



Ayurvedic perspectives on Pediatric Oral Health- Prevention and Management

¹ Jinu Jojan,

¹Final year PG scholar,

¹Department of Shalakyatantra,

¹Government ayurveda college Trivandrum ,Kerala ,India

Abstract : Oral health is fundamental to the growth and development of children. Ayurveda describes oral cavity disorders under Mukharoga . Changing lifestyle, dietary patterns, and poor hygiene have increased the prevalence of these disorders in children. This article throws a light on various ayurvedic management on pediatric oral health diseases, its prevention and management. Preventive strategies like *dantadhavana*, *jihvanirlekhana*, *pratisarana kavala*, and *gandusha* strengthen oral tissues and prevent microbial accumulation in children. Pathya–apathya dietary practices and Rasayana drugs further enhance immunity. Classical formulations such as Irimedadi Taila, Kasisadi Churna, Khadira Vatika, Chandrakala Rasa, and Shubhra Bhasma were described for gingivitis, caries, halitosis, and bleeding gums. Modern studies validate their antimicrobial, anti-inflammatory, and plaque-reducing properties

IndexTerms – pediatric oral care,gandusha,dantadhavana,pratisarana.

I. INTRODUCTION

Oral diseases in children are a major global health concern, affecting nutrition, speech, learning, and psychosocial well-being. Ayurveda gives prime importance to oral health through the description of Mukharoga and daily regimens like *dantadhavana* and *kavala*. Oral diseases in children are a major global health concern, affecting nutrition, speech, learning, and psychosocial well-being

The World Health Organization (WHO) recognizes oral diseases as one of the most prevalent non-communicable conditions worldwide, affecting nearly 3.5 billion people [13]. In India, the burden of dental caries and gingivitis in children continues to rise, with reports indicating that 60–80% of school-aged children suffer from some form of dental disorder [12]. Poor oral health in early years is closely associated with nutritional deficiencies, speech impairments, absenteeism from school, and psychosocial disturbances

Ayurveda, the ancient Indian system of medicine, emphasizes holistic well-being with special attention to preventive and promotive aspects of health. Oral health is specifically addressed in Shalakya Tantra, which deals with diseases above the clavicle.

Charaka Samhita and Ashtanga Hridaya also highlight the relationship between oral hygiene and systemic health, underscoring the importance of daily regimens such as *dantadhavana* (tooth brushing with herbal twigs), *jihvanirlekhana* (tongue scraping), *gandusha* (oil holding), and *kavala* (oil pulling) as part of *dinacharya*. From a modern biomedical perspective, the two most prevalent pediatric oral diseases are dental caries and gingivitis. Dental caries is a multifactorial microbial disease of tooth structures characterized by demineralization due to acid production, primarily by *Streptococcus mutans* and *Lactobacillus* species. Gingivitis is an inflammatory condition of the gums induced by microbial plaque accumulation, characterized by redness, swelling, and bleeding on probing. Both these conditions are strongly influenced by diet, oral hygiene practices, socioeconomic status, and parental awareness [6,11]. Interestingly, Ayurveda recognizes similar etiologies,

identifying excessive intake of sweet, sticky foods (*madhura rasa*), poor hygiene, and kapha-aggravating diets as primary factors leading to oral disorders.

Given the rising prevalence of pediatric oral disorders, increasing resistance to antibiotics and antiseptics, and the need for cost-effective safe alternatives, Ayurvedic strategies hold immense relevance today. Thus, this review aims to consolidate classical Ayurvedic knowledge and contemporary research on prediction, prevention, and management of Mukharoga in children. By highlighting decision-making parameters, preventive regimens, and effective yogas, this work seeks to present an integrative framework that can complement modern pediatric dentistry

Review of literature

Concepts and observations were collected and documented from multiple sources through observational studies, interventional studies, and review articles, primarily from the databases PubMed, Science Direct, Scopus and Google Scholar from 1960 to 2025. Ayurvedic treatises provide the earliest descriptions of oral diseases under Mukharoga, *Dantamoolagata Roga*, and *Dantaroga*. Charaka Samhita mentions the role of kapha and rakta in gum disorders and emphasizes dinacharya regimens such as *dantadhavana*, *jihvanirlekhana*, *kavala*, and *gandusha* for maintaining oral hygiene [1]. Sushruta Samhita details 65 Mukharogas and advocates local measures (*pratisarana*, *gandusha*), systemic formulations, and *raktamokshana* in resistant cases [2]. Ashtanga Hridaya highlights 75 mukharoga and mentions about preventive oral hygiene and therapeutic practices [3]. Pediatric considerations, including dantodbhava vyadhi (teething disorders), are elaborated in Kashyapa Samhita and Bhaishajya Ratnavali with specific yogas for children [6].

