

Knowledge of oral cancer among the community served during the stomatological lesion prevention campaign conducted at Universidad Católica de Santiago de Guayaquil – Ecuador

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ABSTRACT

The aim of this study was to evaluate the level of knowledge on oral cancer and level of preventive care among the population. A descriptive cross-sectional study was performed to evaluate 408 individuals through a face-to-face survey at Universidad Católica de Santiago de Guayaquil during the 2016 academic year. Sixty-one percent (61%) of respondents said they knew of the existence of oral cancer, but 56.1% did not know that 'white spots' in the oral cavity could become malignant, and 50.7%

did not know that 'lumps' could be oral cancer. Moreover, 81.8% said they had never undergone screening for oral cancer. This shows the continued need to implement preventive measures such as educating patients in self-examination of the oral cavity, intensifying prevention campaigns and raising awareness among dentists regarding their responsibility in early detection.

Key words: Mouth neoplasms, primary prevention, oral health, public health.

Conocimiento sobre el cáncer bucal en la comunidad atendida en la campaña de prevención contra lesiones estomatológicas realizada en la Universidad Católica de Santiago de Guayaquil- Ecuador

RESUMEN

Este estudio tuvo como objetivo evaluar el nivel de conocimiento de la población sobre el cáncer bucal y evaluar el nivel de atención preventiva. Se realizó un estudio descriptivo y de corte transversal que evaluó 408 individuos a través de una encuesta de forma personal. El estudio se realizó en la Universidad Católica de Santiago de Guayaquil durante el periodo lectivo 2016. El 61% de los encuestados indicaron conocer la existencia del cáncer bucal, sin embargo 56,1% ignoraban que las "manchas blancas" en cavidad bucal podrían malignizar; 50,7% desconocían que los "bultos" podrían ser

un cáncer bucal. Por otra parte, el 81,8% respondieron nunca haber sido sometidos a un examen de prevención contra el cáncer bucal. Esto nos muestra que es necesario continuar estableciendo medidas preventivas tales como educar a los pacientes en la realización de un autoexamen de la cavidad bucal, intensificar las campañas de prevención y concientizar a los odontólogos en cuanto a su responsabilidad en la detección precoz.

Palabras clave: cáncer bucal, prevención primaria, salud bucal, salud pública.

INTRODUCTION

Oral cancer accounts for 2% of all cancers and almost 30% of head and neck tumors. According to the World Health Organization (WHO) reports, there are 575,000 new cases and 200,000 deaths every year¹⁻³. Squamous-cell carcinoma (SCC) accounts for 90% of all oral cancers. The remaining 10% consists of tumors of salivary glands, odontogenic tumors, melanomas, sarcomas, lymphomas and

metastatic lesions⁴⁻⁶. SCC has one of the lowest 5-year survival rates. It is a multifactorial disease that mainly affects males in their forties and sixties⁷. The best known risk factors are smoking, alcoholism, oral sepsis, trauma caused by teeth or prosthesis, genetic factors, and viral and fungal infections⁷⁻⁹. Excessive exposure to solar radiation is also a risk factor for lip cancer. Easy access to the oral cavity provides a major advantage for prevention and early

detection of any disorder². General dentists and clinical stomatology specialists should include health education in their clinical practice to raise awareness in the population regarding self-responsibility and cooperation in the detection of early signs of disease. Similarly, it is important to teach patients to observe and palpate the oral mucosa, and have regular stomatological check-ups, which should include hard and soft tissues¹⁰⁻¹². The aim of this study was to evaluate the level of knowledge among the population regarding oral cancer and to ascertain whether they had ever undergone a stomatological inspection of soft tissues by a health professional as a preventive measure against oral cancer.

MATERIALS AND METHODS

A descriptive cross-sectional study was conducted using a face-to-face survey. The study was conducted by the Department of Stomatological Pathology of the Dentistry Course at Universidad Católica de Santiago de Guayaquil during the 2016 academic year.

