CASE REPORT

Verrucous carcinoma of left mandibular alveolar mucosa - A case report

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Abstract

Verrucous carcinoma is a low-grade variant of squamous cell carcinoma (SCC). It is mainly reported in head and neck region, but it has a predilection of oral cavity and larynx. Clinically, it appears as a proliferative growth along with finger-like projections or a cauliflower-like appearance which plays a significant role in its diagnosis. Most commonly, it is seen in tobacco user males. It is difficult to diagnose verrucous carcinoma histopathologically. Verrucous carcinoma is often described as a benign lesion. It has minimum aggressive potential, but transformation into SCC has been seen in long-standing cases. Thereby, early diagnosis of the lesion is very necessary, and its surgical excision is the most appropriate treatment modality of verrucous carcinoma. In this paper, we discuss a case of 78-year-old female with verrucous carcinoma of left lower alveolar mucosa.

Introduction

Lauren V Ackermann in 1948 described oral verrucous carcinoma (OVC) as a low-grade variant of squamous cell carcinoma (SCC) and so it was known as “Ackermann’s tumor” or “verrucous carcinoma of Ackermann.”[1] In literature, various names have been used for verrucous carcinoma such as florid oral papillomatosis, Buschke–Lowenstein tumor, carcinoma cuniculatum, and epithelioma cuniculatum.[2] The most common site of occurrence includes oral cavity and various other sites being pyriform sinus, larynx, paranasal sinuses and nasal cavity, esophagus, lacrimal duct, external auditory meatus, skin, penis, scrotum, vagina, vulva, uterine cervix, perineum, and leg.[3,4] Among the oral mucosa, the most common sites include the buccal mucosa, followed by the mandibular alveolar crest, gingiva, and tongue. There is a predilection for male in the sixth decade with a slow-growing rate in OVC. It may invade locally if treatment is not appropriate. Distant metastasis is rare in verrucous carcinoma.[5] Clinically, it appears as a thick, painless, white plaque, giving it resemblance with a cauliflower.[6] Most commonly associated etiologies with OVC are smoking and smokeless form of tobacco, opportunist viral infections, and alcohol. This article reports a case of a female patient with OVC with differential diagnosis.

Case Report

A 78-year-old female patient reported to the Department of Oral Medicine and Radiology, Sri Rajiv Gandhi College of Dental Sciences and Hospital, Bengaluru, with a chief complaint of pain in left lower back tooth region for 2 weeks. A history of presenting illness revealed that pain started 2 weeks back, which was severe, continuous, aggravated on wearing denture, and got relieved by analgesics. Medical history revealed that the patient was hypertensive, diabetic, anemic, and was having hypothyroidism and was under medication for the same. The patient had a habit of betel nut chewing which she had quit for 30 years. The patient gave no relevant family history. She was a denture wearer for 10–12 years.

Normal gait and posture were seen on general examination. Furthermore, the patient was well oriented, conscious, and moderately built. Evidence of pallor was present. In extraoral examination, there was no abnormality detected. Regional lymph nodes were non-palpable.

On intraoral examination, completely edentulous maxillary and mandibular arches were revealed and a well-defined exophytic growth on the lingual aspect of left lower posterior alveolar ridge extending up to the retromolar area with white component extending up to the pterygomandibular raphe [Figure 1]. The growth was extending lingual to the left ventral...
aspect of the tongue, showing cauliflower-like growth. The surface of the growth appeared erythematous and papillary. On palpation, the growth was firm inconsistency and tender. Lesion was raised from adjacent mucosa with firm and irregular margins. Furthermore, the tongue appeared depapillated from the tip of the tongue to posterior one-third area. The oral hygiene of the patient was fair.

Verrucous carcinoma of the left mandibular alveolar mucosa was given as provisional diagnosis. Differential diagnosis of SCC and verrucous hyperplasia was given. Hematological investigations along with thyroid, lipid profile, and blood sugar estimation were done which was under normal limits and diabetes was under control.

Radiographically, completely edentulous maxillary and mandibular arches are seen without any invasion into the bone [Figure 2].

The lesion was excised under local anesthesia, and postsurgical instructions were given [Figure 3]. The specimen of excised lesion was sent for histopathological examination [Figure 4]. Uneventful satisfactory healing occurred after 1 month.

Follow-up of the patient has been done.

**Microscopic features**

The section (H and E stained) revealed stratified squamous epithelium with para keratinization. The epithelium was hyperplastic in nature with its down growth into the cellular connective tissue. The epithelium was having dysplastic features such as basal cell hyperplasia, cellular and nuclear pleomorphism, individual cell keratinization, and keratin pearl formation within broad and elongated rete ridges. Focal area of keratin plugging was also seen. The connective tissue underlying the epithelium was scanty and had infiltration of inflammatory cells with few endothelial lined blood vessels [Figure 5].

**Diagnosis of the case**

On the basis of clinical as well as histopathological findings, diagnosis of verrucous carcinoma was given.

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**Figure 1:** Intraoral picture showing exophytic growth on the left mandibular alveolar mucosa

**Figure 2:** Orthopantomogram showing completely edentulous maxillary and mandibular arches

**Figure 3:** Showing surgical excision of the lesion

**Figure 4:** Excised specimen
Discussion

OVC, as described before, occurs most commonly in elder male with tobacco chewing or smoking habit and alcohol consumption.[5] However, the case we reported here is of elder female with a thick exophytic growth having cauliflower-like appearance seen in her left mandibular alveolar mucosa, which had been proven histologically as verrucous carcinoma. Although Ackerman’s tumor or OVC has a predilection for oral cavity, esophagus involvement has also been reported in some cases. In Ackerman’s study, 11 patients of 18 (i.e., 61%) with OVC were tobacco chewers.[5] Some studies have also shown an association of verrucous carcinoma and human papillomavirus. Low socioeconomic status, ill-fitting dentures, poor oral hygiene, sniff, tobacco smoking and chewing, and alcohol use are some of the causative factors. Some factors that can predispose the individuals to the development of premalignant lesions are oral submucous fibrosis, leukoplakia and erythroplakia. Leukoplakia was found in association with OVC in 48% of patients in a study done by Rajendran et al.[8]

It has been reported that long-standing leukoplakia without treatment can change into OVC. The buccal mucosa is the most common site in oral cavity followed by mandibular alveolar mucosa. OVCs mostly present as a large, soft, fungating, exophytic growth, and having pebbly surface along with locally aggressive nature. Often lymphadenopathy is seen but is often reactive. The differential diagnosis of verrucous carcinoma includes (i) proliferative verrucous leukoplakia, (ii) SCC, and (iii) Verrucous hyperplasia.

The best treatment modality for OVC as per the literature is the surgical resection of tumor. Therefore, this patient was advised for surgical removal of the lesion, followed by regular checkup. Distant metastasis is generally not seen in case of OVCs. Recurrence of lesion can be seen because of improper section.

Conclusion

Verrucous carcinoma, in most of the cases, is clinically indistinguishable from verrucous hyperplasia and verrucous keratosis, hence in order to give appropriate diagnosis histopathological evidence is necessary. It is more common in males and is generally asymptomatic and painless. In this case, we report a case of a female with painful exophytic, warty lesion of left mandibular alveolar mucosa which was histopathologically proved to be verrucous carcinoma. OVC which is associated with leukoplakia, erythroplakia, and submucous fibrosis may be an indication of “field cancerization” and can have multiple recurrences, so regular follow-ups are highly suggestive in such patients.

References
