

## AYURVEDIC MANAGEMENT OF DENTAL TARTAR-CASE STUDY

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**ABSTRACT**

Oral diseases continue to be major health problem world-wide with the incidence of oral cancer and other disorders are on the rise in developing countries. If oral hygiene is not maintained then it leads to various *Danta rogas*. 8 *Danta rogas* are mentioned in our classics namely *Dalana*, *Danta harsha*, *Danta bhanjanaka*, *Danta sharkara*, *Kapalika*, *Krimidanta*, *Shyavadanta*, *Hanumoksha* and *Karala danta*. Among these, *Danta sharkara* is one such disease which occurs due to inadequate oral hygiene. According to modern science *Danta sharkara* is nothing but dental tartar i.e. dental calculus. It affects the health of the gingiva (gums). *Dantasharkara* is a common problem seen in day to day patients. In today's era we can see many patients suffering from *Dantasharkara*, hence chosen disease for clinical study is *Dantasharkara* treated with *Irimedadi tail pratisarana* after *lekhana karma*.

**KEYWORDS:** *Irimedadi tail*, *Lekhana karma*, *Dantasharkara*.**INTRODUCTION**

*Ayurveda* is the everlasting supreme science of medicine which deals with all aspect of life since time immemorial. The first and foremost aim of *ayurveda* is to promote and maintain the health of healthy individual. To satisfy this, it has given many procedures and measures under the heading *dincharya*, *panchakarma*, *ritucharya*, *shamana karmas*. By following these one can maintain and promote the health and prevent many diseases.

*Ayurveda* has given much importance to oral hygiene. It has mention *Danta swasthya* i.e. *dincharya* is an important aspect of *ayurveda* in which *danta dhawana* and *kawala-gandusha* helps in maintaining oral hygiene. Which is held to be very individualistic, varying with each persons *prakriti* and *kalaparinama*. If oral hygiene is not maintained then it leads to various *danta rogas*. Among them, *Dantasharkara* is one such disease which occurs due to inadequate oral hygiene. It is a disease characterized by hardened accumulation of mala on tooth surface which destroys the teeth and its surrounding structures and is accompanied by bad odour. The line of treatment as told in our classic is removal of *sharkara* by *shastra* i.e. *lekhana karma* followed by *pratisarana* and *Danta harshokta kriya*. *Danta harsha chikitsa* (treatment for the sensitivity of tooth) after *Danta sharkara udharana* (removal of dental plaque).

**AIM AND OBJECTIVE**

- Assess the effect of *Ayurvedic* treatment in dental tartar.

**MATERIAL AND METHODS**

A known case of dental tartar was taken from OPD. Detail history of the patient was taken. Complete examination was done. *Ayurvedic* treatment was given along with oral hygiene maintenance. Assessment was done after complete treatment.

**Case report**

A 34 year old male patient visited to ENT OPD of *Shalakyatantra* department, GAC, NANDED Hospital on 16/1/2020 with chief complaints of bad breath, inflamed gingiva, receding gums and bleeds during brushing tooth. The patient is suffering from all these symptoms since 4 years. He consulted a local hospital near his house and diagnosed as dental calculus and took medications but was not satisfied, so for the complete recovery patient opted *Ayurvedic* treatment and consulted to us. He was having the history of *chikungunya* 6 years back and not maintaining the proper dental care since childhood and having the addiction of *ghutaka* and tobacco chewing since 20years, no any other relevant family history and occupational history was found. After assessing the cause and symptoms *Ayurvedic* diagnosis was made as *Dantasharkara*.

**Personal history**

Diet-non-vegetarian  
Appetite-moderate  
Bowel-regular  
Micturation-normal  
Sleep-disturbed

Toothbrushing-once a day (no habit of flossing after taking meal)

### Ashtavidha pariksha

Nadi- Kapha pitta pradhana

Mala-Prakruta

Mutra- Samyaka pravrutti

Jivha-Saama

Shabda-Spashta

Sparsha-ushna

Drik-prakruta

Akruti-madhyama

### Local examination

Direct examination- supragingival calculus can be seen directly or indirectly using a mouth mirror with a combination of retraction, light and drying with air, small deposit can be seen.

Subgingival examination- dark edges of calculus may be seen at just beneath the gingival margin.

### Procedure administered to the patient

Patient administered with *lekhana karma* by *danta shanku shastra* followed by *Irimedadi tail pratisarana* after brushing twice daily for 1 month. After 8 days of *lekhana karma* follow up will be taken then on 15<sup>th</sup> day and on 30<sup>th</sup> day follow up will be taken.

