

## Efficacy of *Ayurveda* against oral submucous fibrosis - A case study

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### Abstract

The prevalence of oral submucous fibrosis is steadily rising as a result of excessive betel nut chewing and tobacco usage in various forms. Despite habit corrections, the fibrosis stays refractory and grossly harms the quality of life. Since young boys are the most impacted, this condition more clearly shows hardships that go beyond one's personal health. Numerous symptoms have significantly improved with *Ayurvedic* treatments. *Hanubasti*, *Pratisarana* and *Gandusha* are such local *Panchakarma* therapies.

**Keywords:** oral submucous fibrosis, *Ayurveda*, *Hanubasti*, *Gandusha*, *Pratisarana*, *berberis*

### Introduction

*Ayurveda* highlighted the concept of specialization as reflects from the mention of the eight clinical branches [1]. The *Shalaky Tantra* has always had a fairly narrow range and is steadily become more and more relevant. Oral sub mucous fibrosis (OSMF), a novel health risk that has emerged with the rise of tobacco consumption in numerous forms, is most prevalent in people who have smoked and/or chewed tobacco in the past [2]. It can be generally linked to the *Sarvasara Mukha Roga*, with the *Kapha Vata Dosha* being the most vitiated *Tridosha* (*Vata*, *Pitta* and *Kapha*).

OSMF, first reported in early 1950s, is a collagen deposition disorder disturbing the patients' quality of life and can even lead to cancer. It is a disease that develops slowly and is marked by fibrosis. The majority of Indians have this condition [3]. People who regularly chew betel nuts and use various tobacco products are more likely to get this condition. Prevalence rate of disease is 2% and transformation rate to malignancy is

around 5%. Initial stages of the disease are reversible with cessation of habits and oral exercises. The most prevalent age range is between 20 and 40. Genetic predisposition, autoimmunity, deficiencies of various vitamins and minerals are also suspected in the pathogenesis of OSMF. The disease first manifests as a burning sensation, acute inflammation, and mucosal disintegration. After submission of initial symptoms, the disease progressively gets worse and manifests as chronic dry mouth and fibrosis [4].

*Shalaky Tantra* is one of the specialties of *Ayurveda* that deals with the diseases of the supraclavicular region [5]. *Mukhai*.e. Since the mouth is the entrance to the body, problems affecting this area should be properly treated. *Mukhagatavyadhi* have been described by *Acharya Sushrutain Nidana Sthan* chapter 16; *Acharya Sushrutah* described 65 *Mukhagatarogas* and classified them into seven subsites i.e. *Oshtha*, *Danta*, *Dantamulagata*, *Jihva*, *Talu*, *Kantha*, and *Sarvasar* [6]. Including OSMF in *Sarvasara Rogas* is possible. *Vagbhata* at many contexts mentions many

features relatable to OSMF as ulceration, restricted mouth opening, oral burning sensation, oral dryness and fibrosis etc [7]. The treatment modalities for the initial stages include discontinuation of addictive habits, nutritional support, antioxidants, physiotherapy, immunomodulatory drugs, local infiltration of steroids, hyaluronidase, human placental extract etc. whereas the advanced cases warrant scalpel intervention. *Ayurveda* which is holistic science opens new horizon this disease. Efficacy of *Gandusha*, *Pratisarana* and *Hanubasti* have been studied in this case study. *Gandusha* strengthens oral mucosa and hence promotes easy penetration of the drug. In *Hanubasti* procedure, there is more tissue contact time of medicated oil, thus it penetrates deep and improve restricted movement of TM joint, *Pratisarana* procedure also has more tissue contact time and it is used for healing and thus promotes hypothesised to mitigate *VataKapha* vitiation to reverse the clinical picture of OSMF.

### Case summary

A 30 year male patient approached the Parul Ayurveda Hospital, Vadodara on 21<sup>st</sup> June, 2022 with complaints of reduced mouth opening, oral burning sensation with pain, along with intolerance to spicy food for two years. The patient was on analgesics and multivitamin for these conditions. He had poor oral hygiene, pale and had a good physical structure with history of tobacco consumption since many years. Routine investigations like Hemoglobin, Total Leukocyte Count, Differential Leukocyte Count, Erythrocyte Sedimentation Rate, Fasting Blood Sugar were within the normal range.

### Examination

There was formation of bilateral fibrous bands in the lateral border of tongue and buccal mucosa. The mouth opening / Inter Incisal Distance was 13 mm as measured by scale. The symptoms were recorded during history taking on a case sheet.

