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VERUCCOUS CARCINOMA- A CASE REPORT

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ABSTRACT

Oral Verrucous Carcinoma (OVL) is a rare tumor, first described by Ackerman[1]. Verrucous carcinoma is a variant of squamous cell carcinoma. The etiology of verrucous carcinoma is not well defined. Human papilloma virus (HPV) has been considered one of the causative factors[2]. Smoking seems highly associated with the development of mucosal verrucous carcinoma of the neck and head. Poor oral hygiene, presence of oral lichenoid, and leukoplakic lesions may act as predisposing factors. In Asia, leukoplakia is known to be associated with smoking (bidis and cigarettes), smokeless tobacco, and chewing habits (paan, areca quid, and miang), and a synergistic effect has also been found[3].

KEY WORDS

Oral Verrucous carcinoma (OVL), Human Papilloma Virus (HPV), Leukoplakia.

INTRODUCTION

Oral Verrucous Carcinoma (OVC), a variant of Squamous Cell carcinoma (SCC), was first described by Lauren V Ackermann in 1948 so it was known as 'Verrucous Carcinoma of Ackermann" or "Ackermann's Tumor". Other names used in literature are Buschke-Loewenstein tumor, florid oral papillomatosis, epitheliomacuniculatum, and carcinoma cuniculatum[4]. The most common site of occurrence is oral cavity, other sites being larynx, pyriform sinus, esophagus, nasal cavity and paranasal sinuses, external auditory meatus, lacrimal duct, skin, scrotum, penis, vulva, vagina, uterine cervix, perineum, and the leg[5,6]. OVC has a predilection for male in sixth decade with a slow growing rate and becomes locally invasive if not treated properly. But, distant metastasis is rare[7]. It appears as a painless, thick white plaque resembling a cauliflower. The most common sites of oral mucosal involvement include the buccal mucosa, followed by the mandibular alveolar crest, gingiva, and tongue[4]. The tumor rarely crosses 10 cm in its greatest dimension. Literature depicts that VC mostly occurs in males in 5-6th decade of life [3]. Use of tobacco in the smokeless and inhaled forms has been predominantly reported in the affected patients, followed by betel nut chewing and use of alcohol[8]. Surgery has been the first choice of treatment for these lesions, and radiotherapy is controversial[9], however, surgery combined with radiotherapy is the next most preferable treatment and may have benefits, particularly in cases of extensive lesions[10]. Recurrence rate is high in cases in which either irradiation or surgery alone is performed.

CASE REPORT

A male patient whose age was 45 years, came in our patient department presented with a complaint of growth on right lower lip for 5 months with mild pain, Patient also complains of white patch on right buccal mucosa. Patient was apparently well 1 year back when he noticed white patch on right buccal mucosa which gradually increased in size. Six months back patient noticed a growth on lower right lip on lateral side. Patient also have a burning sensation on consumption on hot spicy food.

Personal History: Patient consume 15 packets of shyambahar gutkha, 3-4 paan daily and also put Radha tobacco in his vestibule (snuff dipping) for 15 years. He also consumes 100ml of alcohol occasionally for 15 years.

On general examinations all vitals were normal and no any abnormality detected.

On Extra oral examination: Face was billaterally symmetrical. Skin overlying the right side of the mandible was red.

Smooth synchronous movement of temporo mandibular joint with clicking sound was present.

Right submandibular lymph nodes were enlarged, palpable and tender. Lymph nodes were fixed, and their consistency was hard. There was a exophytic growth on right lower lateral part of lip.

On intra Oral Examination: White kearatotic non scrappable patch seen on right buccal mucosa extending into the upper and lower vestibule. The lesion was 2cm in diameter extending anteriorly from commissural area to retromolar area posteriorly and superio-inferiorly from upper labial vestibule to lower labial vestibule. On examination of right side of lip, exophytic finger like growth was present which was 1.5cm in diameter with ill definded margins, Extension of the margin is from right commissural area to middle part of the lip. Color of the lesion was brown.

