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Practice of Ayurveda in Dentistry

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ABSTRACT

For good systemic and oral health, proper maintaining of oral hygiene is very important. Ayurvedic medicine is one of the world's oldest medical systems that originated over thousands of years. There has been a long tradition of improving a oral hygiene using plants products, to research different plants and their products in the treatment of various ailments, since ancient times as effective medicine. Many medical plants have been used as traditional treatment for numerous diseases since ages in many parts of the world. Ayurveda an ancient science based on the herbal therapies believes that dental problem can be treated by three doshas. Therefore, the search for alternative drugs continues, taking into account natural phytochemicals derived from plants used in conventional medicine.

Keywords: Oral health, Ayurvedic medicine, conventional treatment,Diseases, Doshas,

INTRODUCTION

The word ayurveda means living in tune with nature (1). It is a combination of Sanskrit word Ayur (Life) and Veda (Science of knowledge) (2). Ayurveda originated over 5000 years ago and is mainly practiced in India (3). Ayurveda is a traditional science that believes that oral and other ailments can be treated by three biological humours called doshas (vata, pitta, kapha) (4). Ayurveda, Siddha and Unani are the three traditional medicine systems used in India (5).

The *SushrutaSamhitra* and *Charikasamhitra* are the earliest two ancient medicines of India (5). Ayurveda branches of *Shalyatantra* and *Shalakyatantra* has 65 varieties of oral disease in seven anatomic locations, 15 on alveolar margin, 8 on lips, 8 in connection with teeth, 5 on tongue,9 on palate,17 on oropharynx and 3 in generalized form(6).

The Ayurvedic treatment also includes swelling in oral cavity, toothache, bleeding gums. (7). The herbs which decreases pain and fight infections are amla, lavanga Oil, nimbu or lemon solution, azadirachiaindica and haritaki. Triphala herbal products are used as toothpaste, gum paints, mouthwashes, root canal irrigantsetc(1).Various herbal ayurvedic products are used in the prevention of oral diseases (8). Some daily uses of therapeutic procedures are recommended in Ayurveda are: (9).

- DantDhavani (brushing)
- JivhaLekhana (tongue scrapping)
- Gandoosha (gargling) (9).

Within the oral cavity, danta performs several functions, where danta called as varnasthana, which aids in proper speech. Those Varna are called as "*dantyavarna*"(10).

Ayurveda & Concept of Health

Charak Samhita – by charak was given 800BC, a major compendium in ayurvedic medicine (2).

Sushruta Samhita – by Sushruta was given 700BC that gives five sub doshas and include, reconstructive surgery and skin grafting technique (2).

In Ayurveda, dental health is also called as "*Dantaswasthya*" (4) .Ayurveda is one of the ancient Indian system of healthcare and longevity that involves man, namely, (9)

- Prophylactic measures as a part of daily routine,
- Alleviation if some minor conditions by drugs,
- Application of surgical measures for the relief of serious dental disease.

Sushruta Samhita, the surgical compendium of Ayurveda, defines health as *"the equilibrium of the three biological doshas, seven body tissues (bhatus), proper digestion and state of pleasure or happiness of the soul, senses and the mind"*.According to Ayurveda, balance among these three doshas is necessary for health, because they govern the metabolic activities. When they are balanced, then one can experience psychological and physical wellness. When they go slightly out of balance then one feels uneasy. When they are imbalanced, then the symptoms of sickness can be observed and experienced.Ayurveda also recommends some daily use of therapeutic procedures for prevention and maintenance of oral health .These include DantDhawani (brushing), Jivhalekhana (Tongue Scrapping) and Gandoosha (gargling) or oil pulling and tissue regeneration therapies (9)

Uses of various herbs and their effect in Dentistry

Aloe Vera (Aloe barbadenis)

It's used as a topical applicant gel on gingiva, which if is damaged unknowingly by sharp foods, nylon tooth brush bristle injury, tooth pick injury, dentifrice abrasion, etc. It can be used in extraction sockets preventing from getting dry socket i.e. alveolar osteitis. Periodontal abscess are soothed by application of aloe vera(6). Also, topical and oral treatments found a positive influence on the synthesis of glycosaminoglycans. Aloevera seems to be helpful in dentin formation, proliferation of pulp cells and mineralization (9). Aloeveracan be used in Root canal treatment as sedative dressing and sometimes as a file lubricant. Aloevera gel can be used with a cotton pellet and placed in a closed dressing during intermediate root canal appointments. Aloe Vera might tend to reduce the inflammation when kept around dental implants. Chronic ill-fitting dentures which cause soreness can be healed by applying aloe Vera. It can be used in treatment of chronic oral diseases like lichen planus, migratory glossitis etc (6).

