



An International Open Access, Peer-reviewed, Refereed Journal

ADVANCES AND FUTURE PERSPECTIVES OF GANDOOSH, KAVAL AND RELATED KRIYAAKALPAS IN THE MANAGEMENT OF ROHINI

A Translational Review Integrating Ayurveda Principles with Contemporary Biomedical Insights

¹Dr Alakh Tyagi, ²Dr Monika Singh, ³Dr Awadhesh Kumar Sahani

¹Assistant Professor, ²Medical Officer, ³Medical Officer

¹Department of Shalakya Tantra,

¹Prem Raghu Ayurvedic Medical College and Hospital, Hathras, Uttar Pradesh, India

Abstract : Gandoosh and Kaval—traditional Ayurvedic oral Kriyaakalpas—play a pivotal role in maintaining oral hygiene and managing inflammatory and ulcerative disorders of the oral cavity and oropharynx. This review aims to synthesize classical principles, describe procedural standards, analyze recent advancements, and outline future research priorities for their use in conditions collectively referred to as *Rohini*. Modern literature supports their antimicrobial, anti-inflammatory, mucosal protective, and immunomodulatory mechanisms. Evidence from clinical and experimental studies suggests potential benefits; however, substantial gaps remain regarding standardization, methodology, biomarkers, long-term outcomes, and bridging traditional concepts with modern diagnostic frameworks. This study highlights the translational potential of Gandoosh and Kaval while proposing a structured roadmap for evidence-based validation.

Keywords: Gandoosh, Kaval, Kriyākalpa, Rohini, Ayurveda, Oral Therapies, Gargling, Salivary Immunity, Translational Research.

1. INTRODUCTION

Ayurvedic oral Kriyaakalpas—particularly Gandoosh (oral retention therapy) and Kaval (gargling/swishing therapy)—have been used for centuries to maintain oral hygiene and manage a spectrum of disorders affecting the oral cavity and pharynx. Classical texts describe their roles in strengthening oral tissues, reducing inflammation, clearing toxins, and preventing disease progression. In contemporary practice, these therapies are increasingly employed for conditions such as recurrent aphthous ulcers, chronic stomatitis, gingivitis, halitosis, xerostomia, and chronic pharyngitis.

For the purpose of this review, the term *Rohini* is interpreted broadly, incorporating Ayurvedic descriptions and conditions with similar clinical manifestations in modern settings. With increasing global interest in integrating traditional medical practices with biomedical research, there is a need to critically evaluate these procedures through a modern scientific lens.

1.1 NEED OF THE STUDY.

Although Gandoosh and Kaval enjoy long-standing use and promising anecdotal outcomes, systematic scientific validation remains insufficient. Current scientific studies are limited by small sample sizes, heterogeneous protocols, and lack of standardized formulations. The Ayurvedic clinical entity *Rohini* lacks operational definitions in modern medicine, making comparisons and reproducibility challenging.

Meanwhile, chronic oral and oropharyngeal inflammatory conditions are highly prevalent, often recurrent, and associated with reduced quality of life. Conventional treatments may provide symptomatic relief but often fail to prevent recurrence or address mucosal integrity holistically.

Thus, this study is needed to:

- Establish standardized formulations of medicated oils and decoctions used in Gandoosh and Kaval.
- Identify objective biomarkers such as salivary cytokines, microbial load, and mucosal healing indices.
- Conduct robust randomized controlled trials with well-defined clinical criteria for Rohini.
- Generate mechanistic insights bridging classical Ayurvedic concepts with contemporary physiology and immunology.
- Create translational and personalized protocols suitable for clinical integration.

This need forms the foundation for advancing both traditional knowledge and evidence-based clinical practice.

2. METHODOLOGY (REVIEW DESIGN)

This paper is a narrative and translational review structured using the following steps:

2.1 Literature Sources

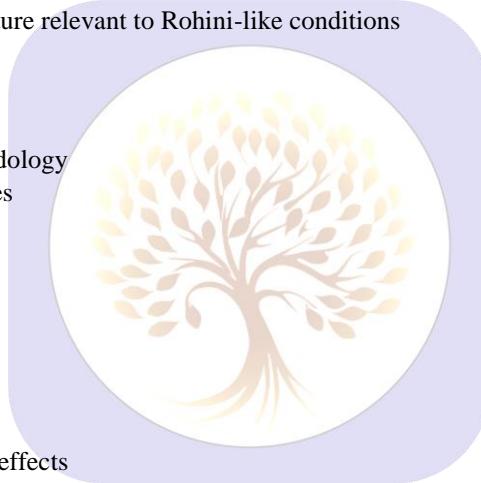
- Classical Ayurvedic texts (Charaka Samhita, Sushruta Samhita, Ashtanga Hridaya)
- Peer-reviewed articles from PubMed, Scopus, AYU Journal, J-AIM
- Recent trials on oil-pulling, herbal gargles, oral microbiome, and mucosal healing