Blenching and fibrotic bands were present on left buccal mucosa. Blenching of soft palate and restricted tongue protrusion was present. Generalized moderate gingival inflammation was present.

DIFFERENTIAL DIAGNOSIS:

Based on clinical features-

- Squamous Papilloma
- Proliferative Verrucous Leukoplakia
- Verrucous Leukoplakia
- Verrucous Xanthoma
- Verrucous Vulgaris

Incisional biopsy shows, one bottle containing one soft tissue was received. The tissue was creamish to brownish in color, firm in consistency and measured 1.8x1.7x0.7 cm in diameter. The tissue was cut into two. One part was kept for routine processing and other part of the tissue was preserved.

Fig.1. Shows white kearatotic non scrappable patch seen on right buccal mucosa.

Fig.2. Shows white kearatotic non-scrapable patch seen on right buccal mucosa.

Fig.3. Shows white, exophytic finger like growth on the Lip.

Fig.4. The tissue was, firm in consistency and measured 1.8x1.7x0.7 cm in diameter.

DISCUSSION

Verrucous carcinoma, a low-grade variant of squamous cell carcinoma, is so closely aligned with the use of snuff and chewing tobacco that it has been called the "snuff dipper's cancer," even though it is not the most common form of carcinoma resulting from this habit[11]. The habitual chewing of “paan,” a mixture of betel leaf, lime, betel nuts, and tobacco, has been extensively implicated for the high incidence of verrucous type of oral cancers in India[12]. It is, furthermore, now known that 16-51% of oral verrucous carcinomas are found in persons without tobacco habit. VC constitutes 2 to 4.5% of all forms of squamous cell carcinoma seen mainly in males above 50 years of age9. It occurs most commonly in the buccal mucosa (61.4%), followed by the lower alveolus (11.9%)[13]. The etiopathogenetic of VC is unclear Other etiologic agents may be involved, with immunosuppression, human papilloma virus and other viruses being most recently implicated. Nevertheless, it cannot be denied that the most common site of occurrence for this cancer remains the oral mucosa and the majority of oral cases are found in persons who habitually chew tobacco or snuff. Recent studies have further confirmed association between HPV and OVC by detecting HPV– DNA types 6, 11, 16, and 18 by polymerase chain reaction (PCR), restriction fragment analysis, and DNA slot–blot hybridization[14]. VC in the oral cavity is characterized by a cauliflower-like exophytic growth with a cleft, pale, warty, fungating, locally aggressive, ulcerated tumor attached by a broad base, is well circumscribed and it is clearly demarcated from the adjacent mucosa. with a pebbly mamillated surface[15].

The present study showed that the patients had the habit of chewing tobacco, with other aetiological risk factors such as smoking and consumption of alcohol. The lesions often occurred in the buccal mucosa which was the regular site of placement of the quid. Smoking alone was associated with VC in 9% while multiple habits were seen in 18.8% of the cases. Alcohol, another carcinogen in VC was observed in the present study. These findings support the role of chemical carcinogens especially tobacco in the development of verrucous carcinoma.

Histopathological appearance of VC was similar to various reports[16,17] which showed a well-differentiated parakeratinized stratified squamous epithelium showing large broad and pushing rete pegs extending deep into the connective tissue. The epithelium shows marked basal cell hyperplasia, acanthosis, mitosis, vesiculated nuclei and prominent nucleoli. The superficial parakeratin layer shows plugging deep into the epithelium and corrugated appearance.

Dense chronic inflammatory infiltration consisting of lymphocytes and plasma cells in the superficial lamina propria.

