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Ayurvedic approach in Oro-Dental Care in *Prameha*

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ABSTRACT

Ayurveda, the traditional system of medicine that originated in India, offers a holistic approach to health and wellness, including oral care. In the context of diabetes, maintaining oral health is crucial because individuals with diabetes are at an increased risk of developing dental issues such as gum disease and infections. Ayurveda emphasizes the balance of *doshas* i.e. *Vata*, *Pitta*, and *Kapha*, proper diet, and lifestyle modifications to promote overall well-being, including oral health. Regular dental check-ups, maintaining good oral hygiene practices, and following the guidance of Ayurvedic principles are essential components of oral care for individuals with diabetes cases. Exploring the integration of Ayurveda into the oral care of diabetes cases involves considering the holistic principles of Ayurveda, the role of specific practices like oil pulling and herbal components, and the practical application of these principles in conjunction with conventional care. It's a fascinating intersection of traditional wisdom and modern healthcare, and ongoing research can shed more light on the efficacy and nuances of Ayurvedic approaches in managing oral health in individuals with diabetes.

Key words: *Danta Harsha*, *Danta Vaidarbha*, *Krimi Danta*, *Mukha Shosha*

INTRODUCTION

Ayurveda is a natural healthcare system that originated in India more than 5000 years ago. Its main objective is to achieve optimal health and well-being through a comprehensive approach that addresses the mind, body, behavior, and environment. It's a well-known fact that good oral health is integral to the general health of an individual and people with diabetes are at increased risk of oral health problems.^[1] There is a plethora of oral diseases which are manifested in Diabetes Mellitus.^[2] As it is a metabolic disorder affecting almost every tissue of the body, most of the oral pathologies are exacerbated in diabetes due to

weakened defense mechanisms.^[3] Dental diseases i.e., '*Danta Roga*' in Ayurveda are described in '*Shalaky Tantra*'- one of the 8 branches of '*Ashtanga Ayurveda*' under the heading '*Mukha Roga Adhikaara*'. A 15 number of '*Dantamulagata Rogas*' and 8 number of '*Danta Rogas*' are described in Sushrut Samhita (*Uttar Tantra*) while *Vagbhatta* counted 13 '*Dantamulagata Vyadhis*'. The description of '*Danta Roga*' and '*Dantamulagata Rogas*' in various Ayurvedic texts is very similar to the dental diseases described in modern medical Science.

Ayurvedic concept of inter-relationship between *Mukha Roga* & *Prameha Roga*:

In the description of *Prameha Roga*, while describing its *Purvarupa*, the following terms are encountered in verses:

1. *Maddhuryam Aasye* - (Ch. Chi.6)
2. *Galatalu Shosha* (Xerostomia) - (Ch. Chi. 6)
3. *Dantadinam Malaadhyatvam* - (Ma. Ni. 33)

Above mentioned entities are frequently seen in diabetics. Other clinical entities that are frequently seen in diabetics are:

- a) *Mukha Shosha* (Xerostomia)

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- b) *Danta Harsha* (Increased tooth susceptibility towards percussion)
- c) *Kapalika* (Increased incidence of enamel hypoplasia)
- d) *Krimi Danta* (Dental caries)
- e) *Danta Vaidarbha* (Gingivitis: ranging from mild to severe)
- f) *Saushira* (Deep periodontal pockets)
- g) Cheilosis or tendency towards drying & cracking

The rate of periodontal destruction is similar for diabetics and non-diabetics upto the age of 1-29 years.^[4] However, after that, its incidence is greater in the diabetic population.^[5] Although the above-mentioned oral disease can also occur in normal individuals, it also revealed an increased prevalence of gum diseases ranging from gingivitis (an early stage of gum disease) to periodontitis (a serious form of gum disease)^[6] adding to the list of other complications associated with diabetes such as heart disease, stroke, etc. All these diseases are well versed in Ayurvedic texts too and along the line of treatment too are discussed in detail. Sushruta and Vagbhata described specific treatment principles in detail according to prevailing conditions while in Charaka Samhita general guidelines like the use of *Kavala*, *Dhumapana*, *Pradhamana Nasya*, etc.^[7]

Some important features of Charaka's guidelines for the treatment of *Mukha Roga*:

1. *Kavala*

In all *Mukha Rogas*, decoctions prepared from *Tikta*, *Katu Pradhana Dravyas* mixed *Madhu* should be used as *Kavala*. In *Kavala*, medicine is kept in the mouth for some time and moved in all directions by the patient himself. For *Kavala Pipplayadi Churnam* (*Pippali*, *Agaru*, *Daruhaldi*, *Yavakshara*, *Patha*, *Haritaki*) mixed with honey can also be used.^[8]

2. *Manjana* (Tooth Powder)

In toothaches, and bleeding gums Charaka has advocated the use of *Tejohavadi Choornam* in paste form containing *Tejabala*, *Haritaki*, *Ela*, *Manjishtha*,

Kutki, *Nagarmotha*, *Patha*, *Malakangni*, *Pathani Lodhra*, etc.^[9]

3. *Mukha Dhavana* (Mouthwash)

For maintaining good oral hygiene, the formulation containing *Triphala*, *Patha*, *Munakka*, *Jatipatra* and other *Tikta Kashaya Dravyas* mixed with honey in cold decoction form can be used for *Mukha Dhavana*.^[10]

4. For any oral disease *Kalaka Choornam*,^[11] *Khadiradi Gutika*,^[12] and *Khadiradi Tailam*^[12] are other important medications mentioned by Acharya Charaka in Charaka Samhita.

