Prevalence of Habit of Tobacco and its Deleterious Effects in General Population of Jaipur District, Rajasthan

Vela Desai, Rajdeep Kaur Gill, Rajeev Sharma

ABSTRACT

Introduction: Usage of tobacco is prevalent worldwide in some or other form in all age groups. Smoking and tobacco use is a major public health issue in developing countries. As Rajasthan is a place with different cultural and traditional variations when compared with other parts of the world. To extract if the same diversity exists in the usage of tobacco in Jaipur district Rajasthan, this study was conducted as no similar studies have been done previously.

Materials and methods: A total of 552 patients who visited Outpatient Department of Jaipur Dental College, Jaipur, were studied. Complete information regarding presence of smoking and other forms of tobacco was recorded in case history proforma and any of tobacco-related oral lesions among these patients were examined.

Results: In age group of <20 years, 109 males and 62 females gave history of habit of tobacco. A total of 164 males and 146 females were in the age group of 21 to 50 years, which made the highest total of 56.16%. Diagnosis included leukoplakia in 111 patients, lichenoid reaction (p-value > 0.05) in 12.84% subjects, oral cancer was reported in 33 patients (p-value = 0.001) whereas smoker’s palate in 25 patients and OSMF being the most common. Awareness level about ill effects of tobacco was 51.1%.

Conclusion: High incidence of tobacco usage in smokeless form is seen in Jaipur population especially in adolescents. There were no significant findings found between males and females. Of all lesion examined, OSMF was found to be more prevalent. Therefore, it is important to take immediate steps to curb the habit.

Keywords: Smokeless tobacco, Beedi smoking, Oral lesions.


INTRODUCTION

‘Tobacco habit appears to be the Hydra of our modern society.’ Kenneth JR.

Human beings have been using tobacco since 600 AD. It is the largest global threat to public health and is anticipated to kill 1000 million people prematurely this century. It contains 2,00,000 chemicals and 4,000 carcinogens which causes malignancy and other premalignant conditions. This can be smoked or chewed or snuffed. Tobacco habit is prevalent in both males and females, educated and illiterate, old and young individuals. Smoking being slightly higher in males. Cigarette smoking is more common in urban area whereas beedi in rural India. As beedi smoke contains more tar, nicotine and carbon monoxide than filter-tip cigarettes, it is more harmful relatively.

In Rajasthan, smokeless tobacco is also being endorsed and marketed extensively. It is available at affordable price and used as a substitute for smoking even after so much of campaigning against ill effects of smoking on heart, lungs and oral cavity. It is available in different forms like pan (betel quid) with tobacco, pan masala, zarda, mawa, khaini, mishri, manipuri tobacco and supari, etc. Smokeless tobacco contains tobacco, areca nut (areca catechu), slaked lime and catechu (acacia catechu) with other added flavors. Its prevalent in females and young children because of its easy accessibility, moreover its not banned in public areas.

In India pan is used since ages, as a custom in religious festivals and different occasions. This study was conducted to determine prevalence of usage of various forms of tobacco (smokeless and smoking) with their deleterious effects on oral mucosa, in relation to different age, sex, literacy level, occupation, and religion and awareness in this part of Rajasthan.

MATERIALS AND METHODS

An epidemiological study was conducted on 552 patients who visited Outpatient Department of Jaipur Dental College within the time period of 6 months. All the subjects were examined thoroughly and data recorded on a case history proforma. Patients who were willing to give written consent were included in the study. The data collected was then statistically analyzed by using Chi-square test and significant p-value was evaluated.

RESULTS

1. Prevalence of tobacco habits in males and females of different age groups: Out of 552 patients, 321 (58.15%) males and 231 (41.85%) females had habit of tobacco usage (Graph I). The study subjects were divided into three age groups. In age group of <20 years, 109 (19.75%) males and 62 (11.23%) females gave...
history of tobacco. A total of 164 (29.71%) males and 146 (26.45%) females were in the age group of 21 to 50 years, with highest prevalence of subjects in this age group (56.16%). The last group had least prevalence.

2. Prevalence of lesions in males and females: Based on the diagnosis, leukoplakia was observed in total 111 (20.11%) patients, 74 (13.41%) and 37 (6.7%) in males and females respectively, with p-value of <0.05 which shows that the result is significant. Lichenoid reaction was seen in 71 (12.84%) in which 43 (7.79%) were males and 5.07% were females with non-significant p-value of >0.05. Oral cancer was reported in total of 33 (6.88%) patients, in which males being 33 (5.98%) and females 5 (0.91%) with p-value (0.001) which is highly significant. OSMF was most common lesion and varied in severity as grade I was highly prevalent seen in 184 (3.33%) patients, 110 (19.93%) and 74 (13.41%) in males and females respectively and p-value (>0.05) was not significant. Grade II in 73 (13.22%) total patients, of which 40 (7.25%) were males and 41 (7.43%) were females and p-value was not significant. OSMF grade III showing significant p-value (0.001) with males 26 (4.71%) and 41 (7.43%) females affected, which made total of 67 (12.14%). Twenty-five (4.53%) patients were diagnosed of smoker’s palate, from which 7 (1.27%) were males and 18 (3.26%) were females. The p-value (<0.02) was significant (Table 1).

3. Awareness levels of ill effects of tobacco usage by males and females: Awareness level about deleterious effects of tobacco is important for its control. In present study 51.1% patients were aware of its effects, males (53.1%) were more aware than females (48.9%). A total of 48.9% were unaware of the bad effects of tobacco on body, as it was 46.9 and 51% males females respectively (Graph 2).

