

Siddha Herbal Formulations in Dental Care: A Comprehensive Review of Traditional Remedies

Suresh Ramasamy^{1,*}, Shanmugapriyan Pazhani¹, Abarna Balasubramani², Shanmu Radhakrishnan³, Karthic Vedhachalam Mani⁴

¹Department of Gunapadam (Siddha Pharmacology), National Institute of Siddha (Affiliated with the Tamil Nadu Dr.M.G. R Medical University) Ministry of Ayush, Chennai, Tamil Nadu, INDIA.

²Department of Nanju Maruthuvam (Siddha Toxicology), National Institute of Siddha (Affiliated with the Tamil Nadu Dr.M.G. R Medical University) Ministry of Ayush, Chennai, Tamil Nadu, INDIA.

³Department of Pura Maruthuvam (Siddha External Medicine), Govt. Siddha Medical College (Affiliated with the Tamil Nadu Dr.M.G. R Medical University) Ministry of Ayush, Tirunelveli, Tamil Nadu, INDIA.

⁴Department of Nanju Maruthuvam (Siddha Toxicology), Velumailu Siddha Medical College (Affiliated with the Tamil Nadu Dr.M.G. R Medical University) Ministry of Ayush, Sriperumbudur, Tamil Nadu, INDIA.

ABSTRACT

Oral health is a critical component of overall well-being, yet dental diseases remain widespread due to factors like poor hygiene and limited awareness. Traditional systems like Siddha medicine offer valuable insights into natural, cost-effective oral care solutions. This review explores 43 Siddha herbal formulations used in dental care, focusing on their traditional applications and potential therapeutic benefits. Plant parts such as bark, roots, leaves, seeds, and latex are used in diverse forms-decoctions, powders, fumes, chews, and oil preparations-to treat conditions like gingivitis, toothache, oral ulcers, and periodontitis. Classical Siddha texts and contemporary research validate the antimicrobial, anti-inflammatory, analgesic, and astringent properties of these herbs. The study highlights the relevance of integrating Siddha formulations into modern dental practice, especially for underserved populations. However, further pharmacological validation, standardization, and clinical trials are essential to ensure safety and efficacy. This synthesis encourages a holistic approach to oral healthcare by bridging traditional knowledge and contemporary science.

Keywords: Gingivitis treatment, Herbal dental formulations, Medicinal plants, Oral health, Siddha medicine, Traditional remedies.

Correspondence:

Suresh Ramasamy

PG Scholar, Department of Gunapadam (Siddha Pharmacology), National Institute of Siddha (Affiliated with the Tamil Nadu Dr. M. G. R Medical University) Ministry of Ayush, Chennai-600047, Tamil Nadu, INDIA.

Email: suresh03051994@gmail.com

ORCID:0009-0004-9403-0629

Researcher ID (WOS): LEM-0465-2024

Received: 13-09-2025;

Revised: 28-10-2025;

Accepted: 05-12-2025.

INTRODUCTION

Oral diseases continue to be a major public health concern worldwide. Poor oral health is linked to various systemic conditions, including chronic diseases such as diabetes. It also increases the risk of infective endocarditis, digestive issues, cardiovascular disease, stroke, bacterial pneumonia, and pre-term delivery. A direct relationship has been observed between oral infections like periodontitis and cardiovascular conditions. Oral health is thus integral to overall health.^[1] In India, periodontal disease affects individuals across all age groups, with prevalence reaching up to 89.2% among adults. One of the leading contributors to oral health issues is the lack of awareness regarding preventive and promotive oral care.^[2]

Several herbs have been traditionally used for the prevention and management of dental diseases. Herbal medicines-which include herbs, herbal preparations, and finished products made from plant materials-are available in both traditional forms (like powders and oils) and commercial forms (such as pastes, tablets, or gels).^[3,4] They have shown efficacy in treating various oral conditions such as purulent gingivitis, mucositis, superficial periodontitis, tongue inflammation, mucosal infections, and post-operative wound healing. Herbal remedies also alleviate oral symptoms associated with systemic diseases due to their anti-inflammatory, antiseptic, analgesic, astringent, edema-reducing, and healing-accelerating properties.^[5,6]

