

A Randomized Comparative Clinical Trial to Evaluate the Add-On Effect of Katphaladi Churna with Darvyadi Kwatha Kavala in the Management of Acute Pharyngitis (Galagraha)

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Abstract: Background: Acute pharyngitis is an inflammatory condition of the pharynx associated with symptoms such as throat pain and difficulty swallowing. In Ayurveda, the condition is considered in relation to Galagraha. **Objective:** To evaluate the add-on effect of Katphaladi Churna administered with Darvyadi Kwatha Kavala compared with Darvyadi Kwatha Kavala alone in acute pharyngitis. **Methods:** This randomized comparative clinical trial involved 70 patients allocated to two groups of 35 each. Group A received Darvyadi Kwatha Kavala with Katphaladi Churna (3 g three times daily with honey), while Group B received Darvyadi Kwatha Kavala alone. Treatment continued for seven days, with assessments at baseline (Day 0), Day 3, and Day 8. Outcomes included dysphagia, throat pain, fever, tonsillar enlargement, lymphadenopathy, and pharyngeal redness. **Results:** Both groups demonstrated significant overall clinical improvement. Mean overall percentage improvement was 64.72% in Group A and 52.71% in Group B. Between-group improvement in dysphagia statistically favored Group A (post-treatment mean score 0.77 ± 0.55 vs. 1.06 ± 0.42 ; $p = 0.016$). Between-group differences in throat pain and tonsillar enlargement were not statistically significant. **Conclusion:** The combination therapy of Katphaladi Churna with Darvyadi Kwatha Kavala demonstrated greater overall symptomatic relief in acute pharyngitis, showing a statistically significant therapeutic advantage particularly in relieving dysphagia..

Keywords: Acute pharyngitis; Ayurveda; Darvyadi Kwatha; Galagraha; Katphaladi Churna; Kavala

I. INTRODUCTION

Acute pharyngitis is a common inflammatory disorder of the pharynx that presents with throat pain, dysphagia (difficulty in swallowing), fever, tonsillar enlargement, cervical lymphadenopathy, and pharyngeal redness. These symptoms interfere significantly with deglutition, vocal communication, and daily quality of life. Accurate clinical evaluation and effective management are necessary to reduce symptom duration and prevent secondary complications. In classical Ayurvedic literature, acute pharyngitis aligns closely with Galagraha, characterized by localized pathological changes in the Gala Pradesh (throat region) predominantly associated with Kapha and Vata/Pitta vitiation



resulting in Shotha (inflammation). Local administration of medicated liquids via Kavala (gargling/mouth retention) is an established therapeutic modality in Mukharoga and Galaroga.

Darvyadi Kwatha administered as Kavala acts directly on the local mucosal lining of the pharynx. Katphaladi Churna is a classical formulation administered orally to provide systemic anti-inflammatory, analgesic, and Kapha-Shamaka action. The present clinical trial was conducted to evaluate the add-on efficacy of Katphaladi Churna when combined with Darvyadi Kwatha Kavala versus Darvyadi Kwatha Kavala alone in the management of acute pharyngitis (Galagraha).

II. AIM AND OBJECTIVES

Aim: To evaluate the add-on effect of Katphaladi Churna with Darvyadi Kwatha Kavala in the management of acute pharyngitis (Galagraha).

Objective 1: To evaluate clinical outcomes following Darvyadi Kwatha Kavala alone in acute pharyngitis.

Objective 2: To evaluate clinical outcomes when Katphaladi Churna is added to Darvyadi Kwatha Kavala.

Objective 3: To compare the therapeutic efficacy of both treatment regimens across standardized clinical parameters.

III. MATERIALS AND METHODS

3.1 Study Design and Setting

This was a single-center, prospective, randomized comparative clinical trial conducted in the Outpatient Department (OPD) and Inpatient Department (IPD) of Shalakya Tantra at PDEA's Ayurved College and Research Centre, Nigdi, Pune, Maharashtra. The total study duration spanned 18 months, covering protocol approval, patient recruitment, clinical trial administration, data collection, and statistical compilation.

3.2 Participant Selection and Allocation

A total of 70 patients aged between 18 and 50 years presenting with clinical features of acute pharyngitis were recruited. Participants were randomly allocated using a simple lottery method into two equal groups of 35 patients each:

Inclusion Criteria: Patients aged 18 to 50 years of either gender presenting with at least two cardinal features of acute pharyngitis (throat pain, dysphagia, fever, enlarged tonsils, cervical lymphadenopathy, or pharyngeal redness).

Exclusion Criteria: Patients with severe complications such as peritonsillar or retropharyngeal abscess, conditions requiring surgical intervention, pregnant or lactating women, and individuals suffering from major systemic illnesses (such as uncontrolled diabetes mellitus, renal or cardiac failure).

3.3 Intervention Protocols

Group A (Trial Group): Received Darvyadi Kwatha Kavala (local gargle twice daily) along with oral administration of Katphaladi Churna (3 g, three times daily after food with Madhu/honey) for 7 consecutive days.

Group B (Control Group): Received Darvyadi Kwatha Kavala alone (local gargle twice daily) for 7 consecutive days.