Observations

Ayurveda emphasizes predictive tools such as prakriti, agni, and nidana for early susceptibility assessment. Kapha-dominant children are prone to Krimidanta, Pitta types to Shitada and Raktasrava, and Vata types to Dantodbhava Vyadhi and Dantashoola. Weak digestive fire predisposes to oral infections

Influencing factors in pediatric oral diseases:

Successful administration of Ayurvedic protocols in pediatric Mukharoga depends upon multiple internal and external determinants. These influencing factors must be assessed prior to initiating prediction, prevention, and management strategies.

Prakriti (Constitutional Type)

Kapha Prakriti:

Prone to *Krimidanta* (caries), gum hypertrophy, excessive salivation.
Sluggish metabolism promotes accumulation of plaque and microbial growth.

Pitta Prakriti:

Susceptible to *Shitada* (gingivitis), *Raktasrava* (bleeding gums), stomatitis.
Tendency for inflammation, sensitivity, and oral ulcers.

Vata Prakriti:

Predisposed to *Dantodbhava Vyadhi* (delayed teething), *Dantashoola* (toothache).
Features dryness of oral cavity, weak dental roots.

Agni (Digestive & Metabolic Power)

Mandagni (low digestive fire) leads to ama production, lowering systemic immunity and creating an internal environment favorable to infections.

Children with weak agni often suffer from recurrent oral disorders, poor absorption of nutrients essential for dental development (calcium, phosphorus)

Bala (Strength & Immunity)

Sahaja Bala (congenital immunity) and *Kalaja Bala* (age-dependent strength) determine disease resistance.

Weak immune children are more prone to chronic gingivitis, recurrent halitosis, and oral ulcers.

Rasayana chikitsa (with *Amalaki*, *Guduchi*, *Yashtimadhu*) can be advised to enhance resistance.

Desha (Habitat/Environment)

Anupa Desha (marshy, humid areas): Enhances kapha → increases caries and gingival inflammation.

Jangala Desha (dry regions): Enhances vata → increases sensitivity, delayed teething, oral pain.

Sadharana Desha (moderate climate): Balanced environment, fewer oral complaints unless aggravated by diet.

Kala (Seasonal Influence & Age)

Ritus (seasons):

Varsha Ritu (monsoon): Kapha-Pitta aggravation → gingivitis, halitosis.

Shishira Ritu (winter): Vata aggravation → toothache, sensitivity.

Grishma Ritu (summer): Pitta aggravation → bleeding gums, stomatitis.

Ahara (Diet)

Pathya (Wholesome diet): Fresh fruits, vegetables, whole grains, Triphala, milk.

Apathya (Unwholesome diet): Refined sugars, sticky sweets, packaged foods, carbonated drinks — these aggravate kapha and directly cause microbial growth in oral cavity.

Vihara (Lifestyle & Oral Hygiene)

Poor oral hygiene (irregular brushing, skipping dantadhavana).

Lack of parental supervision in young children.

Modern lifestyle habits such as excessive consumption of chocolates, snacks, and aerated drinks.

Psychological Factors

Stress and irritability in children, especially during teething or chronic gum disorders, affect compliance.

Fear of dental procedures may reduce cooperation; hence child-friendly Ayurvedic measures like manjana and vatikas are more effective.

Parental Awareness and Compliance

Parents' knowledge of oral hygiene practices and willingness to implement preventive regimens strongly influence outcomes.

Regular follow-up and reinforcement of daily habits like *dantadhavana* and *kabala* ensure sustained results.

Preventive Measures

Dinacharya: Dantadhavana; jihvanirlekhana; kavala/gandusha with Tilataila or Irimedadi Taila [1,3].

Diet: Fruits, vegetables, Triphala recommended; refined sugar and carbonated drinks should be avoided [6].

Rasayana: *Amalaki*, *Guduchi*, *Yashtimadhu* strengthen immunity [5].

Management

Teething (Dantodbhava Vyadhi): *Dantodbhavaga Dantaka Rasa, Pravala Bhasma*, gum massage with ghee/honey. *Shitada* (Gingivitis): *Kasisadi Churna, Irimedadi Taila*; proven comparable to chlorhexidine [7,8]. *Krimidanta* (Caries): *Khadira Churna, Triphala Kwatha*; *Khadira* shown antimicrobial [9]. *Raktasrava* (Bleeding gums): *Chandrakala Rasa, Shubhra Bhasma*; alum clinically reduces gingivitis [10]. *Halitosis* (Mukhadourgandhya): *Khadira Vatika, Sahakari Vati*; *Dantashoola* (Toothache): *Dantashoolahara Manjana, Hingwadi Yoga*.