Six hundred and forty-three (643) persons attended a campaign for prevention of stomatological lesions which consisted of educational talks about different oral diseases. Of these persons, 408 (63.4%) accepted to take part in the study. This sample comprised 249 (61%) females and 159 (39%) males. Average age was 28 years (range: 12-80 years). All participants were asked to complete a questionnaire consisting of 10 closed objectives, dichotomous or multiple choice questions and received a free oral clinical examination. Questionnaire content was validated by review of the literature^{3,13-15} and by the opinion of a specialist in Oral Pathology. Data were collected on age, sex, schooling and whether or not respondents belonged to the university community.

Questions were grouped into two categories: a) questions to evaluate level of knowledge regarding oral cancer and its risk factors, and b) to evaluate whether the respondent had ever undergone a stomatological examination of soft tissues as a preventive measure for oral cancer.

The study followed the ethical principles set forth in the 1964 Declaration of Helsinki for medical research on human beings. The confidentiality of the information recorded through the surveys was maintained and participant names were not identified at any time during the study.

RESULTS

One hundred and seventy-six persons (176; 43.1%) reported that someone in their family had had some form of cancer, while 232 (56.8%) reported no history of cancer in their family circle (Fig. 1).

In response to questions about knowledge of oral cancer, more than half the respondents (249; 61%) said they knew of the existence of cancer of the oral cavity, while 159 (39%) did not (Fig. 2).

With regard to clinical signs related to oral cancer and which can be detected by the patient him/herself, more than one fourth of the population (159; 39%) did not know that lesions in the oral cavity that do not heal may be malignant.

Specific warning signs in the oral cavity were evaluated through the following questions:

- 1) Did you know that white spots in the oral cavity may become malignant? Over half the respondents (229; 56.1%) did not know.
- 2) Did you know that thickening or lumps in the oral cavity might be cancer? Two hundred and seven (207; 50.7%) participants did not know that it could be a sign requiring clinical attention (Fig. 3).

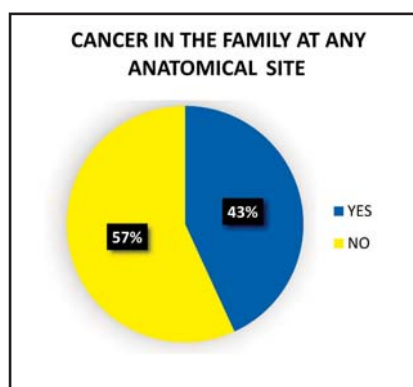


Fig. 1: Family history of cancer.

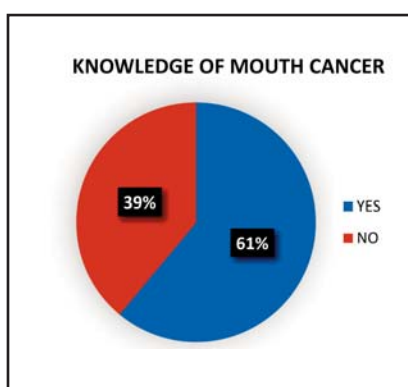


Fig. 2: Oral cancer.

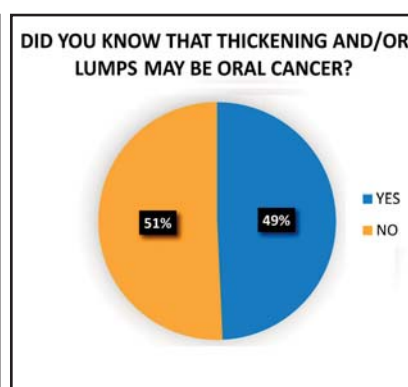


Fig. 3: Clinical warning sign in oral cavity.

To analyze oral cancer risk factors, the first question asked about the more well-known ones such as alcohol and tobacco. Nearly three quarters of the participants (288; 70.5%) knew that these were risk factors (Fig. 4). However, despite this knowledge, 349 (85.5%) persons smoked tobacco and 161 (39.4%) drank at least 1 glass a week of some kind of alcoholic beverage.

