

# EUROPEAN JOURNAL OF PHARMACEUTICAL AND MEDICAL RESEARCH

www.ejpmr.com

Review Article
ISSN 2394-3211

**EJPMR** 

# THE STUDY OF VYASAN (ADDICTION) HETU FOR PATHOGENESIS W. S.R TO ORAL SUBMUCOSAL FIBROSIS

\*1Dr. Nitesh S. Deotale and 2Dr. Ujwala V Pawar

<sup>1</sup>P.G Scoler Government Ayurved Collage. Nanded. <sup>2</sup>Professor Government Ayurved Collage. Nanded.

\*Corresponding Author: Dr. Nitesh S. Deotale

P.G Scoler Government Ayurved Collage. Nanded.

Article Received on 10/03/2016

Article Revised on 31/03/2016

Article Accepted on 22/04/2016

#### **ABSTRACT**

Lifestyle disorder primarily based on daily habits, Some common disease are ,Alzheimer disease, cancer, arteriosclerosis, cirrhosis, COPD, DM,HTN, etc. They take year to develop caused by factor heat, sound, dust, fumes, smoke. Vyadhi occurred by doshdushti and dhatudourbalya, etiological factor are ahara, vihara, vyasana, manas&aushadhi. Vyasan are of different kinds like alcohol, tobacco pan- guthakha, smoking etc. gutakha and pan masala are widely used because of low cost, easily available, easily handle. On routine observation seen that these vyasan cause OSF. According to ayurveda nidan, doshdushti, dhatudushti, dhatuvikruti (Twak), reversible and irreversible. In OSF it is reversible, cause by vata kapha, 70% of oral cancer are vata kapha, according to modern arecoline(alkaloid) stimulate fibroblast and increase production of collagen by 150%. Oral sub mucous fibrosis is a chronic disease of the oral sub mucosa characterized by inflammation and progressive fibrosis, which has high risk of malignant transformation. It can be prevented by changing lifestyle and sesation of chewing betel nut. The fibrosis can be reversible, By the use of Bhallataka which is anticancerous drug and also vatakaphaghna may be effective in OSF.

**KEYWORD:** According to ayurveda nidan, doshdushti, dhatudushti, dhatuvikruti (Twak), reversible, irreversible.

## INTRODUCTION

Evolutionary cause of disease

- 1) Pre –Historic age violence, malnutrition.
- 2) Industrial age infectious disease.
- 3) Automation age Lifestyle disease.

## Definition of lifestyle disease

The relationship & impact of day to day event on the illness & wellness of an individual and its cumulative impact on community.

Lifestyle disorder primarily based on daily habits some common disease include Alzemeirs disease, cancer, arteriosclerosis, cirrhosis, dyslipidemia, hypertension, type-2DM,Heart disease, Stroke, Chronic Bronchitis, tobacco& nutritional induced cancer.

These disorders take year to develop caused by factor heat, Sound, Dust, Fumes, Smoke. Lifestyle disorder are going to take the form of epidemic in 21<sup>st</sup> century if proper preventive measure are not taken, modern system of medicine is successful in preventing disease of infective origin but it is difficult to prevent lifestyle disease alone with it. Which are preventable with changes in diet, lifestyle, and environment.

Oral squamous cell carcinoma (OSCC) is the most common cancer of oral cavity and represents about 90% of oral malignancy. The prevalence varies from 0.20-05% in India with a higher percentage being found in southern part of country. [1] several factor like tobacco, areca nut and hormonal factor are suspected possible risk factors. It is Global health problem with increasing mortality rate, In India because of cultural ethnic and geographic factors the popularity of addictive factor is high. And also frequency of oral cancer is high as 4-10% of all cancer are oral cancer with trend increasing towards young adult.

The concept of two step process of cancer development in oral mucosa i.e. reversible and irreversible Oral Sub mucous Fibrosis is one of the reversible form of potentially malignant disorder. Malignant transformation of areca nut ranges from 3-19 %, Areca nut chewing has been causes related to OSMF. Along with alkaloid high copper content in the nut play an important role in pathogenesis of OSMF. I have highlighted the points how pathogenesis take place in oral mucosa and what kind of preventable measure.

<u>www.ejpmr.com</u> 264

#### Vyadhi

Vyadhi occurred by doshdushti and dhatushaithilya, <sup>[2]</sup> etiological factors are ahara vihara, vyasan, manas& aushadhi.

## Vyasan

According to American society of addiction medicine—addiction is primary, chronic disease of brain reward, motivational, memory and related circularity dysfunction in these circuit leads to characteristic biological, Psychological, social and spiritual manifestation this is reflected in an individual pathological pursing relief by substance use. Vyasan are of different kind - Alcohol, tobacco chewing. Pan- masala, gutakha, smoking Betel quid's are widely used because of its low cost, easily available, easily handle. Betel quid chewing is a habit practiced predominantly in India. It is similar to tobacco chewing in westernized country; condition is well recognized for its potential to produced oral sub mucosal fibrosis.

#### Areca nut and its commercial product

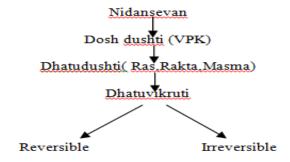
It may be used fresh or dried and cured before use, by sun drying, baking or roasting. A consensus workshop held in 1996 recommended that the term "quid" should be defined as substance or mixture of substance placed in mouth usually containing at least one of the two basic ingredient, tobacco, and areca nut, in raw or any manufactured form.

