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# Ayurvedic Dentistry: A Review

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Oral health is an integral part of the general well-being of a person and is not only closed related to the craniofacial complex but the entire body. We face numerous challenges in maintaining the oral health, we seek help from western/ modern medicine and also search for remedies from the herbal medicine. Modern medicine is a blessing but is limited by the glut of side effects associated with its use. Most oral diseases are infections from caries to periodontal problems are caused by micro-organisms. Antibiotics can be successfully used in their treatment but the world is facing the threat of antibiotic resistance. Considering all these factors, we have been striving to find alternatives to the modern medicines and have started switching back to ayurveda and homeopathy.

**KEYWORDS:** Ayurvedic, Dentistry, Herbal Medicine, Alternate

## INTRODUCTION

The history of medicine is as old as human race. It is essential for living beings to fight ailments to survive. Homo sapeins are the most superior and complex of all living beings. In ancient times man used herbs, oils and clay to fight disease.

Modern medicine was first recognised by Hippocrates and his followers systematizing the medical systems predating to the 5<sup>th</sup> century medicine. Long before the era of Modern medicine, the ailments were cured with herbs, clays and soils. The erudite people in ancient medicine were known as healers. Ayurvedic medicine is the most ancient known medical system in the world emanating in India dating back thousands of years. It was initially practised in The Himalayas .Presently it is not only confined to its country of origin but has spread and gained popularity globally owing to plethora of factors. Ayurveda is a sanskrit word ayur meaning life and veda meaning science of knowledge. The texts containing the knowledge of Ayurveda were called ‘Vedas’. They were first written by Srila Vyasadeva.<sup>1</sup>

Ayurveda Aims at coordinating the body, mind and spirit which leads to ultimate happiness and health and prevent disease.<sup>2</sup> Existence of about 1250 Indian plants with medicinal value is known.<sup>3</sup>

Ayurveda documents diseases of oral health as well, according to which they can arise from seven anatomic locations:

- 8 on lips.
- 15 on alveolar margin.

- 8 in connection with the teeth.
- 5 on the tongue.
- 9 on the palate.
- 17 in oropharynx.
- 3 as generalised forms.<sup>4</sup>

Following are the few procedures known in Ayurveda which have proven to be beneficial:

**1. Dant Dhavani:** Known as brushing in the modern medicine. It involves the use of sticks. These sticks are chewed in the morning and after meals to help combat oral diseases or prevent them. These sticks measure 9 inches in length and thickness of the little finger. These sticks are mostly bitter, astrigent or sour in taste. These sticks are crushed from one end, chew them and slowly eat them.<sup>5</sup> The idea behind crushing these sticks under the teeth is that they cause attrition and remove the deep anatomic fissures which are the niche of caries, also they enhance salivary secretion and saliva in turn helps prevent caries by flushing out the caries causing micro organisms.It is known to have anti bacterial properties and prevent accumulation of plaque as well.<sup>6</sup> The neem (margosa or Azadirachta indica) is a famous herbal chewing stick. Fresh stems of liquorice (Glycyrrhiza glabra), black catechu or the cutch tree (Acacia CatechuLinn)<sup>7</sup> Arjuna tree (Termmalia arjuna), fever nut (Caesalipinia bouduc) and milkweed plant(Calotropis procera)<sup>6</sup> can also be used for brushing. Mango tree sticks, babul, guava and miswak are amongst some other popular herbal sticks. Miswak is known to have antibacterial effects

against early colonizers in plaque, such as streptococci, and possibly against the periodontopathogen *Porphyromonas gingivalis*, these are attributed to tannin and thiocyanate released by the chewing stick. The anti-cariogenic effect of mango is ascribed by tannins, bitter gums and resins. Nimbin, nimbinin and nimbidin are elements corresponding to the anti-caries effect of neem. Neem is also known to release fluoride and chloride.<sup>8,9</sup>

Besides all this, these chewing sticks also have anti-oxidant properties. These herbal sticks have medicinal and anti-cariogenic properties.<sup>10</sup>

**2. Jivha Lekhana:** Also called as tongue scrapping. It is acceptable to use noble metals like gold and silver for tongue scraping. Copper and stainless steel are also used for tongue scrapping. In ancient India, coconut leaves were also used as tongue cleaning aids. Examination of tongue is an important diagnostic, it is recognised in traditional medicine as well as modern medicine.<sup>11</sup> Tongue cleaning is a pivotal part of full mouth disinfection procedures.

**3. Gargling:** Also called as *gandusha* in the Vedas. Oil pulling is another name for it. It is used to prevent decay, malodor, gum problems, dry lips and throat. Sun-flower and sesame seed oil are commonly used.<sup>12</sup>

Ayurvedic medicine has been used since long to treat various diseases. It lost its popularity with the introduction of Modern medicine but lately it has started to be used by the masses again. The biggest advantage of Ayurvedic medicine is minimal side-effects and long track record. Various plants have been used in Ayurvedic medicine for their pharmacological properties. Following are a few herbs used in dentistry along with their effects:

- **Ajowan:** It has anti-cariogenic and prevents colonisation of caries causing bacteria like *Streptococcus mutans* and also prevent the adherence of biofilm to the tooth.
- **Green Tea:** It has antimicrobial properties and has anti-oxidant properties. It hinders the adherence of *Streptococcus mutans*, *Porphyromonas gingivalis* and *Streptococcus sobrinus* to the tooth surface.
- **Aloe vera:** It is known to provide protection against caries and periodontal problems. It can be incorporated in tooth pastes, mouthwashes.

- **Clove:** Clove has the excellent anti-cariogenic properties particularly against *Streptococcus Mutans*. It affects its cell adhesion, cell surface hydrophobicity and glycosyltransferase activities.
- **Turmeric:** It is known for its antifungal, antiseptic, analgesic, anti-oxidant properties.
- **Tulsi:** It helps tackle toothache, fungal infections like candidiasis, lichen planus and even leukoplakia. These benefits have been attributed to Liquorice: its COX-2 inhibition potential.
- **Liquorice:** These can be constituted in tooth pastes, mouth washes, chewing gums and help treat aphthous ulcers, fungal infections, denture related infections and inflammation, gum problems including gingivitis and periodontitis.
- **Neem:** It is effective in reduction of plaque and prevent gum problems.
- **Triphala:** It has anti-bacterial properties and aids in reduction of the levels of metalloproteinase responsible for destruction of collagen in periodontal disease.
- **Miswak:** It increases salivation and helps prevents caries by flushing out the microorganisms responsible for caries and periodontal problems.

Most oral diseases are caused due to infections. The anti-biotic properties of ayurvedic medicine helps combat the amount of bacterial load in the mouth and prevent accumulation of plaque and caries and other diseases of the oral cavity. Ayurveda has a holistic approach in treating the disease. Its integration with the modern medicine will benefit the human species. It should be taught in medical and dental schools as a subject to spread awareness amongst the budding dentists to use this ancient approach of treating ailments as well. New generation is ignorant of this traditional knowledge. Because of younger generation's lack of knowledge on the identification, collection, preservation and processing of the plant species for medicinal use it is therefore very crucial to conserve these ethno-cultural practices before they are lost definitively.

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