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Case Report

Early Stage of Oral Squamous Cell Carcinoma

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Abstract

Oral cancer is the sixth most common cancer in the world. It is usually diagnosed in late stages, requiring extensive surgical therapy, radiation and sometimes chemotherapy. In early stages it is usually asymptomatic and can be diagnosed only as a suspicious lesion of oral mucosa. We report a case of a male patient with symptomatic erythematous lesion of sublingual mucosa. After exclusion of mechanical and chemical irritation and after local therapy showed no improvement, the lesion was biopted. Histopathologic examination revealed carcinoma in situ partially invading the basal membrane.

Clinical Relevance: When diagnosed in early stages, the treatment of oral cancer is simple and patients have high survival rates. Clinical examination of oral mucosa is a short and inexpensive procedure which can reveal are there any suspicious changes in the oral cavity. Every patient with suspicious lesions should be followed up and biopted if no improvement occurs.

Keywords: *Oral Cancer; Squamous Cell Carcinoma; Stages; Toluidine Blue Staining; Histopathological Examination*

Abbreviations

TNM Classification: Tumor-Node-Metastasis Classification

Introduction

Oral cancer is the sixth most common cancer worldwide [1,2]. More than 90% of oral cancers are squamous cell carcinoma. It usually affects males over 50 years of age [2,3], although the incidence in younger persons is increasing [2]. The most common localization of oral cancer in Europe and US is the tongue, in 40 - 50% of cases. Other intra-oral localisations include floor of the mouth, gingival, buccal mucosa, lips and palate [2,3]. The stage of advancement of oral cancer is determined by tumor-node-metastasis (TNM) classification [4]. TNM stage at the time of establishing diagnosis significantly affects five-year survival rate [4].

For tumors diagnosed in early stage (stage 1 or 2), five-year survival rate is about 80%, while the survival for advanced stages (3 or 4) is only 30 % [5]. Early stages of oral cancer are asymptomatic so the diagnosis is usually established in advanced stages [3], when the treatment includes an extensive surgical procedure, radiation, and sometimes chemotherapy [6]. The consequences of such procedures are very severe because they affect patient's appearance and quality of life [6,7] and the survival chance decreases below 40%. When oral cancer is diagnosed at the earliest stage, the healing is simple and the healing results are greater than 80% [5].

Case Description

A 60-year-old male patient was referred to the Department of Oral Medicine, University of Zagreb, complaining about burning sensation under the tongue while he was eating popcorn. The symptoms have lasted for a few weeks. He has used a mouthwash bought in the local drugstore, without any improvement. His medical history was without distinction. He was not a smoker and he consumed alcohol occasionally. . He was edentulous and wore removable dentures in upper and lower jaws. His medical history revealed he had hypertension, hypercholesterolemia, diabetes mellitus and penicillin allergy. He was taking antihypertensives (moxonidine, ramipril), lipid-lowering drug (atorvastatin), antidiabetic drugs (a combination of vildagliptin and metformin) and analgetics (tramadol, paracetamol, ibuprofen, diclonenac, urapidil).

Clinical examination revealed erythematous area on left sublingual mucosa (Figure 1). Remaining oral mucosa was without any clinical changes and symptoms. Palpation of regional lymph nodes hasn't revealed enlargement. Toluidine blue staining was only partially positive, which could be explained also by inflammatory process (Figure 2).

Figure 1: *Clinical finding at first examination.*

Figure 2: *Toluidine blue staining of the sublingual lesion.*

Differential diagnosis of the lesion included chemical burn (mouthwash or self-ordinated compress), mechanical irritation with lower denture or hard food, adverse drug reaction or erythroplakia. The patient was given local therapy which included antiseptic solution (chlorhexidine gluconate 2%) and corticosteroid ointment (betamethasone in orabase) to be applied three times a day. He was advised to stop rinsing with previously used mouthwash and to avoid wearing removable denture in the lower jaw. At the control examination after two weeks, the lesion appeared unchanged. Since extension of the therapy for 10 more days hasn't shown any improvement, a biopsy of oral lesion was made (Figure 3). Histopathological finding revealed dysplastic changes in the epithelium and carcinoma in situ, partially invading the basal membrane. A patient was further referred to the Department of Maxillofacial Surgery. Intraoral excision was made one month after the initial biopsy and the lesion was completely removed. Histopathological finding showed squamous cell carcinoma, second degree. Clinical finding after healing of the wound is seen on Figure 4.

Figure 3: *Clinical finding on the biopsy day.*

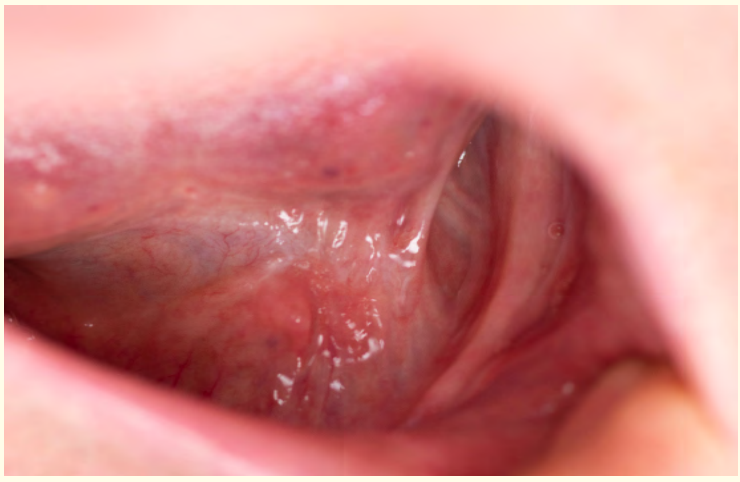

Figure 4: *Clinical finding after intraoral excision of the lesion and healing of the wound.*

