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Case Report

Squamous Cell Carcinoma Associated with the Use of Depigmenting Products in a Dark-Skinned Adult Woman in Côte d'Ivoire

Carcinome Épidermoïde Associé à l'Utilisation de Produits Dépigmentants chez une Femme Adulte à la Peau Foncée en Côte d'Ivoire

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ABSTRACT

Voluntary skin depigmentation carries the risk of several skin complications, including squamous cell carcinoma. This study reports a case of squamous cell carcinoma associated with skin depigmentation in a 63-year-old female with phototype VI, who works as a traveling saleswoman, and came for consultation in the dermatology department at Treichville University Hospital in Abidjan. The development of the carcinoma was favored by exposure to topical corticoids over a long period, prolonged exposure to UV radiation, and the presence of actinic keratoses. Histology analysis was consistent with squamous cell carcinoma. The other paraclinical examinations were normal. We classified this primary cutaneous tumor as TNM stage 0. Treatment consisted of carcinologic excision (1 cm margin) with VY advancement flap and cryotherapy of actinic keratoses. The patient was also given sunscreen, advice on better photoprotection for clothing and better cosmetic habits (neutral soap for cleansing and emollient cream). The clinical course after three months was satisfactory.

RÉSUMÉ

La dépigmentation volontaire de la peau comporte le risque de plusieurs complications cutanées, dont le carcinome épidermoïde. Cette étude présente un cas de carcinome épidermoïde associé à la dépigmentation cutanée chez une femme de 63 ans de phototype VI, qui travaille en tant que commerciale itinérante, et qui est venue en consultation au service de dermatologie à l'hôpital universitaire de Treichville à Abidjan. Le développement de ce carcinome a été favorisé par une exposition prolongée aux corticoïdes topiques, une exposition prolongée aux rayons UV et la présence de kératoses actiniques. L'histologie était conforme à un carcinome épidermoïde. Les autres examens paracliniques étaient normaux. Nous avons classé cette tumeur cutanée primitive comme étant de stade TNM 0. Le traitement a consisté en une excision carcinologique (marge de 1cm) avec lambeau de VY et cryothérapie des kératoses actiniques. La patiente a également reçu un écran solaire, des conseils sur une meilleure photoprotection vestimentaire et de meilleures habitudes cosmétiques (savon neutre pour le nettoyage et crème émolliente). Le suivi après trois mois était satisfaisant.

INTRODUCTION

Voluntary skin depigmentation (VSD) is a practice that can lead to various skin complications, including squamous cell carcinoma (SCC). Several sub-Saharan African countries, such as Senegal, Mali, Côte d'Ivoire, and Togo, have seen cases of SCC associated with VSD since the first reported case by Addo in Accra, Ghana in 2000 (1-6). This report presents a new case of squamous cell carcinoma related to voluntary skin depigmentation in Côte d'Ivoire.

CASE PRESENTATION

A 63-year-old female with phototype VI, who works as a traveling saleswoman, sought consultation from the Dermatology Department at Treichville University Hospital in Abidjan regarding a burgeoning ulcerative lesion on her upper back. Her medical history documented over two decades of daily use of clobetasol propionate creams and substantial sun exposure due to her occupation. Skin examination revealed a crumbly,

painful, ulcerative-burgeoning lesion with an indurated base, located on the upper-median part of the back, measuring 6cm x 4cm, with irregular, splayed edges (Figure 1). Additionally, the patient presented with actinic keratoses on the photo-exposed areas of the upper back and stigmata of depigmentation. No peripheral adenopathies or other organ involvement were found. The burgeoning ulcerative lesion on her upper back had developed over the course of one year.



Figure 1. Ulcerative-burgeoning lesion on the upper-median part of the back.

A skin biopsy of the ulcerative lesion with histology was performed. The following hypotheses have been suggested: squamous cell carcinoma, basal cell carcinoma, and keratoacanthoma. The histology was consistent with squamous cell carcinoma (Figure 2).

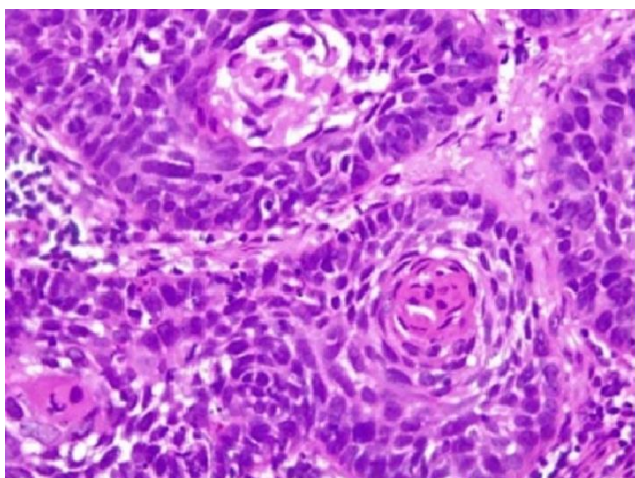


Figure 2. Squamous cell lobules with cytonuclear atypia maturing into keratinized nodules.

Other paraclinical examinations were normal. We classified this primary cutaneous tumor as TNM stage 0. Treatment consisted of carcinologic excision (1cm margin) with VY advancement flap and cryotherapy of actinic keratoses. The patient was also given sunscreen, advice on better photoprotection for clothing, and better cosmetic habits (neutral soap for cleansing and emollient cream). The progress after three months was satisfactory.