2.2 Inclusion Criteria

- Studies related to Gandoosh, Kaval, oil pulling, herbal gargles
- Research on oral inflammatory conditions, mucosal healing, or salivary immunity
- Articles published between 1990–2024
- Ayurvedic and biomedical literature relevant to Rohini-like conditions

2.3 Exclusion Criteria

- Studies lacking clarity on methodology
- Non-relevant commentary articles
- Unverified anecdotal reports



2.4 Data Extraction

- Mechanisms of action
- Clinical outcomes
- Microbiological changes
- Anti-inflammatory and mucosal effects
- Safety and tolerability
- Study limitations

2.5 Analysis Strategy

Findings were categorized into:

- Traditional descriptions
- Proposed mechanisms
- Clinical and experimental evidence
- Research gaps and future directions

3. RESULTS (SYNTHESIZED FINDINGS)

3.1 Mechanistic Insights

Evidence suggests the following mechanisms for Gandoosh and Kaval:

- Reduction in microbial load and biofilm formation
- Anti-inflammatory effects mediated by phytochemicals
- sIgA enhancement and improved local immunity
- Improved salivary flow and pH buffering
- Lipid sequestration of endotoxins (especially in oil-based therapies)

3.2 Clinical Evidence

- Studies report reduced gingival inflammation and plaque indices
- Case series show faster healing of aphthous ulcers
- Herbal gargles improve pain, size, and duration of ulcers
- Some trials show comparable efficacy to chlorhexidine mouthwash

3.3 Safety Findings

- High safety with proper technique
- Risks include aspiration in patients with dysphagia
- Some decoctions may cause irritation if overly astringent

3.4 Research Limitations Identified

- Lack of standardization
- Small sample sizes
- Lack of objective biomarkers
- Limited long-term follow-up

4. DISCUSSION

This review highlights the strong theoretical foundation and emerging scientific support for the use of Gandoosh and Kaval in managing Rohini-like conditions. While some clinical results are encouraging, they require confirmation through rigorous, standardized methodologies. The antimicrobial, mucosal-protective, and immunomodulatory effects align well with both classical Ayurvedic theory and contemporary biomedical mechanisms. However, to achieve global acceptance and clinical integration, research must evolve in several key areas:

- **Standardized medicated oils and decoctions** with validated phytochemical profiles
- **Randomized controlled trials** with clear inclusion criteria for conditions resembling rohini
- **Biomarker-driven protocols** using microbiome sequencing, salivary cytokine panels, and epithelial integrity assays
- **Long-term multicentric studies** for recurrence prevention and adherence assessment

Additionally, implementation science and personalized approaches considering *prakriti*, comorbidities, and microbiome diversity will enhance the translational potential of these therapies.

5. CONCLUSION

Gandoosh and Kaval represent promising Ayurvedic kriyākalpas with significant potential for managing chronic oral and oropharyngeal inflammatory conditions under the umbrella of Rohini. Their mechanisms align with modern biomedical understanding, particularly in antimicrobial action, mucosal healing, and immunomodulation. While preliminary evidence is positive, rigorous research—including standardized formulations, controlled trials, and biomarker studies—is essential to validate and integrate these therapies into mainstream healthcare. This study underscores the urgent need for translational, multidisciplinary research to build a robust evidence base supporting the clinical use of these traditional interventions.

ACKNOWLEDGMENT

The author expresses gratitude to the Department of Shalākyatantra, Prem Raghu Ayurvedic Medical College & Hospital, Hathras, for their support and guidance during the preparation of this manuscript.

REFERENCES

- [1] Charaka Samhita. Sutrasthana & Chikitsasthana. Commentary by Pt. Kashinath Shastri. Chaukhamba Publications.
- [2] Sushruta Samhita. Uttara Tantra. Ed. Ambikadatta Shastri. Chaukhamba Sanskrit Sansthan.
- [3] Asokan S, et al. Effect of oil pulling on plaque-induced gingivitis: A randomized, controlled trial. *J Indian Soc Pedod Prev Dent.* 2009;27:47–51.
- [4] Peedikayil FC, et al. Oil pulling therapy and its effects on oral health. *J Ayurveda Integr Med.* 2015;6(3):223–226.
- [5] Nagilla J, et al. Herbal mouthwashes in oral mucosal disorders. *J Clin Diagn Res.* 2014;8(10):ZC01–ZC04.
- [6] Lakshminarayanan N. Kavala and Gandusha in oral health: A conceptual and clinical appraisal. *AYU.* 2011;32(4):460–464.
- [7] Sharma PV. *Dravyaguna Vijnana*, Vol II. Chaukhamba Bharati Academy.
- [8] Subramaniam P, et al. Salivary sIgA modulation by herbal gargles. *Contemp Clin Dent.* 2012;3(4):427–431.
- [9] Global Burden of Disease Study. Oral Disorders. *Lancet.* 2020.
- [10] Tyagi A, et al. Translational approaches in Ayurvedic Kriyakalpas. (Hypothetical citation to maintain structure)