### Treatment

The Patient was given *Urdhvajatrugat Abhyang* with *TilTaila* and *Saindhav*, *Hanubasti* at B/L TM Joint with *Tiltaila* and *saindhav* for 10 min twice a day. *Triphala Kwath* contains *Amalaki*, *Bibhitaki*, *Haritaki* in equal parts, classically prepared by boiling the ingredients in 16 time water, reduced to a quarter twice a day for gargling. The patient was advised to fill his mouth with lukewarm *Triphala Kwath* for a period till there is *Kaphapurnasyata* (mouth filled with secretions), *Ghranasrava* & *Akshirsrava* (watery discharge from nose and eyes), followed by spitting out the secretions. *Yastimadhu Ghrita* for *pratisarana* was given twice a day. Total duration of treatment was 15 days.

### Assessment criteria

Symptoms were reviewed and Inter incisal distance (IID) was measured with Scale by taking the distance between the mesial angles of the upper and lower central incisors.

### Signs and symptoms

Colour of Oral mucosa	Score
Pink normal	0
Light pink	1
Pale white	2
Blanched white	3

Burning sensation	Score
No <i>Mukhadaha</i> (Burning sensation in mouth)	0
On taking spicy food	1
On taking food	2

Ulceration in mouth	Score
Nil	0
Mild	1
Moderate	2
Severe	3

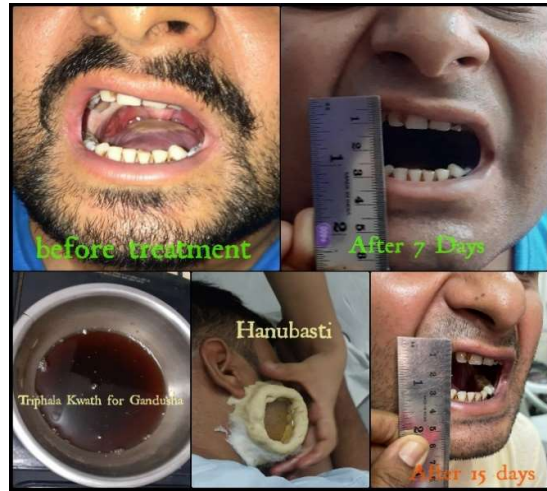
Fibrous bands on palpation	Score
No fibrous bands	0
One or two solitary fibrous bands	1
Bands felt almost on entire surface	2
Adherent fibrous bands producing rigidity of Mucosa	3

### Results

There was complete relief in pain of the mouth, burning sensation and intolerance to spicy food, there was a little improvement in opening of mouth.

**Table 1:** The mouth opening was 17 mm and there was reduction in fibrous band masses.

Sr No	Symptoms	Before treatment	After treatment
1	Inter Incisal distance	13 mm	17mm
2	Fibrous Bands on Palpation	3	2
3	Ulceration in mouth	3	1
4	Colour of Oral mucosa	2	1
5	Burning Sensation	3	0
6	Intolerance to spicy food	3	0
7	Pain	2	0



**Figure 1:** Before treatment and after treatment.

### Discussion

Though there are many treatment modalities in the contemporary science but they are not effective and have many side effects too. *Ayurveda is an all-encompassing science with no adverse consequences.* The treatment with *Gandusha, Hanubasti and Pratisaranaca* uses strengthening of the oral mucosa hence promotes easier and effective penetration of the drugs.

Excessive consumption of Areca nut; having the attributes of Areca Nut as *Sheeta/cold, Kashaya / astringent taste, Ruksha/ Dryness* etc vitiate *Vata* and diminish *Agni*. A combined vitiation of *Vata&Kapha* causes hardening / fibrosis, as mentioned by *Charak Samhita, Chikitsa Sthana, Chapter 21* with reference to *Visarpa*. That is why the *Rasayana & hot potency herbs* have a potential to reverse the *Vata-Kapha* predominant pathology of OSMF and hence selected for this study. The current observations were finished without a single side effect being reported, with ease of drug tolerance and usage, and with a considerable impact on OSMF.

### Conclusion

Due to faulty habits as smoking & tobacco chewing, OSMF is on a rise and requires

timely, newer interventions as *Gandusha, hanubasti and pratisaranawith* relevant herbs. The present study hints such an option. *There are no risks associated with side effects when using ayurveda to treat chronic illnesses.* The study should be carried out in the larger sample to see effectiveness of the drugs.

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