3.4 Outcome Measures and Evaluation Intervals

Clinical parameters were assessed at baseline (Day 0 - Before Treatment), Day 3 (During Treatment), and Day 8 (After Treatment). Graded ordinal scoring scales (0 to 3) were used to record severity for dysphagia, throat pain, tonsillar enlargement, cervical lymphadenopathy, and pharyngeal redness. Fever was recorded presence/absence and body temperature in degrees Fahrenheit.

3.5 Statistical Analysis

Statistical compilation was performed using standard analytical software. Within-group changes (Day 0 vs. Day 8) were analyzed using the Wilcoxon signed-rank test. Between-group comparisons (Group A vs. Group B at Day 8) were



evaluated using the Mann–Whitney U-test for ordinal data, while categorical variables (fever) were evaluated using Chi-square tests. A p-value of < 0.05 was considered statistically significant.

IV. RESULTS

All 70 enrolled participants (35 in Group A and 35 in Group B) completed the 7-day treatment course and follow-up. Both treatment modalities showed significant reductions in symptom severity scores from baseline to Day 8.

Table 1: Comparative Clinical Parameter Improvement Between Group A and Group B

Clinical Outcome Parameter	Group A (BT → AT) Mean ± SD	Group B (BT → AT) Mean ± SD	Between-Group Comparison (Day 8 Post-Treatment)	p-value
Dysphagia (Difficulty Swallowing)	1.94 ± 0.68 → 0.77 ± 0.55	2.06 ± 0.59 → 1.06 ± 0.42	U = 455.5	0.016*
Throat Pain	1.69 ± 0.47 → 0.60 ± 0.55	1.54 ± 0.56 → 0.77 ± 0.49	U = 510.5	0.155 (NS)
Enlarged Tonsils	1.11 ± 0.72 → 0.40 ± 0.50	1.03 ± 0.62 → 0.49 ± 0.61	U = 581.0	0.667 (NS)
Cervical Lymphadenopathy	1.14 ± 0.65 → 0.43 ± 0.50	1.06 ± 0.58 → 0.51 ± 0.51	U = 542.0	0.320 (NS)
Pharyngeal Redness	1.46 ± 1.12 → 0.46 ± 0.69	1.29 ± 0.96 → 0.51 ± 0.77	U = 560.5	0.482 (NS)
Fever (No. of Patients)	16 BT → 5 AT	17 BT → 8 AT	Chi-Square = 0.88	0.348 (NS)

* Statistically significant ($p < 0.05$); NS = Not Statistically Significant; BT = Before Treatment; AT = After Treatment.

Overall Symptomatic Improvement Percentages

Group A demonstrated a higher overall percentage improvement across all parameters compared to Group B (64.72% vs. 52.71%). Individual symptom relief rates included:

Dysphagia Improvement: 60.31% in Group A vs. 48.54% in Group B ($p = 0.016$)

Throat Pain Relief: 64.50% in Group A vs. 50.00% in Group B

Pharyngeal Redness Relief: 68.49% in Group A vs. 60.47% in Group B

Tonsillar Size Reduction: 63.96% in Group A vs. 52.43% in Group B

Lymphadenopathy Resolution: 62.28% in Group A vs. 51.89% in Group B

Fever Resolution: 68.80% in Group A vs. 52.90% in Group B

V. DISCUSSION

The clinical trial findings demonstrate that both Darvyadi Kwatha Kavala alone and its combination with oral Katphaladi Churna provide substantial therapeutic relief in acute pharyngitis (Galagraha). Notably, the addition of Katphaladi Churna produced a statistically significant superior outcome in reducing dysphagia ($p = 0.016$), highlighting its add-on value in resolving difficulty with deglutition.

From a pharmacological and Ayurvedic perspective, Darvyadi Kwatha Kavala works locally on the inflamed pharyngeal mucosa. Ingredients in Darvyadi Kwatha possess Kashaya-Tikta Rasa, Vedanasthapana (analgesic), and Shothahara (anti-inflammatory) properties that cleanse local secretions and reduce pharyngeal edema. When Katphaladi Churna is added orally, Katphala (*Myrica nagi*) and associated drugs provide systemic Deepana, Pachana, and Kapha-Vatahara action, relieving local congestion and systemic symptoms like fever and painful swallowing.

While throat pain and pharyngeal redness showed greater numerical improvement in the combination group (Group A), the between-group statistical difference was not significant for pain alone ($p = 0.155$). This suggests that local gargling



with Darvyadi Kwatha plays the primary role in local pain relief, while systemic oral administration of Katphaladi Churna provides targeted additive benefit for motor/swallowing discomfort (dysphagia).

VI. CONCLUSION

This trial establishes that adding oral Katphaladi Churna (3 g TID with honey) to local Darvyadi Kwatha Kavala enhances overall clinical efficacy in acute pharyngitis (Galagraha), achieving 64.72% overall improvement compared to 52.71% with gargling alone. The combination offers a statistically significant advantage in relieving dysphagia. Thus, Katphaladi Churna is a highly effective, safe, and practical add-on therapy alongside classical local Kavala therapy in acute pharyngitis.

VII. DECLARATIONS

Ethical Approval: Approved by the Institutional Ethics Committee of PDEA's Ayurved College and Research Centre, Nigdi, Pune (Approval No: PDEA/ACRC/IEC/2023-24/022). Written informed consent was obtained from all participants prior to enrollment.

Conflict of Interest: The authors declare no competing financial interests.

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