Cloves (Syzygiumaromaticum)

Cloves are from the family of Myrtaceae, which is a native of Maluku islands in Indonesia. It is harvested primarily in Indonesia, India, Pakistan, Srilanka and Tanzania. Cloves are being described as a natural antihelmintic property, which reduces tooth ache by its antiseptic properties which ultimately eases off the pain. It's also a way of treatment in curing halitosis (6). Clove oil commonly used to relief dental pain and caries. Eugenol is widely used in root canal therapy, dental abscess, temporary filling and gum diseases (9).

Eucalyptus

Eucalyptus trees are native of Australia, highly recognized by as the tall trees. Eucalyptus oil is widely used in ayurvedic medicine in India. It is universally named as "fever tree "the type of eucalyptus most commonly used medically is called the Australian fever tree or blue gum. It can rise up to 230 feet and can be used in the treatment of sore throat and inflamed gums as a temporary relief (6).

Peppermint

Peppermint belongs to the family of "Lamiceae" and is a native of Europe and Middle East. Pepper mint contains natural vitamin C, menthol and tannic acid. The leaves of

pepper mint are being used for treatment of fever, convulsions, nausea and diarrhea. Pepper mint is an ancient house hold remedy, which was used in the treatment of tooth ache, by soaking the pepper mint oil in a cotton pellet and placing it in the cavity reduces the pain. It is used for relieving gum inflammation (6).

Turmeric

Turmeric belong to the family of "curcuma longa'', a flavorable spice native of south Asia. Components of the turmeric are curcuminoids, desmethoxycurcumin, and bisdemethoxycurcumin. It's nontoxic and normally found in the underground stem. A variety of therapeutic properties include anti-oxidant, analgesic, anti-septic and anti-cariogenicactivity. Curcumin have anti-bacterial activity against anactinomycetemcomitans and MRSA. Curcumin is a known as radio sensitizer and chemo preventive agent, which is effective against oral mucositis (6).

Amala (Emblica officinalis)

Amala has antioxidant and astringent property. It has been proved to be effective for toothache, apthous stomatitis and gingival inflammations (9).

Nimbu/Lemon

Nimbu/Lemon solution is the natural source of citric acid with antibacterial property. A lemon solution which is freshly prepared is recommended for root canal treatment (9).

Kantakari

A kantakari seed dhoopan used in dental caries due to its chemical constituents likes carpesterol, olanocarpine, solanocarpedine, salosonine and salasodine (9).

Neem (Azadirachtaindica):

Neem is prescribed for skin diseases and blood detoxification. Nimba used as skin whitening agent although purified neem oil and powdered leaves are used as facial cream and other cosmetics(6). Mouth rinse using neem leaves are effective in the treatment of periodontitis (9).

Ayurveda and therapeutic procedure

Dant dhavani (Tooth brushing)

Ayurveda recommends chewing sticks for daily use in the morning as well as after every meal to prevent disease. These herb sticks should be either "katu" (acrid), "kashaya"(astringent),or "tikta"(bitter) in taste(9). The famous herbal chewing stick is neem (margosaorazadirachtaindica). Fresh stems of liquorice (glycyrrbizagalabra), cutch tree (acacia catechu linn),fever nut (cesalipiniabouduc),arjuna tree (termmaliaarjuna) and milkweed plant (calotropisprocera) are used for brushing traditionally (11).It is an oral hygiene device and has an additional benefits derived from its functional aspect of chewing as jaw exercise, reflex induction of saliva which is beneficial to the oral hygiene(5). Chewing of these can facilitate salivary secretion; help in plaque control, some stems have an anti-bacterial action (9). But there are some drawbacks that cause attrition while chewing(11).

