

Dermatological Complications of Voluntary Depigmentation at the Sominé Dolo Hospital in Mopti (Mali)

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Abstract

Original Research Article

In sub-Saharan Africa, skin lightening with cosmetic products for aesthetic purposes is still a widespread practice, with prevalence among women varying from 25 to 67% depending on the region. The objective of this study was to describe the dermatological complications of voluntary depigmentation in women seen in dermatological consultation at the Sominé Dolo hospital in Mopti (Mali). This was a descriptive cross-sectional study conducted from January 1, 2024, to December 31, 2024, at the Sominé Dolo Hospital in Mopti, focusing on the cutaneous complications of voluntary skin lightening in women. This hospital is the only dermatological referral center in the Mopti region. The target population of our study consisted of female subjects aged 15 years and older who were using depigmenting cosmetic products at the time of the study. In total, 1563 patients were seen in dermatological consultation and 240 women presented with skin conditions related to the use of depigmenting cosmetic products, representing a frequency of 15.35%. Skin complications due to hydroquinone : represented 37.08% : Vitiligoid hypochromia, ochronosis, periorbital pigmentation in lorgnette. Skin complications due to topical corticosteroids accounted for 52.1% : stretch marks, skin atrophy, hyperpigmentation of the back of joints, dermatophytoses, candidal intertrigo, erysipelas, pyoderma, acne. Complications related to the use of mercurial derivatives 10.82% : Perioral dermatitis, contact dermatitis. depigmenting cosmetic products are as follows: the correction of skin irregularities, seduction, on the advice of a friend, during the preparations for a party, the influence of the media.

Keywords: Dermatological complications, voluntary depigmentation, Mopti, Mali.

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INTRODUCTION

In sub-Saharan Africa, skin lightening with cosmetic products for aesthetic purposes is still a widespread practice, with prevalence among women ranging from 25 to 67% depending on the region [1,2].

The extent of this practice in an apparently growing number of regions of the globe, as well as the wide range of medical complications (primarily dermatological, but not exclusively) associated with it, are likely to give it the dimension of a real public health problem today [3]. essentially hydroquinone, often at high concentrations exceeding 5%, and local

corticosteroids, primarily clobetasol propionate at 0.05% [3].

Numerous dermatological complications are associated with voluntary depigmentation; since the work of Mahé A in Bamako [4], Raynaud E in Senegal [5] and Levang J in Mayotte [6] which drew attention to the risk of skin complications from depigmenting cosmetic products, it has become a subject of growing interest which has generated many other publications in Africa.

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After reviewing the literature, there is no data on this practice in the Mopti region, hence the interest in carrying out this study.

The objective of this study was to describe the dermatological complications of voluntary depigmentation in women seen in dermatological consultation at the Sominé Dolo hospital in Mopti (Mali).

PATIENTS AND METHODS

This was a descriptive cross-sectional study conducted from January 1, 2024, to December 31, 2024, at the Sominé Dolo Hospital in Mopti, focusing on the cutaneous complications of voluntary skin lightening in women. This hospital is the only dermatological referral center in the Mopti region.

The target population of our study consisted of female subjects aged 15 years and older who were using depigmenting cosmetic products at the time of the study.

The following were considered to be depigmenting products :

- Products of known composition containing an agent with well established and documented depigmenting activity (dermocorticoids, hydroquinone, mercurial derivatives).
- Some products of unknown composition (composition not mentioned on the box) but whose label indicates a lightening effect, sold as such on the market, and whose reputation according to several sources collected during the pre-investigation suggested a depigmenting activity, (Extra clear ®, Ultra clear ®, Naro cream ®, Shirley®).

The data were collected using a questionnaire that included socio-demographic characteristics (age, profession, level of education), skin complications, type of cosmetic products used and the factors motivating the use of the depigmenting practice.

The data were entered into Epidata 3.1 software and then analyzed using SPSS 18.0 software.

The study was conducted in accordance with the requirements of the Declaration of Helsinki and in compliance with the bioethical recommendations recorded in Annex C of ISO15189 v. 2007.

RESULTS

In total, 1563 patients were seen in dermatological consultation and 240 women presented with skin conditions related to the use of depigmenting cosmetic products, representing a frequency of 15.35%.

The age of our patients ranged from 15 to 65 years with an average of 29 years. The professions of these women were distributed as follows : housewives (36.3%), shopkeepers (22.5%), employees (10%), dyers (7.1%), hairdressers (5.8%), pupils/students (13.3%), other (5%).

The level of education was as follows : no schooling (23.4%), primary level (45.8%), secondary level (25.8%), higher level (5%).

The active ingredients used were hydroquinone (37.08%), dermocorticoids (52.1%), mercurial derivatives (10.82%), products of unknown composition (18.33%).

Skin complications due to hydroquinone accounted for 37.08% and consisted of :

- Vitiligoid hypochromia (3.75%),
- Ochronosis (20.83 %),
- Periorbital pigmentation in lorgnette (12.5%).

