Case report

Tackling Squamous Cell Carcinoma of Tongue in a 76 Year Old Man: A Case Report

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Abstract:
The growing geriatric population should be given a chance to fulfill their late age in the best way possible, including those affected with head and neck malignancies. This report describes about a 76 year old man with squamous cell carcinoma of tongue managed with the typical cancer treatment modes and shown a good outcome.

Keywords: geriatric; squamous cell carcinoma; tongue; cancer

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Introduction:

Squamous cell carcinoma (SCC) is the most prevalent type of malignancy and it comprised more than 90% of all oral cancers [1]. It can arise at any sites within oral cavity such as floor the mouth, buccal mucosa, gingiva and tongue. Among these, the tongue predominates[2], especially at the area of postero-lateral border.

As with other malignancy in the head and neck region, tongue SCC requires a great consideration of the treatment modalities. Surgery, radiotherapy and chemotherapy are the mainstay treatment choices, be it as an independent or a combined therapy. Due to solid nature of this loco-regional disease and the uncommon occurrence of its distant metastases, tongue SCC is often managed with primary tumor resection and neck dissection followed by radiotherapy. Chemotherapy on the other hand, had a more marginal benefit in most of the common solid tumors including squamous cell carcinoma[3]. The selection however, lies upon the patient's individual disease condition.

Geriatric age group is commonly associated with co-morbidities which can pose challenges in carrying out the treatment. They may not be able to withstand a major surgery and the vigorous radiotherapy planned, have a reduced tissue healing capacity and inability to be compliant to the treatment regime. Apart from the patient's factor, the decision of treatment choice is based on the primary tumor, its type, extend of the tumor spread and biopsy result [4].

Case Report:

A 76 year old gentleman was undergoing his routine follow-ups under General Surgery Department when they first noticed the presence of an ulcer on his tongue. He was then referred to us. The ulcer was 2.0x1.5cm lesion which is painless and not causing any discomfort during speech or eating. It had persisted for almost a year without any obvious changes in the size and texture. There was also no history of spontaneous bleeding. The initial biopsy had shown negative findings for malignancy. Despite given a denture holiday for 2 weeks and other potential traumatic cause eliminated, the ulcer had remained in-situ. Suspicious of the non-healing nature and the high risk site of the ulcer, we performed a second incisional biopsy. This time, the result revealed a Moderately Differentiated Squamous Cell Carcinoma.

Medically, he had several gastrointestinal problems. He had atrophic gastritis with intestinal metaplasia, chronic pancreatitis with dilated common bile duct and chronic cholecystitis due to the presence of gallstone. Cholecystectomy and choledocojejunostomy was done 7 years ago and they ruled out carcinoma of

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the head of pancreas. Other than these, he had an underlying hypertension and atrial fibrillation. Bisoprolol, aspirin and simvastatin were prescribed for his medical conditions.

Patient was a chronic smoker, who smoked since in his early 20s, about 10 cigarettes per day. The habit however, stopped when he was diagnosed with the carcinoma. Apart from that, he also consumed alcoholic drinks, frequently beer. Family history revealed that he has a brother diagnosed with an intestinal malignancy. Patient had once running a small business in town and now retired and lives with his son and family.

Physical examination revealed a non-fixed, palpable left neck node at upper jugular chain area about the size of 1x1cm. Intraorally, the ulcer was at his left lateral border of tongue with rolled, irregular margin. The ulcer was painless and indurated on palpation. Assessment of cranial nerves function showed no deficit.

CT scans revealed the tumor does not cross the tongue midline (Figure 1).

