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Case Report

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Squamous Cell Carcinoma Associated with the Use of Skin-Lightening Cream

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ABSTRACT

Introduction: Skin-lightening cosmetics are widely used by both women and men worldwide. Skin cancer cases have also been linked to the use of skin-lightening cosmetics we present the second case of epidermoid carcinoma associated with skin lightening in the Department of Dermatology at Bamako, Mali.

Observation: A 50-year-old Malian woman who had been using these products for 20 years. She presented with a budding ulceration on her left shoulder, which began as a keratotic nodule treated with liquid nitrogen but persisted and gradually expanded. Clinical examination revealed hyperpigmented spots on her face and a poikilodermic appearance on her trunk. The ulceration on her left shoulder, suspicious for SCC, prompted an excision with a 2 mm margin for histological examination. Further investigations showed lymphadenopathy in the left cervical, supraclavicular, and axillary regions. Pathological examination indicated the presence of malignant cells, suggesting secondary localization of carcinoma or adenocarcinoma.

Discussion: This case is the second reported instance of SCC associated with skin-lightening practices in Mali. The epidemiological profile aligns with previous cases, typically affecting middle-aged women who have practiced depigmentation for many years.

Conclusion: In conclusion, this case emphasizes the risks associated with skin-lightening cosmetics and the need for further research to better understand the mechanisms involved in skin cancer development in these cases.

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Introduction

Skin-lightening cosmetics are widely used by both women and men worldwide. Skin cancer cases have also been linked to the use of skin-lightening cosmetics. These products contain various substances, many of which are unknown to users. Most of these products include topical corticosteroids, hydroquinone, and mercury salts, with the addition of numerous other substances [1]. Several surveys and cohort studies, involving thousands of individuals, have shown that regular application of skin-lightening cosmetics over large areas of the skin can lead to irreversible cutaneous adverse effects. These include patchy hyper- or hypopigmentation, skin atrophy, stretch marks, delayed wound healing, and the potential to mask or exacerbate skin infections [2,3]. Skin cancer cases have also been linked to the use of skin-lightening cosmetics. While occurrences of epidermoid carcinoma have been reported previously, we present the second case of epidermoid carcinoma associated with skin lightening in the Department of Dermatology at Bamako, Mali [4-7].

Case Observation

A 50-year-old Malian woman from Ségou, a housewife with phototype 6 skins, had been practicing artificial depigmentation since 1998 (for 20 years). She sought medical attention for a developing ulceration on her left shoulder. The patient had no personal or family history of skin carcinoma, was being treated for hypertension with Amlodipine 10 mg since 2017, had a G4P4V4 obstetric history, and reached menopause in 2017.

The ulceration began two years prior with the appearance of a keratotic nodule resembling warts, which was treated three times with liquid nitrogen. Following the last nitrogen session, an ulceration persisted for a year and gradually expanded. Upon clinical examination, hyperpigmented spots were observed on her face, and her trunk exhibited a poikilodermic appearance characterized by hyperpigmentation, small achromic macules, skin atrophies, and some telangiectasias. On her left shoulder, there was an 8x5 cm budding ulceration, slightly crusty, with a raised, infiltrated, and hemorrhagic border upon contact. The lesion was not notably painful. Palpation of the lymph node areas revealed left axillary polylymphadenopathy ranging from 1 to 2 cm and a 3 to 4 cm

nodule in the left supraclavicular ganglion. The rest of the clinical examination was unremarkable. The lesion raised strong suspicion of squamous cell carcinoma. An excision with a 2 mm margin was performed for histological examination, which revealed poorly differentiated squamous cell carcinoma with incomplete excision. Thoraco-abdomino-pelvic CT scan results showed suspicious left cervical lymphadenopathy, a suspicious left supraclavicular node, and left axillary lymphadenopathy, with no secondary abdominal or thoracic lesions detected. Fine needle puncture of the cervical and axillary nodes for pathological examination indicated isolated cells or clusters of cells with anisocaryosis, hyperchromatism, and visible nucleoli at the cervical level. The background was inflammatory, hematic, and necrotic, suggesting secondary localization of carcinoma or adenocarcinoma. At the axillary level, the cells examined were hematic and lipid without atypia. The patient was referred for surgery to resect the initial tumor with a one-centimeter margin, followed by directed healing. A consideration for cervical and axillary lymph node dissection was made, even though the latter localization did not show histological invasion.

Discussion

To the best of our knowledge, this is the second reported case of squamous cell carcinoma in a region undergoing voluntary depigmentation in Mali. The diagnosis was evident due to the budding nature of the ulcer, hemorrhage upon contact, the chronicity of the ulcer, its location on a sun-exposed area, the prolonged voluntary depigmentation history, and confirmation by histopathological examination. In the literature, reported cases predominantly involve females with an average age of around 50 years and an average duration of voluntary depigmentation ranging from 10 to 30 years (references) [5-7]. These epidemiological and histopathological findings align with our case. The prevalence of this condition remains unknown, but a few cases have been reported worldwide, with the largest series reported in Senegal in 2004 [6]. The mechanism underlying the occurrence of carcinoma during depigmentation remains incompletely understood, likely involving multifactorial factors and complications related to the combined use of products like corticoids, hydroquinones, and mercurials. These products, besides their intended aesthetic effects, may induce local immunodepression and/or inhibit melanogenesis. Sun exposure likely plays a role, as depigmenting agents reduce melanin levels, making the skin more vulnerable. Hydroquinone, with its melanocytotoxic, mutagenic, and carcinogenic properties, is implicated in cancer development [8,9]. Furthermore, topical corticosteroids impair local immune surveillance, and the potential involvement of oncogenic human papillomaviruses (HPV), often associated with immunosuppression, cannot be ruled out [10,11]. Research is needed to support these hypotheses, which are not mutually exclusive. Stretch marks, ochronosis, and poikiloderma are complications related to the use of hydroquinone and corticosteroids in our patient.

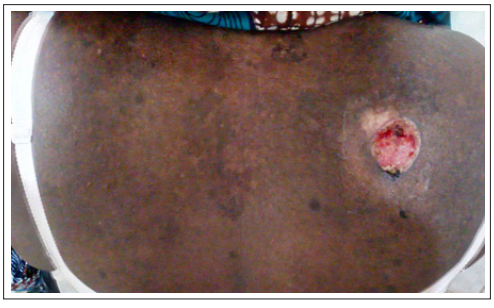

Figure 1: On her Left Shoulder, there was an 8x5 Cm Budding Ulceration, Slightly Crusty, with a Raised, Infiltrated, and Hemorrhagic Border Upon Contact

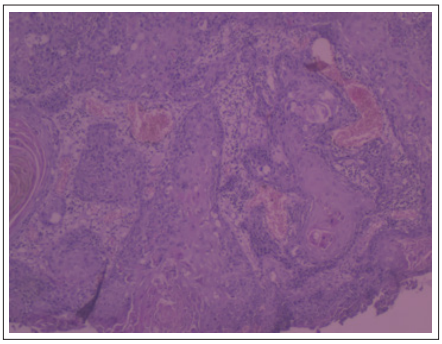

Figure 2: Poorly Differentiated Squamous Cell Carcinoma with Incomplete Excision

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