Skin complications due to topical corticosteroids accounted for 52.1% and were distributed as follows :

- Stretch marks (3.8%),
- Skin atrophy (3.3%),
- Hyperpigmentation of the back of the joints (4.6%),
- Dermatophytoses (8.33%),
- Candidiacal intertrigo (7.91%),
- Erysipelas (2.5%),
- Pyoderma (6.66%),
- Acne (15%).

Complications related to the use of mercury derivatives (10.82%)

- Perioral dermatitis (4.16%)
- Contact dermatitis (6.66%).

The arguments that motivated women to use skin-lightening cosmetic products are as follows:

- Correction of skin irregularities (45.4%),
- For seduction (26.7%),
- On the advice of a friend (7.1%),
- During party preparations (12.1%)
- The influence of the media (8.8%).

DISCUSSION

To our knowledge, this is the first study carried out at the Sominé Dolo hospital in Mopti (Mali) on dermatological complications related to the use of depigmenting cosmetic products.

Despite major methodological obstacles (particularly the reluctance of respondents to discuss their practices and uncertainties regarding the products used), our study identified the main skin conditions linked to the use of depigmenting cosmetic products. in

our workplace skin-lightening cosmetic products by women is common in Mopti (Mali).

The extent of the voluntary depigmentation phenomenon has already been studied in sub-Saharan Africa. In Bamako (Mali), a study conducted by cluster sampling in the general population found a prevalence of 25% among adult women in 1993 [1]; in Senegal, a study with a similar methodology conducted in a working-class neighborhood of Dakar reported even higher figures (67%) [2].

In Mahé's 2004 study, voluntary skin lightening appeared to be primarily an urban phenomenon, affecting 55% of women living in Dakar or its suburbs, compared to 29% of those living in rural areas [7]. In our study, there were more users of skin-lightening products in the city.

Our series found more users of skin-lightening products among housewives and business owners than among employed women. Pitché found more users of skin-lightening products among employed women, business owners, and students than among housewives [8].

This difference may be due to selection bias, as the distinction between housewives and traders would be difficult due to the importance of informal trade in Africa [5].

Our study reported a predominance of this practice among women who can read and write, comparable to Mahé's study [7].

A higher frequency of topical corticosteroid use was observed among female users, which could be due to easy access to corticosteroid products, some of the least expensive on the market. Dermatological complications related to this type of product were dominated by various infectious dermatoses : dermatophytosis, candidiasis, erysipelas, and superficial

pyoderma. This is consistent with a study conducted in Nouakchott, Mauritania, by Kebe M *et al.*, [9]. According to the literature, these complications primarily involve the exacerbation, or the de novo occurrence, of these various conditions on skin predisposed by corticosteroid-induced immunosuppression, often resulting in an exaggerated, even caricatured, clinical presentation [3].

Topical corticosteroids result in a more "aggressive", more visible and faster lightening effect. [9].

As for acne, it is relatively common, occurring in 17% to 34% of cases depending on the study. The use of topical corticosteroids is frequently observed [10]. In our patients, it represented 15% of the dermatoses encountered, and all used cosmetic products containing topical corticosteroids. In this context, the lesions are often inflammatory, rather monomorphic, and located on the trunk and face.

On the other hand, depigmentation due to hydroquinone is more subtle and associated with dyschromic disorders such as exogenous ochronosis with its long-term carcinogenic risk [11, 12], periorbital lorgnette pigmentation and vitiligo hypochromia [3]

The main skin complications associated with this substance in our users were dominated by exogenous ochronosis. This condition is most frequently due to the prolonged application of hydroquinone-based topicals [13] on sun-exposed areas (malar, temporal, mandibular and neck regions) [14].

Regarding the motivations behind voluntary skin lightening, our study highlighted aesthetic concerns (correcting skin imperfections and enhancing attractiveness), and the significant influence of female peers, linking this practice to an urban fashion trend. Socially significant events, such as weddings and baptisms, appear to be particularly significant.

Table 1: Distribution of patients according to complications

Complications		Staff	Percentage
Hydroquinone	Vitiligo- like hypochromia	9	3.75
	Exogenous ochronosis	50	20.83
	Periorbital pigmentation	30	12.5
	Total	89	37.08
Corticosteroids	Stretch marks	9	3.8
	Skin atrophy	8	3.3
	Hyperpigmentation of the back of the joints	11	4.6
	Acne	36	15
	Dermatophytia	20	8.33
	Candidiasis	19	7.91
	Erysipelas	6	2.5
	Superficial pyoderma	16	6.66
	Total	125	52.1
	Perioral dermatitis	10	4.16

Complications		Staff	Percentage
	Caustic dermatitis	16	6.66
	Total	26	10.82
Total		240	100.0

CONCLUSION

Artificial depigmentation induces numerous dermatological complications. It has a considerable impact on the practice of dermatology in tropical areas.

Faced with this multifaceted problem, with its complex socio-cultural underpinnings and significant health repercussions, organized control strategies would benefit from being more widely proposed.

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