Carcinoma of tongue in a 40-year-old male: A case report

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Abstract

Squamous cell carcinoma (SCC) of the oral tongue in patients less than 40 years old is a rare condition. Several systematic reviews in Oncology have revealed that the number of individuals under the age of 40-years with squamous cell carcinoma of the tongue is relatively rare.

We report a case of oral squamous of the tongue in a 40-year-old male with complete coverage of clinical features, investigation, treatment and follow-up. The clinical and radiographic features as well as the histopathological features of this case are discussed in detail.

The prognosis of patients with advanced oral squamous cell carcinoma of the tongue is poor. Tumor invasion across the midline, cervical lymphatic metastasis, surgical treatment, recurrence and residual tumor are independent factors affecting the prognosis.

***Keywords**:* oral squamous cell carcinoma, tongue, younger age group.

Introduction

The article presents the case of a 40-year-old male with tongue cancer. The median age at the diagnosis of the tongue's cancer is 61 years (1). Very few cases of carcinoma of the tongue have been reported in individuals below 60 years (2). The clinical and histopathological features of the carcinoma occurring on the tongue in a 40-year old male are discussed in detail in this report.

Case report

A 40-year old male patient reported to the Sharjah dental clinic with complains of ulcer in the left side of the tongue since three months, pain in the left side of the tongue since one month, difficulty in speaking, chewing food and bleeding from the ulcer since then.

The ulcer on the tongue began three months ago, it was of small size initially, within 3 months gained the present size. There is no history of trauma or such type of ulcer formation occurring in the past. Initially the ulcer was asymptomatic but since last 1 month intermittent episodes of moderate pain was present; radiating to the left ear and temporal region, the episodes of pain triggered after chewing food. The patient also had difficulty in speaking and chewing food since past 1 month. The discomfort is severe when hard food was consumed. Patient also gave complains of bleeding from the ulcer on 3 occasions during past one week.

Patient's medical history was non-contributory. Patient visited a private dentist for extraction of 2 teeth in the lower jaw 3 years prior. Patient's elder brother had died five years ago due to liver cancer. Patient had the habit of smoking beedis, 10 beedis/ day since 20 years. His habit index was calculated to be 10 x 20 = 200. The patient had occasional pan chewing habit (with tobacco).

Patient was well oriented in time place and person; his vital signs were within the normal range. There was no pallor, icterus, cyanosis, clubbing or edema. His height = 1.6m, weight = 58kgs; BMI = 23.25. None of the lymph nodes of the cervico-facial region were palpable.

The intraoral hard tissue examination revealed generalized attrition and stains on the teeth.

Figures 1-2. Intraoral clinical photograph of the patient showing severe attrition and extrinsic dental stains

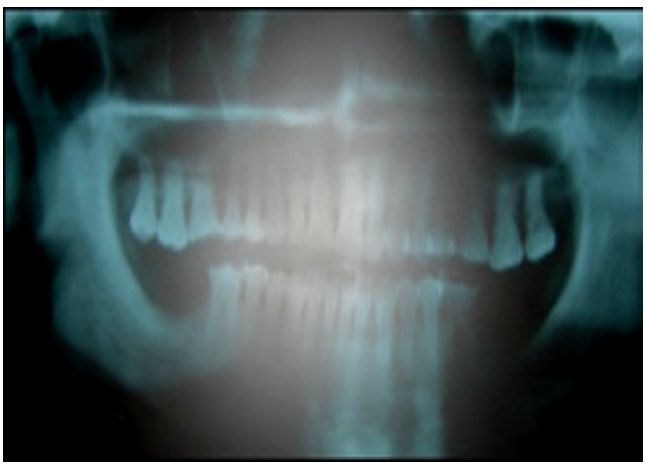
Soft tissue examination revealed an ulcer on left lateral border of the tongue extending to the ventral surface (Figure 3). It was roughly spherical in shape and approximately 4 cm in diameter, extending superiorly from the left lateral border of the tongue to the ventral surface till the lingual fermium inferiorly. The ulcer had sloping edges and averted margins. Floor showed presence of irregularly shaped erythematous areas interspersed with areas having slough surrounding mucosa which was pale. The dorsal surface of the tongue was thickly coated.

On palpation the site and size of the lesion were confirmed. The ulcer was tender, and fixed to the underlying tissues. The edges base and the surrounding areas were indurated. There was bleeding on removal of the slough covering the floor. Forward movement of the tongue was restricted. No loss of sensation on the left side of the tongue was observed.