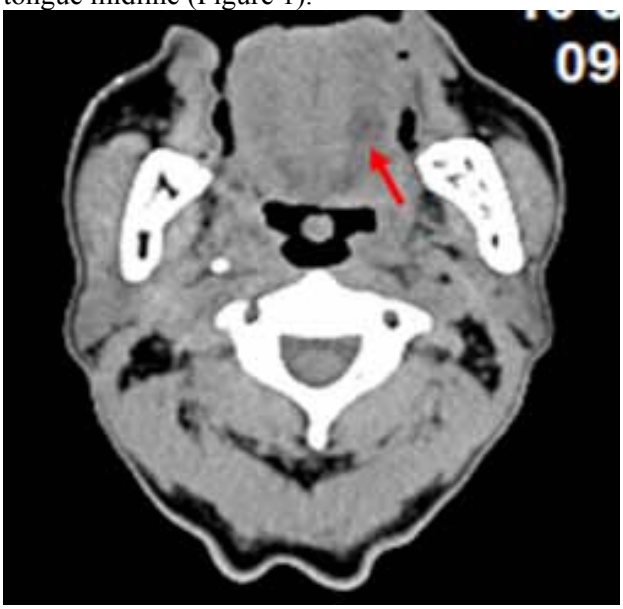

Figure 1: Ill-defined lesion with irregular outline seen at the left lateral border of tongue without extension across the midline.

His right upper jugular chain had shown enhancement measuring 0.7cm while no submental, submandibular or parotid nodal enhancement seen. Ultrasound of his abdomen showed no sonographic evidence of liver metastasis. We staged the lesion as Stage III with $T_2N_1M_0$ using the 1997 staging system of the International Union against Cancer (UICC). We performed left partial glossectomy (Figure **2**) with left modified radical neck dissection type III, preserving the internal jugular vein, spinal accessory nerve and sternocledomastoid muscle.

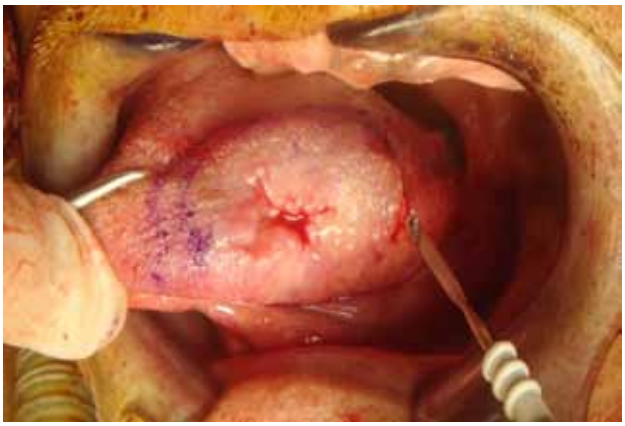

Figure 2: The tumor on patient's left lateral border of tongue being resected 1cm from the tumor indurated margin. Resection performed using electrocautery to control bleeding.

Histopathology result of the surgical specimen confirmed the diagnosis of Moderately Differentiated Squamous Cell Carcinoma. Specimen margins were free of tumor and no tumor infiltration of the submandibular gland and the lymph nodes. Two months post-operatively, patient underwent adjuvant radiotherapy, 54 Gy given in 2 phases. Xerostomia was noted towards the end of his radiotherapy treatment, so as some alteration in taste. We prescribed him with oral moisturizer to wet the oral mucosa and meticulous oral hygiene care was advised to avoid infections.

Six months after completion of radiotherapy, we referred him to prosthodontist for construction of a new set of dentures and continue reviewing him six monthly. At 3 year review, patient had shown no sign of local or regional recurrence. His dry mouth remained (Figure **3**) but despite of this, tongue movement and speech had improved.

Figure 3: Patient's tongue 3 years after the combined therapy. Surgical site on the posterolateral border showed a good healing. Although the tongue has a noticeable morphological deficient, protrusive and lateral movement was not altered. Also noted here, the dryness of his oral mucosa.

Taste bud function also showed some recovery with sweet sensory. For the neck, there was neither esthetic nor shoulder function deficit observed (Figure **5**).

