Oral lesions diagnosed during an oral cancer prevention campaign in Fernandópolis, Brazil, 2018

Lesões orais durante campanha de prevenção do câncer bucal em Fernandópolis, Brasil, 2018

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ABSTRACT
Introduction: As one of the most common human malignancies, oral and oropharyngeal cancer represents a challenge in global public health. Objective: To describe the lesions diagnosed during an oral cancer prevention campaign carried out in Fernandópolis, Brazil, in 2018. Material and methods: Patients treated at the basic health units in Fernandópolis on the day of the campaign were examined by a previously trained dentist who looked for suggestive oral lesions with malignant potential. Patients with suspicious lesions were scheduled for re-evaluation by an oral disease specialist to obtain the correct diagnosis of the lesion. Results: 956 patients were examined during the campaign. Among them, 75 (7.84%) were referred, however, 66 (88%) attended for reassessment and proper diagnostic management by the dentist specializing in oral diseases. Were diagnosed 59 benign oral lesions and 23 variations from normality, no patient was diagnosed with malignant oral lesion. Conclusion: The absence of a diagnosis of oral cancer during the campaign suggests the need to reassess its methodology, aiming to reach a target audience with a higher risk of carrying oral lesions that lead to malignant manifestations. It is also noteworthy that health professionals need better training to clinically recognize lesions suggestive of oral cancer.

Keywords: Mouth Neoplasms, Health Promotion, Primary Prevention.

RESUMO
Introdução: Como uma das neoplasias malignas mais comuns em humanos, o câncer de boca e orofaringe representa um desafio para a saúde pública global. Objetivo: Descrever as lesões diagnosticadas durante campanha de prevenção do câncer bucal realizada em Fernandópolis-SP, em 2018. Material e métodos: Pacientes atendidos nas unidades básicas de saúde de Fernandópolis no dia da campanha foram examinados por dentista previamente treinado, procuraram lesões orais sugestivas com potencial maligno. Pacientes com lesões suspeitas foram agendados para reavaliação por um especialista em doenças bucais para obtenção do diagnóstico correto da lesão. Resultados: 956 pacientes foram examinados durante a campanha. Destes, 75 (7,84%) foram encaminhados, porém 66 (88%) compareceram para reavaliação e adequado manejo diagnóstico pelo dentista especialista em doenças bucais. Foram diagnosticadas 59 lesões orais benignas e 23 variações da normalidade, nenhum paciente foi diagnosticado com lesão oral maligna. Conclusão: A ausência de diagnóstico de câncer bucal durante a campanha sugere a necessidade de reavaliação de sua metodologia, visando atingir um público-alvo com maior risco de desenvolver lesões bucais que levem a manifestações malignas. Ressalta-se também que os profissionais de saúde precisam de melhor treinamento para reconhecer clínicamente lesões sugestivas de câncer bucal.
Palavras-chave: Neoplasias Bucais, Promoção de saúde, Prevenção primária.

1 INTRODUCTION

As one of the most common human malignancies, oral and oropharyngeal cancer represents a global public health challenge, with low cure and 5-year survival rates. In the year of 2020, 11,180 new cases of oral cancer were estimated for males, and 4,010 were estimated for females in Brazil. Squamous cell carcinoma (SCC), which develops from cells in the lining epithelium, accounts for about 90% of all oral malignancies.

The carcinogenesis of the oral mucosa is directly associated with harmful habits, such as smoking and excessive alcohol consumption, and the risk is 30 times greater for individuals who smoke and drink. In addition, among the risk factors are unprotected sun exposure, excess body fat, human papilloma virus (HPV) infection and occupational exposure.

Clinically, oral squamous cell carcinoma (OSCC) can be recognized as a painless ulcer lasting more than 2 weeks. However, exophytic lesions or, in less advanced cases, leukoplasic or erythroplastic plaques may develop. It is also known that in some cases, OSCC can develop from potentially malignant oral lesions, which, according to the World Health Organization (WHO), are lesions with an increased risk of malignant evolution when compared to ordinary mucosa.

Among these lesions, oral leukoplakia stands out as the most prevalent, although oral erythroplasia lesions show a greater potential for malignancy. Oral lichen planus and actinic cheilitis should also be mentioned, due to chronic sun exposure, which is a predisposing factor to lip carcinogenesis.

Early diagnosis of OSCC is mandatory to improve healing of affected patients and chances of long-term survival, in addition to reducing morbidity associated with the disease, treatment and costs. Unfortunately, in most cases, OSCC is diagnosed in advanced stages, a factor that explains the high mortality rates associated with oral cancer. The diagnosis of OSCC is challenging due, basically, to two factors: affected patients take a long time to seek professional evaluation, generally, it takes 4 to 8 months for any change in the oral mucosa. And dentists, who even maintain close contact with the oral cavity, are not always qualified to perform the recognition of lesions with potential for malignancy.