DISCUSSION

A new case of squamous cell carcinoma associated with voluntary skin depigmentation in Côte d'Ivoire is reported. The first reported case involved a 52-year-old woman with phototype VI (5). The role of depigmenting agents in the development of squamous cell carcinomas is suspected due to phototype VI being one of the reasons (7). The patient's age in this observation and the first description falls within the age range of the 8 cases reported by Ly et al. (37 to 68 years) in Senegal (8). Although squamous cell carcinoma is most frequently found in sun-exposed areas of the skin, it can manifest in any part of the body. The localization on the upper back of our patient was previously described in Senegal by Ly et al. in a study that featured 8 cases of squamous cell carcinoma linked to voluntary depigmentation of the skin, wherein the lesions were centered on either lichenoid or exogenous ochronotic lesions located in photoexposed regions (i.e., the face, neck, or upper back) (8). The important fact in our observation was that the patient had precancerous actinic keratosis (AK) lesions in addition to VSD. This combination of VSD and AK appeared coincidental in the patient but could account for the synergistic effect of these two variables in the progression of squamous cell carcinoma. Actinic keratosis is a proliferation of unusual histological keratinocytes within an area of skin that has suffered longstanding damage from exposure to Ultraviolet (UV) light (9). The patient's work as a street vendor resulted in prolonged and intense exposure to UV radiation. According to a systematic review and meta-analysis conducted by Schmitt et al., there was strong epidemiologic evidence indicating a positive link between occupational exposure to UV radiation and an increased risk of squamous cell carcinoma (10). UV radiation exposure is the primary carcinogenic factor responsible for the development of squamous cell carcinomas. Additional factors that contribute to skin carcinogenesis include β -HPV subtypes, smoking, BRAF inhibitor monotherapy, and immunosuppression. Clobetasol propionate, a dermatocorticoid, exhibits anti-inflammatory, immunosuppressive, and antimetabolic properties that affect the function, growth, and differentiation of various cells while inhibiting cytokine production. This immunosuppressive effect has been identified by some researchers as potentially involved in skin carcinogenesis. Therefore, it is suggested that the patient's prolonged use of clobetasol propionate led to local immunosuppression and reduced protection against UV radiation, which in combination with actinic keratoses, ultimately caused the development of squamous cell carcinoma. Carcinologic excision was

performed as the recommended treatment, and chemotherapy was not necessary as no distant lesions were present.

CONCLUSION

Skin tumors resulting from dermatologic complications of VSD are on the rise. Prolonged use of clobetasol propionate leading to local immunosuppression and reduced UV protection combined with actinic keratoses were the factors that favored the development of this squamous cell carcinoma

Conflicts of interest

None

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None

Authors' contributions

Gbandama Koffi Kouamé Pacôme: main author and editor.

Diabaté Almamy: co-author and co-editor.

Kouassi Kouamé Alexandre: co-author and practical realization of the case study.

Loemba Yala Thanya Juliana Gaëlle: co-author and co-editor.

Allou Ange-Sylvain: co-author and reviewer.

Kourouma Hamdan Sarah: co-author and reviewer.

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Consent

The patient provided her formal consent for the use of her photographs in a scientific publication.

REFERENCES

1. Addo HA. Squamous cell carcinoma associated with prolonged bleaching. *Ghana Med J.* 2000 Sep;34(3):144–6
2. Faye O, Dicko AA, Berthé S, Cissé L, Traoré B, Keita A et al. Squamous cell carcinoma associated with use of skin-lightening cream. *Ann Dermatol Venereol.* 2018 Feb;145(2):100–3.
3. Ly F, Kane A, Déme A, Ngom NF, Niang SO, Bello R et al. First cases of squamous cell carcinoma associated with cosmetic use of bleaching compounds. *Ann Dermatol Venereol.* 2010 Feb;137(2):128–31.
4. Diop K, Ly F, Diop A, Déme A, Diatta BA, Diop MTN et al. Carcinomes Épidermoïdes et Dépigmentation Cosmétique Volontaire : Encore de Nouveaux Cas au Sénégal, Plaidoyer pour une Prévention Efficace ! *Health Sci Dis.* 2019;20(6 S1).
5. Gbandama KKP, Diabaté A, Kouassi KA, Kouassi YI, Allou AS, Kaloga M. Squamous Cell Carcinoma Associated with Cosmetic Use of Bleaching Agents: About a Case in Ivory Coast. *Case Rep Dermatol.* 2019 Dec 4;11(3):322-6.
6. Mouhari-Toure A, Kassang P, Foma W, Akakpo SA, Teclessou JN, Tcheumagam K et al. Multiple Squamous Cell Carcinoma in a Patient Using Skin Bleaching Products in Togo. *Case Rep Dermatol Med.* 2023 Jan 11;2023:8002896.
7. Jacyk WK. Xeroderma pigmentosum in black South Africans. *Int J Dermatol.* 1999 Jul;38(7):511–4
8. Ly F, Dioussé P, Ndiaye C, Déme A, Diatta BA, Ndiaye MT et al. Cutaneous squamous cell carcinomas (SCC) associated with cosmetic skin whitening: 8 cases reported in Senegal. *Ann Dermatol Venereol.* 2018 Feb;145(2):83–88.
9. Gutzmer R, Wiegand S, Kölbl O, Wermker K, Heppert M, Berking C. Actinic Keratosis and Cutaneous Squamous Cell Carcinoma. *Dtsch Arztebl Int.* 2019 Sep 13;116(37):616–26.
10. Schmitt J, Seidler A, Diepgen TL, Bauer A. Occupational ultraviolet light exposure increases the risk for the development of cutaneous squamous cell carcinoma: a systematic review and meta-analysis. *Br J Dermatol.* 2011 Feb;164(2):291–307.