The Prevalence of OSMF among Biscuit Factory Workers in Delhi NCR Region: A Cross-Sectional Study

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INTRODUCTION: The consumption of tobacco and related products is on the rise and promotes various medical/oral conditions that lead to increased morbidity/mortality in people.

AIM: To assess the prevalence of Oral Submucous Fibrosis (OSMF) among biscuit factory workers in Delhi NCR region, India

MATERIALS AND METHOD: A total of 496 biscuit factory workers in Delhi NCR region, were interviewed and examined for OSMF and associated lesions with the help of a preformed, pre-tested questionnaire. The population was divided into four stratas according to age (≤34 years, 35-44 years, 45-60 years and >60 years). Data was entered into Microsoft Excel. Descriptive statistics were applied and statistics (t-test) was done using SPSS 19.0.

RESULTS: OSMF was observed in 173 (34.9%) [males 116 (23.4%), females 57 (11.5%)] and the difference was statistically significant (p=0.02). The majority of subjects having OSMF (48, 27.8%) were seen in the age group of ≤34 years. Male: Female predilection was observed as 2.03

CONCLUSION: Efforts and strategies need to be directed to reduce the overall consumption of tobacco and related products in both urban and rural areas.

KEYWORDS: Prevalence, Oral Submucous Fibrosis, Arecanut, Tobacco

INTRODUCTION

Oral Submucous Fibrosis (OSMF), has highest malignant potential as compared to oral premalignant lesions and is found with a female predilection (although it varies from region to region) and is associated with areca nut chewing. Other contributory factors include chillies, lime, tobacco, nutritional deficiencies such as iron and zinc, immunological disorders, and collagen disorders.1 This condition mainly is seen in the Indian subcontinent and South-east Asian countries with authors finding its incidence in countries like UK, China, Saudi Arabia, Kenya and can be attributed to the migration of these habitual tobacco chewers in these countries.2,3

The consumption of Areca nut and associated substances could be due to lack of awareness and education among people, which usually belong to people from low socio-economic status.4 Authors have reported that these people are not aware of the potential and life-threatening harmful effects associated with the use of these substances and are consumed for perceived beneficial effects which include mouth freshening to aid in digestion and most of all mood enhancement/stress relief.3 Shah G et al. have stated that the use of paan and gutkha is difficult to control in most countries where it is widespread, with their excessive and extensive use leading to oral cancer as people become habitual to it and find it difficult to leave this habit.5

Considered as a psychoactive substance, arecanut is commonly known as “supari” in India. It is important to note that India is also the largest producer and consumer of areca nut in the world.7 Overall prevalence rates of OSMF in India vary between 0.2-0.5%, with a gender-wise prevalence of 0.2-2.3% in males and 1.2-4.57% among females.8 It also has a high risk of Malignant transformation (4.5 to 7.6%) and therefore, constant screening of people vulnerable to OSMF with provision of habit breaking techniques, education and motivating must be constantly provided to them. This study hence, was conducted to assess the prevalence of OSMF among biscuit factory workers in Delhi NCR region, India.

MATERIALS AND METHODS

The present study, which was Cross- sectional in nature, was conducted among various biscuit factory workers in Delhi NCR region from June 2017 to November 2017. The study population comprised of a total of 496 biscuit factory workers, who were examined and interviewed with the help of a
The sale of tobacco products and its use which leads to various medical and dental conditions is still a major public health challenge in India. Therefore, a need arises to educate the people to quit this habit and dental and medical professionals, government and NGOs’ should carry nationwide screening and education programs with timely re-enforcement and subsequent motivation so as the burden of this disease is reduced.

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LEGENDS

| Characteristic          | Males (n,%): 313 (63.1) | Females n,%: 183 (36.9) | Total (n,%): 496 (100) | t-test (With OSMF vs Without OSMF) |
|-------------------------|--------------------------|--------------------------|-------------------------|-----------------------------------|
| Gender                  | 313 (63.1)               | 183 (36.9)               | 496 (100)               | p=0.02*                           |
| With OSMF               | 116 (23.4)               | 57 (11.5)                | 173 (34.9)              |                                   |
| Without OSMF            | 197 (39.7)               | 126 (25.4)               | 323 (65.1)              |                                   |

Figure 1. Distribution of the Biscuit Factory Workers (Percentages Rounded off to Nearest Decimal).

| Age                     | Males (n,%): 116, 67.1 | Females n,%: 57, 32.9 | Total (n,%): 173, 100 | t-test |
|-------------------------|-------------------------|------------------------|-----------------------|--------|
| ≤34 years               | 33, 68.7                | 15, 31.2               | 48, 27.8              |        |
| 35-44 year              | 15, 38.5                | 24, 61.5               | 39, 22.5              | P=1.51 |
| 45-60 years             | 35, 89.7                | 4, 10.3                | 39, 22.5              |        |
| > 60 years              | 33, 70.2                | 14, 29.8               | 47, 27.2              |        |
| Total                   | 116, 67.1               | 57, 32.9               | 173, 100              |        |

Table 2. Distribution of OSMF among Different Age Groups.