

Verrucous Carcinoma (Ackerman's Tumour) of Mobile Tongue

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Abstract

Ackerman's tumour or Verrucous carcinoma is a unique clinico-pathological variant of squamous cell carcinoma, occurring mainly in oral cavity and larynx, buccal mucosa being most commonly involved. One case of verrucous involving tip of tongue ($T_1N_0M_0$ /Stage 1) in an adult male is being reported who underwent wide field surgical excision. The clinico-pathological feature of verrucous carcinoma are being discussed.

Key Words

Carcinoma, Verrucous

Introduction

Verrucous carcinoma is an uncommon but distinct variety of well differentiated squamous cell carcinoma first delineated as a clinico-pathologic entity by Ackerman in 1948 (1). Predominantly being a squamous mucosal lesion, verrucous carcinoma may also be found on cutaneous surfaces. Whether the carcinoma occur in the upper aerodigestive tract (verrucous carcinoma), on the genitalia (condyloma acuminatum), or on extremities (carcinoma cuniculatum), they are essentially the same neoplasm with slowgrowing, locally invasive and non-metastasizing behaviour (2). The mucosal membrane of head and neck are sites of predilection, with the oral cavity and larynx especially at the risk (2).

The macroscopic appearance of Ackerman's tumour depends on several factors like duration of lesion, degree of keratinization and the changes in adjacent mucosa. The fully developed carcinoma in an exophytic gray to red bulky lesion with a rough, shaggy, papillomatous surface. The term "Verrucous" is used because of its fine, finger like surface projections (3). It may grow through soft tissue of cheeks, penetrate into mandible or

maxilla and invade perineural space (4). Regional lymph node metastasis is rare and distant metastasis has not been reported. The cell kinetics of verrucous carcinoma are distinctive, containing a thick zone of non-proliferating, non keratinizing cells between the basal germinative layer of normal squamous mucosa, lacking the S-phase cells (5) In contrast, non-verrucous squamous cell carcinoma manifests S-phase cells distribution throughout non keratinized zones. It is likely that most of cases reported in the past as oral florid papillomatosis represent early and non-invasive stage of verrucous carcinoma (6).

Case Report

A 70 year old male patient presented with an exophytic growth on tip of tongue with a rough, shaggy and papillomatous surfaces, for a period of 6 months. The growth was 2 cm x 1.0 cm in its greatest dimensions with no history of trauma, oral bleeding, dysphagia or any speech problem. On palpation, the growth was greyish white, non-friable, non-tender, with well defined raised margins and no infiltrative induration. Cervical lymph nodes were not palpable. The patient underwent

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wide-excision taking safe oncological margin, under local anaesthesia and it was closed primarily using two layers of 2.0 vicryl sutures. The post-operative histopathological examination revealed features of verrucous carcinoma (Fig-I) depicting swollen and voluminous rete pegs extending into deeper tissues lacking cytological atypia. Occasional mitotic figure was present.

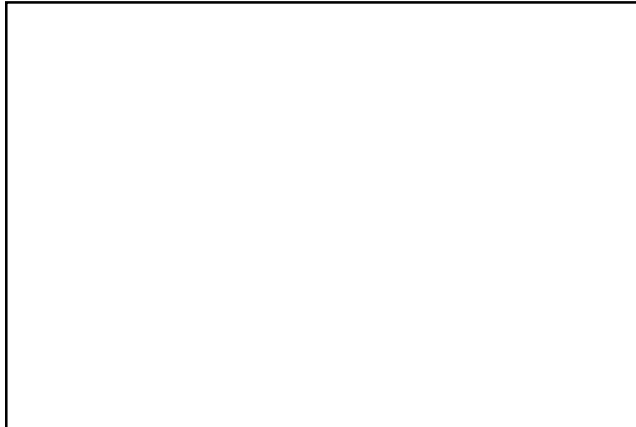


Fig 1. Histological feature of verrucous carcinoma, depicting swollen rete pegs lacking cytological atypia. occasional mitotic figure is seen (10x)

Discussion

Verrucous carcinoma most of the times goes unrecognised or unchallenged due to benign indolent tumour behavior. Clinical leucoplakia often characterises the mucosa from which the neoplasm originates. Verrucous carcinoma appears to be a part of histologic continuum of leucoplakia with verrucous hyperplasia as a part of such spectrum (2) while others consider verrucous hyperplasia as a distinct clinico-pathological entity (7) with its characteristics (Table 1). In the oral cavity, verrucous carcinoma constitutes 2 to 4.5 % of all forms of squamous cell carcinomas (8) seen mainly in males above 50 years of age and having a close connection with use of tobacco especially chewing of snuff dipping. This is also associated with high incidence (37.7%) of second primary tumour synchronous or metachronous, mainly in oral mucosa (10). Verrucous carcinoma has excellent prognosis because of its slow growth and gravity with which it metastasize to regional

lymph nodes (3). Later in the course the contiguous structure may be involved with time and adjacent tissues including bone and cartilage may be invaded and destroyed. Microscopically, verrucous carcinoma are usually broad based and locally invasive with papillary fronds consisting of highly differentiated squamous cell lacking usual criteria of overt malignancy. Rarely mitosis is seen. Surface is usually covered by keratin layers. The invasive margin is invariably a slow 'pushing' one along with inflammatory reaction in the stroma. Because of deceptive benign appearance of neoplastic cells, an accurate pathological diagnosis requires a sufficient biopsy specimen that contain infiltrative features of verrucous carcinoma. A focus of conventional invasive squamous cell carcinoma within the verrucous carcinoma is seen in 20 percent of patients akin to the phenomenon of anaplastic transformation in larynx (2).

There is a considerable controversy in the literature regarding 'anaplastic transformation of verrucous carcinoma following irradiation therapy in 10-20 percent cases (4,11,12,13). Following irradiation a small proportion of verrucous carcinoma are reported to have changed their biological behaviour from indolent low grade locally destructive lesion to a highly malignant, metastasizing and fatal tumor, (4,11,12,13) with extremely short latent

Table 1. Clinico-pathological characteristics of Verrucous carcinoma

1	Sites of prediction	Oral Cavity, larynx
2	Age/Sex	Men over 50 years.
3	Habits	Tobacco user, poor oral hygiene.
4	Grade of malignancy	Low grade of local significance only.
5	Metastatic	None in bonafide cases.
6	Gross appearance	Exophytic or fungating usually keratinizing.
7	Associated mucosal changes	Leukoplakia, metachronous or synchronous squamous cell neoplasm
8	Differentiation of cells	High grade, Uniform.
9	Cytologic feature of Malignancy	Rare to absent
10	Depth of lesion	Pushing or blunt invasion.
11	Cellular (host) response	Usually predominant.
12	Hybrid malignancy`	20% of case approx.

period of transformation. other authors don't believe in this 'dedifferentiation' phenomenon (2,10) and account this observation due to presence of 'hybrid tumors', i.e presence of foci of less differentiated squamous cell carcinoma within verrucous carcinoma.

Because of reported incidence of anaplastic transformation following radiotherapy, many centres recommend wide field surgical resection with good oncologic clearance as preferred treatment modality While others recommend that verrucous carcinoma should be treated as other squamous cell carcinomas with the treatment modality determined by effectiveness of control without regarding the potential risk of its developing into a far more aggressive lesion after irradiation (2,14).

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