BRIEF REPORT

Minor salivary gland tumours: a 10-year study

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Abstract

Salivary gland tumours represent between 2% and 6.5%, approximately, of all head and neck tumours. The aim of this paper was to identify the frequency of minor salivary gland tumours among patients in the Oral Medicine Clinic of the Federal University of Paraná during the period from 1997 to 2007. A retrospective study was conducted on 1923 histopathological analyses of oral lesions. Fourteen cases of salivary gland tumours were found, of which 7 were benign and 7 malignant. The lesions were localized mainly in the palate (71.5%). By histological type, 50% of the lesions were characterized as pleomorphic adenoma, 28.6% mucoepidermoid carcinoma, 14.3% cystic adenoid carcinoma, and 7.1% as polymorphous adenocarcinoma. These findings suggest that salivary gland tumours have a low incidence in the population and that the pleomorphic adenoma is the most common type of tumour, followed by mucoepidermoid carcinoma.

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Palabras clave

Glándulas salivales; Neoplasias; Manifestaciones bucales

Neoplasias de glándulas salivales menores: estudio de 10 años

Resumen

Las neoplasias de las glándulas salivales representan aproximadamente un 2-6,5% de todos los tumores de la cabeza y cuello. El objetivo de este trabajo es identificar la frecuencia de neoplasias de glándulas salivales menores en pacientes de Medicina Oral de la Universidad Federal de Paraná atendidos de 1997 a 2007. Se realizó un estudio retrospectivo mediante el análisis de 1.923 laudos histopatológicos, y se halló 14 casos de neoplasias de glándulas salivales. Las lesiones encontradas fueron 7 tumores benignos y 7 malignos. Las alteraciones, en su mayoría, se encontraban en la mucosa palatina (71,5%). En cuanto al tipo histológico, el 50% se caracterizó como adenoma pleomorfo; el 28,6%, como carcinoma mucoepidermoide; el 14,3%, como carci-

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Introduction

Neoplasms of the salivary glands (NSGs) are rare, approximately 2%-6.5% of all tumours in the head and neck region; this low incidence is one of the major determinants that several papers have emphasized in retrospective analyses.\(^1\)\(^-\)\(^5\)

The purpose of this study is to determine the frequency of minor NSGs in patients treated at the Oral Medicine Department of the Federal University of Paraná (UFPR) between 1997 and 2007 by collecting data concerning the location, histological tumour type, clinical features, age, and gender.

Methods

We performed a retrospective, descriptive study, based on a review of case histories and pathology examinations of oral biopsies carried out at the UFPR Oral Medicine Department between January, 1997, and December, 2007. All patients freely signed an informed consent form on the day of the initial examination. Of the cases with NSG, data were taken recording age, gender, race, anatomical location, shape, and size of the lesion and the pathologist’s diagnosis. The diagnoses were reviewed according to the WHO classification of salivary gland tumours.\(^1\)

Results

Out of a total of 1923 pathology examinations performed in this period, there were 14 cases of NSG, thus a frequency of 0.73% was obtained. The mean age was 37 years for females and 30 years for males. NSG was observed more frequently in white patients (85.8%).

As for the type of tumour, 7 cases were benign, all pleomorphic adenomas and 7 malignant: 4 mucoepidermoid carcinomas, 2 adenoid cystic carcinoma, and 1 low grade polymorphous adenocarcinoma.

Considering gender distribution, malignant tumours were more frequent in women (n=4) and benign tumours in males (n=4). With regard to the location of the lesions, the palatal mucosa was the most frequent location, with 10 cases (71.5%), followed by 2 cases (14.3%) in the labial mucosa, 1 case (7.1%) on the sides of the tongue and 1 (7.1%) in the cheek mucosa. The description of all variables in the study is shown in Table.

