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**ABSTRACT**

First described in 1948 by Ackerman, the verrucous carcinoma is an unusual and non-metastasizing tumor with tendency for local invasion in comparison to squamous cell carcinoma. Though it appears remarkably harmless, the histo-pathological diagnosis of verrucous carcinoma should be done. This will help with careful identification of the tumor with a greater chance to become frank cancers. The most common site of occurrence is oral cavity involving buccal mucosa and mandibular alveolar crest. Treatment of verrucous carcinoma is challenging; multiple medical and surgical therapies are often attempted with limited success.

Here, I report two cases of verrucous carcinoma on lower lip and on buccal mucosa.

**KEYWORDS:** verrucous carcinoma, tongue, buccal mucosa, lip, tumor.

**INTRODUCTION:**

Oral Verrucous carcinoma (OVC) is a variant of well-Differentiated Oral Squamous Cell Carcinoma. Defined by Ackerman in 1948 as a diagnostically squamous cell neoplasia involving lip, oropharyngeal, and laryngeal mucosa.

**SYNONYMS:** Buschke Lowenstein tumor, Florid Oral Papillomatosis, Epithelioma Cuniculatum, Carcinoma Cuniculatum.

**AGE:** 50 to 80 years; Male predominance

**COMMON SITES IN ORAL CAVITY:** Buccal mucosa, mandibular alveolar crest etc.

**NON- ORAL SITE:** Glottis & larynx

**NATURE & APPEARANCE:**

The tumor grows slowly and locally, invasive in nature and unlikely to metastasize. It appears as a painless, thick white plaque resembling a cauliflower & pebbly mamillated warty lesions. Shear and Pindborg described a condition termed verrucous hyperplasia in 1980. Both lesions closely resemble each other clinically and pathologically. Verrucous hyperplasia has been considered an antecedent stage or early form of verrucous carcinoma and is believed to have the same biological potential.<sup>5</sup>

**ETIOLOGY:**

- Alcohol consumption
- Smoking
- Areca nut chewing
- Oral Microbiota

These factors may act individually or synergistically in oral carcinogenesis.

OVC also has a relationship with undesirable prosthesis, earlier injuries and scars, and chronic inflammation.

Moreover, it may occur as a result of deterioration of premalignant lesions, including oral verrucous leukoplakia, oral lichen planus, oral submucous fibrosis (OSF), odontogenic keratocyst.<sup>6</sup>

**CASE 1:**

A male patient aged 60 years came to the department of Oral Medicine and Radiology with a chief complaint of dull, intermittent pain in lower anteriors which increases on chewing food since last 1 year.

**ASSOCIATED COMPLAINT:** White growth on the lower lip since 1 year, gradual onset & had remained of the same size since the patient noticed it. Chronic smoker with 2 bidis/day since last 20 years and had quit the habit since 10 days.

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**Intraorally:** partially edentulous arch irt 14, 15, 16, 24, 26, 31, 36

Grade 2 mobility irt 41, 42, 32.

Generalized attrition of incisal edge, smoker's palate were seen.

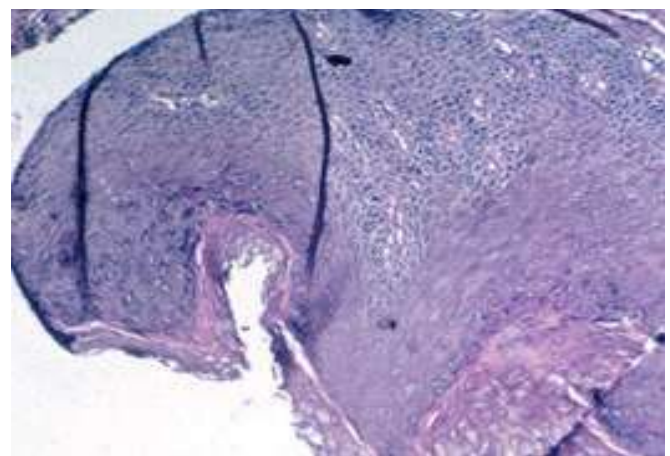
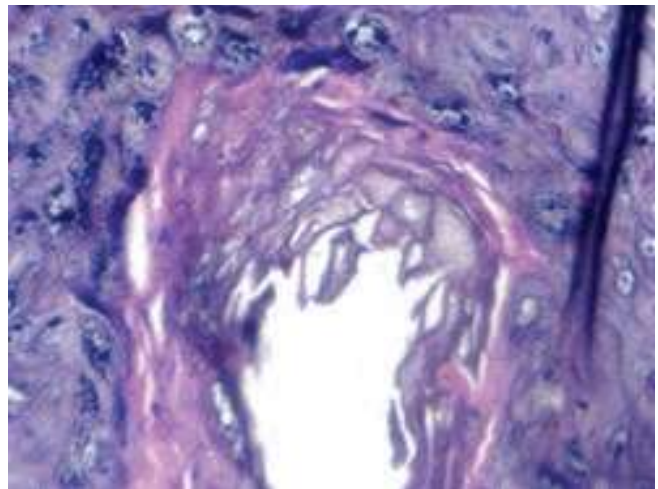
**ON INSPECTION:**

