

Increasing Affection for Areca Nut among Teenagers: A Bane for Society

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ABSTRACT

Background: To study the percentage of school going students having areca nut chewing habit and OSMF in Bhopal city.

Materials and Method: Three schools in Bhopal city having a total of 294 students in class IX to XII were surveyed. Students were given a structured questionnaire to fill, followed by complete dental check up. SPSS software was used to analyze the results.

Result: A total of 89 students; boys and 6 girls had the chewing habit. 5 students (1.7%) had Grade I Oral submucous fibrosis. 81 students chewed plain areca nut, 7 chewed gutkha and 1 chewed areca nut with tobacco. 3 students having plain areca nut chewing habit and 2 students chewing gutkha had Grade I OSMF.

Conclusion: Banning these products for the individuals less than 18 years can be a way of making the availability of these products difficult for the students.

Keywords: OSMF, Prevalence, Areca nut, Teenagers.

INTRODUCTION

Areca nut, the fourth most common psychoactive substance in the world ¹, is consumed by nearly 600 million people in the form of betel quid ². It is an indigenous habit among the inhabitants of India and parts of South East Asia ³. Traditionally, Ayurveda involves the use of areca nut for the treatment of multiple ailments. It has been used as an antihelminthic, an appetite stimulant, a dentifrice, a diuretic, a flatus reliever and a laxative ⁴. It also plays an important role in religious, social and cultural functions.

Betel nut chewing has been associated with oral submucous fibrosis (OSMF), oral leukoplakia and oral cancer ². Betel nut without tobacco has been classified as a human carcinogen by the International Agency for Research on Cancer (2004) by the World Health Organization ⁵. More than 5 million people in India have OSMF ⁶ with the overall prevalence ranging from 0.2 – 1.2% in different parts of the country ^{7, 8}. Commercially areca nut is available as both processed and unprocessed forms, with tobacco (Gutkha) and without tobacco (Pan Masala). The areca nut containing products are

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easily available in small, attractive, colorful and inexpensive sachets at every hawker's corner.

Promoted by slick, high profile advertising campaigns and aggressive marketing, pan masala and gutkha has become very popular with all sections of Indian society, including school students. Surveys conducted in schools and colleges in several states of India have reported that 13 – 50 % of students chew pan masala and gutkha on a regular basis⁹. These areca nut products have been strongly implicated with the recent increase in the incidence of OSMF, especially in the young, even after a short period of use¹⁰. OSMF, a precancerous condition has a high rate of malignant transformation⁶ and is extremely debilitating with no definite cure. Bhopal ranks highest in the age - adjusted rates of cancers for both tongue and mouth.¹¹ Therefore, if areca nut chewing habit among the school students could be identified early and the students with OSMF are screened, counseled and educated regarding the consequences of such habit, the rate of malignant transformation of OSMF can be checked. With this objective in mind, this study was conducted among the school children of Bhopal.

MATERIALS AND METHODS

The study was conducted in two government and one private schools of Bhopal city. A total of 294 students of class IX to XII participated in the study. The students of each class were given a structured questionnaire to fill, followed by a dental check - up. The clinical diagnosis of oral submucous fibrosis was made by using the criteria as mentioned by Khanna JN and Andrade NN (1995). SPSS software was used to analyze the recorded data. Data was analyzed by Chi - square test.

RESULTS

A total 294 students participated in the study; 183 were government school students and 82 were private school students. Out of total 89 chewers (30%), 60 students (33%) from government schools and 29 students (26%) from private chewed areca nut. 6 (7%) of the chewers were females, 34 students in the age group of 14 – 15 years, 47 in the age group of 16 – 17 years and 8 students of 18-19 years chewed areca nut. The types of areca nut chewing habit were varied; 7

students chewed gutkha, 1 chewed areca nut with tobacco and 81 chewed plain areca nut. Five of 89 students had Grade I OSMF. Two students with OSMF, had gutkha chewing habit and 3 with OSMF had plain areca nut chewing habit.

The overall study showed that 9 out of 294 students were not aware of the adverse effects of chewing areca nut, pan masala or gutkha. However among the chewers all were aware of the adverse effect of the habit.

Table 1: Demographic data

SEX	CHEW		TOTAL STUDENTS
	YES	NO	
MALE	83	76	159
FEMALE	6	129	135
TOTAL	89	205	294

Table 2: Number of students having OSMF.

SEX	TOTAL	OSMF
MALE	159	5
FEMALE	135	0

Table 2: Details of chewing pattern and OSMF.

	PLAIN ARECA NUT	ARECA NUT WITH TOBACCO	GUTKHA	TOTAL
	81	1	7	89
OSMF	3	0	2	5

Table 3: Class wise distribution of students having chewing habit.

CLASS	CHEW		TOTAL
	YES	NO	
IX	32	16	48
X	25	37	62
XI	13	87	100
XII	19	65	84
TOTAL	89	205	294

DISCUSSION

India being one of the largest consumers of the areca nut could be a hub to a large number of potentially malignant disorders. This problem is

compounded by the easy availability of this addictive substance. Added to the ill effects on teeth and periodontium the chemical damage caused to the cells definitely warrants a detail study.

In the present study the percentage of students with OSMF was 1.7% which is in accordance with other studies¹². The percentage of students with regular chewing habit (30.3%) is comparable. The chewing habit was more prevalent in boys as compared to girls; similar results were seen in study conducted by Joseph N et al¹³. Studies observed that the social restrictions prevalent in India prevent women, to a certain extent from indulging in deleterious oral habits. Though these habits are considered a taboo, there seems to be more relaxation of these norms for men and thus there are more chances that males get addicted to the habit¹⁴.

In the present study 37% students in age group 14 – 15 years, 28% in the age group 16 – 17 years and 57 % in students of 18 years and above chewed areca nut (with and without tobacco). These results varied from other reports^{13, 15, 16, 17}; however they had encompassed broader age group.

87% student chewed plain areca nut as they believed that only tobacco and gutkha are harmful for health and not the areca nut, it was also noted that all 89 chewers started the habit after seeing their friends chewing the same which is at par with the study conducted by Gunaseelan R et al¹⁸. The possible reason for this could be that teenage is a vulnerable age when there is intense peer pressure and thus forces children and young adults to get involved in high – risk behavior.

CONCLUSION

Easy availability of areca nut products which are low priced, use of these products by the family members and elders being indifferent towards this habit motivated them to continue the habit despite the knowledge that they could have serious consequences. Detrimental effect of the use of the areca nut and tobacco must be made mandatory in the school curriculum. Banning these products for the individuals less than 18 years can be a way of making the availability of these products difficult for the students. As seen in few states that banned the selling of these products, this

prohibition can also be implemented in Madhya Pradesh as the current statistics show that Bhopal has the highest prevalence of oral cancer (tongue) in the world.

CONFLICT OF INTEREST

No potential conflict of interest relevant to this article was reported.

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