There is a growing global demand for safe, effective, and economical alternatives to synthetic drugs in oral healthcare. Phytochemicals derived from herbs are increasingly recognized for their antimicrobial, antioxidant, antifungal, antiviral, and analgesic effects, along with their role in enhancing immunity. Traditional texts like *Pathaartha Guna Sinthamani* have classified oral diseases under *Pal Noigal* and *Palladinoigal*. Historically,



ScienScript

DOI: 10.5530/ajbls.20250078

Copyright Information :

Copyright Author (s) 2025 Distributed under Creative Commons CC-BY 4.0

Publishing Partner : ScienScript Digital. [www.scienscript.com.sg]

oral hygiene was maintained using natural tools such as *datum* (wooden chewing sticks) and aromatic herbs or spices for mouth rinsing.^[7,8] This study aims to explore the use of herbal remedies in managing various dental ailments and promote their application in everyday oral healthcare.

METHODOLOGY

A focused literature review was conducted on classical Siddha texts such as Pathartha Guna Sinthamani and Agasthiyar Vaithiya Kaaviyam, along with electronic-based research articles related to herbal remedies in dental care. Studies and traditional references were selected using keywords such as “Siddha medicine,” “oral care,” and “Pal Noigal.” Only plant-based formulations specifically used for oral diseases were included. Information on plant parts, preparation methods, dosage forms, and therapeutic uses was compiled. Traditional claims were cross verified with available scientific research to highlight the pharmacological relevance of these remedies in dental healthcare.

Review of Siddha Herbal Remedies for Dental Care

A summary of selected Siddha herbal remedies traditionally used in dental care is presented in Table 1.^[9-11]

Siddhars prescribed particular herbal powders for brushing that are intended to maintain oral cleanliness while simultaneously aiding digestive health. For oral health issues such as soft gums and oral ulcers, Vembu Kolunthu (*Azadirachta indica*) or Thiripala powder can be used as a brushing powder to strengthen the gums and promote healing. In cases of indigestion, dryness of the tongue, eye-related ailments, and vomiting, a mixture of fried Lavangam (clove) and Seeragam (cumin), powdered and combined with a small amount of salt, can be used for brushing. This combination helps stimulate digestion and reduces associated symptoms. For conditions like fever, cough, vomiting, and headache, a brushing powder made from fried Omam (carom seeds), salt, Kaichikatti (bark extracts of *Acacia catechu*), Masikkai (Magic nuts), Lavangapattai (cinnamon bark), Lavangam (clove), and Milagu (black pepper) can be used. These ingredients, once powdered and used regularly for brushing, aid in relieving the above symptoms and contribute to maintaining overall oral and systemic health. Various medicinal sticks are traditionally used for managing dental ailments. These include sticks from Karuvelam (*Acacia nilotica*), Vembu (*Azadirachta indica*), Puliymaram (*Tamarindus indica*), Aalam (*Ficus benghalensis*), Nayuruvi root (*Achyranthes aspera*), Maruthu (*Terminalia arjuna*), Iththi (*Ficus microcarpa*), Maa (*Mangifera indica*), Thekku (*Tectona grandis*), Naaval (*Syzygium cumini*), Magizh (*Mimusops elengi*), Kadambu (*Anthocephalus cadamba*), Vila (*Limonia cidissima*), Asoku (*Saraca asoca*), Kurukkathi (*Hiptage benghalensis*), and Sanpam (*Michelia champaca*).^[12,13] These herbal sticks are chewed or used as toothbrushes, providing antimicrobial, anti-inflammatory, and astringent effects beneficial in maintaining oral hygiene

and treating various dental conditions. For dental cavities, Omatheener can be used as a gargle to reduce microbial load and support healing. Additionally, Argasara Nalika Chooranam may be used as a tooth powder for brushing, helping to cleanse the teeth and prevent further decay. In cases of gingivitis, traditional remedies such as Kandangathiri fumes are beneficial for reducing inflammation. Lavangapattai Thailam can be applied for its antiseptic and soothing properties, while Marukkarai Kudineer can be taken as a decoction to support oral and systemic health.^[14,15]

