

Transition of Oral Leukoplakia Into Oral Verrucous Carcinoma – A Case Report with Literature Update

Usama A. Kharadi¹, R.S.Birangane², Sanjeev Onkar³, Noopur Kulkarni⁴

ABSTRACT

Introduction: Verrucous carcinoma (VC) is an exophytic lesion, which classically can be seen in the oral cavity, larynx, genitalia, skin, and esophagus. It has a slow growth potential and is an alternative form of oral squamous cell carcinoma. It is recognized by its local aggressiveness with minimal metastatic activity. It is also called as “snuff dipper’s cancer” as its association with tobacco chewers and snuff users. According to a recent literature, VC has a strong relation with human papilloma virus which has a potential role in its growth and development. Though clinical presentation is classic for VC, histopathological diagnosis needs expertise opinion. It is said that often VC is preceded by long standing potentially malignant disorders (PMD) in the oral cavity.

Case report: Here we report a case of verrucous carcinoma with a pre existing history of oral leukoplakia since long duration. The case was managed surgically and the patient is on follow up without any complication since a year.

Conclusion: From the case presented here we could say that potentially malignant disorders (PMD) of oral cavity should be correctly diagnosed and immediately the treatment should start to prevent further complications. Long term follow up of patients with PMD is must. The Prognosis of VC is often good after surgical treatment.

Keywords: verrucous carcinoma, potentially malignant disorders, histopathologic diagnosis, oral leukoplakia

INTRODUCTION

Cancer is the second most leading cause of mortality in economically developed countries (following heart diseases) and the third most leading cause of death in developing countries (following heart diseases and diarrhoeal diseases). VC is a rare variant of squamous cell carcinoma of oral cavity, diagnosed in only 1 to 3 of every 1,000,000 persons each year.¹ The term verrucous carcinoma was first recognized by Lauren V. Ackermann in the year 1948. By that time it’s commonly called as verrucous carcinoma of Ackermann or simply Ackermann’s tumor. History dates back in 1896 when Buschke, and next in 1925, Buschke and Loewenstein, illustrated a lesion on penis which emerged benign cytologically, but behaved like a malignancy. As it was histologically similar to the benign condyloma acuminatum, it was termed as a giant condyloma acuminatum or the Buschke-Loewenstein

tumor.² It was actually a genital form of verrucous carcinoma. Buschke-Loewenstein tumor, florid oral papillomatosis, epithelioma cuniculatum, carcinoma cuniculatum and Ackermann’s tumor are various synonyms for verrucous carcinoma in literature. Here we report a case of VC in middle aged male patient with previous history of oral leukoplakia in oral cavity.

CASE REPORT

A 43 years old male reported in our Department of Oral Medicine and Radiology with a chief complaint of white patch on his lower left posterior region of jaw since 1-1/2 years. A detailed case history revealed that the patch existed since 1-1/2 years when he had visited a private dentist for oral prophylaxis, who had alarmed him regarding the white lesion and had counseled him about its malignant potential and advised him complete stoppage of all deleterious habits. The patient continued his habits and appeared alright. Patient revisited the dentist after 1 year for oral prophylaxis. Dentist informed the patient that the white lesion had increased in size and needs to be biopsied. With the apprehension of cancer, Patient visited cancer hospital where he was advised biopsy, which he did not get done. He then visited our department of Oral Medicine and Radiology for the same. He presented with a history of pain and paresthesia on mandibular left side of jaw. Patient’s past medical and dental history were non significant. He revealed a habit of chewing tobacco mixed with lime 8-10 times per day since 15 years place it in and used to keep in mandibular left posterior region of jaw for 10-15 minutes and spit it out afterwards, and also used to consumed paan occasionally. Since 1 month he had completely stopped all the habits. Examination of area of

¹Post Graduate Student, ²Professor & HOD, ³Reader, Department of Oral Medicine & Radiology, ⁴Senior lecturer, Department of Oral Pathology & Microbiology, PDU Dental College & Hospital, Solapur, India

Corresponding author: Dr. Usama A. Kharadi, PDU Dental college & Hospital, Department of Oral Medicine & Radiology, 19/1, Kegaon, Solapur, India

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chief complaint showed whitish verrucous growth in relation with 36 involving marginal and attached gingiva which was surrounded by leukoplakic patch [figure 1]. On palpation lesion was rough in consistency and non tender. 36 number tooth was grade I mobile. A single left side submandibular lymph node approximately size of 0.5x0.5 cm was found palpable which was soft, movable and non tender. Based on the clinical findings, a provisional diagnosis of Verrucous leukoplakia was made and a differential diagnosis of Verrucous carcinoma was considered. Various investigations like IOPA, cropped panoramic radiograph, CBCT, CT, blood investigations and incisional biopsy were carried out. On intraoral periapical radiograph (IOPA) severe bone loss was seen, mimicking a floating tooth appearance, but complete extent of bone loss was not appreciated on IOPA [figure 2]. In panoramic view radiolucency in alveolar crestal bone and in furcation area can be appreciated suggestive of bony invasion of lesion [Figure 3]. On CBCT, CT scan complete extent of lesion could be appreciated which was about 16.8x8.7 mm on axial CBCT [Figure 4]. On cross sectional CBCT periodontal ligament widening was noted with the adjacent premolar [Figure 5] which was not clearly noted on conventional radiograph. 3D reconstructed image by CBCT was done [Figure 6]. Incisional biopsy was done from the left buccal vestibule in region of 36 and specimen was sent for the histopath examination. The histopathological analysis in H and E section showed, epithelium with bulbous reteridges and acanthosis. There was presence of orthokeratin plugging. Individual cell keratinization and bizarre mitotic figures were seen at places. There was nuclear hyperchromatism and cellular pleomorphism which were pointing out a diagnosis towards a malignancy [Figure 7]. Histopathologic diagnosis came was Verrucous carcinoma. Patient was opted for surgery; hemimandibulectomy along with neck dissection on left side was done. Patient is still under follow up with no metastasis or recurrence.

