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A Scientific Approach of *Dantadhawana* with Herbal and Non Herbal Toothpastes - A Literary Review

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ABSTRACT

In Ayurveda, *Dantadhawan* is an important part of *Dinacharya*. Our ancient acharyas has mentioned the role of *Tikta*, *Katu*, *Kashaya Rasa Dravyas* in *Dantadhawana* procedure to maintain the oral cavity. Healthy oral cavity is not only important for structures in oral cavity but also plays an important role in maintaining general health. Due to civilization, *Ayurveda* twigs with *Tikta*, *Katu*, *Kashaya Rasa* got replaced by chemical based toothpastes. No doubt, these toothpastes have bacteriocidal action, but also having side effects which are harmful for the health. Hence, Current world is shifting towards Ayurvedic principles of *Dinacharya* (daily regimen) to promote health. Herbal toothpastes containing *Tikta*, *Katu*, and *Kashaya Rasa Dravyas* are much better in *Kaphahara* property, antibacterial, and anti septic action with no chemical ingredients, hence reduces the risk of side effects. Hence, this paper is the need of hour to focus on the action and side effects of herbal and non herbal toothpastes.

Key words: Ayurveda, *Dantadhawana*, *Dinacharya*, *Kaphahara*, *Katu*, *Kashaya*, *Tikta*, *Toothpaste*

INTRODUCTION

Ayurveda is the science of nature. It deals with the two principles i.e. preventive and curative approach. The preventive approach includes some strategies like *Dinacharya* (daily regimen), *Ritucharya* (seasonal regimen), *Achara Rasayana*. If we talk about *Dinacharya* modalities, each and every step of daily practices is important in its own. In today's era, most of the lifestyle disorders are increasing day by day due to improper practices of daily regimen. *Dantadhawan*

(tooth brushing) is one of the practices of *Dinacharya*. It seems to be a regular and very small of *Dinacharya* but this step of 5 to 10 minutes has uttermost importance in daily routine. In the present scenario, we have so many toothpastes or tooth powder is available in the market to maintain our oral health. In ancient times, people used to clean their tooth by the twigs of the *Ayurvedic* trees mentioned in *Ayurvedic* classics. These herbal twigs are having *Tikta*, *Katu* and *Kashaya Rasa* predominantly. But, due to civilization, *Dantakashtha* (twigs) were replaced by toothbrushes and toothpastes. The American Dental Association recommends that toothbrush should be replaced every 3-4 months or sooner if the bristles become frayed, according to *Ayurveda*, *Dantakashta* should be used freshly to avoid micro organisms growth and oral infection due to long usage of same toothbrush. Also, if we talk about toothpastes, emulsifying agents such as Sodium Lauryl Sulphate and Sodium Ricinolate etc. are used which are harmful for the health.^[1] Nowadays, many pharmaceutical companies are preparing herbal toothpastes contains *Lavang*, *Tulasi*, *Nimbi*, *Lavana* etc. So, it shows that ancient practice of

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Dantadhawan was more appropriate and good for oral health as the whole world is moving towards the *Ayurvedic* principles to maintain the oral health. Hence, it is the need of hour to focus on the details of herbal and regular toothpastes available for the healthy individual.

Toothbrushing - An Ayurvedic view

As we have stated above, *Dantadhawana* is an important part of *Dinacharya*. *Acharya Sushruta* has mentioned *Dantadhawan* first in *Dinacharya* part. According to *Sushruta Samhita* and *Ashtang Hridaya*, *Dantadhawana Kashtha* (twig) should be of twelve *Angula* in length and size of the little finger in thickness, straight, not having nodes, not having any knots and fresh.^[2] *Acharyas* has mentioned *Katu, Tikta, Kashaya, Rasa*, for *Dantadhawan* in which twigs of *Karanj, Nimba, Khadira*, are indicated respectively.^[3] *Acharya Charak* and *Acharya Vagabhatta* has mentioned some drugs indicated for *Dantadhawana* like *Arka, Nyagrodha, Khadira, Karanja, Kukubha, Karveera, Malati*, etc.^[4]

Dantadhawan Churna (Toothpowder)

In *Ayurvedic* classics, some conditions are mentioned which are contraindicated for *Dantadhawana*, like *Talu Roga, Osth Roga, Jihwa Roga, Mukhapaka, Shwasa, Hikka, Kasa, Chardi, Ardita, Karnashool, Ajeerna, Mada Peedita, Murcha, Shram, Klant*, etc.^[5] In these conditions one can go for *Dhantadhawana* with the help of powder. *Acharya Sushruta* has mentioned some drugs in the classics used for *Dantadhawan* (cleaning of teeth), mentioned as *Dantashodhana Churna*. It contains *Madhu, Tejovati, Trikatu, Daalchini, Ilaichi, Tail, Saindhav*. Regular practice of *Dantashodhana Churna* helps in preventing the diseases of *jihva, Danta, Mukharogas*, develops taste for food, cleanliness of mouth, and feeling of lightness. It alleviates foul smell and tastelessness.^[4] In between 18th to 19th century, these herbal twigs and *Dantadhawana Churna* are replaced by plastic toothbrushes and toothpastes manufactured by different companies. In the manufacturing of these toothpastes, soap was used as an emulsification factor. Nowadays, many agents are used in toothpastes which are harmful for health.