RESULTS AND DISCUSSION

In recent times, there has been a growing recognition of traditional medicine systems. More people are turning to ancient and locally rooted remedies for their healthcare needs. In India, traditional medicine has a strong foundation, built over centuries of practice and refinement. Dentistry has also been integral part of these traditional approaches, with herbal treatments commonly used for issues like dental pain, infections, gum problems, and mouth ulcers. Even though modern allopathic dentistry has made significant advancements, traditional methods continue to maintain their relevance and popularity. While traditional claims are promising, there remains a need for scientific validation through pharmacological and clinical studies to confirm efficacy and safety. Integration of these time-tested remedies with modern dental care could offer cost-effective and accessible alternatives for managing oral health in rural and underserved populations.^[16] The traditional knowledge of Siddha medicine should be harmonized with modern dental treatments. To achieve this, the active compounds found in traditional herbs need to be incorporated into present-day oral healthcare practices. Furthermore, dental professionals should be encouraged and empowered to utilize natural remedies in various oral health treatments. Siddha oral care methods often rely on herbal substances that possess antimicrobial, anti-inflammatory, and antioxidant properties. The integration of Siddha practices into contemporary dentistry holds significance due to their potential to provide supportive and complementary benefits alongside standard procedures. Also, it could lead to improved oral health outcomes by embracing a holistic strategy that unites time-honoured wisdom with current scientific innovation.^[17] However, for wider acceptance and application, there is a need for standardized formulations, clinical trials, and interdisciplinary collaboration. The lack of scientific documentation and standardized dosing poses a challenge. Bridging this gap requires efforts from both traditional medicine practitioners and modern dental professionals to ensure safety, efficacy, and public trust.

This article identified 43 Siddha herbal formulations traditionally used for managing dental ailments. These formulations included various plant parts such as bark, roots, leaves, latex, and seeds, administered in diverse forms like decoctions, powders, chewed

Table 1: Selected Siddha Herbal Remedies Traditionally Used in Dental Care.