It has been observed that persons aged above 50 years and are diabetic and smokers are at twentyfold greater risk of developing gum disease.^[13] The glucose content of gingival fluid is high and C-AMP (cyclic adenosine monophosphate) is deficient in salivary secretions which in turn plays a key role in inhibiting inflammation,^[14] so this leads to increased severity of gingival inflammation in diabetics. Moreover, owing to disturbed oral hygiene in diabetics greater preponderance of *Candida albicans*, *hemolytic streptococci*, and *staphylococci* are seen.^[15] Candidal colonization is attributed to increased genetic susceptibility, altered immune response, and a change in an oral biochemical environment favouring exuberant growth.^[16]

Ayurveda in maintaining Oral Health in Diabetes:

It's a universal fact that the basic crux of diabetes and its complications lies in the stringent control of blood sugar under physiological limits.^[17] Various conditions and their management according to Ayurveda can be summarised as follows:

1. *Xerostomia* (*Mukhashosha*)

Owing to decreased salivary secretions patient complains of dryness and a burning sensation in the mouth. Oral mucosa becomes dry, atrophic, and inflamed. In Ayurveda, it's referred to as *Talushosha* or *Mukhashosha* as a prodromal symptom of *Prameha*. (Su.Ni.16). Charaka has said it is also a prodromal symptom of *Trishna Roga* (*Pragrupam Mukhashosha*) in Charaka Samhita. (Ch.Chi.22/8)

Charaka has advocated fresh *Amlaki Swarasa* as *Gandusha*.

Besides external use, one may also advise internal use of *Aamalki Swarasa* with *Haridra* (Su. Chi.11/8) in *Madhumeha* up to 30-50 ml twice daily empty stomach to combat hyperglycemia. The antihyperglycemic effect of *Aamalki* is proven in various pharmacological trials and it is described in the treatment of *Madhumeha* frequently in almost all ayurvedic texts.

2. Cheilosis or tendency towards drying and cracking

Here, oral intake of *Amlaki* with *Pravala Pishti* (250-500 mg) is prescribed as it is a rich source of vitamin C and calcium and *Amlaki* is advocated in the treatment of *Madhumeha* in Ayurveda.

Dosage- Powder: 5-10 gm BD

Swarasa: 30 ml BD

3. Increased Tooth susceptibility towards Hot and Cold

This condition is comparable to '*Danta Harsha*' described below:

Danta Harsha -

दशनानां शीतमुष्णं च सहन्ते स्पर्शनं न च।

यस्य तं दन्तहर्षं तु व्याधि स्मृणात् ॥ (Su. Ni.16/32)

i.e., person can't tolerate touch of too hot or too cold due to vitiated *Vata Dosha*.

Here, *Gandusha* having *Snehan* (Oleation) properties is advocated. Warm *Tila Tailam* can be used as *Gandusha*. *Ghrita* medicated with *Jeevaniya Gana* can be used in later stages. '*Anu Tailam Nasyam*' too is usefully alleviating vitiated *Vata Dosha* in *Urdhavajatrugata Roga* (Supraclavicular disease).

4. Increased incidence of Enamel Hypoplasia

In Ayurvedic nomenclature, this condition is termed as '*Kapalika*' described below:

Kapalika -

दालन्ति दन्तवल्कानि यदा शर्करया सह।

जेय कपालिका सेव दशनानां विनाशिनि॥ (Su. Ni. 16/35)

i.e., when *Danta Valkala* (Covering over teeth i.e. enamel) starts eroding along with deposited *Sharkara* resulting in the ultimate destruction of teeth then it is termed as *Kapalika*. Sushruta has advocated treatment described for '*Danta Harsha*' and the application of a paste made from '*Laksha Choorna* & honey' over affected teeth. Enamel is the hardest part of the human body and its erosion can be checked above mentioned formulation given by Sushruta can be tried in this condition as in modern medical science only covering of affected tooth with an artificial cap as the remedy.

5. Dental caries (*Krimi Danta*)

कृष्णचिद्री चल स्रावि संस्रम्भो मारुजा ।

अनिमित्तजो वाताद विजेय कृमिदन्तक ॥ (Su.Ni.16/31)

i.e., tooth which becomes black in colour, mobile, perforated, and having intense pain and inflammation should be considered as *Krimi Danta*. Although methods for extracting *Danta Krimi* mentioned in Ayurveda are not practiced nowadays, their efficacy can be explored on clinical grounds in selected cases in modern times.