Figure 5: Patient's left lateral neck after 3 years. Both of the skin erythema and the surgical scar had very much reduced. Also noticeable in this photo is the tightening of the neck skin due radiation effect. There was no deficit in his shoulder function.

We plan to continue reviewing him six monthly.

Discussion:

According to Bachar et al, squamous cell carcinoma of tongue typically affects men from 6th to 8th decades of life [5]. Although presented with malignancy at this late period of life, they were said to have less rates of regional metastases and distant failure. Recurrent disease, should it occur, is also less aggressive comparing to patients aged younger than 30 years[6].

Cigarette smoking and alcohol consumption are the two strongest etiological factors in the development of tongue SCC. The risk was elevated after exposure of these two carcinogens for over 21 years[7]. We postulated that cigarette smoking and alcohol consumption had act synergistically in our patient. History of malignancy in his family also added to the risk factors.

As in any other head and neck cancer, tongue SCC has potential to metastasize to the rich cervical lymphatic drainage. The presence or absence, level and size of nodal involvement carry the patient's prognosis. Presence of cervical metastases will reduce survival rates by 50% and increase the likelihood of distant metastases[8]. Generally speaking, the lymphatic flow has a sequential pattern from superficial to deep and from the upper to lower parts of the neck. Skip metastasis however, do occur and it was reported that significant proportion of neck recurrence happened because of these. The tumor cells may skip the more commonly affected levels, to be in the cervical nodes level III or IV[9]. Therefore, we extended our neck dissection to encompass level IV and V, while strenocledomastoid muscle, internal jugular vein and spinal accessory nerve were preserved.

From a retrospective study among patients with tongue carcinoma of pathologic T_1T_2-N_1,Chen et al found a significant benefit in locoregional control when post-operative radiotherapy was added to the surgery[10]. Even patients with tongue SCC staged pathologic T_1T_2-N_0 treated with partial glossectomy and ipsilateral elective neck dissection had greater than expected rate of neck failure [11]. Hence, although histopathological results revealed the neck nodes were negative of tumor cells infiltration, we believed, by irradiating the patient's ipsilateral neck, we might be able to address the existence of any micro-deposits of cancer cells.

Our patient started radiotherapy nearly 3-months post-surgery instead of the ideal 6-weeks. This was due to the protracted healing of the surgical wound on the neck (Figure **4**) and defer was hoped to prevent its further damage.

Figure 4: Wound of neck dissection. Healing was still taking place at nearly two months post-operatively.

The contralateral neck was only kept under closed surveillance without intervention because there were no palpable neck nodes on that side, no breaching of tongue midline by the tumor and it had a clear surgical margin.

Prognosis of patients diagnosed with squamous cell carcinoma of head and neck that had surgery and post-operative radiotherapy is highly varied. Langendijk et al stratified patients into three groups; the intermediate risk, high risk and very high risk groups. Patients in the intermediate group had free surgical margin (>5mm), no extra-nodal spread and

no pN3 lymph nodes. Based on their analysis, with post-operative radiotherapy, these patients, as is our patient in this discussion, has 5-years of 92% locoregional control and 67% overall survival rates[12].

We are indeed sharing the same opinion with Soudry et al in that, this segment of population diagnosed with oral tongue SCC should be managed similarly with younger patients in terms of clinical staging and co-morbidities. This is because patient's age is not considered a prognostic factor in this disease[13]. However, it is generally known that there were significant association between histological subtype and recurrence outcome[14]. It is important that people should be fortified to immediately report to a surgeon whenever they see any unusual swelling any discomfort otherwise it may cause great discomfort and difficulty in future[15]. Our patient had survived the first three years and we hope we can continue counting good oncoming years.

Conclusion:

The treatment result of this patient is satisfactory. In our opinion, geriatric patients with squamous cell carcinoma of tongue can be given a vigorous treatment with curative aim whenever their general condition is permissible. This is because, once recurrence occur, further treatment can be more complicated in the patient's advancing age.

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