

**“SHALAKYA APPROACHES TO DANTA ROGA (DENTAL DISORDERS):
AN INTEGRATIVE REVIEW”**

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ABSTRACT

Introduction: Dental disorders (*Danta Roga*) are among the most prevalent global health concerns, affecting billions worldwide. Ayurveda, particularly through the Shalakya Tantra branch, provides an elaborate understanding of oral and dental diseases and their management. Unlike modern dentistry, which emphasizes mechanical and pharmacological approaches, Ayurveda offers holistic interventions that combine preventive, promotive, and therapeutic strategies. **Methods:** A structured literature review was conducted using Ayurvedic classical texts (*Charaka Samhita*, *Sushruta Samhita*, *Ashtanga Hridaya*, *Bhavaprakasha*), PubMed, Scopus, Web of Science, and AYUSH Research Portal. Keywords included “Shalakya Tantra,” “Danta Roga,” “Ayurvedic dentistry,” and “Ayurveda and dental health.” Studies published between 2000–2025, including clinical trials, pharmacological studies, and systematic reviews, were included. Exclusion criteria involved anecdotal reports, non-peer-reviewed sources, and studies unrelated to oral and dental disorders. **Results:** Shalakya Tantra describes *Danta Roga* as arising due to vitiation of *doshas* affecting teeth and surrounding structures. Classical texts mention various conditions such as *Krimidanta* (dental caries), *Dantaharsha* (dentin hypersensitivity), *Dantashoola* (toothache), and *Dantaveshtaka* (gingival disorders). Preventive regimens like *Dantadhatvana* (herbal tooth brushing), *Gandusha* (oil pulling), and *Pratisarana* (herbal powder massage) are emphasized. Herbal formulations such as *Irimedadi Taila*, *Triphala*, *Yashtimadhu*, and *Neem* have demonstrated antimicrobial, anti-inflammatory, and analgesic properties. Clinical studies confirm the efficacy of oil pulling and herbal dentifrices in reducing plaque, gingivitis, and halitosis. **Discussion:** Shalakya Tantra provides comprehensive preventive and curative approaches for *Danta Roga*. While modern evidence supports many Ayurvedic interventions, further standardization and large-scale clinical validation are required for global integration.

KEYWORDS: Ayurveda, Danta Roga, dental health, Shalakya Tantra, Triphala



INTRODUCTION

Oral and dental diseases are a major public health burden worldwide, with conditions such as dental caries, gingivitis, and periodontal disease affecting individuals across all age groups^[1-2]. Modern dentistry has developed advanced surgical, restorative, and pharmacological treatments; however, these are often costly, inaccessible in rural areas, and associated with adverse effects such as antimicrobial resistance and chemical toxicity^[3-4].

Ayurveda, the ancient Indian system of medicine, offers a unique perspective on oral and dental health. Shalakya Tantra, one of the eight branches of Ayurveda, deals with diseases of the organs above the clavicle, including the eyes, ears, nose, throat, and oral cavity^[5-6]. Within this framework, *Danta Roga* (dental disorders) are described in detail, with emphasis on doshic imbalances, improper diet, and poor oral hygiene as causative factors. Preventive regimens, local therapies, and internal medications are all part of the therapeutic approach^[7-8].

The aim of this review is to comprehensively analyze Ayurvedic approaches to *Danta Roga* as described in Shalakya Tantra, compare them with modern evidence, and highlight their practical relevance and research potential^[9-10].

MATERIALS AND METHODS

- **Databases searched:** PubMed, Scopus, Web of Science, Google Scholar, AYUSH Research Portal^[11].
- **Keywords used:** “Shalakya Tantra,” “Danta Roga,” “Ayurveda and dental health,” “Ayurvedic dentistry,” “oral cavity disorders Ayurveda.”^[12]
- **Inclusion criteria:**^[13]
 - Classical Ayurvedic descriptions of *Danta Roga*.
 - Peer-reviewed clinical trials, reviews, and pharmacological studies (2000–2025).
 - Research connecting Ayurvedic therapies with oral and dental health.
- **Exclusion criteria:** Non-peer-reviewed works, anecdotal cases, and studies not related to oral diseases^[13].
- **Type of studies reviewed:** Classical Ayurvedic texts, pharmacological studies, clinical trials, and recent review articles^[14].
- **Data extraction:** Organized under categories of classification, preventive measures, therapeutic

strategies, clinical validations, and integration with modern dentistry^[15].

OBSERVATION AND RESULTS

1. Classification of Danta Roga in Shalakya Tantra

According to *Sushruta Samhita* and *Ashtanga Hridaya*, *Danta Roga* are primarily caused by vitiation of *Vata*, *Pitta*, *Kapha*, and *Rakta*. The major conditions include:

- **Krimidanta:** Comparable to dental caries, caused by microbial activity.
- **Dantaharsha:** Resembling dentin hypersensitivity.
- **Dantashoola:** Toothache of various origins.
- **Dantaveshtaka:** Gum disorders, similar to gingivitis and periodontitis.
- **Dantakshata and Dantakotha:** Structural deformities of teeth.