### Assessment criteria and observations

#### 1) Plaque

- No plaque 0
- A film of plaque adhering to the free gingival margin and adjacent area of the tooth, which can not

be seen with the naked eye, but only by using disclosing solution or by using probe 1

- Moderate accumulation of deposits within the gingival pocket, on the gingival margin and/or adjacent tooth surface, which can be seen with the naked eye 2

- Abundance of soft matter within the gingival pocket ad/or on the tooth and gingival margin 3

#### 2) Gum inflammation

- No inflammation 0
- Mild inflammation over gums in 1 or 2 region with slight tenderness 1
- Moderate inflammation 2
- Severe inflammation causing difficulty in chewing food 3

#### 3) Bad breath

- No Bad breath 0
- Bad odour to patient only 1
- Mild bad odour to other or doctor 2
- severe bad odour to other or doctor 3

#### 4) Bleeding gums/pus

- No bleeding gums/pus 0
- After pressing gum-bleeding/pus 1
- After breaking hard food material then bleeds/pus 2
- Bleeding/pus without any pressing gums or during mastication 3

#### 5) Pain

- No pain 0
- Occasional pain with low intensity 1
- Frequent pain with moderate intensity 2
- Continuous pain with severe intensity which increases during mastication 3

### Properties of drug used

Properties	Irimedadi tail (Main ingredient-Khadira)
Rasa	Tikta-kashaya
Guna	Raktastambhaka, shothahara, ruchiwardhaka, shleshmaka kalasankochaka
Virya	Sheeta
Vipaka	Katu
Karma	Kapha-pitta shamaka

### Effect of treatment

Sr. no.	Symptoms	Before treatment	After treatment
1	Plaque	2	0
2	Gum inflammation	1	0
3	Bad breath	2	0
4	Bleeding gum/pus	3	1
5	Pain	2	1

### RESULT

**On first follow up (8<sup>th</sup> day)-** The patient got mild reduction of bad breath and gum inflammation.

**On second follow up (15<sup>th</sup> day)-** Patient was feeling better, bleeding occurs during brushing was reduced.

**On third follow up (30<sup>th</sup> day)-** Patient got marked improvement and complete resolution of pain.

### DISCUSSION

*Dantasharkara* is a disease of teeth. Scaling is the first treatment for removal of all kind of tartar. Prevention of

plaque is most important after scaling to prevent recurrence of tartar. Dental tartar is one of the *urdhwajatrugata vyadhi* caused due improper oral hygiene due to which *kapha* is dried by *vayu* or *vata* and formation of plaque having sugar like consistency with bad breath. *Danta* having *shukla, shlakshna, drudhtwa* and *saundaryadi* gunas which losts in this Dantashrakara vyadhi. The drug used for pratisarana karma is proprietary medicine contain like *khadira* which is *dantya*, anciently used for brushing having properties of *raktastambhan* and *pooyanashaka*, *Tila tail* is *vata shamaka* and *yogavahi* hence used in *mukharogas*. As per preventive aspect *Charaka Acharya* says *Nidana Parivarjana* to break up the entry of causative factors and prevent the disease, so we advised him not to take tobacco or ghutaka and dental flossing after every meal or taking snacks.

#### Probable mode of action of pratisarana

Gentle rubbing with fingers is *Pratisarana*. It is a mechanical approach for plaque control. *Pratisarana* mainly possesses *Shodhana* and *ropana* properties. By *Pratisarana* mechanical pressure is exerted on gingivae in the direction of the gingival sulcus which remove food debris, food impaction, plaque, desquamated epithelial cells, calculus, and bacterial colonies. *Pratisarana* increases rate of crevicular fluid production, which inhibits bacterial diffusion into the tissues as it has phagocytic leukocytes and enzymes.

#### Probable mode of action of irimedadi tail

As *Khadira* is main ingredient, it cleanses the teeth and mouth. It tends to remove the bad smell from the mouth and the uncleanliness of the teeth as well as to subdue the *kapha*. It also produces a good relish for food and a cheerfulness of mind.

In the ingredients of *Irimedadi tail* is having *tikta kashaya rasa, laghu-ruksha-guna, sheeta virya, katu vipaka* and *kapha-pitta shamaka*.

*Tikta-kashaya* is having *Shodhana, Lekhana, Kledashoshaka, Krimighna* and *Kaphanashaka karma*. It may decreases the *Kapha* and purifies local blood. It may help to dry up the excessive fluid and decreases the inflammation. *Laghu-ruksha guna* are *vata* *kapha shamaka*. The drugs by their *Laghu, Tikshna* properties produce *Chhedana* of vitiated *Kapha* that can also be correlated with tartar. *Katu vipaka* normalizes vitiated *Kapha* and *Vata*. Most of the drugs possess anti-inflammatory, anti-bacterial activities and may be helpful in preventing recurrent plaque formation, infection and reduces inflammation.

#### CONCLUSION

*Ayurveda* can be of great help to deal this problem by its preventive and curative approach. *Irimedadi tail pratisarana* provides statistically significant result in preventing the recurrence of plaque and calculus as well as maintaining the oral hygiene. By applying proper

brushing technique and *pratisarana with Irimedadi tail* after *lekhana karma* twice daily can prevent plaque formation and tartar deposition, reduce the gum swelling and prevent the infection.

*Ayurvedic* drugs used in this treatment are easily available. This overall regimen did not cause any unwanted effects.

Further studies may concluded by taking more patients for evaluate the efficacy of trial drug.

Scope for further study-

- The holistic approach of *Ayurveda* should be tried for a long duration
- Repeated clinical trials on same drug should be carried out to bring authenticity of our science.

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