda contributed to reduction in frequency and number of wheals. Sita, Ksheera and Ghrita through their Rakta prasadana and poshana properties help reduce intensity and duration of wheals.

DLQI: The 10-point mean reduction ($p < 0.001$) is classified as very large and clinically meaningful. This confirms that treatment was successful not only in reducing physical symptoms but also in significantly improving quality of life across domains of work, social activities, personal relationships and emotional well-being.

UAS: UAS reduction from 5.00 to 2.42 ($p < 0.001$) indicates a clinically meaningful shift from high to moderate disease activity, corroborating individual symptom analyses and DLQI improvements.

AEC: Significant AEC reduction ($p = 0.013$) objectively supports the Kandughna and Shothahara effects of Ardraka Khanda. The Deepana-Pachana properties improve Agni — an important underlying factor in allergic disorders. The dual impact on symptoms (UAS) and objective immune markers (AEC) substantiates Ardraka Khanda as a holistic therapeutic agent [20].

C. Discussion on Formulation and Vyadhi Pratyanika Principle

Statistically significant reductions across all cardinal symptoms — mandala (wheal formation), kandu (pruritus), toda (pricking sensation) and daha (burning sensation) — validate the therapeutic potential of Ardraka Khanda. The formulation was well-tolerated with no adverse events. No dependency was observed, making it safe for short-term use.

The potent Ushna Virya of Ardraka directly counteracts Sheeta maruta sparsha — the cornerstone of Udarda's pathogenesis. The synergistic action of Trikatu (Shunthi, Pippali, Maricha), Chitraka and Vidanga — all predominantly Ushna Virya — contributes Deepana and Pachana effects, correcting Agni-mandya and eliminating Ama, considered underlying causes of hypersensitivity disorders. By addressing both the immediate pathology and its root cause, Ardraka Khanda exemplifies the Vyadhi Pratyanika Chikitsa principle: directly opposing the disease process irrespective of individual doshic considerations.

VII. CONCLUSION

This open-label, single-arm prospective clinical trial, conducted in compliance with ICH-GCP E6(R2) after IEC approval and informed consent, substantiates the clinical relevance of Vyadhi Pratyanika Chikitsa Siddhanta. Statistically and clinically significant improvements ($p < 0.05$) were observed across all assessed parameters — Kandu, Sa Utsanga Mandala, Toda and Daha — with sustained effects at follow-up.

DLQI demonstrated a clinically meaningful mean reduction of 10.00 points; UAS reduced significantly from 5.00 to 2.42; AEC showed objective significant reduction ($p = 0.013$), confirming immunological improvement. No adverse events were recorded, establishing an excellent safety profile.

Ardraka Khanda, through its Kandughna and Shothahara properties, Ushna Virya counteracting the Sheeta nature of Udarda pathogenesis, and Deepana-Pachana action correcting Agni-mandya, proved effective as Vyadhi Pratyanika Chikitsa in Udarda. Ardraka Khanda can be recommended as a safe, well-tolerated and effective Ayurvedic intervention for Udarda (Urticaria).

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DECLARATIONS

Ethics Approval: IEC Approval No.: SDM/IEC/27/2023, SDM College of Ayurveda and Hospital, Hassan. Conducted per ICH-GCP E6(R2) and Declaration of Helsinki.
Trial Registration: CTRI/2024/07/070620 (Clinical Trials Registry – India).
Funding: No external funding. Investigational product prepared in the institutional pharmacy at no cost to participants.
Conflict of Interest: The authors declare no conflict of interest.
Data Availability: Datasets available from the corresponding author on reasonable request.
GCP Compliance: This trial was conducted per ICH E6(R2). All study personnel were trained in GCP prior to study initiation.

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