

Oral Squamous Cell Carcinoma Of Lateral Border Of Tongue – A Case Report

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Abstract

Oral squamous cell carcinoma (OSCC) is the most common epithelial malignant neoplasm affecting the oral cavity; early detection is an important criterion for achieving high cure rate. The control of oral squamous cell carcinoma (SCC) is difficult even after treatment because it has a tendency to multiple primary carcinomas. The purpose of this report is to describe the clinicopathological characteristics of a SCC of lateral border of the tongue in a 38 year old male patient and to determine whether any associated risk factors are present.

Keywords – squamous cell carcinoma, tongue, oral cancer

INTRODUCTION:

Oral squamous cell carcinoma is the 8th and 12th most frequent cancer in the world among men and women respectively. [1] For oral cancer male: female ratio is 2:1. It clearly shows male predominance. Oral squamous cell carcinomas are found mainly after 4th decade. The incidence is about 11.5 per 100,000 population. High incidence countries include Sri Lanka, India, Pakistan, Bangladesh, and calvados regions in France, countries in central and Eastern Europe and Brazil. [2] Carcinoma of tongue constitutes 50% of all oral malignancies. In recent times, Squamous cell carcinoma of tongue was increased among females who never consumed alcohol and also in young individuals. The major risk factors include trauma in oral cavity, smoking and smokeless tobacco, alcohol consumption, diet factors such as Vit-A and C deficiency, radiations, viral infections such as HSV, HPV, HIV, EBV, preexisting oral diseases. [3] Oral cavity has abundant lymphatic circle and regional nodes involvement in about 30% cases diagnosed nowadays. The lateral borders of tongue and the anterior, right and left floor of mouth, the retro molar pad and the adjacent parts of the soft palate constitutes a “U” shaped zone which is high risk area for Squamous cell carcinoma. SCC often cause fixation of tongue to floor of mouth which results in difficulty in speech and swallowing, etc. Tongue carcinoma have high chance of metastasis to neck. SCC of tongue often spread and involve gingiva, floor of mouth, mandible, base of the tongue, etc. Tongue lesions usually have excessive bleeding tendency. The advanced lesions often produce painful, enlarging, exophytic and large, extensively Indurated ulcers are elevated and everted margins. [3] Diagnosis may be achieved after thorough clinical examination of oral cavity with confirmatory biopsy and Fine Needle Aspiration Biopsy (FNAB). [5]

CASE REPORT:

A 38 year old male patient reported to our college with the chief complaints of pain in left lateral border of the tongue for past 1 month. Patient gives history of ulcer in the left lateral border of tongue, which was initially small in size before 6 months and gradually increased in size. Patient went for consultation in a nearby private dental clinic and coronoplasty was done. Later it was subsided and patient developed another ulcer over the left lateral border of the tongue. Patient again went for consultation in a private dental clinic and they referred to our hospital for further management. Patient also gives history of pain, which was chronic, pricking in nature, aggravates on mastication and tongue movements, and relieved on rest. Patient reported to our hospital on 29.01.2024 where incisional biopsy was taken under local anesthesia and the report reveals keratinized squamous cell carcinoma. Then patient reported to our hospital on 19.02.2024 for further management. Patient had no relevant medical history such as hypertension, diabetes mellitus, asthma, epilepsy and bleeding disorders. On past surgical history, patient underwent surgery for plate fixation in left forearm before 7 years. On drug history, patient was allergic to drug voveron. Patient had history of tobacco chewing for past 2 years and quit the habit before 6 months. Patient also had history of alcohol consumption for past 10 years. On general examination, on inspection, patient was conscious,

stable and oriented. Patient was moderately built and vitals are normal. On extra oral examination, on inspection, there was no gross facial asymmetry, no evidence of swelling in facial region and no evidence of visible swelling seen in the neck region, adequate mouth opening was present and patient was able to perform lateral movements of mandible.



On palpation, lymph node of size approx 2 * 2 cm was evident on the left submandibular region and another lymph node of size approx 1 * 1 cm was evident on upper jugular group which was hard in consistency and fixed to underlying structures. Intra oral examination reveals, on inspection, ulceration of size approx 3 * 3 cm was evident on left postero-lateral aspect of the tongue. There was no evidence for any kind of discharge. Ulcer was covered with erythematous slough. Surrounding structures appeared to be normal. Margins were irregular and everted edges were present. Indurated base was present. It was hard in consistency and on palpation, bleeding was evident. Lesion extended to the floor the mouth and tongue movements were slightly restricted.



