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KNOWLEDGE ABOUT OF ORAL CANCER AMONG THE PATIENTS ATTENDING NATIONAL INSTITUTE OF CANCER RESEARCH AND HOSPITAL, DHAKA

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Abstract: *This cross-sectional descriptive study was carried out among 75 oral cancer patients at National Institute of Cancer Research and Hospital, Dhaka, from July 2013 to December 2013, to assess the level of knowledge of oral cancer patients about of oral cancer. The mean age of the respondents was 45.50 years of then 61.33% were male and 38.67% were female. In this present study it was found that 80% had no knowledge about common causes of oral cancer. Common age of oral cancer occurrence could answer correctly and by 42.67% had no knowledge about it. Effects of smoking were correctly answered by 66.67%. Regarding effects of betel leaf and associated ingredients 6.67% respondents answered correctly. Only 1.33% respondent correctly answered about effects of alcohol consumption. But 60% respondents correctly answered about effects of chronic oral ulcer and effects of chronic oral infectious diseases. Regarding effects of poor oral hygiene and foods mixed up with chemicals (preservatives, insecticides and pesticides) only 33.33% respondents answered correctly. About effects of fewer intakes of fruits and vegetables, 8% respondents answered correctly. Effects of excess intake of red meat and positive family history could not be correctly by 100%. Finally, the study revealed that the knowledge of oral cancer patients about of oral cancer was poor, and need to improve the situation through health education.*

Keywords: *Oral Cancer, Common Causes of Oral Cancer, Effect of Oral Cancer and Smoking.*

Introduction

Cancer is a major disease burden worldwide. Given the current trends in smoking prevalence and the adoption of unhealthy lifestyle the number of new cases is expected to grow by 50% over the next 20 years to reach 15 million by 2020. Worldwide, 12% of people die from cancer and in industrialized countries more than one in four will die from the disease. Tobacco consumption remains the most important avoidable cancer risk. During the twentieth century, approximately 100 million people died worldwide from tobacco associated disease. Oral cancer is one of the 10 most cancers in the world. Oral cancer accounts for 20% of all body cancer. In the developing world, cancers rank third as a cause of death and accounts for 9.5% of all death. At present, about 1 million people are suffering from cancer in Bangladesh, cancer of the oral cavity is high in the South East Asia. More than 70% of all new cases occur in 60 years old. In children, cancer is

one of the leading cause of death between the age of 3 and 13 years. Cancer is 3 times common in women than in man. Oral cancer is the 3rd most common cancer in Bangladesh representing 20% of all cancers. Each year 40000 new cases of oral cancer are diagnosed in this country. Most of the oral cancers are discovered at late stages. Mortality rate is high from oral cancer. In Bangladesh betel quid and area nut chewing is time old tradition. Chewing of "khaini" (mixture of cured tobacco with lime) and "gul" (powder of dried tobacco leaves) are also practiced in this country. Epidemiological studies have shown a association between the use of tobacco (smoked or chewed) and oral carcinogenesis. It has been calculated that a heavy smoke may have two or four fold increased risk of developing squamous cell carcinoma than a nonsmoker. In addition, chewing of betel quid with tobacco is associated with an increased risk of developing oral cancer. Although a recent study has found that chewing of areca nut itself was carcinogenic. The presence of lime within betel quid has also been shown to release reactive oxygen species that could contribute to the cytogenetic damage involved in the etiology of oral cancer[1-16]. The aim of this study was to assess knowledge, attitude and practice among Bangladeshi people towards using tobacco, betel quid, and areca nut as risk for oral cancer. Globally the percentage of oral cancer is not more than 5-6% out of all cancer, incidence in Bangladesh it is as high as 30%.The problem of oral cancer in Bangladeshis a particularly acute because of Poverty, illiteracy and other disease associated with poor nutrition and lack of basic knowledge of people about health 1 matters 30. Tobacco chewing is an important cause of oral cancer and account for about 13 percent of all cancer in Bangladesh. About 50% of all cancer can be prevented in Bangladesh if smoking and chewing tobacco is stopped**.** This study was taken on hand to find out and measured the strength of knowledge of oral cancer patient (people) about possible factors of oral cancer. The findings of this study will be helpful to provide some baseline information to carry out future in depth study about some specific factors related with oral cancer in the context of Bangladesh[17-31]**.**

