# VERRUCOUS CARCINOMA -NOW AND THEN

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**ABSTRACT:** Verrucous carcinoma is a highly differentiated variant of squamous cell carcinoma which tends to occur more commonly in the men in the 6-7th decade of life. There are reports to indicate the lesions arise from proliferative verrucous leukoplakia. Both the lesions have a greater tendency to occur in patients with smokeless tobacco use. Verruocus carcinoma is an innocuous lesion with a late tendency to metastasize. It responds well to surgical management. Here we report the occurrence of verrucous carcinoma from a pre-existing case of proliferative verrucous leukoplakia in a 72 year old female patient.

**KEYWORDS: Proliferative verrucous leukoplakia, verrucous carcinoma, premalignant lesions, potentially malignant disorders.**

## INTRODUCTION

Proliferative verrucous leukoplakia is a potentially malignant condition which was first described by Hansen in the year 1985[1,2]. Proliferative verrucous leukoplakia begins as an innocuous slow growing hyperkeratosis which in time turns into multifocal exophytic wart like growth.[1] The synonymous term in oral florid papillomatosis.[1,3] Most commonly occurs in women in 7th to 8th decade of life.[1] It is postulated that proliferative verrucous leukoplakia represents a histological point on a continuum to the development of cancer: hyperkeratosis with epithelial dysplasia, verrucous hyperplasia, verrucous carcinoma and conventional cell carcinoma.[4] Thus proliferative verrucous leukoplakia has a progressive clinical course with worsening histopathologic features, if left untreated.

Verrucous carcinoma is a highly differentiated variant of squamous cell carcinoma, first described by Ackerman in the year 1948. The synonyms for it include Ackerman's tumour, Buschke- Lowenstein tumor, epithelioma cuniculatum, Ca- cuniculatum.[5]The tumor has an insidious, progressive onset which is locally invasive with a late tendency to metastasize. It clinically manifests as a white plaque with exophytic projections resembling the surface of a cauliflower.[6] It is most commonly seen in men than in women in the 6-7th decade of life.[5] Here we present a case report of an elderly female who had presented with a proliferative verrucous leukoplakia turning into a verrucous carcinoma.

**Case report:**

A 72 year old female patient had come to the Department of oral medicine , Meenakshi Ammal Dental College and Hospital with a complaint of a growth in the cheek for the past 3 months. History reveals that she visited a dental hospital 3 months back for the same growth for which incisional biopsy was done which revealed proliferative verrucous leukoplakia. Patient discontinued the treatment and she came to us.

She had the habit of chewing betel nut and slaked lime combination for the past 50 years. She uses atleast 2-3 betel leaves with betel nut and slaked lime everyday on a constant basis. During her 3rd and 4th decade of life she had also used dried tobacco leaves extensively. All her tobacco related products were placed on the lower left buccal vestibule. After 50 years of age, she was repeatedly getting tooth ache she was using snuff intra orally in a bid to reduce the dental pain.(**Fig.1**)

On inspection, three separate proliferative growths were seen in the left buccal mucosa closely spaced together measuring variably from 2x3 cm to 1x1.5 cm. The growths were located anteriorly about 0.5 cm short of the commissure of the mouth and posteriorly 3 cm short of the pterygomandibular raphe. The superior extent of the growths were about 2 cm away from the upper buccal vestibule and extending inferiorly to about 2 cm above the lower buccal vestibule. The growths appears pebbly

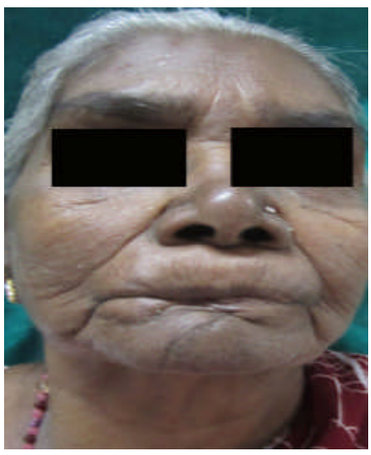

**Fig.1 Profile photograph**

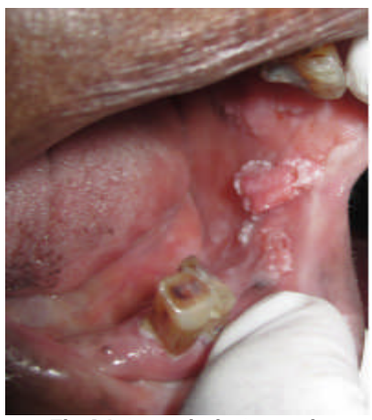

**Fig.2 Intraoral photograph**

surface with a rough texture compared to the adjoining mucosa.(**Fig. 2)** On palpation the growths are found to be sessile with no fixity to the deeper structures. The growths were non-tender with firm nature on palpation.

