

Case Report

Clear Cell Squamous Cell Carcinoma: A Rare Case Report

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Abstract: Clear cell squamous cell carcinoma (SCC) is a rare variant of SCC of skin in which ultraviolet radiation has been suggested as possible etiology. We report a case of A 35-year-old man who works as a farmer presenting with an ulcerative-burgeoning lesion of the face that had been evolving for 2 years. microscopic examination revealed a clear-cell squamous cell carcinoma. It is a rare entity that must be diagnosed with care. when evaluating lesions with predominantly clear cell morphology, histopathological diagnosis is often difficult. Further research is needed to understand the pathophysiology, biological behavior, therapeutic options and prognosis.

Keywords: Clear Cell, Squamous Cell Carcinoma.

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INTRODUCTION

Squamous cell carcinoma (SCC) is the second most common form of skin cancer. It develops from the stratified squamous epithelium of the mucosa. Men are more often affected than women. CSC subtypes have been described: keratoacanthoma, acantholytic, spindle-cell, verrucous, clear-cell, papillary, Signe ring, pigmented and desmoplastic. Clear cell squamous cell carcinoma is an extremely rare histological subtype associated with aggressive clinical behavior. We present a case of clear cell SCC with clinical and histopathology findings and literature review.

CASE REPORT

A 35-year-old man who works as a farmer presenting with an ulcerative-burgeoning lesion of the face that had been evolving for 2 years. Clinical examination revealed an ulcerative-burgeoning lesion measuring 13 × 11 mm, painful, bleeding on contact and superinfected. A biopsy was performed, and microscopic examination revealed a diffuse infiltrating tumor proliferation of medium-sized epithelial cells with clear vacuolated cytoplasm and peripheral nuclear displacement, giving the lesion a patchy ring-like appearance (figure 1). Immunostains were positive for anti-P40 antibodies and negative for anti-CK7 and anti-CK20 antibodies (figure 2).

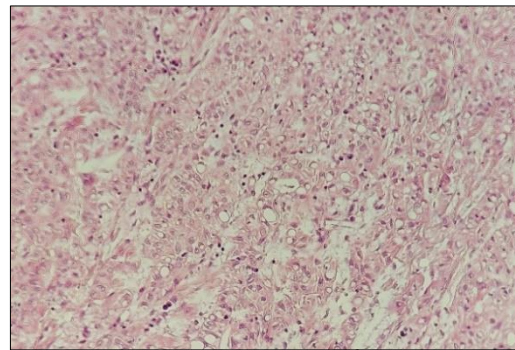


Figure 1: Cytoplasmic vacuolation with some signet-ring cells

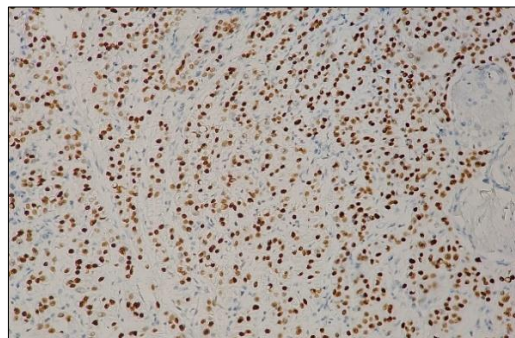


Figure 2: Immunohistochemical study showing tumor cell expression of anti-P40

DISCUSSION

Cutaneous squamous cell carcinoma (SCC) is a malignancy of epidermal keratinocytes that exhibits various degrees of differentiation that partially recapitulate the cytology of squamous cells of the epidermal stratum spinosum. SCC is the second most common form of skin cancer (after basal cell carcinoma) and is more common in men than in women. Most cases occur in sun-exposed skin of elderly individuals, most commonly individuals with lighter skin pigmentation. In addition to ultraviolet (UV) radiation, other factors that have been implicated in the etiology of SCC include chronic immunosuppression, other forms of radiation, topical carcinogens, burn scars, chronic inflammation, sinus tracts, HPV infection, arsenic, and coal tar.

Clear cell squamous cell carcinoma (SCC) is a rare histological variant of SCC that microscopically shows abundant clear cytoplasm. There is no consensus on the required proportion of clear cells for the definition of clear cell SCC, but >25% has been suggested. Although, the etiology of clear cell SCC is not completely understood, immune-suppression, arsenic exposure, radiation, chronic ulceration, have been suggested as possible etiologic factors. This is supported by this case which also occurred in elderly man who works as a farmer. The head and neck are most often affected. These tumors have no clinical features that distinguish them from conventional CSCs.

Histologically, the cells display cytoplasmic vacuoles and focal keratinization. Intracytoplasmic vacuoles are typically unilocular, in contrast to sebaceous neoplasms (microvesicular). The clear material is largely glycogen, with a positive PAS (Periodic acid Schiff) reaction. Rarely, a single cytoplasmic vacuole compresses the nucleus, giving a ring-like appearance.

Differential diagnoses of the clear cell variant of SCC include sebaceous neoplasms, clear cell acanthoma, clear cell hidradenoma, clear cell hidradenocarcinoma, tricholemmoma, pilar tumor, balloon cell nevus, balloon cell melanoma and metastatic renal cell carcinoma. The prognosis of clear cell SCC is comparable to that of other SCC types.

CONCLUSION

The clear-cell variant of squamous cell carcinoma is extremely rare, occurring mainly in sun-exposed areas of the body, such as the head and neck. It is a rare entity that must be diagnosed with care. when

evaluating lesions with predominantly clear cell morphology, histopathological diagnosis is often difficult. Further research is needed to understand the pathophysiology, biological behavior, therapeutic options and prognosis.

Conflicts of Interest: The authors declare no conflicts of interest.

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