- Yellowish-white keratotic mass with finger like projections of approx. 2\*2.5cm.
- Extending antero-posteriorly (AP) from rim of lower lip to 2.5 cm posteriorly & medio-laterally (ML) extending opposite to mesial of 43 to mesial of 33 tooth.
- Surface appeared rough. No similar growths were noticed else where in the body.
- No past medical history family history of similar lesions or other skin diseases.

**ON PALPATION:**

- All inspectory findings were confirmed.
- Shape was irregular,
- Borders were well defined,
- Fixed to the underling mucosa
- Non-scrapable, does not disappear on stretching, no bleeding or discharge.
- Non tender and non-indurated.

Submandibular lymph nodes were palpable and tender on right side.



**PROVISIONAL DIAGNOSIS:** VERRUCOUS CARCINOMA of lower lip

**DIFFERENTIAL DIAGNOSIS:**

- Squamous cell carcinoma
- Verrucous Leukoplakia
- Verrucous Hyperplasia
- Squamous papilloma

**INVESTIGATIONS:**

Incisional Biopsy

**FINAL DIAGNOSIS:**

Verrucous carcinoma of lower lip

**CASE2:**

A male patient aged 57 years came to the Department of Oral Medicine and Radiology with a chief complaint of mass in right cheek region since 25 days. He was advised biopsy from a

private clinic before one week.

Had a habit of chewing & placement of tobacco in right buccal vestibule, 2-3 packets/ day since 8 years.

Intra orally there was-

partially edentulous arch irt 15, 16, 21, 22.

Root piece irt 25, 47, 48

Grossly carious irt 27

**ON INSPECTION:**

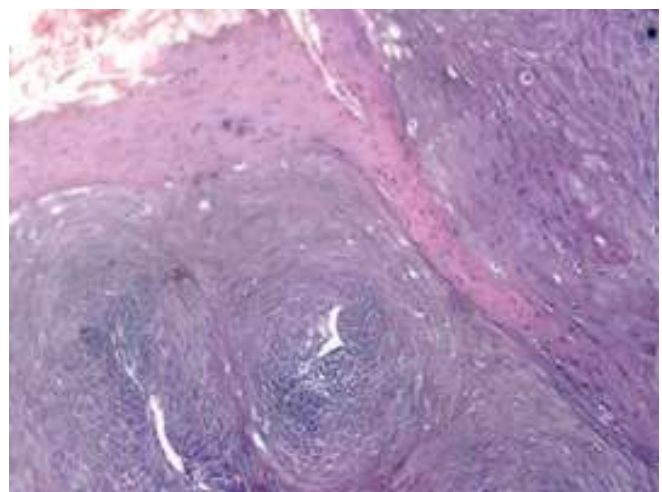
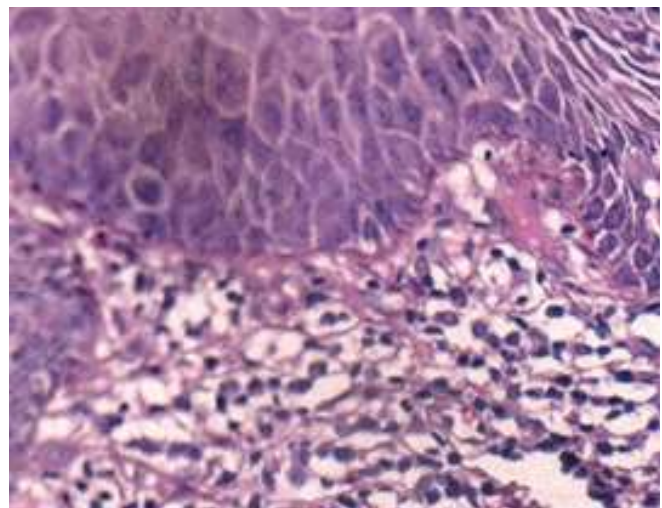
- Whitish keratotic like lesion on right buccal mucosa of approx. 3\*2 cm.
- Extending from 2<sup>nd</sup> premolar to 1<sup>st</sup> molar AP and supero- inferiorly from the occlusal line till depth of lower vestibule.
- A single cauliflower growth present on the same site at occlusal level opposite to 2<sup>nd</sup> molar tooth.
- Pinkish white in color, roughly round in shape, of approx. 5 mm in diameter.
- Surface appeared rough.

