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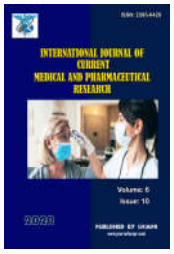

Research Article

A CASE OF CARCINOMA INVOLVING THE HARD PALATE AND MAXILLA

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ABSTRACT

Squamous cell carcinoma of the gingiva accounts for 6% to 10% of squamous cell carcinoma of the oral cavity. Due to the small thickness of the gingiva, the tumor easily infiltrates the underlying bone and can spread to the periodontal ligament, the floor of the oral cavity, the cheek or the palate. In edentulous jaws, the tumor may more easily invade the alveolar nerve or infiltrate the maxillary sinus. In the present article we consider a case of a patient who is admitted for treatment in the clinic of maxillofacial surgery, with a formation covering the hard palate and the gingiva of the upper jaw on the right. After taking material for histological examination, the patient was diagnosed with highly differentiated keratinized squamous cell carcinoma. Laterally, the tumor is in peripheral contact with the right pterygoid muscles. Bone osteolysis-destruction of the posterior part of the floor of the right maxillary sinus and the right half of the hard palate is observed, no suspicious lymph nodes are found. Surgical treatment was performed.

INTRODUCTION

Squamous cell carcinoma of the gingiva accounts for 6% to 10% (1) of squamous cell carcinoma of the oral cavity. It most commonly develops in the area of the premolars and molars of the lower jaw (1). Men are more likely to get sick around the age of six, but there is an increase in cases in women (1). In about 95% of squamous cell carcinomas of the gingiva, they are G1 with a tendency to infiltrate the jaw bones (2).

In Western European countries, the gender distribution of men: women is 2: 1 (3). In India, the incidence is very high and more than 70% of tumors develop in patients younger than 50 years. On the mandible it develops in 70% -80%, while on the maxilla in 20% - 30% (2). Second primary carcinoma occurs in about 13% of cases (4). Macroscopically it presents as a growing mass, ulcerative and less often as an exophytic, papillary or fungal lesion.

Due to the small thickness of the gingiva, the tumor easily infiltrates the underlying bone and can spread along the periodontal ligament, the floor of the oral cavity, the cheek or the palate (2). In edentulous jaws, the tumor may more easily invade the alveolar nerve or infiltrate the maxillary sinus (2).

Squamous cell carcinoma of the hard palate is the rarest localization and accounts for 4-5% of squamous cell carcinoma of the oral cavity in Western Europeancountries and 1% in the United States (4). High incidence is observed in Latin America, the Caribbean, and South India, mainly among women who smoke reverse smoking. The most affected age is between 60 and 70 years (1). The ratio of glandular to epithelial tumors of the hard palate is 3: 1 to 4: 1. Squamous cell carcinoma develops more often on the soft palate (70%), while on the hard palate it is rare (30%) (2). Lymphatic drainage is abundant and in the upper jugular lymph nodes may metastasize to the retropharyngeal. Soft palate cancer metastasizes more often (40%) than hard palate cancer (15%) (2). The tumor grows superficially without showing a tendency to deep invasion. Advanced forms perforate the underlying bone and enter the nasal cavity (2).

Case Report

It is a patient who is admitted for treatment at the Clinic of Maxillofacial Surgery - Plovdiv, with a formation covering the hard palate and the gingiva of the upper jaw on the right. Histological material was taken, which showed the presence of highly differentiated keratinized squamous cell carcinoma.