HISTOPATHOLOGICAL IMPRESSION: VERRUCOUS CARCINOMA

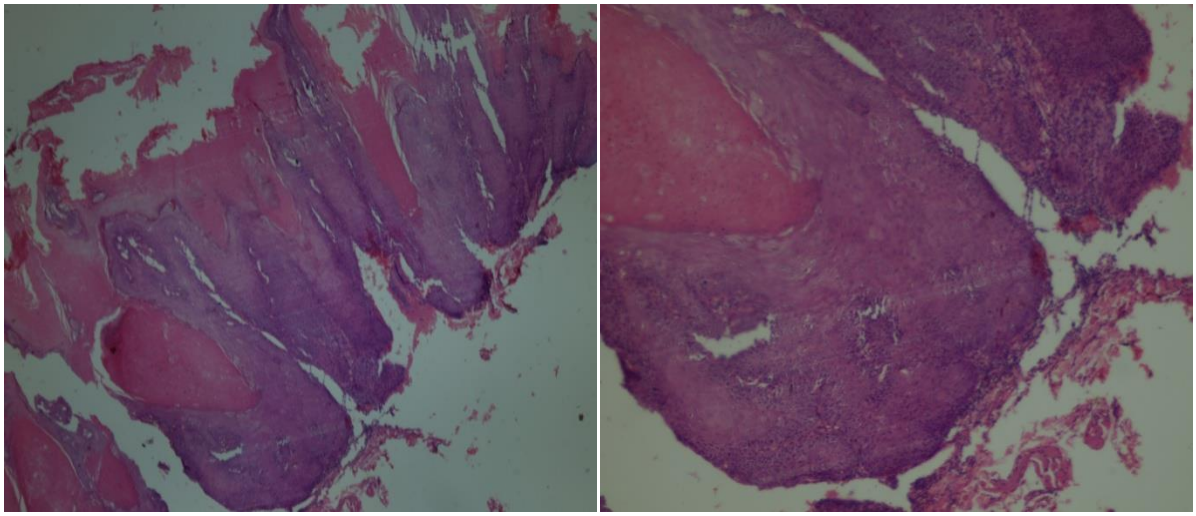

Fig 5&6. Histopathological slide shows, Keratin plugging, push like pattern of rete ridges, connective tissue core, cleft like space lined by thick layer of parakeratin.

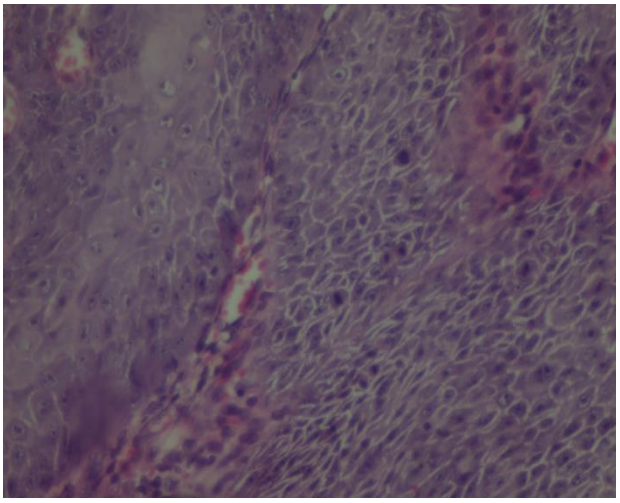

Fig 7. Histopathological slide shows, the epithelium shows marked basal cell hyperplasia, acanthosis, mitosis, vesiculated nuclei and prominent nucleoli.

Verrucous Carcinoma should be differentiated histologically from similar appearing lesions like verrucous hyperplasia and proliferative verrucous leukoplakia. All these lesions show atypical epithelial hyperplasia with varying degrees of dysplasia. The Verrucous Carcinoma lacks the well-formed, wide papillary fronds of a squamous cell papilloma. Lack of atypia and intact basement membrane helps to rule out conventional SCC and papillary SCC from Verrucous Carcinoma. There have been accounts of squamous cell carcinoma occurring in Verrucous Carcinoma described by several authors and as many as 20% cases show invasive/micro-invasive carcinoma in a part of the lesion[18].

Treatment modalities for verrucous lesions have included surgery, radiation therapy, chemotherapy, cryotherapy, laser therapy, photodynamic therapy, and treatment with recombinant alpha–interferon. Although adequate surgical excision remains the treatment of choice for the oral VC, chemotherapy, alone or in combination with radiotherapy, has also been employed as initial treatment[19,20].

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