Discussion

The diagnosis of oral cancer is usually made in advanced stages. Sometimes the responsibility for that is on the patients, who hesitate to come to the doctor's office, and sometimes it is on the doctors, who do not perform routine oral examination which can reveal suspicious changes on the oral mucosa which should be then followed up. Potentially malignant lesions of oral mucosa often precede oral squamous cell carcinoma. These lesions can be diagnosed during routine oral examination as either white or red patches, known as leukoplakia and erythroplakia and they are asymptomatic [3]. Oral cancer in early stages is also usually asymptomatic. In our case, due to the appearance of oral symptoms, the patient was early on to seek help, which enabled early diagnosis. High risk localizations for the development of oral cancer include lateral borders of the tongue and floor of the mouth ("pool of saliva") [3], which is in accordance with our case. Known risk factors for oral cancer include smoking and alcohol consumption and age over 50 years [2,3]. Our patient was 60 years old, but he was not a smoker and consumed alcohol occasionally. According to the literature data, risk factors for oral cancer could not be identified in 10-20% of patients who develop oral cancer [2].

Our differential diagnosis included chemical burn from mouthwash or a compress with mouthwash or some other self-ordinated medication. Sometimes patients use self-ordinated medications due to one type of symptoms (for example burning or pain) and in the meantime changes of the mucosa occur as a result of self-treatment [8, 9]. Folk medicine medications are very popular in Croatia and

people often use alcohol, propolis or herbal mixtures for topical application on skin or mucosa [8, 9]. Differential diagnosis also included mechanical irritation with removable denture or hard food (popcorn, for example) or self-inflicted lesion, or adverse drug reaction which can develop after one dose or after taking the drug for a longer period of time [10, 11]. The patient was advised to stop using previously used mouthwash, to avoid wearing removable denture in the lower jaws and to apply only local therapy we prescribed, until control examination. Since there was no improvement after applying local therapy and due to the high risk localization of the lesion, a biopsy of oral lesion was made.

A useful aid in visualizing oral mucosal changes is toluidine blue staining. It is an inexpensive test which is simple to perform, but requires some clinical experience in interpretation. It improves visualization of oral lesions and can often be helpful when deciding where to make a biopsy [12]. Histopathologic examination remains the golden standard for establishing diagnosis of oral cancer.

This case report highlights the role of doctors of dental medicine, who have a great potential for early detection of oral cancer. A short, simple and completely painless oral examination can reveal are there any suspicious changes in the oral cavity that require additional diagnostic treatment. Early detection and treatment are critical for reducing morbidity and mortality of oral cancer.

Conclusion

Erythematous oral lesions which don' t show improvement after exclusion of possible local irritational factors and by local steroid therapy need to be biopsied after two weeks. Follow up of these patients is mandatory.

Conflict of Interest

No conflict of interest.

Bibliography

1. Warnakulasuriya S. "Causes of oral cancer--an appraisal of controversies". *British Dental Journal* 207.10 (2009): 471-475.
2. Warnakulasuriya S. "Global epidemiology of oral and oropharyngeal cancer". *Oral Oncology* 45.4-5 (2009): 309-316.
3. Neville B. "Oral cancer and precancerous lesions". *CA: A Cancer Journal for Clinicians* 52.4 (2002): 195-215.
4. Anneroth G., *et al*. "Review of the literature and a recommended system of malignancy grading in oral squamous cell carcinomas". *Scandinavian Journal of Dental Research* 95.3 (1987): 229-249.
5. Huang C., *et al*. "Life expectancy and expected years of life lost to oral cancer in Taiwan: A nation-wide analysis of 22,024 cases followed for 10 years". *Oral Oncology* 51.4 (2015): 349-354.
6. Murphy BA., *et al*. "Quality of life research in head and neck cancer: A review of the current state of the science". *Critical Reviews in Oncology/Hematology* 62.3 (2007): 251-267.
7. Nogueira TE., *et al*. "Factors associated with the quality of life of subjects with facial disfigurement due to surgical treatment of head and neck cancer". *Medicina Oral Patologia Oral y Cirugia Bucal* 23.2 (2018): e132-e137.
8. Brailo V., *et al*. "Delayed contact sensitivity on the lips and oral mucosa due to propolis-case report". *Medicina Oral Patologia Oral y Cirugia Bucal* 11.4 (2006): E303-E304.
9. Vucicevic Boras V., *et al*. "Oral Adverse Reactions Caused by Over-the-Counter Oral Agents". *Case Reports in Dentistry* (2015): 196292.
10. Boras VV., *et al*. "Adverse drug reactions in the oral cavity". *Acta Clinica Croatica* 54.2 (2015): 208-215.
11. Baričević M., *et al*. "Oral bullous eruption after taking lisinopril--case report and literature review". *Wiener klinische Wochenschrift* 123.13-14 (2013): 408-411.
12. Epstein JB., *et al*. "Utility of toluidine blue in oral premalignant lesions and squamous cell carcinoma: continuing research and implications for clinical practice". *Head and Neck* 29.10 (2007): 948-958.

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