THE ORAL HEALTH STATUS OF FACTORY WORKERS IN BAHADURGARH, HARYANA

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A study on oral health status of 1331 workers of three factories in Bahadurgarh, Haryana was carried out. The distribution of the sample was 1305(98.05%) males and 26 females with mean age of 33.85 years. The use of tobacco was noticed in 307(23.07%) smokers and 377(28.32%) tobacco chewers. Examination of soft tissues showed 77(5.79%) subjects with oral lesions.Leukoplakia, lichen planus and ulcers were significantly higher in tobacco users. The prevalence of caries was 59%. Mean CPI score was 1.77. Clinical Attachment Loss was found in 796(59.8%) subjects. 472(35.46%) subjects had missing teeth and 38 subjects had dental prosthesis.

Key words: Oral Health Status, Factory Workers, Bahadurgarh.

India is a developing country with increased emphasis on general health. Last decade has shown expansion in the manpower of oral health professionals in the country. Whether this increase in number augurs better oral health for any group of individuals remains a query. In the year 2002 – 2003 an Oral Health Survey was conducted regarding oral health status of rural and urban areas of various states in India which projected the level of oral diseases in Haryana. [1]

Bahadurgarh is an industrial town in Haryana with a number of medium and small scale industries located in this area. The present study was carried out in three factories – two ceramic factories and one medical disposable items manufacturing factory.The oral health status of the employees of the three factories and their treatment needs was determined.

Materials and Methods

The study population comprised of the factory employees who volunteered to participate in oral health promotion program. The examination was carried out by two trained, caliberated project teams, each consisting of an Investigator and a Recording Assistant.

The Oral Health of all subjects was assessed using additional artificial light set in a fully equipped Community Mobile Dental Van. The WHO (1997) Oral Health Proforma[2] was used to record the findings. A total of 1331 subjects (1305 males and 26 females) participated in the program. Data was statistically analyzed and t test was used for significance.

Results

A total of 1331 factory employees were included in the study with the mean (SD) age of 33.8(11.01) years. Tobacco users were 622 with mean (SD) age of 37.3(11.8) years - 307 smokers and 377 tobacco chewers (51 smokers as well as tobacco chewers). The distribution of oral lesions is presented in Table 1. The occurance of leukoplakia was significantly higher ($p<0.01$) in tobacco users. Buccal mucosa was the most common site for oral lesions (Table 2). The prosthesis status and prosthetic needs are presented in table 3. The dental caries was observed in 776(59%) subjects. The mean (SD) CPI score was 1.64(0.73) for non tobacco users and 1.77(0.71) for tobacco users. Clinical attachment loss was observed in 796 persons (59.8%).

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Table 1: Distribution of Oral Lesions

Distribution : Oral Lesions	Non Tobacco user	Tobacco user	Total	Level of significance
Leukoplakia	4	32	36	P<0.01
Lichen Planus	3	12	15	P<0.05
Ulcers	9	13	22	P<0.05
Abnormal U/L Lip	0	1	1	
Enlarged Lymph Nodes	0	1	1	
Facial Swelling	0	2	2	

Table 2: Site location of oral lesions

Location of Oral Lesion	Number of affected subjects
Buccal mucosa	61
Lips	9
Sulci	2
Tongue	2
Palate	2
Alveolar ridges/gingiva	1

Table 3: Prosthetic characteristics of Study Population

	Prosthesis Status	Prosthetic Need
Single Unit	43 (3.23%)	255
Multi-unit	4 (0.30%)	124
Partial Denture	13 (0.98%)	53
Full Denture	2 (0.15%)	19

Discussion:

The present study revealed that 307(23.07%) subjects had habit of smoking and 377(28.32%) were tobacco chewers. In comparison, the smokers were only 17% and 6-7% had the habit of tobacco chewing and alcohol consumption in a survey conducted in Haryana (2003)[1] The effect of tobacco chewing on oral mucosa in the form of leukoplakia was evident in 32 subjects out of total 36 leukoplakia lesions observed. The majority of oral lesions (79.2%) were seen in buccal mucosa. It has been reported that oral mucosal lesions like leukoplakia and lichen planus are significantly associated with moderate/heavy smoking [3] [4]

A study conducted in Sri Lanka [5] found 26.9% teeth missing in the age group of 25-34 years in comparison to 35.46% subjects in our study. Advanced prosthetic treatment was availed by 4.66% subject as compared to 4% subjects wearing prosthesis in upper or lower arch among the population of Haryana [1].

The National Oral Health Survey (2002-2003) of Haryana[1] has shown a high prevalence of periodontal disease (88.9%) and the most prevalent form of clinical attachment loss was 4-5mm in depth across all age groups. The present study showed 59.8% subjects with clinical attachment loss.

The representative group needed dental health education, motivation and preventive measures for cessation of tobacco and related products. The group also needed help for securing appropriate dental treatment which indirectly adds to better quality of life and improved output in their working environment.

References:

1. Bali et al. National Oral Health Survey and Fluoride Mapping 2002-2003, Dental Council of India and Ministry of Health and Family Welfare (Government of India).
2. World Health Organization (WHO) (1997): Oral Health Survey Basic Methods, 4thEdition, WHO Geneva.
3. Carrard V, Haas AN, Rados PV et al. Prevalence and risk indicators of oral mucosal lesions in an urban population from South Brazil. Oral Dis. 2010; 23. [Epub ahead of print]
4. Saraswathi TR, Ranganathan K, Shanmugam S, Sowmya R, Narasimhan PD, Gunaseelan R. Prevalence of oral lesions in relation to habits: Cross-sectional study in South India. Indian J Dent Res. 2006; 17(3): 121-5.
5. Ekanayaka A. Tooth mortality in plantation workers and residents in Sri Lanka. Community Dent Oral Epidemiol 1984; 12: 128-35.