Jivha lekhana (tongue scrapping)

It is ideal to use copper, gold, silver, stainless steel for scrapping the tongue (11).It is a U shaped metal strip of 4-5 cm width to hold and resist corrosion. It should be rounded and blunt, so that it prevents injury. Tongue is protruded out of mouth and it should be scrapped from posterior to anterior to clean the surface(9). It removes halitosis, improves taste sensation, and it stimulates the digestive enzymes. It also removes microorganism growth followed by bad odor (halitosis) (5).

Gandusha (gargling) or oil pulling

It is an ancient Ayurvedic procedure involving fizzing oil in the mouth for systemic and oral health benefits. Oil pulling therapy done can be done using sunflower oil or sesame oil (11). Antioxidant which is present in the sesame is sesamin, sesamolin and sesaminol. Oil pulling therapy using sunflower oil reduces plaque after 45 days(9).Comfortable quantity of oil should be taken in the mouth for 12-20 min and should be split out without swallowing(5).Oil pulling has been used as a Indian traditional remedy used for many years to prevent halitosis, bleeding gums, dryness of throat, cracked lips for strengthening the teeth, jaws and gums. Oil pulling therapy is very much effective against plaque induced gingivitis (11).

Triphala in dentistry

Triphala is a well-known powdered preparation in the Indian system of medicine, used since ancient times in ayurveda. Triphala is composed equal parts of i) Emblica officinalis, ii) Terminalia chebula and iii) Terminalia belerca (12).

Emblica officinalis (Amalaki)

The botanical name emblica officinalis is known asAmalaki and also known in Sanskrit as dharti which has healing properties. Amalaki can be individually taken in the form of decoction or a concoction (12). This fruit is among the highest vitamin C concentrations. Therefore, it is considered as a prime anti-oxidant (13).The best rasayanas in Ayurveda is amalaki which has anti-oxidant and anti-aging properties (12).This is also rich in carotine, nicotinic acid, riboflavin and tannis. It also has immune moderatory, antipyretic, analgesic, cytoprotective and gastro protective properties (14).

Terminalia chebula (Haritaki)

The fruit is used as a household remedy medicine towards human ailments since antiquilty. The constituents

are chebulic acid, chebulagic Acid, cocitagin and gallic acid. This shows anti-bacterial activity against a variety of gram-positive and gram-negative species of pathogenic human bacteria. Anti-fungal and anti-viral effects are also exhibited (12). This is rich in tannis, anthraquinones and polyphenolic compounds and has been widely used in ayurveda ,unani, and homoeopathic medicines. (15).

Terminalia belerica (Vibhitaki)

This is commonly known as `belluricmycobalan'. This plant is reported to contain anoligam B, Gallic acid etc. This exhibits antioxidant, anti- spasmodic and anti-bacterial characteristics (12). It is rich in termiligan, belleric acid, anolignan B, gallic acid, ellagic acid, beta-sctosterol, arjungenin, thannilignan, bellericoseidem and flavonoids (13).

Trihala as a root canal irrigant

The primary endodontic infections is caused by oral microorganisms, usually they are opportunistic pathogens that may invade necrotic tissue-containing root canal and creating an infectious mechanism (16). A remarkable anti-bacterial activity against three and six-week biofilms has been shown by triphala. Given the many undesirable characteristics of NaOCl as a root canal irrigant, the use of herbal alternatives can prove to be advantageous (15).

Triphala as a mouth rinses

In periodontal therapy, oral rinses generated from these are used. Triphala is one of those with an activity continuum. Triphalacan also be used as a gargling agent for gum disease. Triphala mouth rinse showed substantial decrease in plaque and better gingival and oral hygiene when combined with scaling and root preparation (16). When triphala mouthwash is used twice daily and combined with metronidazole 400mg, it shows progress in bleeding gums, pocket depth, tooth mobility, sensitivity and formation of calculus in minimal recurrence during the clinical procedure (12). Twice a day, 6% of triphalacan be used to reduce the number of oral streptococci to 17% while 44% relative to oral streptococci the chlorhexidine group by 0.2%. Triphala showed better result than chlorhexidine (17).