Contents commonly present in the toothpastes-

1. Abrasive agents - calcium carbonate, dicalcium phosphate dehydrate, alumina, silica.
2. Binding agents - cellulose, alginate, colloidal silica
3. Detergents - sodium lauryl sulphate- for foaming action-^[5]
 - It is harmful for body, it is a cancerous agent
 - Responsible for foaming in toothpaste.
 - Mostly added in toothpaste.
 - Rash on the mouth and skin irritation and also causes problems in the functioning of taste buds.
 - If used in long run, may absorb by our body, harmful for us
4. Humectants - sorbitol, glycerine, polyethylene glycol - to maintain texture
5. Flavouring Agents - peppermint oil, spearmint oil
6. Triclosan - It is an antibacterial agent.
 - Prevents from plaque but has side effects.
 - Causes disturbance in hormones and weakens our immune system
7. Fluoride-
 - Prevents dental caries
 - But, if swallowed, it has its own disadvantages like it causes problems in hormones and enzymes.
 - Even more harmful for kids, as they usually swallow it.^[6]

Classification of Toothpastes on the basis of contents-

1. Chemical toothpastes-
2. Herbal toothpastes
3. Fluorinated toothpastes and non fluorinated toothpastes

Chemical toothpastes - these toothpastes mainly contains aqua, sorbitol, sodium lauryl sulphate,

hydrated silica, sodium saccharin, etc. Some examples are –^[7]

- Meswak toothpaste
- Colgate, pepsodent, close up, sensodyne etc.
- Main target of chemical toothpastes are-
 - ✓ Teeth whitening
 - ✓ Strong teeth
 - ✓ Palatability
 - ✓ Removes smell and plaque
- **Herbal toothpastes** - These toothpastes mainly contain herbal contents like *Bakul*, *Manjishtha*, *Patang*, *Babool*, *Harada*, *Vajradanti*, *Azadirachta indica*, etc. Their effects are freshness, strong teeth, removes stains and the most important, it is safe. These are safe for kids also. But these toothpastes have some limitations to brightness and shade of teeth. Examples are *Vicco Toothpaste*, *Patanjali Dantakanti* etc.^[8]
- **Fluorinated and non fluorinated toothpastes** - There are no doubt that fluorine prevents from the cavity, but early staging of cavity. In modern society, the water we consume contains adequate amount of fluorine. Hence, Toxic effect of fluorine depend on its concentration. For anticavity activity- 1500ppm or 1.5 gm per litre is required in the toothpastes. Toxic effect of fluorine is 2.8gm per litre. Improper proportion of fluoride in toothpastes and powder can lead to many conditions like discoloration or white spots on teeth (dental fluorosis) and skeletal fluorosis, a bone disease.^[6]

DISCUSSION

Healthy teeth and healthy gum are the basis of oral hygiene. *Dantadhawan* with herbal twigs or with herbal toothpastes or powder is necessary to maintain this goal. *Dantadhawan* with the herbal twigs is our ancient custom, nowadays it has been replaced by commercially prepared toothpastes. The food debris which is present in the mouth causes acid formation which in turn causes teeth decay. It causes dental plaque, give rise to dental diseases.

As in *Ayurvedic* classics, mentioned that ingredients having *Katu*, *Tikta* and *Kashaya Rasa* beneficial for the oral cavity. These *Rasa's* are having *Karmas* like *Vaktra Shodhana* (cleanses the oral cavity), *Rochana* (increases appetite), *Krimighna* (anti- microbial), *Vishaghna*(anti toxic), etc. related to *Kapha Nirharana* property (expulsion of vitiated *Kapha Dosha*). Also herbal twigs with *Tikta*, *Katu*, *Rasa* alters the salivary pH and it becomes alkaline which helps to neutralize the acid produced by bacteria.^[9] This principle is very much important for oral health and hygiene. Hence one should bring into practice herbal paste and powder having *Katu*, *Tikta* and *Kashaya Rasa*. So, from the above classification of toothpastes, a person with healthy oral hygiene can go for herbal toothpastes. If the brightness of teeth is not the essentiality, one can practice herbal toothpastes or toothpowder regularly as herbal toothpastes has the limitation of brightness as compared to chemical toothpastes. The herbal toothpastes complete the criteria to maintain the oral hygiene. It contains all the herbs having *Katu*, *Tikta* and *Kashaya Rasa* predominantly removes *Kapha* and provides freshness to the mouth. Chemicals like triclosan, calcium carbonate, hydrated silica, flavor, sodium laryl sulphate, sodium monofluorophosphate, cellulose gum, sodium saccharin etc. are used in toothpastes and mouth washes to prevent plaque nowadays. But these chemicals have toxic effects too. Hence, herbal twigs are more beneficial in maintaining oral health and hygiene. And to some extent, herbal toothpastes with *Kaphahara* and *Krimighna* contents may be used to maintain oral health as these toothpastes do not have toxic effects.

CONCLUSION

Dantadhawana is an important step of *Dinacharya* to maintain the healthy lifestyle. Hence, we should follow *Ayurvedic* principles while doing *Dantadhawana*. Rather than using chemical toothpastes which may be harmful for health, one must use herbal twigs or herbal toothpastes. These herbal toothpastes or herbal twigs having *Tikta*, *Katu* and *Kashaya Rasa*, fulfill both preventive as well as promotive benefit. Hence it can be concluded that regular *Dantadhawana* with *Ayurvedic* principles not only helpful for maintaining

the oral health but also prevents from the side effects of using chemical toothpastes.

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