Special Administration Methods

Pratisarana (rubbing), *gandusha/kavala* (oil pulling), *manjana* (tooth powders), *rasayana* for systemic strengthening

Pratisarana (Topical Rubbing / Massage of Gums)

Pratisarana is the local application or gentle rubbing of medicated powders or pastes on the gums, teeth, and oral mucosa using a finger or soft applicator [2].

Procedure:

Fine powders (*churna*) like *Kasisadi Churna, Tankana Churna, or Triphala Churna* are mixed with honey, ghee, or warm water to make a paste.

This paste is applied with the finger over affected areas (gums, dental margins) and rubbed gently for 2–3 minutes.

Followed by warm water *gargle or kavala*.

Indications in Pediatric Mukharoga:

Shitada (gingivitis): Reduces swelling, bleeding, foul smell.

Krimidanta (caries): Controls microbial load.

Raktasrava (bleeding gums): Provides hemostasis.

Mode of Action:

Provides local stimulation to gingival tissues → improves circulation.

Powder particles act as mechanical plaque removers.

Honey/ghee vehicle has antimicrobial, soothing, and wound-healing actions.

Examples of Yogas:

Kasisadi Churna with honey (for gingivitis).

Tankana Bhasma with honey (for halitosis, microbial control).

Triphala Churna paste (for overall oral hygiene).

Gandusha (Holding of Medicated Fluids in Mouth)

Gandusha is the therapeutic procedure of filling the oral cavity completely with medicated fluid and holding it without movement until tears come from the eyes or saliva from the nose, followed by expulsion [3].

Procedure:

Mouth is filled completely with medicated liquid (oil, decoction, milk, or medicated water).

Held for 2–5 minutes without movement.

Spit out once heaviness/discomfort appears.

Performed after brushing and tongue scraping

Indications in Pediatric Mukharoga:

Shitada (gingivitis): Reduces inflammation, strengthens gums.

Mukhadourgandhya (halitosis): Removes foul odor, purifies oral cavity.

Krimidanta (caries): Antimicrobial action.

Raktasrava (bleeding gums): Astringent oils stop bleeding.

Common Gandusha Dravyas for children:

Irimedadi Taila – for gingivitis, plaque control [7,8].

Tilataila (sesame oil) – antioxidant, antimicrobial.

Khadira decoction – anti-caries, antimicrobial.

Milk decoctions with *Triphala* – soothing for inflamed gums.

Mode of Action:

Provides prolonged contact of drugs with gingiva and mucosa.

Oils and decoctions act as antimicrobial, anti-inflammatory, and astringent agents.

Improves salivary flow, tissue tone, and detoxifies oral cavity.

Milk decoctions with *Triphala* – soothing for inflamed gums.

Discussion

Pediatric Mukharoga encompasses a spectrum of oral diseases such as *Dantodbhava Vyadhi*, *Shitada*, *Krimidanta*, *Raktasrava*, and *Mukhadourgandhya*, which parallel teething troubles, gingivitis, dental caries, gum bleeding, and halitosis in modern pediatrics [1,2]. Oral health in children has direct implications on nutrition, growth, speech development, and psychological well-being [6,11]. Conventional pediatric dentistry primarily offers symptomatic care (scaling, fillings, antiseptic rinses), whereas Ayurveda emphasizes an integrative approach, combining prediction, prevention, and management based on dosha-dushya principles.

Classical yogas such as *Irimedadi Taila*, *Kasisadi Churna*, *Khadira Vatika*, and *Shubhra Bhasma* [10] demonstrate both traditional efficacy and modern validation

Conclusion

Pediatric Mukharoga constitutes a significant burden on child health, with conditions such as Dantodbhava Vyadhi, Shitada, Krimidanta, Raktasrava, and Mukhadourgandhya closely paralleling teething troubles, gingivitis, caries, gum bleeding, and halitosis described in modern pediatrics. Classical Ayurvedic texts, particularly Sushruta Samhita and Charaka Samhita, emphasize that rakta and kapha are the dominant dushyas in oral diseases, and management should therefore address both systemic and local factors [1–3].

The Ayurvedic clinical decision-making framework of prakriti, *agni*, *nidana*, *dushya*, and *adhisthana* provides a predictive and preventive model that modern dentistry currently lacks. Preventive strategies such as *dantadhavana*, *jihvanirlekhana*, *kavala*, and *gandusha* are supported by growing evidence, showing plaque-reducing and antimicrobial actions comparable to standard mouth rinses [7,8]. Formulations like *Irimedadi Taila*, *Kasisadi Churna*, *Khadira Vatika*, *Shubhra Bhasma*, and *Triphala* offer safe and cost-effective options in pediatric oral care

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