CONCLUSION

The use of herbal medicine as an analgesic, antiseptic and antioxidants has been successfully applied in dentistry. Herbal medicine is being popularized internationally as an alternative treatment. Many naturally available ayurvedic drugs are used for the improvement of oral health and prevention of oral disease

REFERENCES

1. Prathima G.S, Dr. Kavitha . M &Dr. Prathima G.S Ayurveda in Dentistry Journal of Scientific Dentistry 5(1), 20-24 Journal of Oral Health 2015,7(8);pp 141-143.
2. Roopali Gupta, NavinAnand Ingle, Navpreet Kaur, Pramod Yadav, EktaIngle&ZoharaCharaniaAyurveda in DentistryJournal Of International Oral Health 2015 7(8) : pp. 141-143.
3. Abinav Singh&BharathiPurohit, Tooth brushing, Oil pulling and Tissue Regeneration,A Review Of Holistic Approaches to Oral Health. Journalof Ayurveda and Integrative Medicine| april-june 2011|vol2.
4. ShilpaHosallimath& Rajeev Sholapur Role of Ayurveda and Holistic Approach in DentistryACTA Scientific and Dental science 3.4(2019):pp. 65-67.
5. DrSumedh lone, Dr. Amit Saragade, Dr. Avadhesh Tiwari, Dr. Monica Maha Jani, Dr. Kuldeep Patel, Dr. Manisha Rathod, Dr. DevendraWarghane& Dr. SiddharthNarote. Ayurvedic dentistry: A Doctor in concept, International Journal of Current Research vol.10, Issue, 12, pp.76025-76027, dec2018.
6. Deepthi. S, Andhad, Supreetha, Shylaja. M. D, Shilpa M & Vinay Kumar K Ayurvedic Medicine and Oral HealthInternational Journal of Oral care and Research oct-dec 2015: volume 3 issue 4.
7. M. Raj Mohan, P. D Madan Kumar, M. Shiva Kumar K & S Uma, Awareness on Oral Health among Ayurvedha and Sidha practitioner's, Medical Journal of Islamic World Academy of Sciences20:2,pp. 43-48, 2012.
8. Patil.M.S&Patil.S.N,Horizon of Ayurveda and Modern dentistry . A review J Nat Ayurvedic Med 2019, 3(2):000185.
9. Nilesh Arjun Torwane, SudhirHongal, Pankaj Goel&V. R. Chandrashekar/ Role of Ayurveda in Management of Oral Health Pharmacognosy reviews| January-june 2014|vol 8|issue 15
10. Khemchand Sharma, Namrata Joshi &Chinky Goyal,Critical Review of AyurvedicVarnya Herbs and their TyrosinaseInhibition effect, Ancient Science of life /jul-sep 2015/vol35/Issue1
11. .MoaMegersa, TilahunTolossa Jima &KabayeKumelaGoro. The use of medical plants for the treatment of tooth ache in Ethiopia, Evidence-based Complementary and Alternative Medicine volume 2019, article ID 2645174, 16 pages
12. Shoba Prakash &Anup U. ShelkeRole of Triphala in Dentistry review article/ Journal of Indian Society of Periodontology issue 2, March Apr 2014.
13. HarshilZaveri, VandhanaRathva, AnkitSant& Deepak Dev. Triphala: an alternative therapy in periodontics- A Clinical Review, Journal of Clinical Periodontology and Implant Dentistry vol 01 issue 01.

14. Vineet Nair, Subhasis Das, ManasKar&Krishna Pada das./ Triphalain dentistry - A Herbal Wonder Journal of Disease and Global health 5th April 2016.
15. Bismay Singh, Mohanty, Sonu Acharya, AntermayeePanigrahi, Priyanka Kallimiready&UpasanaMohapatraTriphala: classic herb in dentistry,International Journal of Oral Health and Medical Research July-August 2019 vol 6 issue2.
16. Shruti K Nair&Shivaprasad BM Triphala: A Miracle Herb in the field of Dentistry Journal of Dental health, Oral Disorders and Therapy Jan 09, 2018.
17. ShaeestakhaleelahmedBhavikatti, Rishi Dhaniy& MLV PrabhujiTriphala: Envisioning its Role in Dentistry International Research Journal of Pharmacy. 2015,6 (6).

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