Treatment - Immobile *Krimi Danta* should be done by *Swedana*, *Raktamokshana*, *Avpeedana Nasyam Gandusha* with *Sneha* and application of *Bhadradarvadi* and *Punarnavadi Gana* over affected teeth (Su. Chi. 22/38-39). Mobile *Krimi Danta* should be taken out and after that '*Agnikarma*' is used over the affected place followed by *Nasyam* with milk or oil medicated with *Vidari Kanda*, *Shringatak*, *Kaseru*, *Mulethi Kalka*, etc. It is proposed that after extraction of teeth, *Agnikarma* must be indicated for sterilization and closure of exposed blood vessels and medicated milk *Nasyam* is given to pacify vitiated *Vata Dosha*. (Su. Chi. 22/40) *Snehan Gandusha* can also help to decrease increased tooth mobility in diabetes. It can alter the response of periodontal tissues to local irritants that hasten bone loss in periodontal disease.

6. Gingivitis (*Danta Vadarbha*)

घृष्टेषु दन्तमुलेषु संस्रम्भो जायते महान।

भवन्ति च चल दन्त से वैदर्भिओभिघातजः॥ (Su. Ni.16/25)

i.e., rubbing over roots of teeth causes excessive inflammation, increased tooth mobility, etc.

Here, Sushruta has advocated *Kshara Prayoga*. Charaka has mentioned *Kshara Gutika* in which *Yava Kshara* mainly in combination with other herbs like *Panchakola*, *Talishapatra*, *Ela*, etc. are used. (Ch.Chi.26/192)

7. Deep periodontal pockets (Deep periodontitis)

In Ayurveda above mentioned condition is referred to as '*Saushira*' and '*Mahasaushira*' depending upon the severity of the disease.

श्वयथुर्दन्तामुलेषु रुजावान कफरक्तजा।

लालास्रवि से विजये कण्डुमान शुषिरो गदः॥ (Su. Ni.16/19)

दन्तश्चलन्ति....महाशुषिर संजक। (Su. Ni.16/20)

Treatment - In *Shushira* after letting blood from gums (*Raktamokshana*), apply a paste made from *Lodhra*, *Nagarmotha*, and *Rasanjana*. Besides, *Gandusha* is made from decoction of '*Kshirivrksha*' (*Vata*, *Udambara*, *Plaksha*, *Parisha*, *Ashwatha*) and *Kheera Nasyam* medicated with *Sariva*, *Kamal*, *Mulethi*, *Lodhra*, etc.

In various dental conditions mentioned above certain Ayurvedic toothpastes too as per availability in the market can be used. Important among them are *Pyokil* (Gurukula Kangri Pharma), *G-32* (Alarsin), *Vajradanti* (Vicco), etc. Certain teeth-strengthening herbs like *Khadira*^[18] and *Puga*,^[19] also proved beneficial in *Madhumeha*. Besides *Dashana Samskara Choorna* has broad therapeutic implications from an Ayurvedic perspective almost in every dental disease.^[20]

DISCUSSION

- *Gandusha* and *Kavala*: Oil pulling is an ancient Ayurvedic practice that involves swishing oil in the mouth for a certain period, typically using sesame oil or coconut oil. This practice is believed to help reduce bacteria in the mouth, improve gum health, and prevent cavities.
- Herbal Toothpowders and Toothpaste: Ayurveda recommends the use of herbal toothpowders or

toothpaste containing ingredients like *Neem*, *Babool*, *Triphala*, and clove for cleaning teeth. *Neem*, in particular, is known for its antibacterial properties and can be beneficial for oral hygiene.

- Ayurvedic Mouthwashes: Some Ayurvedic mouthwashes may include herbal extracts like *Neem*, licorice, and *Triphala*, which can help in maintaining oral hygiene. These natural ingredients are believed to have antibacterial and anti-inflammatory properties.
- Dietary Recommendations: Ayurveda emphasizes a balanced diet that suits an individual's dosha constitution. For individuals with diabetes, managing sugar intake is crucial. Bitter and astringent tastes are often recommended in Ayurveda for oral health. Bitter herbs like neem may be incorporated into the diet.
- Ayurvedic Remedies for Gum Health: Ayurvedic remedies for gum health may involve the use of herbal pastes or powders applied to the gums. These may include ingredients like *Triphala* or a mixture of herbal powders with honey.
- Lifestyle Modifications: Stress management is an essential aspect of Ayurveda. Stress can negatively impact oral health, and practices like meditation and yoga may be recommended to manage stress levels.

It's important to note that while Ayurvedic practices can complement conventional oral care, individuals with diabetes should consult with their healthcare provider for a comprehensive approach to managing their condition.

CONCLUSION

Due to the rising burden of diabetes worldwide and the impact of diabetes on oral health and vice versa, the prevention of oral disease and promotion of oral health are essential components of diabetes management. It is high time to take the initiative to emphasize oral health and diabetes. So, it may be concluded that they are simple omnipotent herbs and treatment procedures mentioned in Ayurveda that may prove safe, cost cost-effective in the management and

treatment of oral disease in diabetes to reduce the financial burden of disease on individual and healthcare systems and maintain quality of life towards normalcy.

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