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admin@ajpsdz.org
MlSacademy.lb@hotmail.com

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Concurrent Challenges: Squamous Cell Carcinoma, Oral Submucous Fibrosis, and Psoriasis vulgaris - A Case Report

ZARMINA EHTESHAM[1], OBAIDULLAH KHAN[1], SHARJEEL CHAUDHRY[2*]

1. House Officer, Hamdard University.
2. Shifa Social Welfare Association.

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5. Corresponding author: sharjeelchaudhry1999@gmail.com

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Abstract

The case report is of the patient reported to the outpatient department having a chief complaint of fungal infection on the right lower front part of his tongue. Clinical features were presented by the symptoms of Oral submucous fibrosis (OSF) such as limited mouth opening and diffuse mucosal fibrosis. The patient's risk factors include the previous diagnosis of psoriasis, the immunomodulatory treatment, smoking, as well as the regular use of gutka and also chalia. A closer look using an Orthopantomagram (OPG) X-ray and also a biopsy revealed a Squamous Cell Carcinoma (SCC) of 4-5 cm in diameter with distinct peripheries and a high rate of tumor growth index, suggesting a high growth rate. The lymphovascular invasion was very negative and the disease was also localized to the oral cavity. The management plan was an interdisciplinary method, which included surgical intervention, radiation therapy, and chemotherapy, targeting the risk factors of tobacco and also betel nut use. The case illustrates the need for an interdisciplinary approach toward the diagnosis and management of oral health disorders, particularly in the presence of high-risk factors for malignancy such as SCC. The regular check-ups are to monitor the response to the treatment and also the recurrence. This report aims to show clinicians' contribution to the early detection and appropriate treatment of oral health diseases.

Keywords: Squamous Cell Carcinoma (SCC), Oral submucous fibrosis (OSF), Interdisciplinary Approach, Psoriasis, Risk factors.

Introduction

Squamous Cell Carcinoma (SCC) is a type of cancer that develops in the squamous cells; these are flat, scale-like cells of the epithelial tissues in various organs such as the skin and also in the lining of the digestive and respiratory tracts. SCC is also one of the most common types of oral cancer and is often linked with some risk factors, particularly in smoking and betel nut use. These risks can lead to the development of cancer in the oral cavity, including the tongue. This case report aims to review the clinical presentation of the patient, a 52-year-old male, who presented to the hospital with the chief complaint of a fungal infection on the right lower front of the tongue. Oral submucous fibrosis OSF, limited mouth opening, an exophytic ulcerated lesion, and white patches on the tongue are seen [1]. The past medical history of the patient includes psoriasis vulgaris, immunosuppressive therapy, gutka and chalia.

Clinical Presentation

In the intraoral assessment, the patient showed a limited mouth opening which was consistent with the OSF and there was extensive mucosal fibrosis affecting right and left buccal mucosa. The affected area is the right lateral border of the tongue with a spread to the tip presenting an ulcerated exophytic lesion and associated white ulcerated area. In addition, the patient also complained about the burning sensation of the affected area [2]. The patient's oral hygiene was compromised with sharp edges of teeth due to attrition. These signs have been presented for the last two months and led to additional investigations. On the other hand, psoriasis vulgaris has a strong correlation with a patient's medical history, which leads to immunosuppressant therapy. Moreover, gutka and chalia are taken frequently, and it is one of the major factors contributing to the growth of oral carcinoma.



Figure 1 OPG



Figure 2 Intra-Oral Examination of Tongue represents the SCC of the tongue with significant attrition and co-existing psoriasis vulgaris, predominantly affecting the skin of the face.

Differential Diagnosis

The clinical presentation is suspicious of various differential diagnoses: Fungal infections, viral infections (for instance, herpes simplex virus), and most likely benign lesions such as traumatic ulcer or inflammatory disease [3,4]. Nonetheless, the severity of symptoms, white patches, and risk factors should be evaluated to determine between malignant conditions such as SCC.

Diagnosis

According to clinical presentation and risk factors, the disease of this patient has a primary differential diagnosis of Squamous Cell Carcinoma (SCC) [5]. Currently, the lymph node examination in the case appears to be negative, restricting the condition only to the oral cavity. This necessitates an OPG X-ray and a mandatory biopsy for diagnosis and findings purposes which will lead to the development of an appropriate treatment plan. The patient had a medical history of psoriasis treated with an immunosuppressive drug. Moreover, in such

cases follow-ups are necessary to assess any signs which can lead to more serious issues, the patient being non-compliant, and the unnecessary usage of drugs leading to decreased immunity. Also, the habit of gutka and chalia led to the progression of the lesion.



Figure 3 SCC along with fibrous bands on the buccal mucosa

Histopathological Analysis

The patient presented to the OPD with a fungal infection on the right lower front of the tongue and with a reduced opening of the mouth which indicates oral submucous fibrosis OSF. On the clinical exam, a well-differentiated SCC was found on the right lateral border of the tongue extending to the tip of the tongue. The biopsy was indicative of SCC measuring 4-5 cm with clear margins and also a high rate of tumor growth count suggesting rapid proliferation. No lymphovascular invasion was observed. The SCC histopathological assessment by identifying the abnormal cell differentiation determines the tumor grading. TNM stage (T2 N0 M0) indicates a locally advanced but non-metastatic SCC with a

favorable prognosis, emphasizing the value of early detection to obtain the very best possible results.

Management

The management plan involved an interdisciplinary approach to eradicate the disease and its associated symptoms. The excision biopsy which was performed led to the accurate diagnosis and ultimately the required surgical intervention with 1-2mm clear margins of normal tissue. The early diagnosis with the correct treatment approach helped in faster recovery. On the other hand, regulating the risk elements including the arrest of gutka and chalia are essential in the management process. Follow-ups including repeated follow-ups should be routine after every treatment to assist in determining treatment response and the recurrence.

Conclusion

Moreover, this case indicates a medical history of psoriasis being treated with immunosuppressive drugs, a team approach between the dentists and the physicians is very central to the provision of comprehensive care. The interdisciplinary team aims at devising a treatment protocol that not only effectively treats the SCC, but also controls the risk of recurrence through the treatment of psoriasis and also immunosuppressive therapy. This collaboration, on the other hand, ensures that the patient is given a comprehensive treatment, reducing the impact of the autoimmune disease and thus optimizing the oncological treatment to achieve the best possible result with a minimal chance of SCC recurrence. This report aims to highlight clinicians' role in the early detection, accurate diagnosis, and management of oral health conditions including malignancy risk factors such as oral Squamous Cell Carcinoma.

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