**ON PALPATION:**

- All inspectory findings were confirmed.
- Sessile growth,
- Rough surface,
- Soft to firm in consistency
- Fixed to underlying mucosa.
- Non- scrapable,
- Does not disappear on stretching
- No bleeding or discharge.
- Non tender, Non- indurated.
- Lymph nodes were not palpable.



**HISTO- PATHOLOGY REPORT:**



Verrucous carcinoma of right buccal mucosa

**DIFFERENTIAL DIAGNOSIS:**

Squamous cell carcinoma

Verrucous Leukoplakia

Verrucous Hyperplasia

Squamous papilloma

**INVESTIGATIONS:**

Incisional Biopsy

**HISTO- PATHOLOGYREPORT:**

Showing hyper ortho- keratinized stratified squamous epithelium exhibiting thick blunt rete ridges.

Keratin plugging was also seen.

Underlying connective tissue shows blood vessels and chronic inflammatory cells.

**FINALDIAGNOSIS:**

Verrucous carcinoma of right buccal mucosa

**DISCUSSION:**

Schrader et al and Jordan have reported that verrucous carcinomas are slow-growing, exophytic, well-demarcated hyperkeratotic lesions.

Tang *et al* first divided OVC into three types: exogenic type, cystoid type, and infiltrative type. The exogenic type of OVC is characterized by exophytic growth, cauliflower-like warty lesion and slow tumor growth.

Predilection for males in fourth to sixth decade is usually seen with OVC.<sup>8</sup>

In the oral cavity, the buccal mucosa and lower gingiva is the common site (IMAI et al, 1995).

In 1981, Diaz-Pérez et al. first reported lip verrucous carcinoma. In addition, Krutchkoff et al. reported that verrucouscarcinoma on the lip constituted only 2.8% of all oral neoplasms.

The lesions in this case series are similar in clinical behavior and aspect.

Alcohol and smoking related carcinogens are two main well established risk factors for oral cancers including OVC. These factors may act individually or synergistically in oral carcinogenesis.

In the following cases, predilection of tobacco in the form of smoked and smokeless with the OVC are seen. Regional lymphnode metastases are exceedingly rare, and distant metastases have not been reported Enlarged lymphnodes often palpable are often reactive.<sup>1</sup>

The findings in our case 1 were synchronous with these characteristics, whereas no lymphnodes were palpable or tender in case 2.

Gold diagnosis standards or specific diagnostic markers are still lacking for OVC differentiation as it is similar to many diseases in clinical and pathological aspects.Verrucous hyperplasia and verrucous carcinoma are indistinguishable clinically.<sup>6</sup>

The clinical association with leukoplakia is significant, and the evidence indicates that untreated leukoplakia may develop in to a verrucous hyperplasia and ora verrucous carcinoma.

**OVC and Oral Squamous Cell Carcinoma:**

OVC has some pathological similarities to OSCC. Clinically, it has a strong tendency for local invasion whereas metastasis is rarely seen in OVC which is common in OSCC.

From the clinical aspect OVC,PVL, and OVH appears as a thick, extensive, white plaque, or exophytic verrucous appearance. They can be differentiated by further in depth clinical and gold standard histopathological examinations.

**OVC and Proliferative Verrucous Leukoplakia (PVL):** PVL are more common in older females on

gingiva & palate, while OVC is seen in older males on buccal mucosa & alveolar ridge. There's no correlation with alcohol consumption, tobacco chewing, smoking, or HPV infection in PVL.

**OVC and Oral Verrucous Hyperplasia (OVH):**

1980 Shear & Pindborg described how these two entities are different. But, the epithelial folds extends above the margins of surrounding mucosa; whereas in VC folds invade down into the connective tissue and below the surrounding mucosa.

**OVC and Oral Squamous Papilloma:** For OVC, all rete pegs of the epithelium tend to project into the underlying connective tissue, at more or less the same level, forming 'pushing border.' OSP often presents as many long, thin and finger-like projections which extend above the mucosal surface.

However, it should be noted that this field is still facing three challenges from primary sub-fields of the research and clinical practice of OVC, namely multifactorial etiology, complex molecular mechanism, and deficient treatment.<sup>6</sup>

The treatment regimens mainly includes-

- Surgery
- Chemotherapy
- Radiotherapy
- Or combinations, cryotherapy, and shave excision.

New modalities includes-

- Photodynamic therapy
- Co2 laser therapy.<sup>6</sup>

In most cases, operations are the first choice for the treatment of OVC and chemotherapy has only a complementary role to surgical procedure.<sup>2</sup>

**CONCLUSION:**

There is a presence of malignant foci reported in OVC cases.

Moreover, close discussion between the clinicians

and pathologists are necessary to differentiate between verrucous hyperplasia, verrucous keratosis, and verrucous carcinoma.

Thus we conclude that differentiation should be based on precise comparison and integration of all the results and not on the isolated valuation of the different findings.

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