Age and oral cancer: The prevalence of oral cancer increases with age, but the pattern differs in different countries with different risk factors. In the west, 98% of cases are over 40 years of age. The incidence rises from an average at all ages of 2-3 per 100000 per annum 100 cases per 100000 per annum in these aged over 75 years. In high prevalence areas in developing world, oral cancer is relatively common in younger people[32].

Gender and oral cancer: In industrialized countries, men are affected almost twice as often as women, probably because of heavier indulgence in risk habits such as tobacco and alcohol consumption (for intra-oral cancer) plus exposure to sunlight (for lip cancer).The incidence tongue and other intra –oral cancer for women is however, greater than or equal to that for men in high prevalence areas such as India, where chewing and smoking (sometime reverse smoking) are also common among women. In the study of Dhaka dental college it was found that among 110 patients 60 were male and 50 were female.

Tobacco and oral cancer: There is undisputed evidence that tobacco, particularly when chewed or dipped and also when smoked, is the major source of intra-oral carcinogens on

a global scale. The use of tobacco is by far the most important available cause of oral cancer. Smoking and alcohol account for 75% of oral cancers in the United States and the world. In South and South East Asian countries chewing and smoking of tobacco is responsible for about a third of the cancers. Various types of carcinogenic chemical substances such as nicotine, tar, carbon monoxide, nitrous amine etc. are present in the smoked tobacco. Users of tobacco in quid's particularly if the person also smokes, have a 10-20 times greater risk of developing oral cancer than those who neither chew nor smoke.

Betel leaf (pan) use and oral cancer: The usage of the constituents of pan varies between countries, communities and individuals but the major ingredients remain constant. In most betel quid consists of a mixture of areca nut, slaked lime, catechu and several condiments according to taste, wrapped in a betel leaf. The major component of betel quid was reviewed by the international agency for research of cancer (IARC) in 1985.

Diet and oral cancer: Mounting scientific evidences from epidemiological, experimental, clinical/metabolic and intervention studies in the past two decades provide valuable information which positively suggest role of diet in human cancers. These studies indicate an increased intake of fat and red meat associated with a higher risk of colorectal cancer and probably risk of several cancers including lung, oral, pancreas, larynx, esophagus, bladder, stomach and cervical cancers[33]. The results of various epidemiological studies carried out in the country on cancer and diet have highlighted that intake of vegetables or fruits was significantly low in cases of oral/or pharyngeal and esophageal cancer risk was found to be higher for low intakes of beta-carotene, thinamine, riboflavin, folic acid, iron, magnesium and copper. Other micro-nutritional deficiencies such as vitamins A and E, folate, zinc and selenium were also documented[34]. Dietary deficiencies particularly of vitamin A and related carotenoids, vitamin C, Vitamin E, Iron, Selenium, Folate and other trace elements have been linked to increase risk of oral cancer. Many studies have found that oral cancer patients have a history of low fruit and vegetables intake. Intervention studies where diets have been supplemented have shown some beneficial effect on pre-malignant conditions and reducing the risk of a second oral cancer [35].

Oral hygiene and oral cancer: Good oral hygiene is important, not only for looks, but for general health as well. Poor oral hygiene can lead to a variety of dental and medical problems such as gum disease, infection, bone loss, heart disease, and more. Regular checkups and cleaning can prevent these problems as well as provide you with good oral hygiene[36]. Gum disease is an infection in the gum tissues bone that keep teeth in place and is one of the leading causes of adult tooth loss. If diagnosed early, it can be treated and reversed. If treatment is not received, a more serious and advanced stage of gum disease may follow. Regular dental cleanings and checkups, flossing daily and brushing twice a day are key factors in preventing gum disease[37]**.** In a study among the rural population of Bangladesh it was found that gum bleeding (60%) was common problem. This result is the indicator of ineffective plaque control.

