

Well-Differentiated Oral Squamous Cell Carcinoma Presenting as a Non-Healing POST Extraction Ulceroproliferative Lesion: A Case Report

Rashmi Metgud, Nikita Chandravadiya*, Smitha Naik and Aastha Lal

Department of Oral and Maxillofacial Pathology, Pacific Dental College and Hospital, Udaipur, Rajasthan, India

Abstract

Background: Oral squamous cell carcinoma (OSCC) may clinically mimic inflammatory or delayed-healing extraction sites, potentially complicating early diagnosis. Persistent painful ulcers warrant careful clinical evaluation and histopathological assessment.

Case presentation: A 35-year-old male presented with continuous throbbing pain in the right mandibular posterior region and a non-healing ulcer following extraction of teeth 44 and 45, persisting for one month. The patient reported a history of bidi smoking, approximately 20 bidis daily for 25 years. Intraoral examination revealed an ulcerative lesion extending to the buccal aspect of tooth 46 and obliterating the buccal vestibule. Orthopantomography showed irregular crestal bone changes in the mandibular posterior region and periapical radiolucency. Incisional biopsy was performed.

Histopathological findings: Microscopic examination revealed infiltrating nests and sheets of malignant squamous epithelial cells, with prominent keratinization, keratin pearl formation, relatively mild pleomorphism and limited mitotic activity.

Conclusion: The findings supported a diagnosis of well-differentiated OSCC. This case emphasizes the importance of considering malignancy in persistent post-extraction ulcers and establishing the diagnosis through histopathological examination and clinicopathological correlation. ulcers require timely biopsy and clinicopathological correlation. Histopathological examination remains essential for confirming oral malignancy and assessing squamous differentiation and supporting early recognition of potentially serious oral disease.

Keywords: Oral squamous cell carcinoma; non-healing extraction socket; keratin pearl; incisional biopsy; case report.

Introduction

Oral squamous cell carcinoma (OSCC) is a malignant epithelial neoplasm characterized by invasion of atypical squamous cells into the underlying connective tissue. Its clinical presentation varies according to the anatomical site and stage of the disease, and lesions may occasionally resemble common inflammatory or odontogenic conditions. Gingival and alveolar carcinomas may present as persistent ulcers, unexplained pain or non-healing extraction sites, creating diagnostic challenges in routine dental practice. Previous case reports have highlighted the importance of considering malignancy when an extraction wound fails to heal as expected, particularly when accompanied by persistent pain or abnormal tissue changes [1-8].

The present case describes well-differentiated OSCC presenting as a painful, non-healing post-extraction ulcer in a 35-year-old male with a prolonged history of bidi smoking. It highlights the diagnostic value of incisional biopsy and histopathological examination in evaluating persistent oral lesions.

Case Report

A 35-year-old male presented with continuous, throbbing pain in the right mandibular posterior region and a non-healing ulcer following extraction of teeth 44 and 45, with symptoms persisting for one month. The pain was aggravated by mouth opening and mastication. Intraoral examination revealed an ulcerative lesion in the missing 44 and 45, region extending to the buccal aspect of tooth 46 and obliterating the buccal vestibule (Figure 1).

Cervical lymph nodes were not palpable. The patient reported a history of bidi smoking, approximately 20 bidis per day for 25 years. No relevant medical history was reported. Orthopantomographic examination demonstrated irregular crestal bone changes in the mandibular

posterior region and periapical radiolucency, as documented in the radiograph. (Figure 2 & 3).

An incisional biopsy was performed, and the tissue was submitted for histopathological examination. Microscopic evaluation demonstrated invasive nests and sheets of malignant squamous epithelial cells with prominent keratinization and keratin pearl formation. (Figure 4) The findings supported a final diagnosis of well-differentiated oral squamous cell carcinoma.



Figure 1: Intraoral photograph revealing the ulceroproliferative lesion in the missing 44 and 45 region extending to the buccal aspect of tooth 46.

Histopathological examination

Grossing: The incisional biopsy specimen consisted of nine creamish-white, soft tissue fragments measuring between 0.3 × 0.3 cm and 0.7 × 0.5 cm. Haematoxylin and eosin-stained Sections revealed in-

*Corresponding Author: *Nikita Chandravadiya, Department of Oral and Maxillofacial Pathology, Pacific Dental College and Hospital, Udaipur, Rajasthan, India

Citation: Nikita Chandravadiya*, Well-Differentiated Oral Squamous Cell Carcinoma Presenting as a Non-Healing POST Extraction Ulceroproliferative Lesion: A Case Report.