Investigations include incisional biopsy which resulted in keratinized squamous cell carcinoma. CECT revealed a heterogeneous soft tissue density lesion measuring 3.2 * 2.8 * 2.8 cm was noted in the left posterior part of the tongue which involved left intrinsic muscles. Bilateral subcentimetric cervical nodes were noted at level Ia, Ib, II & III. With all these above findings we came to a diagnosis of carcinoma in the left postero-lateral border of tongue.

For investigatory purposes, patient was advised for blood investigations. On biochemical investigations, complete hemogram, blood glucose, liver and kidney function tests were performed. Ultrasound examination over whole abdomen and pelvis gave the impression of fatty liver.

Patient was then advised for surgical management. Wide local excision with selective neck dissection with pectoralis major myocutaneous flap reconstruction was done under general anesthesia and the tumor was excised. The excised tumor was sent for a histopathological examination.

MICROSCOPIC FEATURE:

Biopsy from Left lower lip: Sections studied show an expanded dysplastic squamous mucosa with an adjacent infiltrating malignant neoplasm, covered by neutrophilic exudates. Neoplasm is composed of tumor cells arranged in nests. Individual tumour cells appear squamoid with well apparent intercellular bridges, eosinophilic cytoplasm, hyperchromatic to vesicular nuclei having irregular nuclear membrane and variable conspicuous nucleoli exhibiting mild to moderate nuclear pleomorphism. Individual cell keratinization and keratin pearl formation are evident. Atypical mitotic figures are prominent seen amongst the tumor cells. Tumor stromal interface shows dense infiltration by lymphocytes, neutrophils, few plasma cells and occasional tumor giant cells. Stroma shows desmoplastic response. Superior, medial and lateral margins are uninvolved by tumor. Inferior margin shows infiltration by tumor cells.

Level Ia Nodes: Sections studied show two lymph nodes exhibiting reactive lymphoid hyperplasia and sinus histiocytosis.

Level Ib Nodes: Sections studied show five lymph nodes exhibiting reactive lymphoid hyperplasia and sinus histiocytosis. Also noted salivary gland parenchyma with unremarkable histological changes.

Biopsy from Tongue: Sections studied show hyperplastic stratified squamous epithelium having mild hyperkeratosis and parakeratosis with verrucous surface and bulbous, broadened rete pegs. Individual cells have abundant keratinised cytoplasm and fairly uniform vesicular nuclei. There is no invasion of this hyperplastic epithelium into underlying lamina propria and rete pegs are seen at the same level with that of adjacent normal mucosa. Lamina propria shows superficial band of lymphocytic infiltration.

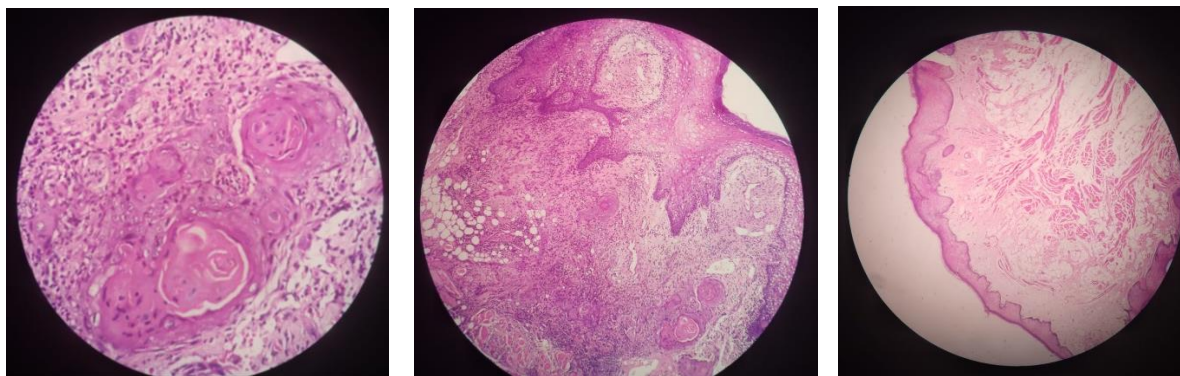


FIGURE A ,B ,C Shows an expanded dysplastic squamous mucosa with an adjacent infiltrating malignant neoplasm, covered by neutrophilic exudates. Neoplasm is composed of tumor cells arranged in nests. Individual tumour cells appear squamoid with well apparent intercellular bridges, eosinophilic cytoplasm, hyperchromatic to vesicular nuclei having irregular nuclear membrane and variable conspicuous nucleoli exhibiting mild to moderate nuclear pleomorphism. Tumor stromal interface shows dense infiltration by lymphocytes, neutrophils, few plasma cells and occasional tumor giant cells. Stroma shows desmosplastic response.

