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Attitude and Practice towards Oral Cancer Prevention Held by Dentists in Belgaum City; A Cross-Sectional Study

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Abstract: ***Background: It is estimated that, 9 million new cancer cases are diagnosed and over 4.5 million people die each year in the world. The estimated that 7 lakhs new cases of cancer and over 3.5 lakhs people die of cancer each year in India. Cancer is preceded by pre-malignant changes and early detection is possible through visual and tactile means. So the present study is conducted to assess the attitude and practice of dentists towards oral cancer prevention in Belgaum city. Objective: To assess the attitude and practice regarding oral cancer prevention among dentists of Belgaum city. Methodology: A cross sectional study was conducted among 140 dentists of Belgaum city, where dentists were selected purposively and their attitude and practice were assessed with the help of predesigned and pretested questionnaire. Results: In the present study 56.4% dentists agreed that they are adequately trained to examine patient for oral cancer. Among study participants, 75% and 67.9% agreed that they are adequately trained to provide tobacco and alcohol cessation education respectively. 75.0% and 58.6% dentists routinely gave advice to patients regarding tobacco cessation and alcohol moderation, respectively. 15.7% dental practitioners said that they are not confident in talking about oral cancer with patients. Conclusion: The findings concerning attitude and practice of dentist regarding oral cancer prevention suggest strongly that educational interventions and training for practitioners are necessary. We contend that an offering of continuing dental education programs would go a long way to enhance the prevention and early diagnosis of oral cancer.***

Keywords: Attitude, Practice, Oral Cancer, Dentists

1. Introduction

Oral cancer is a malignant neoplasm on the lip or in the mouth that occurs generally at the age of 60 years which is higher in men as compared to women. It is estimated that about 9 million new cancer cases are diagnosed and over 4.5 million deaths from oral cancer each year in the world. The estimated number of new cancer in India is about 7 lakhs and over 3.5 lakhs people die of cancer each year. There would be about 1.5 lakhs cancer cases at any given time in Karnataka, and about 35,000 new cancer cases are added each year. [1]

In India, Oral Cancer comprises 20-30% of all cancers; one of the major reasons behind this is high uses of tobacco in different forms. Evidence for the high prevalence of using chewable tobacco products, especially in the youth, has been reported in the global youth tobacco survey. [2] Tobacco toll in India currently has one-fifth of all worldwide deaths attributed to it. There are 700,000 deaths per year due to smoking and 800,000–900,000 per year due to all forms of tobacco use/exposure in India. [1] The World Health Organization reported oral cancer as having one of the highest mortality ratios amongst all malignancies. Taking a worldwide view, cancer is responsible for one in eight deaths and causes more deaths than combined deaths caused by AIDS, tuberculosis and malaria. [3]

Cancer is preceded by pre-malignant changes, although such changes are rarely recognized at early stages. Early detection is possible through visual and tactile means, and dentists being the first to encounter such changes in the oral cavity, have the responsibility to counsel, diagnose and effectively treat the disease in its initial stages. However, a very high number of oral cancers are still detected only in the last stage, when the treatment is complex, expensive and has poor outcomes. [4]

Oral mucosal screening is now considered as an integral part of routine dental care and thus oral health care providers should have appropriate knowledge and skills in oral screening and prevention. Hence many researchers particularly from the developed countries have assessed attitude and practices related to oral cancer prevention among oral health care providers. Though oral cancer is the most common type of cancer in India and dentists have a vital role in its prevention and control, such studies have not been conducted in Belgaum city. The present study thus attempts to assess the attitude and practices of dentists towards oral cancer prevention in Belgaum city.

2. Materials & Methods

The present cross sectional study was conducted using a self administered pre-designed and pre-tested questionnaire to evaluate the attitude and practice towards oral cancer prevention. Dentists practicing in Belgaum city made the study population. Data was collected from 140 dental practitioners. The study was conducted for 10 months from January 2013 to October 2013. Ethical clearance was obtained from institutional review board of KLE University and informed consent was attained from all participating dentists. All dentists who were practicing in Belgaum city and have completed BDS/MDS degree were enrolled in the study and practitioners who refused to give informed consent were excluded. Following informed consent, the data was

collected by interviewing the dentists. A pilot study was conducted in Belgaum city on 10 % of the study sample who were selected to ascertain the feasibility of the study as well to ensure that the questionnaire collects sufficient data to meet the study objectives. The sequential order of few questions in the questionnaire was modified for better collection of data. Thus the data collecting tool was standardized and validated during the pilot study to ensure high content validity. The data was analyzed using SPSS 20 version and Microsoft Excel 2007. Results were expressed as percentage and Chi-Square test was used to evaluate association between variables.