Figure 3. Intraoral clinical photograph showing the ulcer on the dorsum of the tongue extending to the lateral border

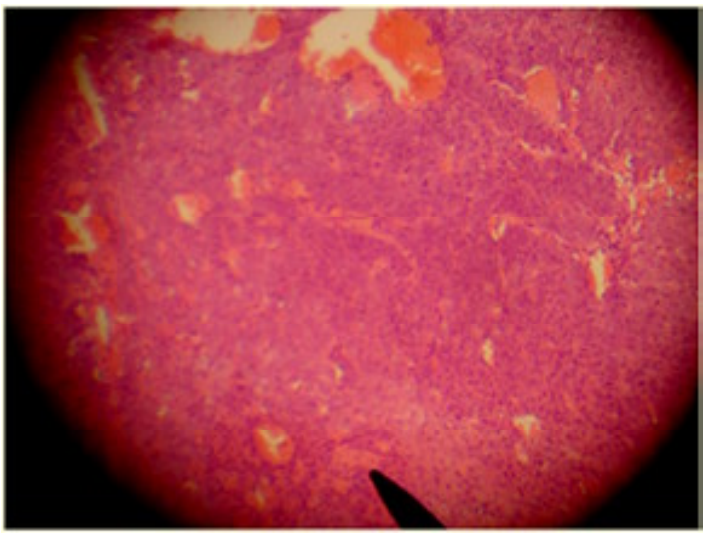
Based on these clinical findings an initial diagnosis of Carcinoma of the left lateral border and ventral surface of the tongue (T2, N0, and M0) Stage II was made. A panoramic radiograph (Figure 4) was also made, which ruled out any bone invasion by the lesion. CT examination confirmed the lack of bone involvement.

Figure 4. Panoramic radiograph indicating no evidence of bone involvement



An incisional biopsy of the lesion followed by histopathological evaluation (Figure 5) confirmed the diagnosis of carcinoma.

Figure 5. Histopathological view of the biopsy tissue showing features of squamous cell carcinoma



Wide excision of the lesion was carried out (Figure 6) and the patient was referred to a regional cancer center for radiotherapy. The patient was followed up for a period of 1 year with no clinical or radiographic evidence of recurrence or metastasis.

Figure 6. Clinical photograph showing post-surgical healing of the area

Discussion

Literature survey reveals that tongue cancer has a male predominance and usually occurs in the 6th-8th decade of life (2). In the present case, the male patient was 40-years old. History of long term exposure to cigarette smoke and alcohol abuse is usually observed in most of the cases (2). In the present case, the patient presented with a history of using paan and beedi for 20 years. Chronic mechanical trauma due to sharp teeth, fractured fillings, ill-fitting dentures have been also suggested as a possible etiology of oral squamous of the tongue (3). Immune deficiency, genetic factors, and dietary factors have been involved in the etiology of cancer. Viruses like herpes simplex virus and human papilloma virus have also been reported as contributing factors (4).

The median age at the diagnosis of the tongue cancer is 61 years. Only approximately 2% of patients are diagnosed before the age of 35 and another 7% before the age of 45, this despite the fact that there is an increasing trend in the prevalence of tongue SCC (5-7). In the present case the patient was a 40-year old male, thus making it a rare age group for occurrence of tongue cancer. Carcinoma of the tongue is often associated with other potentially malignant or premalignant lesions and conditions such a leukoplakia, erosive lichen planus as well as atrophic glossitis (8-10).

Metastatic spread from the carcinoma of the tongue is by the lymphatic system and primarily involves the deep cervical chain of lymph nodes (11). The submaxillary and submental lymph nodes are the ones frequently involved. The rich lymphatic drainage and the extreme mobility of the tongue are probable factors in accelerating the dissemination of tumor cells (12). In the present case the patient had no clinical evidence of cervical nodal metastasis. Clinical features of carcinoma of tongue have no distinguishing features for any age range (13). Classical feature of the lesion is a persistent ulceration with hardening and peripheral infiltration, either being associated with vegetations, red or whitish staining, or not. Predominant location is lateral border of the tongue or oral floor (13). In the present case persistent ulceration with peripheral induration was noticed. The ulcer was located in the lateral border of the tongue. The differential diagnosis usually considered for carcinoma of the tongue includes deep mycoses, primary syphilis cancrum and tuberculosis (14,15). The other differential diagnoses that can be considered are traumatic eosinophilic granuloma and hystoplamosis (16).

Early detection methods that are usually used for carcinoma of the tongue include brush biopsy, optical biopsy, saliva-based oral cancer diagnosis, light-based detection, DNA analysis, and laser capture microdissection (17). Incisional biopsy was performed in the present case.

The commonly used treatment modalities for the tongue carcinoma include surgery, radiotherapy, chemotherapy and combined modalities (18). The selection of appropriate treatment modalities depends upon tumor factors such as site, size (T stage), location and multiplicity, proximity to bone, pathological features, histology grade and depth of invasion. The patient factors include status of cervical lymph nodes, previous treatments medical condition of the patient (19). In the present case, a wide excision was followed by radiotherapy.

The prognosis of patients with advanced oral squamous cell carcinoma of the tongue is poor. Tumor invasion across the midline, cervical lymphatic metastasis, surgical treatment, recurrence and residual tumor are independent factors affecting the prognosis (20). Since there was no radiographic evidence of any bone evasion the prognosis was better in the present case, however long term periodic follow-up is required to prevent any chances of recurrence.

Conclusion

Although carcinoma of tongue is rare in individuals less than 60 years we have presented a rare case of carcinoma of the tongue in a 42 year old male

patient. The clinical and radiographic features as well as the histopathological features of the case have also been discussed in detail.

Conflicts of interest: None declared.

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