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# Squamous cell carcinoma in young adult with no predisposing factors: A case report

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**ABSTRACT**

A 39-year-old male was referred to the Oral and Maxillofacial Medicine department of Alborz University of Medical Sciences Dental School with a lesion that he had noticed for 3 weeks. The patient had no signs or symptoms and no cigarette and alcohol consumption. Because the lesion was placed at the lateral posterior portion of the tongue which is a common place for oral malignancies a biopsy was done. The pathology result was Squamous cell carcinoma grade 2. The patient was referred to Imam Khomeini Cancer Institute for further treatment.

**Keywords:** Oral scc; Oral cancer; Squamous cell carcinoma.

## Introduction

Oral squamous Carcinoma (OSCC) is one of the most common malignancies in the oral cavity [1]. It is treatable but if found late can be lethal for the patient [2]. There are many proven risk factors for developing this cancer such as smoking (cigarettes, betel quid, tobacco ..) alcohol consumption, family history of cancer, pollution, low intake of vegetables and fruit and some human Papilloma viruses [3,4]. 95% of oral cancer occurs in patients over 40 with the mean age of diagnosis at 60 years. Oral cancer can occur in ages under 40 but it is rare and has attracted attention in current literature [1]. The most common site for OSCC is at the lateral border of the tongue. In most of the cases, there is no apparent sign or symptoms and the patient is identified after the cancer has progressed. The most common symptom is discomfort which leads the patient to seek medical care. The patient might also be aware of a mass or an ulcer in the oral cavity that does not heal itself. Trouble swallowing, bleeding or red and white lesions in the oral cavity may be present [5]. Diagnosis is by obtaining a good biopsy sample containing the full thickness of the epithelium with the basement membrane [6].

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Histopathology is the gold standard of diagnosis and is important for Grading. Pathological Grading is the extent of histopathological derangement of the tissue and changes in the cellular morphology. The cancers with less differentiation receive higher grades in a 1 to 4 scale and cancers with high grades tend to be more progressive [7]. Treatment of OSCC consists of surgery alone for tumors that are early diagnosed or are localized or tumors involving the bone. Radiation therapy is also used in patients with more progressive tumors alone or combined with Chemotherapy as a cure or palliative care in patients with really progressive cancers [8].

## Case Report

A 39-year-old male was referred to the Alborz University of Medical Science oral and Maxillofacial Medicine department by a General local Dentist. The patient had a localized lesion of 2.5cm in 3.5cm on the posterior lateral border of the tongue on the left side (Figure 1). The patient had noticed the lesion for 3 weeks and had sought treatment from his Dentist. The ulcer had rolled margins and at the posterior and inferior part, the lesion had turned into a mass. The patient had no smoking or alcohol history and had no other disease. An incisional biopsy was performed for the patient containing two parts of the lesion including the ulcer and the mass part with some normal borders (Figure 2). The specimen was sent to the Pathology lab of Alborz University of Medical Sciences and the result was Oral Squamous Carcinoma moderately differentiated Grade 2 (Figure 3). The patient was then referred to Imam Khomeini Cancer Institute where he received surgical treatment. No radiation therapy was necessary. In the 3-month follow up the patient was cancer-free but suffered some impairment in speech because of the scar of surgery on the tongue.



*Figure 1.* The clinical lesion of the patient consisting of the lesion in the left border of the tongue.

