

## SHORT COMMUNICATIONS AND CASE REPORTS

### Verrucous carcinoma of the skin: case report with literature review

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#### Summary

*We present a case of verrucous carcinoma of the axilla with multiple recurrences and we review the literature with*

*regard to the optimal therapeutic approach for this rare entity.*

**Key words:** surgery, treatment, verrucous carcinoma

#### Introduction

Verrucous carcinoma is a distinctive form of low-grade squamous cell carcinoma. It typically involves the oral cavity, larynx, esophagus and skin. Cutaneous lesions can be found in any part of the skin, mainly in areas of maceration.

Usually it presents as a slow-growing, locally infiltrating tumor that rarely metastasizes to regional lymph nodes. Nevertheless it can cause extended local infiltration. It is rare in patients under 40 years of age.

#### Case presentation

A 52-year-old male patient underwent local excision for an exophytic lesion of the right axilla in a primary-care hospital. The histology report revealed a verrucous carcinoma of the skin.

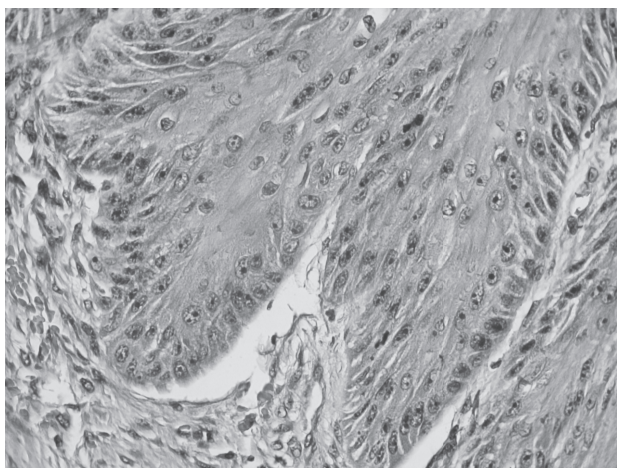
Six months later the patient was referred to our hospital with tumor recurrence, inflammation and a thick, pus-like, excretion. A biopsy that was taken revealed recurrence of the disease. Preoperative investigations included a CT of the chest, neck and abdomen. A 5 cm in diameter soft tissue mass was identified in the right axilla together with 2 lymph nodes. There were no other pathologic findings.

The patient underwent resection of the tumor with disease-free margins and lymph node clearance of the right axilla. The postoperative defect was reconstructed with a myocutaneous flap of latissimus dorsi.

The histology report confirmed the diagnosis of verrucous carcinoma (Figures 1,2). The deep resection margins were free of disease while changes from the operation did not allow to exclude with certainty



**Figure 1.** The base of the tumor is broad with regular, pushing borders and the interface neoplasm/lamina propria is sharp (H&E  $\times 100$ ).



**Figure 2.** The tumor cells have bland cytologic features (H&E  $\times 400$ ).

the invasion of one of the lateral resection margins. Twelve lymph nodes sent with the specimen were free of disease.

The patient presented 3 months after surgery with a new recurrence over the graft. He underwent a new operation when he had a wide resection up to the level of the axillary vessels together with removal of the myocutaneous flap of latissimus dorsi. Frozen sections from the resection margins were all disease-free.

Postoperative radiotherapy was decided in an oncological audit that followed.

The patient presented with a new recurrence 2 months after surgery while awaiting radiotherapy which did not start due to a delayed wound healing.

The patient underwent a new resection with no evidence of residual disease. Postoperative recovery was uneventful. He received a total dose of 55 Gy in 22 fractions with anterior and posterior opposed fields using a Cobalt 60 treatment unit.

The patient is well and free of disease 3 years after therapy.

## Discussion

Cutaneous lesions of verrucous carcinoma typically arise in the genitocrural area and plantar surface of the foot with rare case reports arising elsewhere in the body. To our knowledge there has been only one previous report of verrucous carcinoma of the axilla in the international literature [1].

The lesion usually presents as a slow-growing warty exophytic mass. The histologic examination is difficult to establish the diagnosis. Samplings from the superficial portions of the lesion can not easily be dis-

tinguished from benign conditions such as verrucous hyperplasia and squamous papilloma, necessitating histologic examination of the deeper parts of the lesion. Even with appropriate sampling, the differentiation of verrucous carcinoma from a hyperplastic process or conventional well-differentiated (low grade) squamous cell carcinoma is difficult due to the absence of conventional cellular features of malignancy. Thus the confirmation of malignancy is established by its undoubted locally destructive growth pattern.

Abnormal expression of p53 tumor suppressor protein in a different pattern than that of squamous cell carcinoma has been found in several studies and seems to be a common event in the pathogenesis of this tumor [2,3].

In contrast to conventional squamous carcinomas, HPV predominantly types 6 and 11, have been implicated as an etiologic factor for verrucous carcinoma [4,5].

Verrucous carcinomas rarely metastasize, although they may involve regional lymph nodes late in the course of the disease, mainly by direct extension.

Surgical resection with disease-free margins is the treatment of choice [6]. The Mohs micrographic procedure is recommended for precise resection in anatomic areas where maximum preservation of healthy tissue is desired for cosmetic and functional purposes (face, eyelids, nose, ear, fingers, genital area), for cases with indistinct margins, and for recurrences in scar tissue [7]. When a large skin defect is advocated, plastic reconstruction procedures may be required. For the axillary region a myocutaneous flap with safe and liable blood supply is the procedure of choice for the reconstruction of the defect even if this, apart from the skin and the subcutaneous tissues, involves the muscles of the area giving the appropriate bulkiness without any functional disturbance.

The long term results of surgery are excellent with 100% 5-year survival provided that resection-free margins can be achieved [6]. The role of radiotherapy has been disputed in the past due to the risk of anaplastic transformation. Nevertheless, recent data from the literature suggest that there is only a small chance of anaplastic transformation while it offers excellent local disease control. Therefore, it should be considered as a therapeutic option either alone or combined with surgery [8-10]. In our case the patient is free of disease 3 years after radiotherapy.

There is a limited role for chemotherapy alone in the management of verrucous carcinoma although recently there have been several reports of good response to combined radiotherapy and chemotherapy regimens either as primary therapeutic modalities or adjuvant to

surgery [10,11]. Finally, sporadic cases of verrucous carcinoma have been treated successfully with photodynamic therapy. Photodynamic therapy relies on the intracellular accumulation and photoactivation of a photosensitizer that produces phototoxic compounds that ultimately destroy the malignant cells [12,13].

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