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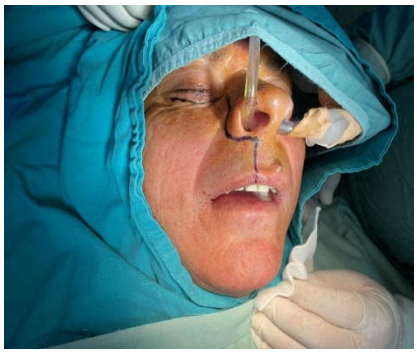
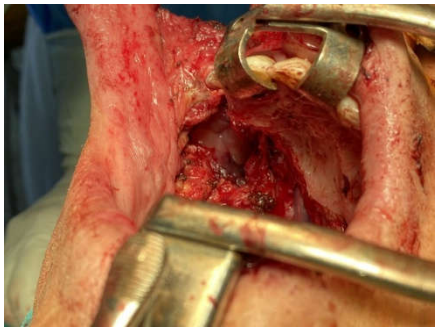
Preoperatively, the patient underwent computed tomography of the head and neck. The results showed arterial, venous and native phases with multiplane and 3-D bone reconstructions.

Picture 1 The tumor before surgery



Picture 2 Planning a surgical incision before surgery



Picture3. Local area after tumor removal

At the border between soft and hard palate, a soft tissue formation with dimensions of 4.2 x 3.2 cm axial size and 2.3 craniocaudal size is established. The formation has greater peripheral contrast enhancement. Laterally, the tumor is in peripheral contact with the right pterygoid muscles. Bone osteolysis-destruction of the posterior part of the floor of the right maxillary sinus and the right half of the hard palate is observed, no suspicious lymph nodes are found. No metastases are found in the gray and white matter of the brain.

No distant metastases were found in the study area. The patient underwent surgery under general anesthesia. The surgery involved resection of the upper jaw and half of the hard palate, while the zygomatic arch was preserved due to its non-involvement in the tumor process.

DISCUSSION

In the presented case, 3 years ago the patient had leukoplakia of the mucous membrane of the palate and was treated with laser several times. The patient was not biopsied or examined histologically. After recurrence of the patient, two teeth of the upper right jaw were extracted. The area of suspected leukoplakia and the area was treated with a surgical laser again.

Cervical metastases are a significant prognostic factor for the survival of squamous cell carcinoma of the hard palate (5). Metastases occurred at 1/3 of the patients at the time of diagnosis. The reported two-year and five-year survival rates are 86% and 57% (4). No one survives the development of cervical lymph metastases for 2 years (4). The overall cure rates for palate cancer are about 40% (4).

Surgical treatment is the preferred method (6). For surgeons, the incidence of local recurrence is high - 63%, and five-year survival is 33% (7). Five-year local control of the disease by radiation therapy is 79% for early lesions and 42% for advanced ones (5). The reported five-year survival is 44% in patients treated with radiation therapy or surgery with postoperative radiation therapy (7). Radiation therapy can be used to treat the early stages of squamous cell carcinoma, surgically inoperable, as well as in cases with close borders. According to the same authors, the recommended dose is 47.5-55 Gy for 3 weeks (5).

There are conflicting reports on the impact of gender on survival, and no link has been found (8). A relatively large study (9) found a relationship between gender and survival, with 73.6% of women having a 3-year survival compared to 62.9% of men.

Patients without risk factors for cancer have a worse prognosis than those at risk (10). A higher incidence of infiltrative lesions was reported in the young, while more exophytic lesions were observed in the adults. According to the author, this is explained by more aggressive biological behavior in younger people (11).

Low socioeconomic status and social deprivation are predictors of poor prognosis in patients with squamous cell carcinoma of the oral cavity (12).

Poor oral hygiene and difficult access to medical care are factors associated with oral cancer (12).

A significant association between smoking, drinking and survival has been reported (13). For squamous cell carcinoma of the tongue, the fifth and tenth year survival rates for non-smokers were 69% and 59%, compared with 43% and 22% for smokers. Five- and 10-year relapse-free survival for non-smokers was 63% and 56%, with all smokers developing relapse by age 5 (14). In addition, cancer patients who continue to smoke during radiation therapy have a poorer response and lower survival rates than non-smokers (14).

CONCLUSION

The presence of a squamous component in verrucous carcinoma requires a detailed serial examination of the entire tumor material to rule out squamous cell coexistence. A key prognostic factor for the survival of squamous cell carcinoma is related to the timely implementation of a standard therapeutic approach, including conducting a hostological examination after leukoplakia of the palatine mucosa and informing patients about the risk factors.

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