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Case Report

Moderately Differentiated Squamous Cell Carcinoma Involving the Right Commissure of Lip: A Rare Occurrence

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Abstract

Oral squamous cell carcinoma (OSCC) is one of the most prevalent malignancies in the oral cavity, with varying incidence rates across different anatomical sites. Although lip carcinoma is common, involvement of the commissure area is rare. This case report presents a moderately differentiated squamous cell carcinoma involving the right commissure of the lip. Early identification and prompt management are essential in improving the prognosis of squamous cell carcinoma of the lip. In cases involving the commissure, surgical excision remains the primary mode of treatment.

Keywords: Squamous Cell Carcinoma; Lip Commissure; Moderately Differentiated; Oral Cancer; Tobacco; Biopsy; Histopathology

Introduction

Oral squamous cell carcinoma (OSCC) represents over 90% of all malignant oral cancers, with the most common sites being the tongue, floor of the mouth, gingiva, and the hard palate. The lips, however, are also a frequent site of occurrence, especially the lower lip due to its greater exposure to ultraviolet radiation. Carcinomas involving the upper lip, and more rarely the commissure region, are relatively uncommon. The involvement of the commissure is even more infrequent, with most studies reporting a low percentage of cases in this specific location.

Risk factors for OSCC include tobacco use, alcohol consumption, and ultraviolet radiation. A history of smokeless tobacco use, as seen in this case, significantly raises the risk of developing malignancies in the oral cavity, including those in the lip and commissure regions. This case report focuses on a rare instance of squamous cell carcinoma in the right commissure of the lip in a patient with a long history of smokeless tobacco consumption.

Case Report

Patient information

A 65-year-old male presented with a growth on his right upper lip, noticed three months prior, which had progressively increased in size. The lesion was associated with discomfort while chewing, especially with spicy foods, and a noticeable loss of appetite. The patient had a long-standing history of smokeless tobacco consumption for over 15-20 years. There was no family history of skin cancer or similar oral lesions.

The patient's general health was stable, with no significant past medical or surgical history. He was a non-smoker, and his dental hygiene habits were routine. The patient reported no other significant comorbidities.

Clinical examination

On general examination, the patient appeared well-oriented with normal vitals. A facial asymmetry was noted on the right side, with noticeable incompetence of the lips. On examination of the oral cavity, an ulcerative lesion with irregular borders, measuring 1.2 x 0.8 cm (Figure 1) was seen on the right commissure of the upper lip. The lesion had a white pseudomembrane, a reddish-pink outer part, and a firm, tender consistency (Figure 2). It was not scrapable and showed signs of spontaneous bleeding upon palpation.

Figure 1: Location of the lesion.

Figure 2: Area of Chief complaint.

Oral examination

Examination of the hard tissue revealed caries in several teeth, and there was evidence of periodontal disease, including gingival recession and staining likely from tobacco use (Figure 3,4). The soft tissue lesion appeared primarily on the vermilion border, extending from the right canine to the first molar. The lesion had a dome-shaped appearance, with irregular borders, and was tender to palpation, exhibiting a tendency to bleed easily.

Figure 3: Intra Oral Examination-Maxilla.

Figure 4: Intraoral Examination-Mandible.

Provisional diagnosis

The provisional diagnosis of malignancy, specifically squamous cell carcinoma (SCC) associated with the lip commissure on the right side.

Investigations

Patient was advised to undergo routine laboratory tests including CBC, liver function and, blood glucose. An incisional biopsy was conducted, which provided the definitive diagnosis.

Treatment plan

The patient underwent an incisional biopsy under local anaesthesia, and the excised tissue was sent for histopathological examination. In addition to biopsy, dental treatment was planned, which included the extraction of decayed teeth and periodontal therapy for the existing periodontal disease. Post-surgical follow-up included monitoring for recurrence of the lesion; however, the patient did not report to the department for further evaluation.

Histopathology

Histopathological examination of the biopsy specimen confirmed the diagnosis of moderately differentiated squamous cell carcinoma. The features included atypical keratinocytes with an increased nuclear-to-cytoplasmic ratio, prominent nucleoli, and keratin pearl formation (Figure 5).

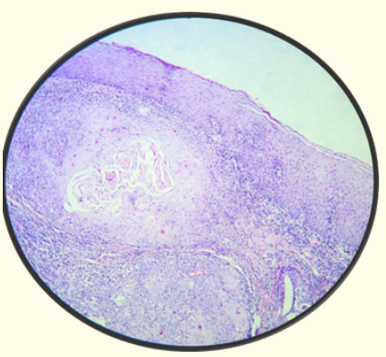

Figure 5: Histopathological Evaluation.

Discussion

Squamous cell carcinoma of the lip represents approximately 5% of all oral cancers, with the lower lip being the most commonly affected region due to its increased exposure to ultraviolet radiation. However, upper lip carcinomas are much less common, and carcinomas involving the commissure area are even rarer. Studies suggest that only 2-4% of all lip carcinomas occur at the commissure, making it a rare location for malignancy [1,2]. The rarity of these tumors at the commissure is likely due to the decreased exposure to sunlight and other carcinogenic factors compared to the more exposed lower lip.

A significant etiological factor in the development of squamous cell carcinoma in this patient was the long-term use of smokeless tobacco. Smokeless tobacco is a known carcinogen, particularly in the oral mucosa, leading to an increased risk of malignancy in areas such as the lip, floor of the mouth, and buccal mucosa. The development of SCC at the commissure in this case is further evidence of how chronic tobacco use can contribute to malignancies in less commonly affected oral regions.

The diagnosis of SCC at the commissure can be challenging due to its subtle initial presentation, often resembling benign conditions such as traumatic ulcers or chronic inflammation. However, the characteristic features of irregular borders, tenderness, and spontaneous bleeding in this case, combined with the patient's history of tobacco use, led to a strong suspicion of malignancy. An incisional biopsy and histopathological examination confirmed the diagnosis.

Treatment of SCC in the lip commissure generally involves surgical excision with clear margins. In this case, the patient was advised to undergo surgery followed by close monitoring to prevent recurrence. Radiotherapy may be considered in cases of advanced disease or if surgical margins are positive. Chemotherapy is generally reserved for metastatic disease [2-6].

Conclusion

SCC of the lip commissure is a rare but clinically significant malignancy, especially in patients with risk factors such as tobacco use. Early diagnosis through careful clinical examination and biopsy is crucial for effective management. Surgical excision remains the primary treatment modality, with favorable outcomes when the carcinoma is detected early. Continued surveillance is essential for preventing recurrence.

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