FREQUENCY OF ORAL SUBMUCOUS FIBROSIS IN 16 – 40 YEAR OLD INDIVIDUALS ATTENDING THE DENTAL OUTPATIENT DEPARTMENT OF CIVIL HOSPITAL KARACHI

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ABSTRACT

INTRODUCTION: The World Health Organization predicts that tobacco deaths in India may exceed 1.5 million annually by 2020. Oral cancer progress through the transformation of tobacco exposed normal oral mucosa to potentially malignant lesions which ultimately changes to carcinoma. OSMF is now globally accepted as an Indian disease. It has one of the highest rates of malignant transformation among potentially malignant oral lesions.

OBJECTIVE: To determine the frequency of oral submucous fibrosis in 16 – 40 year old individuals attending the Dental Outpatient department of Civil Hospital Karachi.

METHODOLOGY: This was Descriptive cross sectional study, which was conducted at Dental Outpatient department of Civil Hospital Karachi from 1st July to 28th December 2019. The data was collected through pre tested questionnaire. Patient's attending the OPD of Civil Hospital, Karachi. Having s aged 16 – 40 year olds.with limited mouth opening and OSF and Squamous cell carcinoma.

RESULTS: This was Descriptive cross sectional study, which was conducted at Dental Outpatient department of Civil Hospital Karachi from 1st July to 28th December 2019. The data was collected through pre tested questionnaire. Patient's attending the OPD of Civil Hospital, Karachi. Having s aged 16 – 40 year olds.with limited mouth opening and OSF and Squamous cell carcinoma. The results were analyzed as: Age distribution among 100 particpants were analyzed as 20-30 Years (36.4%) 31-40 Years (64.6%) Mean age was 33.2 years with standard deviation ±2.142 Gender distribution among 147 patients was analyzed as n= Gender Wise Distribution Male was (73.5%) Female was (26.5%).

CONCLUSION: We conclude that areca nut chewing has a causal relationship with OSF: additional tobacco insult may be necessary for subsequent carcinoma development.There is a marked difference in literacy, socioeconomic status, areca nut chewing habits, symptoms and disease severity

KEY WORDS: Frequency, Oral Submucous Fibrosis

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INTRODUCTION

In ancient medicine, Shushrutha described a condition, "vidari" under mouth and throat diseases. He noted progressive narrowing of mouth, depigmentation of oral mucosa, and pain on taking food. The magnitude of the situation can be gauged by facts stated in a 2004 review that India ranks the highest among all the registries in the world for incidence of oral cancer with 75,000--80,000 cases reported each year. For many years, this condition had been confined to countries like India, Pakistan, Bangladesh, etc., but now due to higher rates of immigration this condition is being reported from Western countries as well.[1-3]

This epidemic in part is due to the sudden spurt in the number of industries involved in the convenient and inexpensive packaging and vigorous advertising of products like gutkha and pan masala which was commercially started in 1980 in India. Major steps in curbing this serious health issue by the Government are missing mainly due to the fear of affecting the livelihood of farmers and others involved in this industry. Karnataka, a state of India grows about 65% of the total areca nut produced in the country, yet a ban was just recently imposed on gutkha after several other states banned the product under the Food safety and

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standards act. Farmers need to be educated regarding the ill effects and encouraged to grow other crops which can bring them profits.[4-8]

The World Health Organization predicts that tobacco deaths in India may exceed 1.5 million annually by 2020. Oral cancer progress through the transformation of tobacco exposed normal oral mucosa to potentially malignant lesions which ultimately changes to carcinoma. OSMF is now globally accepted as an Indian disease. It has one of the highest rates of malignant transformation among potentially malignant oral lesions.[9,10]

Primary healthcare physician can play a very vital role in early diagnosis of OSMF considering its progressive nature. It is a restrictive condition of oral cavity with multifactorial etiology with areca nut chewing most common one. Prevalence of this deleterious habit in India is on rise so this disease which once used to be rare has become very common, hence the awareness of the clinical features, diagnosis, and management is the main stay to curb this menace. Hence, role of primary healthcare physician, being the first point of contact for general population, becomes paramount. The present study was conducted to evaluate the prevalence of OSMF among fibrosis in 16 – 40 year old individuals attending the Dental Outpatient department of Civil Hospital Karachi.

