

MANAGEMENT OF HALITOSIS THROUGH AYURVEDA: A CASE STUDY

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INTRODUCTION

Face is the mirror of mind and index of beauty. It houses almost all sense organs which are gateway of interaction of our body with the external world. Oral cavity functions as an essential component and halitosis is a common complaint among general population which definitely affects a person's beauty as well as personality. Halitosis is an unpleasant odour that originates from the mouth and can be serious enough to cause personal embarrassment and social restraint. Different terms describing halitosis include breath malodour, oral malodour and bad or foul breath. The etiology of halitosis is related to intraoral causes in 90% of cases and extra oral causes are 10%¹. Intraoral halitosis can be caused by poor oral hygiene, gingivitis, food impaction, periodontal disease or excessive bacteria (mainly gram –negative) on the coated tongue degrading and converting both sulfur and non sulfur containing aminoacids into volatile and bad smelling gases. Extraoral halitosis can be caused by upper respiratory tract infections such as chronic sinusitis, rhinitis, tonsillitis, etc. lower respiratory tract infections such as bronchitis, pneumonia, pulmonary abscess etc. Systemic factors causing halitosis include rheumatic fever, hiatus hernia, hepatic carcinoma, diabetic ketoacidosis, uraemia, kidney disease and gastrointestinal diseases. Halitosis can also have temporary causes such as morning bad breath, dry mouth, hunger, stress and dietary causes such as eating garlic, onion etc².

Halitosis affects 22-50% of the population and its incidence increases with age³. Management of halitosis in modern science involve a wide range of mouth rinses available over the counter which cause unnecessary side effects like taste disturbance, tooth staining, sensation of dry mouth, etc⁴. Soreness, ulceration and redness may sometimes occur if the person is allergic or sensitive to mouthwash. As long term use of mouth washes causes unnecessary side effects and they cannot be used as daily prophylactic measures, there is great need to find an alternative treatment in *Ayurveda*.

Acharya Charak states that it is not necessary to name the diseases but physician have to treat diseases according to predominance of *Doshas*. Taking this into consideration halitosis can be categorized under *Mukha Rogas* which is caused due to vitiation of *Kapha* and *Pitta Dosh*. According to *Acharya Vagbhata*^{5,6} all *Mukha, Gala, Dantamoola Gata Rogas* are due to vitiation of *Kapha* and *Rakta Dosh*. He advised *Raktamokshana, Kaya Virechana, Shiro Virechana, Vamana, Katu, Tikta Kavala* and *Kapha Rakta Shamaka* procedures for these *Rogas*.

Considering all the above criteria this case study was done with *Ayurveda* perspectives which may open a doorway to find an alternate and effective solution to the present problem. Hence, the present case study was done with *Darvyadi Kwatha Gandusha, Dashansankar Churna* to be used as paste for brushing along with oral medications.

CASE REPORT

A 32 year old male patient came to dental OPD of National institute of *Ayurveda*, Jaipur with complaints of foul smell from the mouth since six months. On detailed history taking the patient revealed that he did not have any previous periodontal treatment and only had constant bad

breath and taste. There was no familial history of periodontal disease. The patient was medically fit and well, a former smoker and drinker. He had a normal diet and there was no history of dry mouth or mouth breathing. Clinical examination showed presence of debris and calculus deposits. Bacterial tongue coating was also noticed affecting between one third and two thirds of the tongue surface.

Assessment of Oral Hygiene Index and Halitosis scoring

Oral Hygiene Index –Simplified (OHI-S) by Green and Vermillon

This index is required to evaluate the oral hygiene status of individual. This index is simplified to consider only six teeth which will represent all the teeth in the oral cavity. They are 16,11,26,36,31,46. Further, only one surface of each tooth examined will be taken into consideration i.e. facial surface of 16,11,26,31 and lingual surfaces of 36 and 46.

Oral hygiene index has two components: Debris index-simplified (DI-S) and calculus index-simplified (CI-S).

Debris index – simplified (DI-S)

Criteria for scoring debris index:

0	No debris or no stains present
1	Debris present up to gingival 1/3 rd or crown
2	Debris present more than 1/3 rd but less than 2/3 rd of crown
3	Debris present more than 2/3 rd of crown

DI-S= Total no of scores/6

Calculus index – simplified (CI-S)

Criteria for scoring calculus index:

0	No calculus present
1	Only supragingival calculus covering less than 1/3 rd of clinical crown
2	Supragingival calculus covering more than 1/3 rd and or flecks or sub gingival calculus
3	Supragingival calculus covering more than 2/3 rd of clinical crown or/ and continuous band of sub gingival calculus.