- 1) Pan: freshly prepared betel quid with or without tobacco.
- 2) Gutakha: This is manufactured version of betel quid with tobacco sold as single use.
- 3) Pan masala: It is commercially manufactured proceed version of betel quid with or without tobacco used in India.
- 4) Mava (kharra): This is crude combination of areca nut, tobacco, and lime.

In most patients with OSMF areca nut was chewed alone more frequently that it was chewed in combination.

## CAUSE EFFECT RELATIONSHIP

The Ayurvedic Samprapti of OSMF is likely to be.



## In charak told that,[4]

" यदाधातवोवैषम्यआपद्यते तदाक्लेशवाविनाशप्राप्नोति !! च.शा.

klesha – irritation which is reversible Vinasha – irreversible changes

Disease is caused by nidansevan. So here nidan is betel quid nut chewing it causes dosh dushti of vata and kapha which later affect mansdhatu in oral mucosa.

Vata:- causes cell division ,because of its (laghu and chalguna) irregular cell division.

Kapha:- Cell nourishment and maturation (guru &sthirguna).

In India 70% of oral cancer are vatakapka.

क्वरुद्धाः श्लेष्मोल्बनादोषाः कुर्वन्य्तर्मुखेगदान !!

वा.उ.२१/३

So we concluded that OSMF is caused by vata-kapha. According to modern science OSMF is precancerous stage from that 3-14% people converted to oral cancer and is reversible. So OSMF is caused by Vata-kapha and is Reversible.

#### According to modern Science

Oral sub mucosal fibrosis is a chronic debilitating disease of oral cavity characterized by inflammation and progressive fibrosis of sub mucosal tissue (lamina propria and deeper connective tissue).

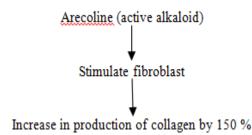
## Clinical feature. [5,9]

- 1) Onset is insidious over 2 to 5 year period.
- 2) Prodromal symptom includes burning sensation in mouth.
- 3) Recurrent or generalized inflammation of oral mucosa.
- 4) As disease progress oral mucosa become blanched and slightly opaque with white fibrous Band.
- 5) The density of fibrous deposit varies from slight whitish area on the soft palate causing Fixation and shortening or even deviation of uvula and soft palate.
- 6) Mark rigidity and inability to open the mouth.
- 7) Buccul mucosa is most commonly involved site but any part of oral cavity can be involved Even the pharynx.
- 8) Condition is well recognized for its malignant potential and particularly associated with areca nut chewing.

## PATHOPHYSIOLOGY. [5,9]

The pathogenesis of the disease is not well established but the cause of OSMF is believed to be multifactorial factor include Areca nut chewing ingestion of chilies. It is genetic and immunologic process. Freeze dried product, gutkha, mava have higher concentration of areca nut, per chew, and appear to cause OSMF more rapidly than self prepared.

www.ejpmr.com 265



#### Is OSMF is precancerous condition

The precancerous nature of OSMF was first postulated by paymaster<sup>6</sup>development of slow growing squamous cell carcinoma in one third of OSMF cases seen in Tata memorial Hospital Mumbai. This precancerous potential was also emphasized by other author, <sup>[7]</sup> based on clinical and epidemiological ground the frequency of malignant changes in patient with OSMF ranges from 3-6%.

#### Possible treatment

Comprehensive search of scientific literature has shown only limited Ayurvedic preparation being used in treatment of OSMF through their effectiveness has to be evaluated in proper clinical trial. Natural Ayurvedic Treatment of OSMF along with lifestyle modification can be in lowering symptom in many chronic disease. The fibrosis can be reversible by use of Bhallataka which is anti cancerous and as well as vatakaphaj drug so may be helpful, Also the oral drug Turmeric and Tulsi were also tried because of drawback of commercial OSMF Treatment. Turmeric is also known to be strong antioxidant and reduce inflammation it increase blood circulation and anti-mutagenic [8]

## CONCLUSION

OSMF is a precancerous condition caused by chewing of betel nut and its preparation, condition is predominantly seen in young adult in India, which is caused by vata and kaphadosha which is in reversible form, if not treated later convert into oral cancer, in such a situation Bhallataka, Turmeric, Tulsi and Pipalli may be used in OSMF.

## REFERENCES

- 1. Menon L G, KuttanR, KuttanG, Anti-mestastatic activity of curcumin and catechin, cancer Let., 1999: 141: 159-65.
- 2. Y.G. Joshi, charaksamhita (purvardha), vaidyamandir prakashan, cha Su., 9/4: 133
- 3. Philips Mathew, ranidavid Austin, sonasusanvarghse, manojkumarAD, Role of areca nut and its commercial product in oral subcumous fibrosis a review. J.adv. Med dent Sci. Res., 2014: 2(3): 192-200.
- 4. Y.G. Joshi, charaksamhita, sharirsthan, vaidyamandr prkashan, 7: 707.
- R. Rajendran-Oalsubmucosalfibrosis, etiology pathogenesis and future research, WHO bulletin OMS, 1994; 72: 986.

- 6. Paymaster JC-cancer of Buccual mucosa, clinical study of 650 cases in Indian patients of cancer, 1956; 9: 431-435.
- 7. Gupta PC etall-incidence rates of oral cancer and natural history of oral pre cancerous lesion in 10 yr follow up study in Indian villagers, 1980; 8: 227-233
- 8. Chaturvedi T, P.uses of turmeric in denstry; an updates, Idian J den Res., 2009; 20: 107-9. (pubmed)
- 9. Borle R, M. Borle S, R, management of oral sub mucus fibrosis, a conservative approach oral maxillofac, 1991; 49: 788-91.

www.ejpmr.com 266