2. Preventive Approaches in Shalakya Tantra

- **Dantadhwana (tooth brushing):** Using twigs of *Neem* (*Azadirachta indica*), *Khadira* (*Acacia catechu*), *Karanja* (*Pongamia pinnata*) for antimicrobial and mechanical cleansing.
- **Gandusha and Kavalagraha (oil pulling):** Daily practice with sesame or coconut oil prevents plaque, gingivitis, and halitosis.
- **Pratisarana (herbal powder massage):** Application of powders like *Triphala*, *Haridra*, and *Lavanga* on gums for strengthening and cleansing.
- **Pathya-apathyta (dietary guidelines):** Avoiding excessive intake of sweet, sour, and sticky foods to prevent dental decay.

3. Therapeutic Approaches

- **Local Therapies:**
 - *Irimedadi Taila* and *Jatyadi Taila* for gargling and gum massage.
 - *Triphala Kwatha* rinses for ulcers and gingivitis.
- **Internal Medications:**
 - *Yashtimadhu* for ulcer healing.
 - *Guduchi* and *Haridra* for anti-inflammatory effects.
- **Shodhana Measures:**
 - *Raktamokshana* (bloodletting) in severe gum diseases.
 - *Virechana* in systemic aggravation of doshas.

4. Evidence from Modern Research

- **Oil pulling:** Randomized controlled trials (Asokan et al., 2009) show sesame oil pulling

- reduces *Streptococcus mutans* and gingivitis, comparable to chlorhexidine.
- **Triphala:** Demonstrated antimicrobial action against *S. mutans* and *Lactobacillus*, effective in reducing plaque and caries risk.
- **Neem extracts:** Show strong antibacterial and antifungal properties, useful in periodontal therapy.
- **Herbal dentifrices:** Clinical trials show efficacy in reducing plaque and halitosis without side effects of chemical mouthwashes.
- **Clove oil:** Provides analgesic and antimicrobial benefits, widely used in dental pain relief.

5. Integration of Classical Wisdom and Modern Science

- Preventive regimens align with oral hygiene principles in modern dentistry.
- Herbal medicines demonstrate validated antimicrobial, anti-inflammatory, and analgesic effects.
- Ayurveda emphasizes systemic health in maintaining oral health, a concept gaining attention in modern periodontal research.

DISCUSSION

The Ayurvedic description of *Danta Roga* in Shalakya Tantra presents a holistic framework for dental disorders, integrating etiology, pathology, prevention, and management. The classification of dental disorders into conditions like *Krimidanta* (caries), *Dantaharsha* (hypersensitivity), and *Dantashoola* (toothache) demonstrates remarkable correlation with modern dental diseases^[16].

Preventive strategies such as *Dantadhavana* and *Gandusha* highlight Ayurveda's emphasis on daily oral hygiene. Modern research validates these practices, with studies confirming the antimicrobial and anti-inflammatory actions of neem, triphala, and sesame oil. Such findings bridge Ayurveda and dentistry, offering low-cost, side-effect-free alternatives for long-term oral care^[17].

Therapeutic measures like *Irmedadi Taila* and *Triphala Kwatha* have shown wound-healing and anti-gingivitis effects, comparable to modern medicated mouthwashes. Clove and turmeric demonstrate analgesic and antimicrobial properties widely recognized in dentistry. Importantly, Ayurveda links oral diseases to systemic health, resonating with modern findings that connect

periodontitis with cardiovascular, metabolic, and inflammatory conditions^[18-19].

Despite these promising overlaps, challenges remain. Clinical trials on Ayurvedic formulations are often small-scale, lacking standardization in dosage and preparation. Global recognition requires robust randomized controlled trials, pharmacological standardization, and inclusion in dental health policies. Collaborative research between Ayurveda and dentistry can establish integrative oral healthcare models^[20].

CONCLUSION

Shalakya Tantra offers a comprehensive approach to *Danta Roga*, emphasizing both prevention and treatment. Practices such as *Dantadhavana*, *Gandusha*, *Kavalagraha*, and *Pratisarana* provide effective daily oral hygiene measures validated by modern research. Herbal formulations including *Triphala*, *Neem*, *Yashtimadhu*, and *Irmedadi Taila* demonstrate antimicrobial, anti-inflammatory, and analgesic effects, making them effective alternatives or adjuncts to modern dentistry.

Modern clinical evidence supports many of these traditional practices, demonstrating reductions in plaque, gingivitis, halitosis, and dental caries comparable to standard chemical interventions. The holistic approach of Ayurveda, linking oral health with systemic well-being, presents a valuable model for integrative dental healthcare.

Future research must focus on large-scale clinical validations, standardization of formulations, and interdisciplinary collaboration. Such efforts can enhance global acceptance of Ayurvedic practices in dentistry, providing cost-effective, sustainable, and safe solutions for the growing burden of dental diseases.

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