SI-S= Total no of scores/6

OHI-S=DI-S+CI-S

Clinical levels of oral hygiene can be assessed by OHI-S as follows

Good	0 to 1.2
Fair	1.3 to 3.0
Poor	3.1 to 6.0

Organoleptic scoring scale for halitosis scoring

Score	Category	Description
0	Absence of halitosis	Odour cannot be detected
1	Questionable halitosis	Odour is detectable, although the examiner could not recognize it as halitosis
2	Slight halitosis	Odour is defined to exceed the threshold of halitosis recognition
3	Moderate halitosis	Halitosis is definitely detected
4	Strong halitosis	Strong halitosis is detected, but can be tolerated by examiner
5	Severe halitosis	Overwhelming halitosis is detected and cannot be tolerated by examiner (examiner instinctively averts the nose)

On examination:

A. Extra Oral

Eyes:NAD

Facial symmetry: Apparently symmetrical

Lips: Competent

Lymph nodes:Not palpable

B. Intra Oral

Halitosis: Present, Organoleptic Score - 4

Labial Mucosa: NAD

Buccal Mucosa:NAD

Floor of the mouth:NAD

Tongue:Coated between one third and two thirds of the tongue surface.

Vestibules:NAD

Tonsillar pillars and pharynx:NAD

C.Hard tissue examination:

Missing teeth:All teeth are present

Stains/ Discoloration:Mild stains

Calculus:Moderate

Caries: Absent

Tenderness on percussion: NAD

Oral Hygiene Index – Simplified (by Green and Vermillon): Before treatment

Debris index:

16 11 26

1	0	2
1	3	2
46	31	36

DI=9/6=1.5

Calculus index:

16 11 26

1	0	0
1	2	0
46	31	36

CI= 4/6=0.6

OHI-S=DI+CI=1.5+0.6=2.1 (fair oral hygiene)

Treatment administered

1. Education and motivation for maintaining oral hygiene
2. *DashansanskarChurnato* to be used as paste for brushing
3. *Gandusha* with *DarvyadiKwatha* for one month
4. *KhadiradiGutika* 250 mg 2 tablet twice a day after meals with lukewarm water for one month.

RESULTS

After a period of one month the calculus and debris were reduced substantially.

Oral Hygiene Index – Simplified (Green and Vermillon): After treatment

Debris index:

16 11 26

1	0	1
1	0	1
46	31	36

DI=4/6=0.6

Calculus index:

16

11

26

1	0	0
1	1	0

46

31

36

$$CI = 3/6 = 0.5$$

$$OHI-S = DI + CI = 0.6 + 0.5 = 1.1 (\text{good oral hygiene})$$

After treatment of one month, the oral hygiene index improved from fair to good level. The scoring of halitosis from organoleptic scoring scale was reduced from score 4 to 1. During follow up period of one month, there was no recurrence in the patient complaints and complete relief was achieved.

DISCUSSION

The etiology of halitosis in present case study is intraoral with poor oral hygiene due to accumulation of calculus and debris. *Gandusha* is a type of *ShodhanaChikitsa* adopted in *MukhaPradesha*. The oral cavity is the seat of *BodhakaKapha*, as a result of which applied drug gets absorbed easily and faster, and showing speedy recovery than the systemic management. Most of the drugs in *DarvyadiKwatha* have *Katu*, *Tikta Rasa*; *Laghu*, *RukshaGuna*; *UshnaVeerya*; all drugs are having *KatuVipaka* and *KaphaShamaka* property. *KatuRasa* in *DarvyadiKwatha* helps in treating halitosis due to property of *VaktramShodhanawhich* cleanses the oral cavity, *Krimighna* i.e. destroys microorganisms, *ShvyathukledamalaAnauphanti* i.e. removes inflammation, sticky, slimy and waste discharges⁷. *Kaphaghna*, *Deepana* and *Pachana* property also helps in the radical removal of toxic substances from the oral cavity. The *Kwatha* of drug is used in lukewarm condition, which does locally *KaphaShamana*, also leads to *DoshaVilayana* and clears the *Strotorodha*. Prolonged and forceful mechanical action during *Gandusha* could play a vital part in dislodging calculus as well as debris from other parts of the mouth. It may also act by increasing the secretion of saliva which contains lysozymes and other detoxifying enzymes, thus saliva can trap the toxin and act as a detoxifying agent, which again helpful in removal of infection and provide relief from symptoms.

DashansanskarChurna used for brushing is a polyherbal formulation, well known remedy for all types of dental problems including gingivitis, halitosis as it has anti-inflammatory and anti-bacterial properties⁸. *KhadiradiVati* used after meals for chewing also helped in treating halitosis due to its chief ingredient *Acaciacatechu* which is also antimicrobial and anti-inflammatory agent. It also increases intracellular concentration of vitamin C, free radical scavenging and inhibition of collagen destruction⁹.

CONCLUSION

Present case study showed that local application of *DashansanskarChurna* with *Gandusha* of *DarvyadiKwatha* along with oral medications and oral hygiene measures are very effective in this case. Despite the limitations of this case study in a single patient, this treatment modality may be an eye opener for further studies to effectively manage halitosis through *Ayurveda*.

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