**DISCUSSION**

Since, the time of discovery of tobacco by Christopher Columbus, among the treasures of the New World; it has provided powerful and immense satisfaction for its use throughout the world. These gratifications may be pharmacological, psychological, emotional or social in nature. Tobacco smoking and chewing habits are rapidly gaining popularity in our country. India is the world’s third largest tobacco growing country, which produces an average of 5,80,000 tones every year. In India there are 240 million tobacco users (195 million men and 45 million women) accounting for one-fifth of the world’s tobacco consuming population. Today our country is in a state of tobacco epidemic with large population of tobacco users emerging day by day.

Based on studies in Gujarat, Haryana, Kerela, etc. the present investigation determined the prevalence of usage of various forms of smokeless and smoking tobacco and their deleterious effects on oral mucosa in Jaipur city-Rajasthan.

1. Prevalence of tobacco habits in males and females of different age groups: Tobacco is the leading cause of mortality globally and also in India. Tobacco use usually begins in adolescents; the time of their observation, understanding, struggling, facing challenges and psychological development. In the present study the same relationship was observed in which maximum 310 (56.16%) patients were in age of 21 to 50 years (Graph 1).
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This can be attributed to modern lifestyle and peer pressure. These findings are in favor with Makwana et al5 where adolescents in order to gain social approval from peers smoked.

2. Prevalence of lesions in males and females: The use of various forms of tobacco has a number of deleterious effects in the oral mucosa which includes OSMF, leukoplakia, lichenoid reaction, smoker’s palate and oral cancer, etc.

According to the present study prevalence of different lesions were OSMF (grade I-33%, grade II-13% and gradeIII-12%), leukoplakia (20%), lichenoid reaction (12%), smoker’s palate (4.53%) and carcinoma of oral cavity (6.88%) (Table 1). Similar reports were documented by Saraswathi et al.6 where the prevalence of leukoplakia and OSMF was 0.59 and 0.55% respectively.

Sunny et al7 reported 8.2% registered oral cancers cases whereas in the present study 6.88% presented with oral cancers. This could be because of their referral to specialty center and not to our OPD.

3. Prevalence of types of tobacco habit in males and females: Present epidemiological study was conducted to assess the use of various methods of consuming tobacco in either gender. It was evaluated there was no significant difference in usage of various forms of tobacco in males and females which probably could be due to cultural belief that tobacco is a remedy for different ailments. Whereas literature review shows male prevalence.2,5,8

4. Prevalence of awareness of ill effects of tobacco usage by males and females: The effects of smoking and smokeless forms of tobacco differed in males and females. For the prevention of oral diseases due to tobacco, it is essential for the population to be aware of the ill effects. In the present study 51.1% of the subjects were aware and 48.9% were ignorant (Graph 2). Males (53.1%) were more aware when compared to females (48.9%). Kumar, Pandey, Bala et al9 concluded 82% were unaware of such ill effects.

CONCLUSION

High incidence of tobacco uses is seen in Jaipur population. Tobacco usage is more prevalent in adolescents due to behavioral modification and changing lifestyle. There were no significant findings found between males and females. Of all lesion examined, OSMF was found to be more prevalent as smokeless form of tobacco is more commonly used in Jaipur city. Level of awareness about deleterious effects of tobacco was very low (51.1%). Therefore it is important to make the public aware of its ill effects through individual, group and mass education with the help of different audiovisual aids. Tobacco-related oral lesions are seen to be high, which brings alarming signal toward development of potentially malignant disorders and malignancies. Considering the enormous adverse health consequences, we should try putting efforts in helping people to quit the habit of tobacco. This is more important for the developing countries like India, which have become the main targets of advertisement and promotional propaganda of various multinational tobacco companies.

REFERENCES


Table 1: Prevalence of lesions in males and females

<table>
<thead>
<tr>
<th>Provisional diagnosis</th>
<th>Male (n = 321)</th>
<th>Female (n = 231)</th>
<th>Total (n = 552)</th>
<th>χ² (mean)</th>
<th>df</th>
<th>p-value</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leukoplakia</td>
<td>74 (13.41)</td>
<td>37 (6.70)</td>
<td>111 (20.11)</td>
<td>4.138</td>
<td>1</td>
<td>&lt;0.05</td>
<td>S</td>
</tr>
<tr>
<td>Lichenoid reaction</td>
<td>43 (7.79)</td>
<td>28 (5.07)</td>
<td>71 (12.86)</td>
<td>0.194</td>
<td>1</td>
<td>&gt;0.05</td>
<td>NS</td>
</tr>
<tr>
<td>Oral cancer</td>
<td>33 (5.98)</td>
<td>5 (0.91)</td>
<td>38 (6.88)</td>
<td>13.798</td>
<td>1</td>
<td>&lt;0.001</td>
<td>HS</td>
</tr>
<tr>
<td>OSMF I</td>
<td>110 (19.93)</td>
<td>74 (13.41)</td>
<td>184 (33.33)</td>
<td>0.301</td>
<td>1</td>
<td>&gt;0.05</td>
<td>NS</td>
</tr>
<tr>
<td>OSMF II</td>
<td>40 (7.25)</td>
<td>33 (5.98)</td>
<td>73 (13.22)</td>
<td>0.389</td>
<td>1</td>
<td>&gt;0.05</td>
<td>NS</td>
</tr>
<tr>
<td>OSMF III</td>
<td>26 (4.71)</td>
<td>41 (7.43)</td>
<td>67 (12.14)</td>
<td>12.544</td>
<td>1</td>
<td>&lt;0.001</td>
<td>S</td>
</tr>
<tr>
<td>Smoker’s palate</td>
<td>7 (1.27)</td>
<td>18 (3.26)</td>
<td>25 (4.53)</td>
<td>9.788</td>
<td>1</td>
<td>&lt;0.02</td>
<td>S</td>
</tr>
</tbody>
</table>

S: Significance; NS: Nonsignificance; HS: Highly significance


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