Sl. No.	Tamil name	Botanical name	Family	Part used	Preparation/ used
1.	Abini	<i>Papaver somniferum</i> Linn.	Papaveraceae	Latex	Powdered mix of Abini, Omam, Karpooram, and Vaadhumai Paruppu ash used for brushing; helps relieve toothache, tighten gums, and reduce bad breath.
2.	Akkarakaaram	<i>Anacyclus pyrethrum</i> L.	Asteraceae	Root	Chewed or used as decoction for gargling in toothache.
3.	Alamaram	<i>Ficus benghalensis</i> Linn.	Moraceae	Prop roots Bark Latex	Prop roots are used for brushing to strengthen the teeth The bark decoction is used for gargling to treat mouth ulcers and bad breath.
4.	Arattai	<i>Alpinia galanga</i> Linn.	Zingiberaceae	Root	Arattai powder mixed with honey or used as a decoction helps relieve toothache.
5.	Chukku	<i>Zingiber officinale</i> Rose	Zingiberaceae	Dried tuber	Dried ginger is chewed to treat toothache.
6.	Devadaru	<i>Cedrus deodara</i> (Roxb)	Pinaceae	Bark	The bark fumes are used to treat toothache associated with cavities.
7.	Erukku	<i>Calotropis gigantea</i>	Apocynaceae	Latex	Cotton soaked in latex is applied to the gums to treat cavities, toothache, and to tighten the gums.
8.	Kadukkai	<i>Terminalia chebula</i> Retz.	Combretaceae	Fruit	Kadukkai powder is used for brushing to treat gingivitis.
9.	Kalipakku	<i>Areca catechu</i> Linn.	Arecaceae	Fruit	Pakku powder mixed with Kaichikatti, Indhuppu, Omam, and Padikaram is used for brushing to treat Pallaranai, gingivitis, and bad breath.
10.	Kandangkattari	<i>Solanum surattense</i> Burm.f.	Solanaceae	Seeds	The seed fumes are used to treat toothache associated with cavities.
11.	Karumbu	<i>Saccharum officinarum</i> Linn.	Poaceae	Karkandu	A mixture of karkandu (rock sugar) and 4 g of vengaram (borax) is administered internally for 7 days as a treatment for pallaranai (gingivitis).
12.	Karungaali	<i>Acacia catechu</i> . (Linn.f)	Fabaceae	Bark	The bark decoction, including Kadukkai, Nelli, and Thandri, is used for gargling to treat mouth ulcers.
13.	Kaththari	<i>Solanum melongena</i> Linn.	Solanaceae	Fruit	The fruit is fried in gingelly (sesame) oil and consumed internally as a remedy for dental ailments.
14.	Kathathak kambu	<i>Uncaria gambir</i> Roxb.	Rubiaceae	Saththu	Kathathak kambu is chewed to treat toothache, gingivitis, and oral ulcers.
15.	Kattamanakku	<i>Jatropha curcas</i> Linn.	Euphorbiaceae	Stick Latex	The latex is applied to the tooth to relieve toothache. The stick is used for brushing to alleviate toothache
16.	Kollukaivelai	<i>Tephrosia purpurea</i> . Linn.	Fabaceae	Root	A root decoction is used as a gargle to treat oral ulcers.
17.	Koyya	<i>Psidium guajava</i> . Linn.	Myrtaceae	Leaf	The leaf is chewed to treat dental ailments.
18.	Kudasapaalai	<i>Holarrhena pubescens</i>	Apocynaceae	Bark	The decoction is used for gargling to treat toothache.
19.	Kudiyottip poondu	<i>Argemone Mexicana</i> . Linn.	Papaveraceae	Seeds	The seed fumes are used to treat toothache associated with cavities.