Another incisional biopsy carried out in our institution as the growths were multiple and had increased in size. The histopathology report, reveals hyperparakeratosis with broad bulbous rete pegs. There was minimal cellular atypia and an intact basal cell layer. These features were suggestive of verrucous carcinoma.(**Fig. 3 and Fig. 4**). The patient decided to undergo treatment in a regional cancer centre near Chennai in spite of our recommendation to carry out treatment in our institution because of financial reasons.

## Discussion:

Proliferative verruous leukoplakia has an uncertain etiology. The probable agents implicated are smokeless tobacco use[7], Human papilloma virus 16 and 18. The presence of Epstein Barr virus has been noted in isolated cases[1]. This benign lesion presents with multiple aberrations in cell cycle regulatory genes with DNA ploidy.

In the continuum as pointed by Batsakis et al[1,8] in the four stages of hyperkeratosis with-out epithelial dysplasia, verrucous hyperplasia, verrucous carcinoma and conventional cell carcinoma; the points of difference between verrucous hyperplasia and verrucous carcinoma are few. The same lesion when biopsied at various points may give differing pictures. However, there are no clinical differences.[1] This may account for the differing histopathology report in this case.

The management options include surgery followed by an antiviral agent like methisoprinol[1,9], carbon dioxide LASER[1.10] and photodynamic therapy.[1,11] The recurrence rate is alarming which is 86.7% with scalpel surgery, Carbon dioxide LASER.[1] However, follow up studies with photodynamic therapy are lacking at the moment.[1] The rate of malignant transformation stands at 74% with multifocal cancer development.[1]

Verrucous carcinoma like its predecessor has an uncertain etiology. The predisposing factors includes oral lichenoid, oral leukoplakia, poor oral hygiene and human papilloma virus. [7]Verrucous carcinoma most commonly occurs in men greater than 55 years of age and most commonly seen in the retromolar area, buccal mucosa and hard palate. Extra oral verrucous carcinoma arises in mucosa of larynx, oesophagus, glans penis and vulva.[6]

Verrucous carcinoma is a warty variant characterized clinically by a warty growth with a well differentiated keratinizing epithelium having minimal atypia and with locally destructive pushing margins at its interface with the underlying connective tissue. Verrucous carcinoma typically has a heavily keratinized/parakeratinized, irregular, clefted surface with parakeratin plugging extending deeply into the clefts. The prickle cell layer shows bulbous hyperplasia with a well defined border with an intact basal lamina. There is minimal atypia and a sub-epithelial inflammation.[6] The lesion has been compared to a lesion referred to as oral florid papillomatosis with which it shares a common clinical, microscopic features and same biologic features.

An occurrence of a verrucous carcinoma arising from an odontogenic cyst in the anterior maxilla has been reported by *Mohtasham et al.*[12] Though metastasis is a rare and late occurrence a atypical case had presented multifoccally from the hard palate, lip with orbital involvement as reported by *Asproudis et al.*[14]

The therapy for this lesion would involve surgery combined with radiotherapy. Cytostatic drugs like alpha interferon may be used to delay the growth of this tumor.[7]Prognosis is excellent after surgical removal.[7]

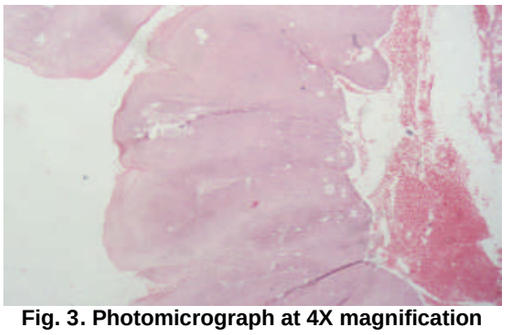

**Fig. 3. Photomicrograph at 4X magnification**

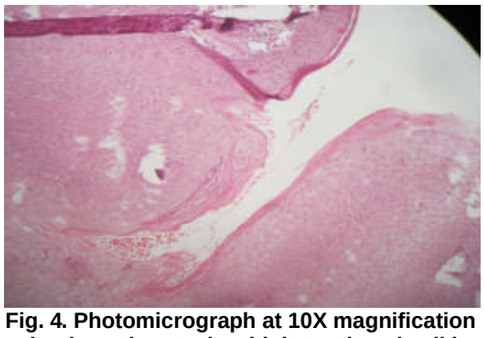

**Fig. 4. Photomicrograph at 10X magnification showing hyperkeratosis with intact basal cell layer**

**CONCLUSION**

Verrucous carcinoma may arise *de-novo* from pre-existing potentially malignant lesions. In this case we had a patient who presented with a proliferative verrucous leukoplakia which over a period of two months had evolved into verrucous carcinoma.

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