ORAL VERRUCOUS CARCINOMA: REPORT OF TWO CASES AND REVIEW OF LITERATURE

D.O. AWANGE and J.F. ONYANGO

SUMMARY

Verrucous carcinoma is a rare and distinct pathological and clinical variant of well-differentiated squamous cell carcinoma. Two case reports of histologically proven oral verrucous carcinoma are presented. One case presented with a history of tobacco chewing, snuff taking and miraa chewing. While the relationship between tobacco chewing or snuff dipping and verrucous carcinoma has been investigated and described, the role played by miraa chewing is still unknown and thus requires further study. Both cases were successfully managed by only conservative surgical excision. No radiotherapy was used. Clinical and histo-pathological examination of verrucous carcinoma is therefore very important in its diagnosis and treatment planning.

INTRODUCTION

Verrucous carcinoma is a rare variant of well-differentiated squamous cell carcinoma which was first recognized and described as a distinct clinicopathologic entity by Ackerman in 1948(1). It is also known as Ackerman’s tumour(2,3). Unlike squamous cell carcinoma which shows a rapidly infiltrative growth pattern with metastases, verrucous carcinoma exhibits a slow locally exophytic growth with a very little propensity to metastasize. It is seen primarily between the sixth and the eighth decades of life(4,5). The purpose of this communication is to add two more cases of this rare condition to the literature.

MATERIALS AND METHODS

Case 1: In September 1987, a 63 year old male patient presented at the University of Nairobi Dental School with a large painless but discomforting exophytic outgrowth on the left buccal region of the oral cavity. History revealed that the growth started in 1982 and was increasing in size slowly inspite of the various courses of antibiotics which he had received during the five years. The patient also gave a history of tobacco chewing, snuff taking and miraa chewing for along time. Past medical history was non-contributory.

Clinically, the patient was partially dentate in both arches and had very poor oral hygiene. Homogenous leukoplakic film with ulcerated patches covered most surfaces of the oral mucosa. On the left buccal region, there was a firm, exophytic, warty overgrowth approximately 3.5cm to 2.0 cm, extending to the mandibular sulcus in relation to 35, 36, 37, 38 and retromolar area (Figure 1). The regional lymph nodes on both sides were palpably enlarged.

A provisional diagnosis of squamous cell carcinoma or verrucous carcinoma was made. A consultation request for radiotherapy was made but this could not be carried out before a histological examination. Surgical excision of the growth was then performed under general anaesthesia. Postoperative recovery was uneventful, and the histopathological features were consistent with verrucous carcinoma.

Radiotherapy was not carried out and when the patient was reviewed two years later, he was found to be well with no recurrence of the lesion.

Figure 1

Photograph of verrucous carcinoma of the left buccal mucosa

Case 2: In August 1989, a 45 year old female patient presented at the University of Nairobi, Dental School with a painful thick white exophytic over-growth on her anterior region of the palate and the dorsum of the tongue for a long time. Pain was only experienced while chewing. Prior to this visit, the patient had earlier been seen at another hospital where a biopsy was taken but the result was non-committal. Past medical history was not significant. Clinically, the patient had a partially edentulous mouth with thick keratotic and homogenous overgrowth covering the anterior palate and dorsum of the tongue (Figure 2). The overgrowth at both sites
were firm, non-ulcerated and could not be scraped away. Submandibular lymph nodes were enlarged but not tender. Tentative clinical diagnoses of leukoplakia, squamous cell carcinoma and verrucous carcinoma were made.

**DISCUSSION**

Verrucous carcinoma is a distinctive, extremely well-differentiated, slow-growing variant of squamous cell carcinoma(5). It is rare, with a frequency of approximately 5-9% of all squamous cell carcinomas(5,6,7). It occurs most commonly in elderly patients, over 60 years of age, with males more commonly affected than females(1-8,9). The oral cavity is the commonest site, with a predilection for the buccal mucosa, especially the commissural regions and sulci, the alveolar mucosa or gingiva, and occasionally the palate and the floor of the mouth(2-8,9). It has also been reported to occur in the larynx, nasal mucosae, glans penis, vagina, scrotum and skin (4,8), vulva (10) or may arise in an odontogenic cyst(11). No aetiology has been established but it is associated with tobacco chewing, snuff taking or dipping, cigar smoking, betel nut chewing, ill-fitting dentures and poor oral hygiene(1-5,8,9).

In case 1, the patient gave a history of tobacco chewing, snuff taking and "miraa" chewing. Since tobacco chewing and snuff taking are some of the habits which have been associated with verrucous carcinoma, it is not known what role "miraa" chewing played in its pathogenesis.

"Miraa" chewing is a popular habit among several ethnic communities in Kenya, especially those of Somali origin who have been found to show a considerably higher rate of oral cancer(12,13). It is a local herb mostly chewed for its stimulating effects but its carcinogenic potential is, not known. This therefore requires further investigation.

Clinically, verrucous carcinoma is chiefly exophytic and papillary in nature with a pebbly surface that is sometimes covered with a leukoplakic film. It may be quite extensive and characterised by rugae, white folds with deep clefts between them(2-6,7,8). It exhibits a slow rate of growth, and erodes rather than invades the adjacent soft tissues and bone relatively late in growth but rarely metastasises(14). Histologically, verrucous carcinoma exhibits a distinctive appearance, with the criteria originally described by Ackerman(1) as: (a) Papillary or verrucoid projections, (b) no actual connective tissue invasion, (c) chronic inflammatory infiltrate at the connective tissue interface, (d) little or no dysplastic epithelial changes, (e) parakeratin or orthokeratin pluggings, and (f) broad front advancing border. Shear and Pindborg(15) reported a relatively unrecognized entity, verrucous hyperplasia of the oral mucosa, as resembling verrucous carcinoma clinically and histologically. They described the histological finding of deep epithelial extension into the underlying connective tissue in verrucous carcinoma as the only salient feature that separates it from verrucous hyperplasia otherwise the two entities are indistinguishable clinically and that they may co-exist in a single patient.

Treatment of verrucous carcinoma with radiotherapy is controversial but it is moderately radiosensitive(5).
Such treatment has occasionally been followed by anaplastic changes, rapid growth and metastasis(4,16,17).

Adequate surgical excision therefore appears to be the treatment of choice. Most cases of recurrences can be assumed to be the consequences of inadequate surgical margins(4,5,8,16,17).

REFERENCES