IMPRESSION

- Squamous cell carcinoma, coventional.
- Histologic grade: G1 - well differentiated.
- Tumor depth of invasion - 5mm.
- Pathologicstage classification : pT₁ , pN₀
- Superior, medial and lateral margins are uninvolved by tumor.
- Inferior margin shows infiltration by tumor cells.
- Perineural and lymphovascular invasion – not identified.
- Two level Ia and five level Ib lymph nodes show no metastatic deposits.
- Depapillation of tongue specimen showing: verrucous hyperplasia

With the correlation of clinical and histopathological findings final diagnosis was given as WELL DIFFERENTIATED SQUAMOUS CELL CARCINOMA

DISCUSSION:

Oral squamous cell carcinoma is the most common oral malignancy, representing 80-90% of all malignant neoplasm of oral cavity. Squamous cell carcinoma is defined as malignant epithelial neoplasm exhibiting squamous differentiation as characterized by the formation of keratin and / or the presence of intercellular bridges. (Pindborg et al, 1997).

Among 90% of oral tumors, tongue is the most common location for squamous cell carcinoma. It is one of the most aggressive tumors of oral cavity. [6] Alcohol intake and smoking are the two most common risk factors, which are mostly seen in older individuals than in younger ones. There are no specific cause for tongue squamous cell carcinoma but in certain cases mechanical trauma, fillings for shattered teeth or ill fitting dentures may be a contributing factor. [7] Initially the condition is painless and aymptomatic. The first evidence patient can elicit is either ulceration orgrowth or any proliferation. However early biopsy often reveals the real nature of this disease. It can also be perineural invasion which may lead to painful condition. It also causes difficulty in speech, swallowing and inability to open mouth (Trismus) due to fixation of the tongue to the floor of the mouth. They may also cause mobility or exfoliation of teeth due to invasion of tumor cells into alveolar bone of maxilla and mandible. It may also cause paresthesia if it involves inferior alveolar nerve. If lesion invaded maxillary antrum, it results in nasal bleeding and pressure sensation to eyeball. [3] Squamous cell carcinoma of tongue typically spreads via lymphatic system. Submental and Submandibular lymph nodes are most frequently involved. [7] Regional lymph nodes may sometimes become stony hard in consistency. [3] The patient may also need aadjuent

therapy such as radiotherapy or chemotherapy.[6] The major confirmatory diagnosis for any suspicious growth, histopathological evaluation is determined as the gold standard. In our present case, the patient had a chronic non healing ulcerated growth which was resembling a carcinoma. For further confirmation of diagnosis, incisional biopsy was taken and sent to histopathological examination. This evaluation reveals squamous cell carcinoma of base and lateral border of the tongue. The patient was again sent to oral and maxillo facial surgery department for wide local excision and selective neck node dissection to remove the condition. The type of epithelium present in tongue is keratinized stratified squamous epithelium. An invasive tongue cancer is produced after a series of epithelial alteration. The foremost invasion seen is the invasion of basement membrane. Invasion of tongue squamous cell carcinoma shows squamous cell nests with stromal fibrosis and keratin deposition which are the characteristic histological features. Histological features also shows many varieties including spindle cell, verrucous papillary and basaloid subtypes. [8] As earlier said patient undergone wide local excision with selective neck node dissection. The excised specimen was again sent for histopathological examination which reveals keratin pearl formation and breach in the basement membrane, etc. By correlating clinically and histopathologically we came to the conclusion of oral squamous cell carcinoma of tongue. The patient is under regular follow up.

CONCLUSION:

Squamous cell carcinoma being the most aggressive tumor can produce terrible outcome if it is unnoticed. The possible treatment could be early diagnosis, routine post operative checkups. [9] The most significant factor affecting prognosis of these patients is the presence or absence of metastases. National Cancer Registry Program, The NCRP was initiated in India in 1982. Data from cancer registries was useful in planning the national cancer control program. [2]

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