Materials and Methods

This was a cross-sectional type of descriptive study done among the oral cancer patient attending at National Institute of cancer Research and Hospital. A total number of 75 patients were interviewed to assess the level of knowledge about factors of oral cancer.

Study Design: This study was cross-sectional type of descriptive study. Descriptive type because the knowledge of oral cancer patients about possible factors of oral cancer are presented in this study. This study was done in one point of lime, so it was cross-sectional study.

Study Period: The total period of the study July 2013 to December 2013. Date were collected from August 2013 to September 2013. Data processing and analysis were done on November 2013. Report writing was done from November 2013 to December 2013.

Study Population: Histopathologically diagnosed oral cancer patients those who was National institute of cancer Research and Hospital, Mohakhali, for treatment were selected as study population of the study.

Study Place: National institute of cancer Research and Hospital (NICRH), Mohakhali, Dhaka was selected as the study place. The Hospital was selected purposively as a large number of cancer patients were attended in this Hospital from all over the country. Referred cases from other Medical College Hospitals and from clinics also attended in this Hospital.

Sample Size: Sample size for the study was 75. Respondents were selected purposively who was willing to give interview. The scheduled period of data collection was 14 days, so within this time period, 75 sample size is suitable and manageable in this study.

Result

Data Collection Instrument: A pre-tested questionnaire was used to collect data. The questionnaire was used to collect data. The questionnaire was developed in English and Bangla. Pre-testing was done of separate five oral cancer patients and NICRH, Mohakhali, Dhaka for checking the wording, sequence and timing of the interview, on the basis of pre-test timing of the interview. On the basis of pre-testing result final questionnaire was prepared.

Data Collection Method: Data was collected by face-to-face interview of the respondents through a structured questionnaire. The researcher during interview filled- up the questionnaire form.

Data Processing: At the end of each day of data collection period individual questionnaire was checked to see whether the questionnaire is filled completely and consistently. Data were entered in the computer after preparing a format according to the coding mentioned in the questionnaire, through cleaning and editing of the data were performed before data analysis.

Data Analysis: Data were analyzed manually by statistical simple procedure. Important table, frequency, percentage and diagram were prepared on the basis of the findings relevant to the study.

Table 1: Distribution of Oral Cancer Patient by age group at detection.

Age Group (Years)	Frequency	Percentage
≤ 30	4	5.33
31-40	13	17.34
41-50	42	56
51-60	12	16
≥61	4	5.33
Total	75	100

Mean = 45.50, Median= 45

The above table shows the mean age of respondents were 45.50 years and the median were 45 years.

Table 2: Distribution of Oral Cancer Patient by gender

Sex	Frequency	Percentage
Male	46	61.33
Female	29	38.67
Total	75	100

The above table shows among 75 oral cancer patients, 46 (61.33%) were male 29 (38.67%) were female.

Table 3: Distribution of Oral Cancer Patient by Residential Area.

Residential Area	Frequency	Percentage
Urban	8	10.67
Rural	67	89.33
Total	75	100

The majority of oral cancer patient came from rural area that was 67 in numbers (89.33) and 8 in number (10.67) came from urban area for treatment purpose in the NICRH.

Table 4: Distribution of Oral Cancer Patient by Level of Education.

Education	Frequency	Percentage
Illiterate	13	17.33
Non formal education	18	24.00
Class VI-X	13	17.33
SSC	8	10.67
HSC	4	5.33
Graduate	2	2.67
Total	75	100

The Education level of the majority of oral cancer patient were below class X and the number were 61 (81.33%), SSC 8 in number, HSC 4 in number, Graduate 2 in number.