<table>
<thead>
<tr>
<th>Year</th>
<th>Classification</th>
<th>Location</th>
<th>Pathology</th>
<th>Age</th>
<th>Gender</th>
<th>Race</th>
<th>Size</th>
<th>Evolution time</th>
<th>Symptoms</th>
</tr>
</thead>
<tbody>
<tr>
<td>1998</td>
<td>Benign</td>
<td>Upper lip</td>
<td>Pleomorphic adenoma</td>
<td>25</td>
<td>Female</td>
<td>Mixed</td>
<td>2 cm</td>
<td>10 years</td>
<td>Absent</td>
</tr>
<tr>
<td>1999</td>
<td>Benign</td>
<td>Soft palate</td>
<td>Pleomorphic adenoma</td>
<td>66</td>
<td>Male</td>
<td>White</td>
<td>2 cm</td>
<td>1 year</td>
<td>Present</td>
</tr>
<tr>
<td>1999</td>
<td>Benign</td>
<td>Hard palate</td>
<td>Pleomorphic adenoma</td>
<td>23</td>
<td>Male</td>
<td>White</td>
<td>2 cm</td>
<td>6 months</td>
<td>Absent</td>
</tr>
<tr>
<td>2000</td>
<td>Malignant</td>
<td>Hard palate</td>
<td>Mucoepidermoid carcinoma</td>
<td>47</td>
<td>Male</td>
<td>White</td>
<td>3 cm</td>
<td>1 year</td>
<td>Absent</td>
</tr>
<tr>
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<td>Malignant</td>
<td>Edge of the tongue</td>
<td>Polymorphous adenocarcinoma</td>
<td>58</td>
<td>Male</td>
<td>White</td>
<td>3 cm</td>
<td>2 months</td>
<td>Present</td>
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<tr>
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<td>Lower lip</td>
<td>Pleomorphic adenoma</td>
<td>62</td>
<td>Female</td>
<td>White</td>
<td>1 cm</td>
<td>5 months</td>
<td>Absent</td>
</tr>
<tr>
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<td>Malignant</td>
<td>Hard palate</td>
<td>Cystic adenoid carcinoma</td>
<td>33</td>
<td>Male</td>
<td>White</td>
<td>3 cm</td>
<td>3 months</td>
<td>Absent</td>
</tr>
<tr>
<td>2005</td>
<td>Malignant</td>
<td>Hard palate</td>
<td>Mucoepidermoid carcinoma</td>
<td>23</td>
<td>Female</td>
<td>White</td>
<td>1 cm</td>
<td>10 days</td>
<td>Absent</td>
</tr>
<tr>
<td>2006</td>
<td>Malignant</td>
<td>Hard palate</td>
<td>Mucoepidermoid carcinoma</td>
<td>19</td>
<td>Female</td>
<td>White</td>
<td>2 cm</td>
<td>11 months</td>
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</tr>
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<td>Malignant</td>
<td>Hard palate</td>
<td>Pleomorphic adenoma</td>
<td>32</td>
<td>Male</td>
<td>White</td>
<td>3 cm</td>
<td>1 month</td>
<td>Absent</td>
</tr>
<tr>
<td>2006</td>
<td>Malignant</td>
<td>Soft palate</td>
<td>Cystic adenoid carcinoma</td>
<td>35</td>
<td>Female</td>
<td>White</td>
<td>1 cm</td>
<td>2 years</td>
<td>Present</td>
</tr>
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<td>Malignant</td>
<td>Cheek mucosa</td>
<td>Mucoepidermoid carcinoma</td>
<td>77</td>
<td>Female</td>
<td>White</td>
<td>2 cm</td>
<td>10 months</td>
<td>Present</td>
</tr>
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<td>Hard palate</td>
<td>Pleomorphic adenoma</td>
<td>27</td>
<td>Male</td>
<td>Black</td>
<td>2 cm</td>
<td>1 year</td>
<td>Absent</td>
</tr>
<tr>
<td>2007</td>
<td>Benign</td>
<td>Hard palate</td>
<td>Pleomorphic adenoma</td>
<td>24</td>
<td>Female</td>
<td>White</td>
<td>2 cm</td>
<td>4 months</td>
<td>Absent</td>
</tr>
</tbody>
</table>
Discussion

Neoplasms of minor salivary glands are rare and their true frequency and main locations of incidence are not precisely known. Tumors of minor salivary glands represent 9%-23% of glandular tumours. The frequency of tumours of minor salivary glands in the present study was 0.73% (n=14).

Retrospective studies in different countries show frequencies ranging from 0.28% to 1.4% of total biopsies performed. 1-8

As for the type of tumour found in this study, both the benign and malignant tumours had a frequency of 50%.

The scientific literature shows that benign salivary gland tumours represent 18%-67%, whereas malignant tumours represent 33%-82%. 2-9 The differences in the results appear to be related to the profile of the department carrying out the diagnosis and/or treatment. Studies in specialized centres have higher rates of malignant tumours. 10 However, studies in dental out-patient clinics report predominantly benign tumours. 4-11-13 These results may explain that the present study shows 50% of benign tumours and 50% of malignant tumours, since all biopsies were performed in an out-patient context.

Pleomorphic adenoma is the most common tumour of the minor salivary glands, representing 21%-70% of all neoplasms (benign and malignant) and 71%-100% of benign neoplasms. 1-3, 5-11 In this study, pleomorphic adenoma was found in 50% of the total sample and also represented 100% of benign tumours, which is a similar result to those found in the literature. 2-5, 14-16

With regard to malignant tumours, there was great diversity as 4 of the 7 malignant tumours showed the same frequency. In relation to histological types, pleomorphic adenoma was the most common, followed by mucoepidermoid carcinoma.

Consideration should be given to any increase in size in the region of the palate, due to the risk of an NSG. This type of cancer, despite being rare, should be diagnosed early to avoid radical treatment with sequelae for patients.

Conflict of interests

The authors have indicated there is no conflict of interest.

References