DISCUSSION

Oral cavity and larynx are the most favored sites for verrucous carcinoma in head and neck region. It can also be found in other sites like vulva, pyriform fossa, nasal cavity, esophagus, paranasal sinuses, external auditory meatus, lacrimal duct, skin, penis, scrotum, vagina, uterine cervix, legs and perineum.³ There is a predilection for males in 6th or 7th decades of life who are addicted to the habits of tobacco, pan chewing and snuff dipping. The case presented here is also middle aged male patient with history of tobacco and pan chewing and used to place tobacco quid in mandibular left posterior vestibular region and lesion occurred on same area around the gingiva. Clinically VC appears as papillary with pebbled surface. There can be rugae like folds with deep clefts. In some cases it showed warty fungating like masses, often surrounded by premalignant lesions or conditions. Statistics reports it to be 5% of all intraoral squamous cell



Figure-1: Intraoral view of lesion; **Figure-3:** Cropped panoramic view showing radiolucency in alveolar crestal bone and in furcation area.

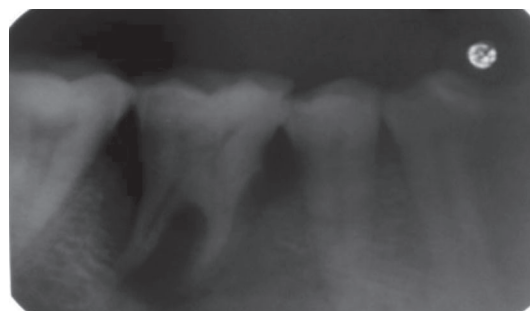


Figure-2: IOPA showing severe bone loss mimicking floating tooth appearance

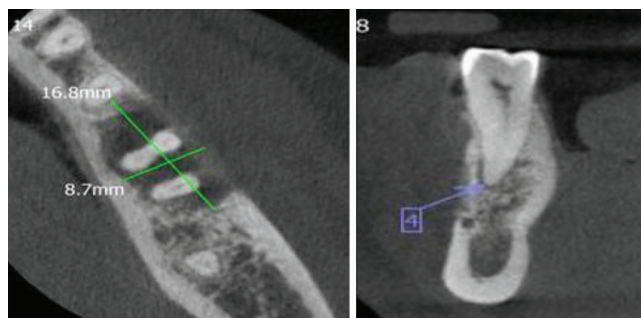


Figure-4: Axial CBCT showing extension of bone involvement; **Figure-5:** widening of periodontal ligament space with adjacent tooth

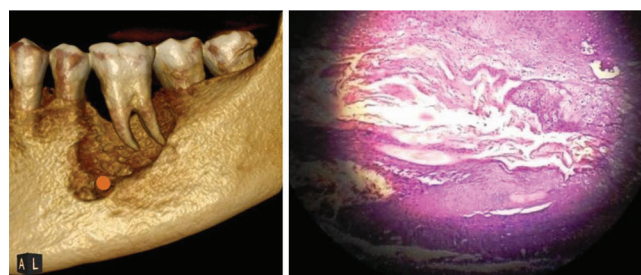


Figure-6: 3D reconstructed image; **Figure-7:** histopathology picture

carcinomas.⁴

It can occur in various anatomical locations and in oral cavity buccal mucosa, alveolar ridge and gingiva are common sites. VC can be seen in various forms like fungating, verrucoid, papillary or cauliflower like. According to a study by Rajendran et al., they found that leukoplakia was associat-

ed with VC in 48% of their cases.⁵ Demian SD et al (1973) stated that very old, untouched leukoplakia could be transformed into VC.⁶ Similar findings were proved in our case. The various treatment options in literature are surgical excision of the lesion that can be combined with radiotherapy. However there are some reports of local recurrence or anaplastic transformation after radiotherapy, but in a study by Shao Hui Huang et al (2009), they disapprove this fact too.⁷ Literature says that even though lymph nodes involvement if present in VC, they are quite often inflammatory. In our case as bone involvement was extensive and also lymph nodes were positive, conventional surgery along with neck dissection was carried out. Radiotherapy was not given. Patient is under follow up since a year and till date no complications were noted.

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CONCLUSION

From the case presented here, we could say as a dentist we come across patients with various abuse habits and white and red lesions in oral cavity. It is very important to diagnose the potentially malignant disorders (PMD) of oral cavity and to make patients aware and educate them regarding the potential threat of these potentially malignant disorders and their possible transformation into malignancy. Even after stoppage of adverse habits it is important to do a follow up with the patients with such PMDs and to perform biopsy if recommended. Though verrucous carcinoma is rare to see in routine practice, clinic pathologic correlation is very important for a judicious therapy.

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