Table 5: distribution of Oral Cancer Patient by Family Member.

Family Member	Frequency	Percentage
≤4	07	9.33
5-8	38	50.67
≤8	30	40
Total	75	100

Majority of the respondents had family members from five to eight in number, (50.67). Above eight were 40% and below four were 9.33%.

Table 6: Knowledge on Common Age of Oral Cancer Occurrence.

Age Group	Yes	Percentage	No	Percentage
20-59	43	57.33	32	42.67
60+				

It was found that 32 respondent (42.67%) did not know about the age. 25 respondent (33.33%) mentioned the old age. 18 respondent (24%) mentioned the young adult age.

Table 7: Distribution of Oral Cancer Patient by Knowledge about Possible Factors of Oral Cancer.

Possible factors of Oral Cancer	Frequency	Percentage (not mutually exclusive)
Tobacco Smoking	35	46.67
Betel leaf (Pan), nut, tobacco leaf, lime	35	46.67
Chewable Tobacco	03	4.00
Gul	02	2.67
Per Cancer lesson and condition	06	8.00
Bad oral hygiene	06	8.00
Sharp teeth	05	6.67
Less immunity	04	5.33
Exposure to ultraviolet radiation	05	6.67
Old age with suffering from chronic disuses	18	24.00
Recurrent oral infection	20	26.67
Total	139	

Table 8: Distribution of Oral Cancer Patient by Knowledge about Effect Smoking Habit.

Smoking habit	Frequency	Percentage
Yes	50	66.67
No	25	33.33
Total	75	100

Among the 75 respondent 50 respondent (66.67%) knew about effect of smoking habit and 25 respondent (33.33%) did not know about the effect of smoking habit.

Table 9: Distribution of Oral Cancer by Inadequate Intake of Fruits and Vegetables.

Deficiency of fruits & vegetables	Frequency	Percentage
Agreed	02	2.67
Not Agreed	09	12
Sometimes Agreed	04	5.33
Not know	60	80
Total	75	100

When the respondents were asked about the effects of deficiency of fruits and vegetables on oral cancer, the majority of the respondent that was 60 respondent (80%) were not aware about only 2 respondent (2.67%) agreed. Nine (9) respondent (12%) were not agreed and only 4 respondent (5.33%) sometimes agreed.

Table 10: Distribution of Oral Cancer Patient by Effect of Excess Red Meat on Oral Cancer.

Excess red meat	frequency	Percentage
Agreed	00	00
Not Agreed	10	13.33
Sometimes agreed	0	00
Not Know	65	86.67
Total	75	100

The Table 11 shows that the knowledge of oral cancer patient about effects of excess red meat on oral cancer was very much poor. Here 65 respondents (86.67%) were not aware about it, 10 respondents (13.33%) were not agreed with it. No one agreed with its effect.

Table 11: Distribution of Oral Cancer Patient by Effect of Unsafe Food

Foods with preservatives and insecticide/ pesticide.	Frequency	Percentage
Agreed	15	20
Not agreed	10	13.33
Sometimes Agreed	10	13.33
Not know	40	53.34
Total	75	100

The knowledge of oral cancer patient about effects of foods mixed up with chemical, it was found that 40 respondent (53.34%) were not aware about it. Fifteen respondents (20%) agreed about it. Ten respondents (13.33%) sometimes agreed. Ten respondents (13.33%) were not agreed with it.