Jour of Clin & Med Case Rep, Imag 2026; 7(1): 1251.

filtrating nests and islands of malignant squamous epithelial cells within the connective tissue. The tumour cells exhibited abundant eosinophilic cytoplasm, prominent keratinization and keratin pearl formation. Cellular pleomorphism and mitotic activity were relatively limited, consistent with the preserved squamous differentiation. The invasive architectural pattern, together with the cytological and keratinization features, supported the diagnosis of well-differentiated oral squamous cell carcinoma.



Figure 2: Orthopantomogram revealing irregular crestal bone changes in the mandibular posterior region.



Figure 3: GROSSING.



Figure 4: Haematoxylin and eosin-stained section demonstrating infiltrating nests and islands of malignant squamous epithelial cells within the connective tissue & prominent keratinization and keratin pearl formation, consistent with well-differentiated squamous cell carcinoma.

Discussion

A non-healing extraction site is an extraction socket that fails to demonstrate the expected progression of healing following tooth removal. Normal socket healing involves blood clot formation, granulation tissue development, epithelialization, and subsequent bone remodeling. Delayed healing may occur due to local infection, retained root fragments, traumatic irritation, systemic conditions, or other pathological processes.

Although most extraction sockets heal uneventfully, persistent ulceration, unexplained pain, abnormal tissue growth, or failure to heal despite appropriate treatment warrants further investigation. In such cases, biopsy and histopathological examination play an important role in identifying the underlying pathology and excluding potentially serious conditions, including oral malignancy.

Oral squamous cell carcinoma is the most common malignant neoplasm of the oral cavity. The present case is significant because the tumour presented as a persistent painful post-extraction ulcer, which can clinically mimic a delayed healing extraction socket or inflammatory lesion. The patient's long-standing bidi-smoking habit represents an important risk factor for oral carcinogenesis. The associated radiographic changes further emphasized the need for thorough evaluation.

Histopathology demonstrated invasive nests and sheets of well-differentiated squamous cells, prominent keratinization and keratin pearl formation, with relatively mild pleomorphism and low mitotic activity, confirming well differentiated OSCC. This case highlights the importance of early biopsy and clinicopathological correlation in any persistent non-healing post-extraction lesion, particularly in patients with significant tobacco exposure.

Conclusion

Persistent painful ulcers at extraction sites warrant careful clinical assessment and consideration of underlying malignancy. In this case, histopathological examination of the incisional biopsy established the diagnosis of well-differentiated oral squamous cell carcinoma. The case highlights the role of biopsy and clinicopathological correlation in the evaluation of non-healing oral lesions, particularly in patients with relevant tobacco exposure.

Note: We thank department of Oral Medicine and Radiology for the clinical details.

References

1. [D'Souza J \(2012\) A case of well-differentiated squamous cell carcinoma in an extraction socket. Journal of Indian Society of Periodontology 16\(3\):440–443.](#)
2. Govindasamy G, Ganesan S (2024) Analysis of epidemiological and clinicopathological risk factors for locoregional recurrence of oral cavity squamous cell carcinoma: retrospective analysis of 150 patients with buccal mucosal carcinoma in a tertiary care centre. International Journal of Otorhinolaryngology and Head and Neck Surgery 10(5):467–473.
3. Attakkil A, Vijay S, Ratheesan K, Mullath A, Nair RR (2024) Survival Outcomes and Prognostic Factors in Oral Squamous Cell Carcinoma with Locoregional Recurrence: A Retrospective Analysis. Journal of Clinical and Diagnostic Research 18(2).
4. Anehosur V, Byadgi AA, Hallikeri K (2024) Assessment and to evaluate the eminence of depth of invasion in gingivobuccal sulcus carcinoma with the use of preoperative computed tomography and to compare it with depth of invasion measured histopathologically in the resected primary tumor, with the cervical nodal metastasis. International Journal of Otorhinolaryngology and Head and Neck Surgery.
5. Thiruvassagam S, Nesamani S, Upadya V, Adyanthaya S, Jose M (2024) Basaloid Squamous Cell Carcinoma of the Oral Cavity: A Report of Two Cases with Review of Literature. Journal of Clinical and Diagnostic Research 18(12).
6. [Yadav Y, Malhotra S, Subudhi G \(2025\) Oral Squamous Cell Carcinoma in a Middle-Aged Patient: Case Report and Literature Review. Cureus 17\(11\).](#)
7. Raina R, Singhal M, Jain A, Shetty DC (2025) Does a well-differentiated oral squamous cell carcinoma always behave well? A case series. J Microsc Ultrastruct 13: 42–48.
8. [Aquino IG, Bastos DC, Cuadra-Zelaya FJ, Teixeira IF, Salo T, \(2020\) Anticancer properties of the fatty acid synthase inhibitor TVB-3166 on oral squamous cell carcinoma cell lines. Arch Oral Biol pp. 113.](#)