We also asked about other risk factors for the oral cavity which are very common but less widely known, such as frequent intake of excessively hot beverages and trauma caused by prosthesis and teeth with fractures or sharp edges, to which 281 (68.87%) respondents answered they did not know (Fig. 5).

Regarding preventive examinations, more than three quarters of the respondents (334; 81.8%) said they had never undergone a screening for oral cancer, 42 (10.2%) said they had been examined by their physician and the remaining 32 (7.8%) mentioned that they had been examined by their dentist (Fig. 6).

DISCUSSION

Cancer continues to be a public health issue because different kinds of malignant neoplasms cause over six million deaths a year in the world. It is estimated that about twenty million persons a year will present some type of cancer¹⁶, which has a prevalence of 2 to 3% of the world population. These data are relevant, not only regarding mortality and morbidity, but also for the evaluation of risk factors. Our study found that 43.1% of the respondents had a family member with a history of cancer.

Cancer prevention efforts have focused on the most frequent types of cancer: breast, cervical and lung, while campaigns for the prevention of oral cancer are less frequent.

Despite the great increase in knowledge of risk factors and the biology of oral cancer, its incidence continues to rise,¹⁴ indicating the importance of prevention campaigns. The aim of this study was to evaluate the knowledge of oral cancer in a population of Guayaquil, Ecuador. The results can be compared with those from other similar studies. Our assessment of people's knowledge of oral cancer showed that only 61% of the participants knew of the existence of cancer in the oral cavity. The literature reports percentages of knowledge of oral cancer ranging from 20 to 65%^{3,17}. This broad range may be due to differences in educational levels. In our study, 62.2% of the respondents belonged to the university community, i.e., they had an academic degree. Our results agree with Pakfetrat et al.¹⁴, Devadiga et al.¹³, Al-Maweri et al.¹⁸ and Al-Maweri et al.¹⁹, who also found a significant correlation between educational level and knowledge of oral cancer. However, a study by Razavi et al.²⁰ did not find this correlation. Analysis of knowledge of risk factors associated to oral cancer showed that 70.5% of the respondents identified tobacco and alcohol as the main risk factors. This is in agreement with the study on knowledge and attitudes related to cancer by Berlanga et al.²¹, in which 93% of the sample mentioned tobacco as the main risk factor. Similarly, the study on women by Cabezas et al.²² found that 91% of the sample acknowledged tobacco and alcohol as risk factors. However, a more recent study by Babiker et al.²³ reports that only 49% of the sample had knowledge of the risk factors for oral cancer.

It is worth noting that although in our study 70.5% of the respondents identified tobacco and alcohol as risk factors for oral cancer, almost the entire

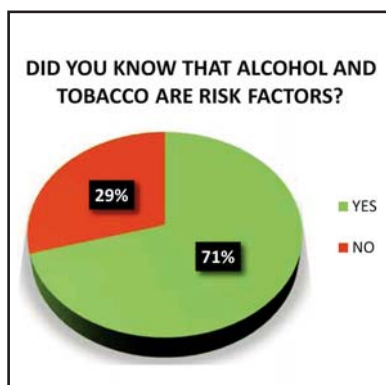


Fig. 4: Risk factors: toxic habits.

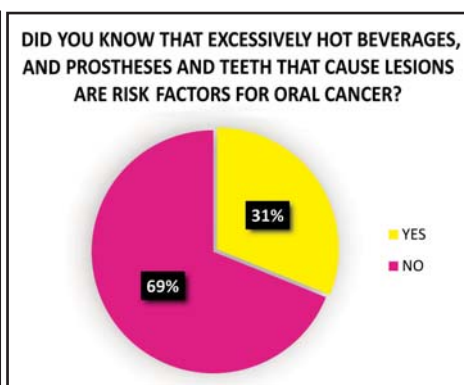


Fig. 5: Local risk factors in oral cavity.