Discussion

This study was carried out among histopathologically diagnosed oral cancer patient attending NICRH. The study was conducted with a view to find out the level of knowledge about oral cancer. During July and December 2013, 75 oral cancer patients were interviewed attending wards and OPD in NICRH. This study was a cross- sectional

type of descriptive study. In this present study, the highest number of patient was in the age group of 41-50 years although a considerable number of patients were noted in the age groups of 31-40 years and 51-60 years. Wahi reported a clear-cut tendency of increased frequency of oral cancer with advanced age. The decrease number of patient in this study after 60 is almost certainly due to age structure of our population. In the western countries the peak occurrence in the sixth to seventh decade, whereas in Asia it is generally in the 5^{th} and 6^{th}decade· In this present study 46 (61.33%)were male patient and 29 (38.67%) were female patient. In a study of Dhaka Dental College it was found that among 110 patients 60 were male and 50 were female. In another study in India around 58% were male and 42% were female. Among the respondents, 67 (89.33%) were came from Rural and 8 (10.67%) From urban. As a Muslim country, the maximum respondents were Muslim, they comprised about 93.33% of the total. The rest of them were the followers of Hindu 5.33%, Buddhism 1.34%. In this present study 38.67% of respondents were Housewife, were Businessman, 14.67% were farmer and physical labor, 9.33% unemployed, student, professional and others were nil. In low group (10000 to 20000) the oral cancer is more common which is 40% in this study. About 81.33% of the total respondents were below class X. It was found that most of the respondents 92% were married, around 8% were unmarried. It was found that 60 (80%) had no knowledge about it, only 5 (6.67%) mentioned life style (habit) and 5 (6.67%) mentioned other causes. It was found among 75 (100%), 45(60%) had knowledge 30 (40%) had no knowledge at all about it. 56.67% were identified smoking tobacco-cigarettes, bidis, 46.67% were identified Betel leaf (pan), nut, tobacco leaf, lime, 4% were identified alcohol, 8% were identified pre cancer lesion and condition and poor oral hygiene, 6.67% identified sharp teeth and exposure to ultra violet radiation, 5.33% identified less immunity, 24% identified old age with other factors, 26.67% identified chronic infection, social deprived, positive family history and other factors no one can identified. In regards to knowledge about effect of smoking habit, 66.67% respondent had knowledge and 33.33% had no knowledge about it. The knowledge about effect of betel leaf (pan) and associated ingredients used, 80% had no knowledge about it, 20% were mentioned only tobacco leaf, Betel nut, Jorda, lime and others no one can mentioned. In this present study, 66.67% correct answer found regarding effects of smoking, 60% correct answer found regarding effects of chronic oral ulcer and effects of chronic disease, 33.33% correct answer found regarding usual occurrence age of oral cancer, effects of poor oral hygiene and effects of foods mixed up with harmful chemical 20% correct answer found regarding causes of oral cancer, 8% correct answer found regarding less intake of fruits and vegetables, 6.67% correct answer found regarding betel leaf (pan) and associated ingredients used, 1.33% correct answer regarding alcohol consumption. No one can gave correct answer regarding excess intake of red meat, positive family history and other possible factors of oral cancer[38-41].

Conclusion

The cross-sectional type of descriptive study was carried out among the oral cancer patients to assess the level of knowledge on oral cancer. From the study findings it was found that the oral cancer patients had poor knowledge regarding oral cancer as the

incidence of oral cancer continued to risen in the Bangladesh, the role of patients in prevention and detection of oral cancer assumed ever more importance. Respondent were identified fewer oral cancer risk factors. In particular alcohol consumption, pre cancer lesion and conditions, poor oral hygiene, malnutrition was identified poorly. Respondent were left less well informed regarding oral cancer. This study showed persistent of a poor level of knowledge regarding oral cancer and the need to improve the knowledge about oral cancer for prevention and early detection. This study highlighted the need for improved health education regarding oral cancer. In the perspective of the present study findings, public health initiative should be taken to prevent smoking, alcohol consumption and betel leaf (pan) chewing habit. The public should be aware about the carcinogenic effect of alcohol consumption, smoking and betel leaf (pan) chewing habit. They should have knowledge and practices of maintaining their oral hygiene properly and further depth study should take on hand regarding knowledge of oral cancer.

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