METHODOLOGY

The was cross sectional study carried out in Civil Hospital, Karachi, having from 1st July to 28th December 2019.The researcher obtained data from 100 patients in Civil Hospital, Karachi through random sampling that lead to sample size of 100. A pre designed, pre tested questionnaire was used to obtain information.The technique used for the collection of data was by means of stratified random sampling. The data was collected through pre tested questionnaire. For this, the ethical issues were already met and a formal permission from the Administration of Civil Hospital, Karachi has been sought. Patient's attending the OPD of Civil Hospital, Karachi. Having s aged 16 – 40 year olds.with limited mouth opening and OSF and Squamous cell carcinoma.A single examiner carefully measured the distance (mm) between the corresponding upper and lower central incisors in millimeters with a ruler after the patient seated on the dental chair with aid of unit lamp, opened his or her mouth as wide as possible without assistance. This was designated the inter incisal distance. The purpose of this study was to stage the severity of the disease (functional staging) using an objective measure (interincisal opening). Functional staging of Oral Submucous Fibrosis: Mouth opening ≥ 20 mm,Mouth opening 11–19 mmand Mouth opening ≤10 mm.

All the collected information on Proforma was then entered in statistical software SPSS version 22.0 and descriptive analysis were applied. Continuous variables were expressed in term of mean and standard deviation. Categorical variables were expressed in term of frequency and percentages.

FIGURE 1: Frequency Distribution of Education

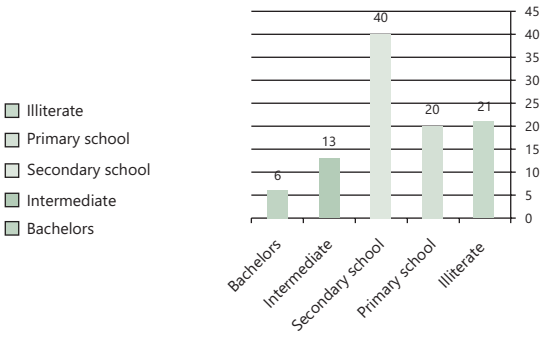
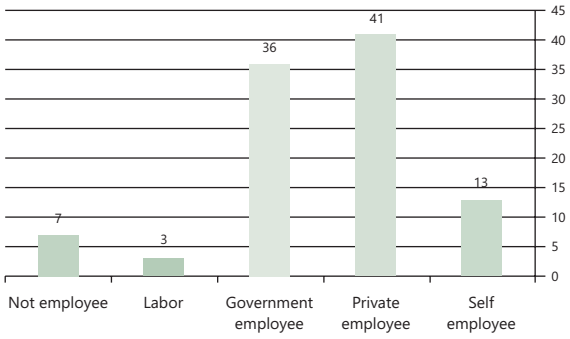


FIGURE 2: Frequency Distribution of Occupation



RESULTS

This was Descriptive cross sectional study, which was conducted at Dental Outpatient department of Civil Hospital Karachi from 1st July to 28th December 2019. The data was collected through pre tested questionnaire. Patient's attending the OPD of Civil Hospital, Karachi. Having s aged 16 – 40 year olds.with limited mouth opening and OSF and Squamous cell carcinoma. The results were analyzed as: Age distribution among 100 particpants were analyzed as 20-30 Years (36.4%) 31-40 Years (64.6%) Mean age was 33.2 years with standard deviation ±2.142 Gender distribution among 147 patients was analyzed as n= Gender Wise Distribution Male was (73.5%) Female was (26.5%).

DISCUSSION

Men had a significantly higher OSMF prevalence than women.[11] Sinor et al. in India found male predominance in OSMF cases.[12] In present study, male predominance can be

TABLE 1: PREVALENCE/PROPORTION OF DIFFERENT STAGES OF OSF AMONG MALES AND FEMALES

Sex of patient			Frequency	Percent	Valid Percent	Cumulative Percent
Male	Valid	mouth opening greater or equal 20mm	12	15.8	15.8	15.8
		mouth opening 11-19mm	49	64.5	64.5	80.3
		mouth opening less than or equal 10mm	15	19.7	19.7	100.0
		Total	76	100.0	100.0	
Female	Valid	mouth opening greater or equal 20mm	4	16.7	16.7	16.7
		mouth opening 11-19mm	14	58.3	58.3	75.0
		mouth opening less than or equal 10mm	6	25.0	25.0	100.0
		Total	24	100.0	100.0	