Aiming to raise awareness among the general population about oral cancer, the public health service and the Faculty of Dentistry of the Universidade Brasil, in
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Fernandópolis (São Paulo, Brazil), carried out an oral cancer prevention campaign, where the patients were clinically examined by public health dental surgeons to search for clinically suggestive signs of oral cancer, instruct patients on the importance of early diagnosis, self-examination, and preventive attitudes toward malignancy. During this campaign, several oral lesions were diagnosed among these patients; therefore, the purpose of this article is to present rates of injuries diagnosed during this campaign.

2 MATERIALS AND METHODS

This study is characterized as a cross-sectional study, which aimed to evaluate oral lesions diagnosed during the oral cancer prevention campaign, carried out in May 2018, in Fernandópolis, São Paulo, Brazil. The recruitment of patients was carried out en masse, through means of communication (radio, newspaper, television and internet), folders and banners.

3 SAMPLE

Patients who attended Basic Health Units in Fernandópolis, São Paulo, Brazil, during the oral cancer prevention campaign in 2018.

4 EXAMINERS’ CALIBRATION

Dental surgeons who performed clinical activities for the public health service in Fernandópolis were previously trained by a specialist in oral cancer diagnosis, receiving instructions regarding diagnosis, preventive procedures and the importance of early diagnosis of potentially malignant diseases. They were also encouraged to instruct patients to perform the oral self-examination properly.

5 INITIAL EXAMINATION

The initial examination of patients consisted of a free oroscopy examination performed by dentists who participated in the calibration. This exam aimed to detect lesions in the oral mucosa and to instruct individuals in relation to risk factors for oral cancer occurrence and the importance of self-examination for early detection of oral cancer. Visual examination had its validity confirmed by a study carried out by Alves et al. (2013). This technique showed noble value for oral cancer preventive programs and public health campaigns.
6 FINAL DIAGNOSIS

Patients who presented malignancy or suspicious oral lesions on the oral mucosa during the prevention campaign were referred to the Dental Specialties Center of Fernandópolis, where they were re-evaluated by the professional responsible for the oral pathology service. Therefore, the correct diagnosis was obtained for each patient.

7 RESULTS

During the oral cancer prevention campaign, carried out in May 2018, in Fernandópolis, São Paulo, Brazil, 956 patients were fully examined, evaluated by trained dentists who were looking for potentially malignant lesions. Among them, 75 (7.84%) were referred, however, 66 (88%) attended for reassessment and proper diagnostic management by the dentist specializing in oral diseases. Were diagnosed 59 benign oral lesions and 23 variations from normality, no patient was diagnosed with malignant oral lesion.

Table 1 shows the benign oral lesions that had the highest frequency of diagnosis during the oral cancer campaign. Among the total number of benign oral lesions diagnosed (n = 59), the most prevalent was leukoplakia, followed by inflammatory fibrous hyperplasia, candidiasis and recurrent aphthous ulcer.

Table 1. Oral benign lesions diagnosis, oral cancer prevention campaign, Fernandópolis, São Paulo, Brazil, 2018.

<table>
<thead>
<tr>
<th>BENIGN LESIONS</th>
<th>N = 59</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leukoplakia</td>
<td>10</td>
<td>16.94</td>
</tr>
<tr>
<td>Fibrous inflammatory hyperplasia</td>
<td>9</td>
<td>15.25</td>
</tr>
<tr>
<td>Oral candidiasis</td>
<td>9</td>
<td>15.25</td>
</tr>
<tr>
<td>Recurrent aphthous ulcer</td>
<td>9</td>
<td>15.25</td>
</tr>
<tr>
<td>Fibroma</td>
<td>7</td>
<td>11.86</td>
</tr>
<tr>
<td>Hemangioma</td>
<td>3</td>
<td>5.08</td>
</tr>
<tr>
<td>Actinic cheilitis</td>
<td>3</td>
<td>5.08</td>
</tr>
<tr>
<td>Lipoma</td>
<td>2</td>
<td>3.38</td>
</tr>
<tr>
<td>Granuloma</td>
<td>2</td>
<td>3.38</td>
</tr>
<tr>
<td>Nevos</td>
<td>1</td>
<td>1.69</td>
</tr>
<tr>
<td>Lichen planus</td>
<td>1</td>
<td>1.69</td>
</tr>
<tr>
<td>Erythroleukoplasia</td>
<td>1</td>
<td>1.69</td>
</tr>
<tr>
<td>Mucocele</td>
<td>1</td>
<td>1.69</td>
</tr>
<tr>
<td>Nibbled mucosa</td>
<td>1</td>
<td>1.69</td>
</tr>
</tbody>
</table>
Table 2 shows the variations from normality diagnosed during an oral cancer prevention campaign (n = 23), lingual varicosities stood out as the most prevalent, as well as cleft tongue.