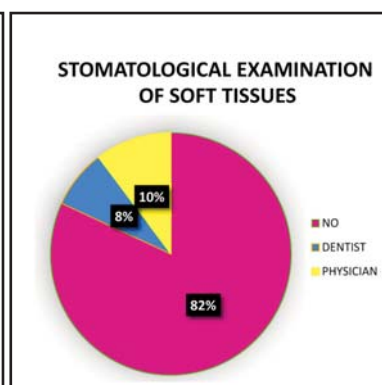


Fig. 6: Screening as a preventive measure for oral cancer.

sample (349; 85.5%) smoked tobacco and 161 persons (39.4%) were alcohol drinkers, although intake was not analyzed.

A study by Doncel et al.³ reports that only 34.8% of the patients recognized smoking as a risk factor for oral cancer, a much lower percentage than the one reported in our study. Several studies have reported a generally low level of knowledge regarding risk factors for oral cancer among the population^{13,17-20,23-27}, and this knowledge is even lower regarding less-known risk factors. One example of this is the study by Al Dubai et al.²⁵ reporting a lower percentage of knowledge regarding spicy or hot foods as risk factors for oral cancer than regarding other factors. Our study found that 68.87% people did not know that certain chronic irritants such as excessively hot beverages, the use of prosthesis that cause trauma, and fractured or sharp-edged teeth were also factors associated to oral cancer. This is in agreement with Doncel et al.³, who report that 62.6% of respondents did not identify these as risk factors.

Identification of clinical signs and symptoms of oral cancer was significantly higher in our study than in other reports in the literature. Studies such as the one by Pakfetrat et al.¹⁴ report that 90% of patients does not know how to identify initial signs and symptoms of oral cancer. Our study shows slightly more encouraging results (29.5%), although more than half the sample (61%) ignores the form of presentation of early signs of oral cancer. These results show the need to continue implementing preventive measures such as educating the patients on how to perform a self-examination of the oral cavity.

Finally, when analyzing the prevention strategies against oral cancer received by the respondents, we found that 81% had never undergone a screening, a percentage somewhat better than others reported in the literature. For example, Babiker et al.²³ and Monteiro et al.²⁶ reported that 93.2% and 98.3% of the sample, respectively, had never undergone screening for oral cancer. These results may be explained by the fact that most of the participants in our study were young (=28 years), therefore the group was not representative of the population at risk for oral cancer. To eliminate this bias in our study, we created a data subset considering only subjects older than 40 years (n=74), finding that

79.35% had never undergone screening for oral cancer. From those who reported having had an oral cancer screening, 10.2% had been examined by their physician and 7.8% by their dentist.

The fact that three quarters of the participants reported never having undergone a clinical-stomatological examination of soft tissues as a preventive measure against oral cancer is alarming, considering that the oral cavity is one of the sites that can be examined directly and is rich in early signs and symptoms. Moreover, our study found that physicians (10.2%) perform this inspection most frequently, reflecting a deficiency in the role of dentists in preventing oral cancer.

In view of these results, it is needed that dentists, as healthcare providers who have continuous contact with the oral cavity, include a clinical examination of soft tissues in their practice. This examination would enable early detection of any change in the oral mucosa by simple observation³, thereby enabling prevention of its progression to cancer, and, when relevant, reference to the specialist.

This study was performed due to the need to find out about perception and knowledge in the community with relation to oral cancer. Among the strengths of this study we can highlight that 1) a significant sample size was used (n=408), 2) data were extracted directly from participants by face-to-face surveys conducted by the researchers and 3) as far as we know, to date, no other study in Ecuador has evaluated these variables, whereby this study is relevant to public health.

Limitations to this study are: 1) results were self-reported by participants, which may introduce bias, and 2) most of the sample belonged to the university community, representing a medium to high educational level which is not representative of the population in Ecuador, where illiteracy prevalence is 6.8%²⁸. Results therefore cannot be generalized to the whole population. Nevertheless, they clearly show that primary prevention strategies are needed such as education regarding risk factors and teaching people to perform self-examination of the oral cavity to detect suspicious lesions and to visit the stomatologist and/or physician in time. Furthermore, a greater awareness of the general dentists is needed about their responsibility in early detection and timely referral to specialists.

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