3. Results

Table 1: Socio-demographic distribution of respondents or Dentists

Socio demographic characteristics	*No. of respondents*	*Percentage (%)*
Age Group		
25-39	127	90.7
40-59	13	9.30
Sex		
Male	65	46.4
Female	75	53.6
Education		
Graduate	59	42.1
Post Graduate	81	57.9
Total	140	100

Among total 140 participants, 127(90.7%) respondents were in the age group of 25-39 year, 13 (9.3%) respondents were in the age group of 40-59 year. There were 65 male dentists and 75 female dentists who make percentage of 46.4% and 53.6% respectively and 59 graduate dentists and 81 post graduate dentists who make percentage of 42.1% and 57.9% respectively.

Table 2: Attitude regarding prevention of oral cancer by dentist (n=140)

Attitude for oral cancer prevention regarding	*Agree*	*Uncertain*	*Disagree*
Trained to examine patients	79(56.4%)	41(29.3%)	20(14.3%)
Up to date Knowledge about oral cancer	80(57.1%)	47(33.6%)	13(9.3%)
Patients were Informed about risk factor	124(88.6%)	12(8.6%)	4(2.9%)
patients should know signs and symptoms	45(32.1%)	69(49.3%)	26(18.6%)
Trained to provide tobacco cessation education	105(75%)	28(20%)	7(5%)
Trained to provide alcohol cessation education	95(67.9%)	33(23.6%)	12(8.6%)
Trained to perform lymph nodes palpation	124(88.6%)	14(10%)	2(1.4%)
Talking about oral cancer is time consuming	40(28.6%)	0(0%)	100(71.4%)
Dentists lack training in effectively talking about oral cancer	52(37.1%)	0(0%)	88(62.2%)
The term 'cancer' makes patients anxious	128(91.4%)	0(0%)	12(8.6%)

The above Table No. 2 shows attitude of dentists for the prevention of oral cancer.

Table 3: practice regarding prevention of oral cancer by dentist

Practice by the dentists	*Routinely to all pts.*	*Sometimes to some pts.*	*Not at all*
Give advice to patients regarding cancer prevention	91(65%)	47(33.6%)	2(1.4%)
Give advice to patients regarding poor fitting dentures as risk factor	63(45%)	63(45%)	14(10%)
Discuss about sites in mouth where oral cancer can develop	66(47.1%)	63(45%)	11(7.9%)
Discuss about signs and symptoms of oral cancer with patients	77(55%)	58(41.4%)	5(3.6%)
Discuss about importance of early detection	98(70%)	38(27.1%)	4(2.9%)
Discuss about general risk factors for oral cancer	90(64.3%)	48(34.3%)	2(1.4%)
Discuss about how to reduce the risk of developing oral cancer	81(57.9%)	54(38.6%)	5(3.6%)
Discuss about the role of regular dental visits in early detection of oral cancer	89(63.6%)	48(34.3%)	3(2.1%)

Similarly, Table No. 3 represents practices of dentists for the prevention of oral cancer.

Table 4: Method followed for screening of cancerous/precancerous lesions

Method for screening	*No.*	*Percentage (%)*
General physical examination	54	38.6
Biopsy	41	29.2
Toluidine blue staining	6	4.3
Other	2	1.4
None	2	1.4

Table 5: Association between educations of respondent and adequately trained to examine patients for oral cancer

Educational status of dentist	Adequately trained to examine patients for oral cancer			Total
	Agree	Uncertain	Disagree	
Graduate	32(54.2%)	18(30.5%)	9(15.3%)	59(100%)
Post Graduate	47(58%)	23(28.4%)	11(13.6%)	81(100%)
Total	79(56.4%)	41(29.3%)	20(14.3%)	140(100%)

$\chi 2$=.206; DF=2 (p=0.902)

According to the present study the difference between education of respondent and training to examine patients for oral cancer is not statistically significant (p value 0.902). Among 140 respondent 54.2% graduate and 58.0% post graduate dentists agree that they are adequately trained to examine patients for oral cancer.

Table 6: Association between education of respondent and current knowledge about oral cancer

Educational status of dentist	*Knowledge about oral cancer is up to date*			*Total*
	Agree	*Uncertain*	*Disagree*	
Graduate	26(44.1%)	29(49.2%)	4(6.8%)	59(42.13%)
Post Graduate	54(66.7%)	18(22.2%)	9(11.1%)	81(57.87%)
Total	80(57.1%)	47(33.6%)	13(0.9%)	140(100%)

$\chi 2$=11.115; DF=2 (p=0.004)

According to the present study the difference between education of respondent and current knowledge about oral cancer is statistically significant (p value 0.004). Among 140 respondent 44.1% graduate and 66.7% post graduate dentists agree that their knowledge about oral cancer is up to date.