Sl. No.	Tamil name	Botanical name	Family	Part used	Preparation/ used
20.	Kuppaimeni	<i>Acalypha indica</i> . Linn.	Euphorbiaceae	Leaf	Leaf treated to pallaranai noigal.
21.	Kurosani omam	<i>Hyoscyamus niger</i>	Apiaceae	Seed	This powder is used in the treatment of various dental disorders.
22.	Lavangam	<i>Syzygium aromaticum</i> . Linn.	Myrtaceae	Flower bud	Clove oil-soaked cotton placed on the gums is used to treat palnoigal (gum diseases).
23.	Magizh	<i>Mimusops elengi</i> . Linn.	Sapotaceae	Bark Seeds	The decoction is used for gargling to treat tooth ache.
24.	Marakarai	<i>Catunaregum spinosa</i> (Thumb)	Rubiaceae	Root	Decoction is used for treating dental ailments. It is used to make old people's teeth strong like young people's teeth.
25.	Mullongi	<i>Raphanus sativus</i> . Linn.	Brassicaceae	Tuber	Tuber is used to treat Dental ailments.
26.	Naruvili	<i>Cordia dichotoma</i> Forst.F	Boraginaceae	Seed	The decoction is used for gargling to treat Pallaranai, Pallasaiivu, Erukattu.
27.	Nayuruvi	<i>Achyranthes aspera</i> . Linn.	Amaranthaceae	Root	The root is used as a toothbrush for cleansing.
28.	Omam	<i>Trachyspermum ammi</i> . Hoof	Apiaceae	Seed	Omam (ajwain) powder mixed with salt is used for brushing to treat pal noigal (gum diseases).
29.	Pallipoondu	<i>Striga lutea</i> . Lour	Orobanchaceae	Whole plant	The plant decoction is used to treat toothache.
30.	Panai	<i>Borassus flabellifer</i> . Linn.	Arecaceae	Flower	The flower is used to treat dental ailments.
31.	Perungayam	<i>Ferula asafoetida</i> . Linn.	Apiaceae	Resin	Abin and Perungayam are mixed and applied to the cavity tooth to relieve pain.
32.	Pirappan kizhangu	<i>Calamus rotang</i> , Linn.	Arecaceae	Tuber	The tuber decoction or powder, when taken internally, is used to treat Chronic periodontitis (mobile tooth).
33.	Pudhina	<i>Mentha arvensis</i> . Linn.	Lamiaceae	Whole plant	The plant powder is used for brushing to treat dental ailments.
34.	Pugaiyilai	<i>Nicotiana tabacum</i> . Linn.	Solanaceae	Leaf	The leaf is placed on the painful area of the tooth to relieve toothache.
35.	Shadurakkalli	<i>Euphorbia antiquorum</i>	Euphorbiaceae	Latex	The latex is applied to the tooth to relieve toothache.
36.	Sivanar vembu	<i>Indigofera aspalathoides</i> . DC	Fabaceae	Root	The root is chewed to treat toothache and mouth ulcers.
37.	Thalisapaththiri	<i>Abies spectabilis</i> (D. Don)	Pinaceae	Leaf	The powder is used to treat toothache, and the bark decoction is used for gargling to treat mouth ulcers.
38.	Thumbilikkai	<i>Diospyros peregrina</i> , Gurka	Ebenaceae	Fruit	The fruit decoction is used for gargling to treat gingivitis.
39.	Udimaram	<i>Lannea coromandellica</i> (Houtt)	Anacardiaceae	Bark	The bark decoction is used for gargling to treat toothache and mouth ulcers.
40.	Vel	<i>Acacia nilotica</i> . Linn.	Fabaceae	Bark	Bark in the form of brush, decoction, or powder is used to treat gingivitis and oral ulcers.
41.	Vellilothram	<i>Symplocos racemosa</i> . Roxb	Symplocaceae	Bark	The decoction is used for gargling to treat gingivitis.

Sl. No.	Tamil name	Botanical name	Family	Part used	Preparation/ used
42.	Vetpalai	<i>Wrightia tinctoria</i> . Roxb	Apocynaceae	Leaf	The leaf is chewed to treat Toothache.
43.	Vila	<i>Limonia cidissima</i> . Linn.	Rutaceae	Fruit	The fruit is taken internally to treat oral ulcers.

parts, oil-soaked cotton, and fumes. A significant number of herbs were found effective in treating gingivitis, toothache, oral ulcers, bleeding gums, and periodontitis.

CONCLUSION

Siddha medicine holds promising potential in the field of dentistry, particularly as a complementary approach to conventional treatments. By integrating its time-tested herbal remedies into modern oral healthcare practices, dental professionals can offer more natural, patient-friendly alternatives. Such an integrative approach not only broadens treatment options but also supports a more holistic view of oral health. Moving forward, focused research, education, and policy support are essential to unlock the full potential of Siddha medicine in modern dental practice.

ACKNOWLEDGEMENT

The authors acknowledge the support and facilities provided by the National Institute of Siddha, Tambaram sanatorium, Chennai for their support in this study.

ABBREVIATIONS

PG: Post Graduate; **WOS:** Web of Science; **SR:** Suresh Ramasamy; **SP:** Shanmugapriyan Pazhani; **AB:** Abarna Balasubramani; **SRK:** Shanmu Radhakrishnan; **KV:** Karthic Vedhachalam.

FUNDING

The author(s) received no financial support for the research, authorship and/or publication of this article.

CONFLICT OF INTEREST

The authors declare that there is no conflict of interest.

Cite this article: Ramasamy S, Pazhani S, Balasubramani A, Radhakrishnan S, Vedhachalam K. Siddha Herbal Formulations in Dental Care: A Comprehensive Review of Traditional Remedies. *Asian J Biol Life Sci.* 2025;14(3):569-73.

