

# Systemic complications and skin cancers due to voluntary cosmetic depigmentation in sub-Saharan Africa

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## ABSTRACT

Skin lightening is a fairly common practice in sub-Saharan Africa, with the epidemiological extent of this fashion phenomenon. To date, no awareness-raising campaign has resulted in a reduction in the frequency of this practice, even with the knowledge of its complications. Systemic complications and skin cancers following the use of depigmenting cosmetics are not as rare as people tend to believe. Systemic complications and skin cancers are among the voluntary cosmetic consequences. Another way of raising awareness needs to be reinvented to effectively raise awareness of the harmful effects of depigmentation.

**Key words:** Systemic complications, Skin cancers, Voluntary depigmentation

## INTRODUCTION

Skin whitening, or skin lightening, refers to the cosmetic misuse of toxic agents (mercurials) or the misuse of skin lightening agents (topical corticosteroids, hydroquinone, or various other agents) primarily to modify the normal, natural skin color. Depigmenting cosmetic practices are aimed at achieving a certain level of well-being and the quest for beauty [1,2]. For more than forty years, there has been much scientific literature from various countries in sub-Saharan Africa and Europe on the various complications of voluntary cosmetic depigmentation (VCD). These complications may be cutaneous or systemic, depending on the composition of the products employed, the extent of their surface application, and the duration of their use [1,2]. The aim of our work was to summarize the data on

systemic complications and cutaneous cancers of VCD in sub-Saharan Africa.

## EPIDEMIOLOGY AND MOTIVATIONS FOR VCD

Depigmentation is common among men and women in certain countries in Africa, Asia, and North and South America [1-3]. In Africa, it is mainly practiced by women, affecting a quarter to more than two-thirds of them. It is reported mainly in sub-Saharan countries, notably Senegal, Mali, Togo, Ghana, Burkina Faso, Nigeria, Congo, and South Africa [1-5]. In sub-Saharan Africa, 25% to 96% of women use voluntary depigmentation products [5]. Apart from the treatment of pigmentation disorders, the main reason reported in several publications is aesthetics, with fair skin as the model of beauty. The products are manufactured

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to maintain a form of alienation of the black population [1,2].

## SYSTEMIC COMPLICATIONS

The complications of depigmenting cosmetic products are a public health issue [1,2]. In addition to skin complications, which are the most common, there are systemic complications ranging from diabetes and arterial hypertension to kidney failure and skin cancers [1,2,6]. Akakpo et al. in Togo documented a correlation between VCD, arterial hypertension (AH), and obesity. Systolic hypertension (OR = 3.94; 95% CI: 1.61–3.67) and obesity (OR = 2.88; 95% CI: 1.23–5.69) were the only factors independently associated with VCD [1]. In a study conducted in Nigeria, hypertension and obesity had a relative risk of 1.6; the risk was more significant after the use of cosmetics containing corticoids for a period of thirteen years or more [1]. Diabetes was also present in the series by Hengge et al. [7]. Dermocorticoids are absorbed transcutaneously and pass into the bloodstream, giving the same effects as general corticosteroid therapy. Thus, the use of these topicals leads to the suppression of the hypothalamic-pituitary-adrenal axis, with Cushing's syndrome, secondary adrenal insufficiency and symptoms of hypoadrenalism when they are discontinued. Hypercorticism affects the mineral-corticoid action of cortisol. Cortisol contributes to the rise in blood pressure by promoting urinary elimination of potassium and renal retention of sodium and water [1,6]. Apart from these complications, membrane nephropathy, nephrotic syndrome, insomnia, and memory loss have been reported following the use of depigmenting agents [2].

## SKIN CANCERS

Compared with other skin diseases, skin cancer associated with the cosmetic use of bleaching products is rare. This could be due to the long delay in the onset of cancers after the beginning of the practice and also to individual susceptibility [8]. The association between VCD and squamous cell carcinoma was first reported in 2000 by Addo in Accra, Ghana [9]. Diop et al. in Senegal reported sixteen cases of squamous cell carcinoma from 2005 to 2019, mainly associated with the use of hydroquinone and clobetasol propionate all over the body for an average of 20.3 years [8]. A case of squamous cell carcinoma was reported by Gbandama et al. in Côte d'Ivoire after the daily use of depigmenting cosmetic products in the form of

ointments and body lotions containing lemon extract, hydroquinone, and dermocorticoids for several years [4]. In Mali [10] and Togo [2], two cases of squamous cell carcinoma were also reported in two women aged 30 and 65, respectively, who had been using depigmenting cosmetic products containing hydroquinone and corticoids for 10 and 30 years, respectively. There are several reasons to suspect the role of depigmenting products in the development of these carcinomas: the relatively young age of the patients, their high phototype, and the absence of any known risk factor for squamous cell carcinoma, notably the absence of human papilloma virus infection or other pre-neoplastic dermatoses such as burn scars [2,8].

## CONCLUSION

Systemic complications and skin cancers are among the consequences of VCD. This practice is a real public health problem that requires ongoing awareness raising, since knowledge of its harmful effects still does not reduce the need to stop using them. Sustainable strategies need to be developed to raise awareness among the general population. Educating this population to change their behavior must begin with children. Skin cancers due to voluntary cosmetic depigmentation are indeed present and are not so rare.

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