4. Discussion

The present study was conducted in Belgaum city to assess the attitude and practice of dentist regarding oral cancer prevention. Among 140 dental practitioners 46.4% were male and 53.6% were female and 42.1% were graduates and 57.9% were post graduates. A study conducted in Bangalore showed that there were 55% male and 45% female and 76% graduate and 24% post graduate dentists, respectively.9, 5 Majority of dentist belong to age group of 25-39 years reporting 90.7%, 9.3% belong to age group of 40-59 years and no dentist belong to above 60 years of age. Study conducted in Bangalore showed that 30% of dentist belong to age group of 20-39 years, 62% dentist belong to age group of 40-59 years and 8% dentist belong to age group of above 60 years, respectively. 5 In our study, 56.4% dentist feels that they are adequately trained to examine patients for oral cancer. Similar studies conducted in Sri Lanka, Bangalore and North Carolina showed that 60.6%, 68.3% and 89.4% dentists agree that they are adequately trained in oral cancer examination, respectively. [6, 5, 7]

57.1% dentist in present study agreed that their knowledge about oral cancer is up to date. Studies conducted in Bangalore, Sri Lanka, North Carolina and New York revealed that 39.1%, 68.4%, 70.5% and 72% dentist claim that their knowledge about oral cancer is up to date respectively. [5,6,7,8] In this study, 90.7% dentist advise their patient regarding oral cancer whereas in a similar study conducted in Italy 63.1% dentist advice their patient regarding oral cancer. [9] The present study reveal that 88.6% dentist believe that their patients are sufficiently informed on risk factors of oral cancer but a conducted in Italy and Sri Lanka showed that 41.6% , 31.6% dentist believes that their patients are sufficiently informed on risk factors of oral cancer. [9, 6] In present study 32.1% dentist believe that their patient sufficiently know signs and symptoms of oral cancer. Studies conducted in Sri Lanka and Italy revealed that 23.3% and 18.8% dentist believes that their patient sufficiently know signs and symptoms of oral cancer. [6, 9]

75% dentist in our study believes that they are adequately trained to provide tobacco cessation education. Almost similar results are seen in studies conducted in Sri Lanka and Italy where it was found that 62.7% and 80.9% dentists believes that they are adequately trained to provide tobacco cessation education respectively. [6, 9] 67.9% dentist in our study believes that they are adequately trained to provide alcohol cessation education. In studies conducted in Sri Lanka and Italy, it was found that 58.8% and 75.6% dentists believe that they are adequately trained to provide alcohol cessation education, respectively. [6, 9] According to the results of the present study, 88.6% respondents believe that they are adequately trained to perform lymph node palpation. Similar studies conducted in Bangalore, North Carolina and Italy reveals that 50.4%, 77.4% and 66.8% dentists agree that they have enough training to perform lymph node palpation. [5, 9, 7]

In relation to cancer prevention 65% dentists of our study routinely give advice to their patient whereas in a study conducted in Spain it was found that 51.4% dentists give such advice to their patient. [4] Here 45% practitioners identified poor fitting denture as a risk factor for developing oral cancer and routinely advise their patient regarding the correlation. In a similar study conducted in Spain it was found that 83.6% dentist advice the same. [4] In our study 47.1% dentists routinely discuss the site in oral cavity where oral cancer can develop with their patient whereas mere 32% dentist discuss the same with their patient in Italy as reported in a study.[9] 55% dentist in our study always discuss the signs and symptoms of oral cancer with their patient similar results are found in a study conducted in Italy reporting 59.5%.[9] According to present study, 70% respondent always discusses the importance of early detection with their patient. Diverse results are seen in study conducted in Bangalore where 44.5% respondent discuss the importance of early detection and in North Carolina where 98% respondent feel the importance of early detection [5, 7]

In our study no more than 64.3% dentists routinely discuss the risk factor of oral cancer with their patient, 57.9% always discuss how to reduce the risk of developing oral cancer with patients and 63.6% always discuss the importance of regular dental visits to reduce the risk of developing oral cancer. These variables are not recorded in any other similar study, so these variables cannot be compared.

5. Conclusion

The dentists seemed to show an encouraging attitude towards oral cancer prevention but recognized deficits in their knowledge and training for implementation of education related to risk factors and habit cessation. We contend that an offering of continuing dental education programs would go a long way to enhance the prevention and early diagnosis of oral cancer. Educational programs should focus on risk factors, screening, behaviour modification, counselling, physical examination of oral cancer and criteria for referral to specialist for biopsy to facilitate definitive diagnosis and management. Additionally, the curriculum of the dental schools should be enhanced to include information on effective communication regarding oral cancer as well as alcohol and tobacco cessation. Furthermore, as most patients were anxious and fearful regarding oral cancer, reinforcement of public awareness is also mandated.

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