TABLE 2: PROPORTION OF OSF BY DIFFERENT TYPES OF SUBSTANCE ABUSE

Product using daily. Saada Pan			Frequency	Percent	Valid Percent	Cumulative Percent
Yes	Valid	mouth opening greater or equal 20mm	1	25.0	25.0	25.0
		mouth opening 11-19mm	3	75.0	75.0	100.0
		Total	4	100.0	100.0	
No	Valid	mouth opening greater or equal 20mm	15	15.6	15.6	15.6
		mouth opening 11-19mm	60	62.5	62.5	78.1
		mouth opening less than or equal 10mm	21	21.9	21.9	100.0
		Total	96	100.0	100.0	

due to easy accessibility for males to use areca nut and its products more frequently than females. Male patients were more in comparison to females, with a prevalence of OSMF 97.67% compared with 2.33% in females.

Similarly, in a population-based case control study in rural and urban Lucknow, it was found that patients who use pan masala were at higher risk of developing OSMF.[13]

The findings of Babu et al., among OSF patients in Hyderabad, showed that people were more addicted to gutkha than any other related areca nut and tobacco products such as pan, pan masala, and raw areca nut. They found a strong association between gutkha chewing and OSMF and pointed that gutkha consumption led to OSMF.[14] Nigam et al. determined the prevalence and severity of OSMF among habitual gutkha, areca nut, and pan chewers of Moradabad, India. The prevalence of OSF was 6.3% and gutkha chewing was the most common abusive habit among OSF patients in the study.[15] Similarly, in the present study, habitual gutkha chewing was more prevalent than gutkha with tobacco.

In this study, the 860 patients were in the age range of 15–60 years, with a peak incidence in 30--40 years (34.88%), followed by 20–30 years (30.23%). Hence, it can be concluded that the occurrence of OSMF is seen most commonly in age group 30--40 years followed by 20–30 years. The youngest patient was 16-year-old, and the eldest was 60-year-old. The observation of present study was similar to study conducted by Nigam, who reported the maximum number of OSMF cases were in the age group of 36--40 years.[16] This could be because of increased social encounters and economic liberty they get at this age in a rapidly developing nation like India. Therefore, during this age, they indulge in various chewing habits such as betel nut, guthka, pan masala, smoking, alcohol, etc., either to relieve stress, as a fashion or due to peer pressure.Shah found the relationship between OSMF to various chewing and smoking habits. It was found that chewing of areca nut/quid or pan masala (a commercial preparation of areca nuts, lime, catechu and undisclosed coloring, flavoring, and sweetening agents) was directly related to OSMF and frequency of chewing rather than the total duration of the habit was directly correlated to OSMF.[17] Ali et al. evaluated the effect of frequency, duration, and type of areca nut products on the incidence and severity of OSMF. It showed that the duration and frequency of its use and type of areca nut product has effect on the incidence and severity of OSMF. Gutkha and pan masala have more deleterious and faster effects on oral mucosa. The gutkha-chewing habit along with the other habits does not have any significant effect on the rate of occurrence and incidence and severity of the OSMF.Present study showed significant effect of duration and frequency of use of areca nut products on the incidence and severity of OSMF.

CONCLUSION

Epidemiological data accumulated over a wide geographical area will help to determine the overall incidence and prevalence rates and formulate appropriate prevention and control measures. High risk individual and population for tobacco usages needs to be targeted and intervention should be done at community level. Policies need to be laid down by concerned policy makers to curb this ever progressing menace. Primary healthcare professionals and dentists should play an active role in prevention and control of tobacco induced lesions as they are generally the first point of contact with patients who are at increased risk

We conclude that areca nut chewing has a causal relationship with OSF: additional tobacco insult may be necessary for subsequent carcinoma development.

There is a marked difference in literacy, socioeconomic status, areca nut chewing habits, symptoms and disease severity

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NOTES ON CONTRIBUTORS

The study was part of N. He was involved in every part of Manuscript writing, analysis, Protocol developments and data collection process.

CONFLICT OF INTEREST

Author declare no conflict of interest.

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