Table 2. Oral variations from normality diagnosis, oral cancer prevention campaign, Fernandópolis, São Paulo, Brazil, 2018.

<table>
<thead>
<tr>
<th>NORMALITY VARIATIONS</th>
<th>N = 23</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tongue varicosities</td>
<td>7</td>
<td>30.43</td>
</tr>
<tr>
<td>Fissured tongue</td>
<td>6</td>
<td>26.08</td>
</tr>
<tr>
<td>Tórus (palatino or mandibular)</td>
<td>3</td>
<td>13.04</td>
</tr>
<tr>
<td>Fordyce granules</td>
<td>3</td>
<td>13.04</td>
</tr>
<tr>
<td>Geographic tongue</td>
<td>2</td>
<td>8.69</td>
</tr>
<tr>
<td>Racial melanin pigmentation</td>
<td>2</td>
<td>8.69</td>
</tr>
</tbody>
</table>

8 DISCUSSION

Early diagnosis of oral cancer is mandatory to improve healing of affected patients and chances of long-term survival, in addition to reducing morbidity and treatment costs.\(^\text{11}\) However, it is more commonly that cases of oral cancer are diagnosed at an advanced stage, therefore, it is extremely necessary to raise awareness about early diagnosis and prevention of oral cancer.\(^\text{17}\)

Agrawal et al. (2012)\(^\text{16}\) reported an unsatisfactory level of awareness among the public about oral cancer, commenting on the need for greater dissemination of information on this subject and its associated risk factors. Our results, as well as these studies, suggest deficiencies in the general population in relation to oral cancer, since only 66 patients attended for reassessment at the Dental Specialties Center and obtained a final diagnosis.

The absence of an oral cancer diagnosis obtained during this campaign can also be attributed to dentists and their ability to clinically recognize the clinical signs of OSCC. Several studies have reported a lack of knowledge of dentists in relation to oral cancer, and although some studies have described it as satisfactory, it is necessary to raise its level, making dentists capable of properly diagnosing and educating the population regarding oral self-examination and prevention of oral cancer.\(^\text{12,14}\)

Although high rates of occurrence of oral cancer are reported in the literature, during an oral cancer prevention campaign carried out in Fernandópolis, SP, Brazil in 2018, we did not identify any diagnosis of oral cancer. However, unfortunately, this rate cannot be attributed to a decrease in oral cancer. As stated by Nemoto et al. (2015)\(^\text{17}\), prevention campaigns are not able to reach patients in the risk group for developing oral
cancer; in addition, the same study authors commented, although these campaigns are structured and reach many people, other forms of prevention must be developed to reach the real risk group for this disease, which are generally alcoholics and smokers.

Among the benign oral lesions diagnosed during the campaign (n = 59), the most common was leukoplakia (16.94%). Despite being benign in its behavior, oral leukoplakia is considered a potentially malignant disease.\textsuperscript{8,9} Lončar-Brzak et al. (2012)\textsuperscript{18} reported that the rate of malignant evolution over a 10-year follow-up period was 0.64% among 139 studies of leukoplakia lesions. Brouns et al. (2014)\textsuperscript{19} reported even lesions between 144 leukoplakia studied in 51 months follow up, malignant transformation rate was approximately 2.6%. Although the rates of malignant evolution of leukoplakia are lower when compared to the rates of malignant evolution of oral erythroplasia.\textsuperscript{8,9}

Thus, there is a risk of occurrence of OSCC in patients diagnosed with leukoplakia, therefore, patients diagnosed with oral leukoplakia during this campaign will be under periodic monitoring and will receive intervention therapy, if necessary.

9 CONCLUSION

Oral cancer prevention campaigns play an important role in early diagnosis and in raising awareness among the general population about oral cancer prevention. However, the absence of a diagnosis of oral cancer during this campaign suggests a need of reassess its methodology, aiming to reach a target audience with a higher risk of carrying oral lesions that lead to malignant manifestations. It is also noteworthy that the high rates of benign lesions and the number of referrals suggest the lack of dentists trained to clinically recognize lesions suggestive of oral cancer, reinforcing the idea that health professionals need better training to do so.
REFERENCES


