Localizador
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Papillated carcinoma *in situ*

In the last three years, fifteen papillated carcinomas in situ with the appearance of irritated wart have been seen at the Skin Cancer Center in Campinas, Brazil. These are tumours that arise de *novo* in sun-damaged, hairy skin of older Caucasians. The patients refer that these lesions appear suddenly and grow rapidly, as elevated keratotic papules, present particularly on the face and neck and the dorsum of hands and forearms. They are excised with a clinical suspicion of keratoacanthoma, squamous cell carcinoma or cutaneous horn, and the final diagnosis is made by the pathologist. There seems to be no gender predilection for this condition.

The tumours we studied measured 0.5 to 1.5 cm in diameter at the base, and appeared as rounded red papules or nodules, centred by a plug of keratin. Histologically, they showed dense parakeratotic columns with deep crypts with papillary configuration (Figure 1). The rete ridges tended to converge towards the centre of the lesion (Figure 2). Under higher magnification, the tumours were composed of two cell types: basophilic and clear cells; the former were found at the periphery of the rete pegs (Figure 3), and showed gradual transition to clear cells. Peripheral palisading was seen only in a few areas. The process of keratinisation was of trichilemmal type, without keratohyaline granules (Figure 2). Numerous hair follicles opened at the base of the tumours, and intact eccrine ducts crossed the thickness of the lesion. There was a moderate degree of cell atypia, with presence of atypical cells as far up as the superficial epithelium. Mitotic figures were seen in 1 to 2 cells per 10 high power fields. The tumours were surrounded by a lichenoid mononuclear infiltrate, and, in some instances, a giant cell reaction to keratin originated from early infiltration in the dermis. PAS stain showed positive, diastase-digestible granules in the cytoplasm of the clear cells. *In situ* hybridization for wide spectrum HPV did not show any viral DNA in these tumours.

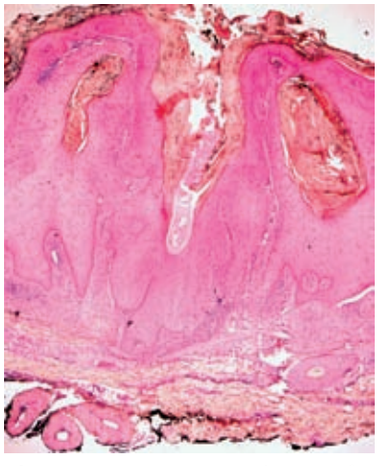

Figure 1. *a) Low-power image of a papillated carcinoma in situ. A deep crypt is filled with dense keratin. b) The rete ridges tend to converge towards the centre of the lesion (HE x 100).*

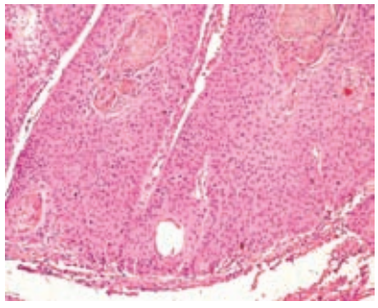

Figure 2. *a) On higher magnification, the basal cells are seen to be located at the periphery of the rete pegs. There is moderate cytological atypia. b) There is a transition towards clear cells in the centre of the tumour (Hex a: 360; b: x 500).*

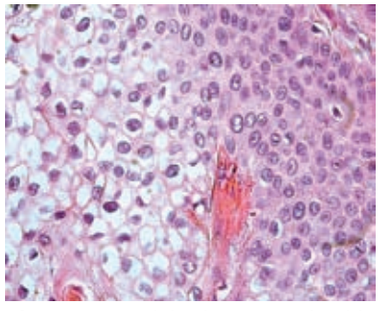

Figure 3. *Keratinization proceeds without the interposition of a granular cell layer. There is a mild chronic infiltrate around the periphery of the tumour (He x 200).*

In summary, the distinctive criteria for the diagnosis of papillated carcinomas in situ are the architectural pattern, the presence of two cell types: basophilic and clear cells, and the trichilemmal type of keratinisation. These features, and the PAS-positive granules in the cytoplasm point towards a follicular differentiation, and their topography, clinically, suggest a role of ultraviolet radiation in their pathogenesis.

The main differential diagnoses include keratoacanthoma, squamous cell carcinoma with trichilemmal differentiation, inverted follicular keratosis with cellular atypia, verrucous type of Bowen's disease, verrucous carcinoma surmounted by a cutaneous horn, basosquamous exophytic carcinoma, trichilemmal carcinoma, and cutaneous papillary squamous cell carcinoma. In keratoacanthomas, the epidermal cells tend to extend into the crater rather than into it; their cytoplasm is homogeneous and pink, rather than clear, and granular cells are present in areas of keratinisation. In squamous cell carcinomas with trichilemmal differentiation, there is not the typical architecture seen in papillary carcinomas, and the degree of atypia is higher. The same applies for the malignant proliferating trichilemmal tumour, which also has a thick collagen capsule, which is absent in the papillated tumour. In the inverted follicular keratosis with atypia, the clear cells are absent, and so is the surrounding inflammatory infiltrate; the typical architecture of the papillated tumour is not seen. Verrucous carcinomas show positivity for HPV, particularly 6 and 11 serotypes, and lack the architectural features of papillated carcinomas. Metatypic exophytic carcinomas don't show the clear cells that are abundant in the papillated carcinomas.

Papillated squamous cell carcinomas seem to originate from the germinative cells in normal adnexal epithelium[1], or may show differentiation towards follicular epithelium[2], as they display pale-staining squamous cells

containing glycogen, and keratinize in a similar way as that observed in the region of follicular infundibulum adjacent to the isthmus[3].

Because papillated carcinomas are excised early, as they grow quickly and alarm the patient, their prognosis is not well known. None of our patients has had a recurrence or lymphadenopathy, but longer follow-up periods and study of a larger number of patients will shed light on the behaviour of this neoplasm.

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