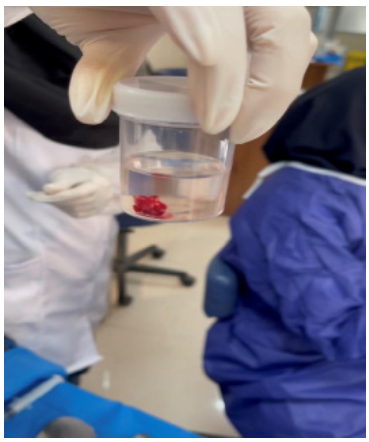
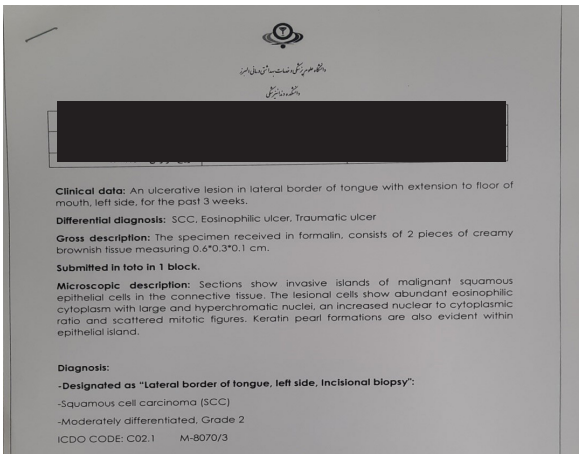


*Figure 2.* The gross specimen obtained by biopsy.



**Clinical data:** An ulcerative lesion in lateral border of tongue with extension to floor of mouth, left side, for the past 3 weeks.

**Differential diagnosis:** SCC, Eosinophilic ulcer, Traumatic ulcer

**Gross description:** The specimen received in formalin, consists of 2 pieces of creamy brownish tissue measuring 0.6*0.3*0.1 cm.

**Submitted in toto in 1 block.**

**Microscopic description:** Sections show invasive islands of malignant squamous epithelial cells in the connective tissue. The lesional cells show abundant eosinophilic cytoplasm with large and hyperchromatic nuclei, an increased nuclear to cytoplasmic ratio and scattered mitotic figures. Keratin pearl formations are also evident within epithelial island.

**Diagnosis:**

**-Designated as "Lateral border of tongue, left side, incisional biopsy":**

-Squamous cell carcinoma (SCC)

-Moderately differentiated, Grade 2

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*Figure 3.* The pathology report of the patient.

## Discussion

Oral cancer is the sixth most common cancer in the US population [1]. This cancer is even more common in the south Asia [9]. The most common Oral cancer is Squamous cell Carcinoma and the most common site is the tongue. Lesions on the lateral border of the tongue or lesions in the base of the oral cavity have a poor prognosis [2]. The risk factors of Oral SCC are smoking alcohol consumption some nutrition deficiencies and family history of cancer. It is more common over the age of 60 and is not seen in youth commonly [10]. As mentioned above, our patient had none of the risk factors and he did not smoke drink alcohol or have any family history of cancer and his weight was normal. Although the lesion was not very big in size it was Grade 2 which showed that it was a progressive Tumor and detecting it soon made all the difference in the patient's treatment and prognosis. Cancer is a multi-factorial disease and its pathogenesis is not been fully understood but it is believed oncogenes and tumor suppressor genes are greatly involved [11]. It could be argued that in patients with no apart risk factor a mutation in

any of the oncogenes or tumor suppressor genes can lead to cancerous cells [12]. A number of studies have been done to identify the mutations involved in Oral SCC but no one mutation can lead to Oral cancer itself, so it cannot be predicted if a certain patient will get Oral cancer or not as seen in this patient who had no risk factors and was a young adult. Therefore, the main focus of patients and oral health professionals should be screening and detecting the lesions early on. In detecting Oral cancer early, the role of family Dentists is critical and educating Dentists for detecting lesions with suspicious properties and referring the patient to the proper specialist for further treatment in the shortest time is very important for the better prognosis of the patient [13]. In our case the length of time that the patient noticed the lesion and was referred to the oral disease clinic was 3 weeks which could have been shortened, but the family Dentist diagnosed that the lesion had malignant properties and referred the patient which showed that he has had some education about this kind of lesions. In this patient's case, the most important aspect of treatment was early detection which the family Dentists play a key role in. The patient's life was probably saved because his Dentist had some Knowledge about malignant lesions in the oral cavity and this education should be available to all Dentists and Dentistry should not be limited to cosmetic and restorative treatments only [14,15].

## Conclusion

Oral SCC can appear in any person and with no risk factors and the key point in the successful treatment of it is early detection.

## Acknowledgment

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## Conflict of Interest

There is no conflict of interest to declare.

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