AUTHOR CONTRIBUTION

Conceptualization: SR; Data collection and compilation: SR, SP and AB; Manuscript Writing: SR, SP and AB; Proofreading and editing: SR, SP, AB, SRK and KV.

REFERENCES

- Alexander DC. The global burden of oral diseases-Aligning around common goals for improved advocacy outcomes. *J Glob Oral Health.* 2018;1(1):3-4. doi: 10.25259/JGOH-1-1-2.
- Petersen PE. The World Oral Health Report 2003: continuous improvement of oral health in the 21st century-The approach of the WHO Global Oral Health Programme. 2021. *Community Dent Oral Epidemiol.* 2003; 31 Suppl 1:3-23. doi: 10.1046/j.2003.com122.x, PMID 15015736.
- Shinde VM, Dhalwal K, Potdar M, Mahadik KR. Application of quality control principles to herbal drugs. *Int J Phytomed.* 2009;1(1):4-8. [ISSN: 0975-0185]. doi: 10.5138/ijpm.2009.0975.0185.05786.
- Sumantran VN, Tillu GS. Ayurvedic pharmaceuticals and insights on personalized medicine. In: Gupta VK, editor(s). *Progress in traditional and folk herbal medicine.* New Delhi, India: Daya Publishing House; 2011. p. 13-52.
- Anna S, Joanna K, Joanna S, Puławska M, DominikaZajde L. The use of medicinal plants in dental treatment. *Herba Pol.* 2010;56(1):97:107.
- Mary P, Udaiyar SS, Ramasamy M. Effectiveness of Siddha formulations for rudimentary dental problems: a review. *J Res Siddha Med.* 2023;6(2):47-51. doi: 10.4103/jrsm.jrsm_29_22.
- Uthamarayan KS, Maruthuvam SA. 6th ed. Chennai: Department of Indian Medicine and Homeopathy; 2009. p. 183.
- Sullivan Sealey K, Lennon E, Roskar AG, Patus J. Ecological shifts in lagoon patch reefs: consequences of large-scale alterations to coastal systems. *Academia Biology.* 2024;2(3). doi: 10.20935/AcadBiol7357.
- Kannusamy Pillai P guna vilagam. Edition-2003, Jeyam print, Madhurai-001.
- Gunapadam MM. Mooligai vaguppu. part 1. Chennai, Tamil Nadu: Indian Medicine and Homeopathy Department; 2013.
- Aanaivari A, Sinthamani AV. Chennai, India: Department of Indian Medicine and Homeopathy; 2008. p. 148.
- Dhurairasan NIN. 3rd ed. Chennai: Department of Indian Medicine and Homeopathy; 2009. p. 126-9.
- Bernaitis L, Menaka M, Kunthavi B, Sneha M, Sonali P, Tamil VN, et al. Traditional Siddha Oral Hygiene Techniques vs. Modern Practices: A Comparative Study of Efficacy and Benefits. *ISAR J Multidiscip Res Stud.* 2024;2(9):8-11.
- Thiyagarajan, Siddha Sirappu Maruthuvam. 6th ed. Chennai: Department of Indian Medicine and Homeopathy; 2009. p. 10.
- Sankhyan A, Gupta N, Gupta P, Priya K, Jindal S, Sharma A. Knowledge, attitude and practices (kap) towards Ayurveda, yoga and naturopathy, unani, siddha, homeopathy (Ayush) and its use in dentistry among dental professionals. *Int J Sci Res.* 2021: 69-71. doi: 10.36106/ijsr/1217415.
- Ramamurthy S, Immanuel R, Varghese S, Kantham L, Jayanandan M, Vikram A. Analysing the practice of ancient Tamil traditional medicine in management of oral diseases: A survey of siddha Practioners in Chennai. *J Complement Med Res.* 2022;13(4):171-75. doi: 10.5455/jcmr.2022.13.04.29.
- Torwane N, Arjun, Hongal, Sudheer S, et al. Role of siddha system medicine in the management of oro facial diseases: a review article in world. *J Pharm Pharm Sci.* 2015;4(8):1661-71.