

## **Xeesal: Cosmetic Skin Whitening in Sub-Saharan Africa**

### **Xeesal: la despigmentación cosmética en África subsahariana**

*To the Editor:*

The use of skin lightening products is a widespread practice in sub-Saharan Africa. We observed this practice during a cooperative project conducted in Senegal. In this letter we do not provide an in-depth study or a detailed analysis, rather we give an outline of this practice, illustrating it with anecdotal cases that required attention due to the adverse effects caused by the skin lightening products.

In Senegal this practice is called *Xeesal*<sup>1</sup> ("lighten" in the Wolof language). These products are also used in Asian countries.<sup>2</sup>

This custom is condemned by official bodies in many African countries, and has even been prohibited in some of them, leading to attempts to conceal the practice.<sup>1,2</sup> Despite this, some studies have reported that half of the patients visiting a dermatologist for any reason in these countries admit to using *Xeesal*.<sup>3</sup>

The users tended to be married, monogamous women with a relatively high cultural level according to some articles (assessed by their ability to speak French)<sup>2</sup> or either lacking education or having a primary education (69%); according to others,<sup>1</sup> they were mainly middle class, and engaged in this practice to lighten their skin for cosmetic reasons and to achieve greater social status.<sup>2</sup>

These products can be acquired at a low cost in most of the larger markets and consist mainly of high potency corticosteroids, hydroquinone, mercury-based compounds and caustic agents, usually in combination.<sup>1,3</sup>

They are applied to the whole body for years, once or twice a day, and rather than stopping the practice during pregnancy and lactation, their use increases due to the mother's anxiety to appear radiant at the time of baptism.<sup>3,4</sup>

The most commonly used corticosteroid is clobetasol,<sup>4</sup> which belongs to the highest potency group. Its use causes atrophy, dyschromia, hypertrichosis, and striae (Figure 1), as well as acne that can be inflammatory and resistant to treatment. It also increases susceptibility to skin infections with atypical features<sup>3</sup>: disseminated dermatophytoses (Figure 2), which are inflammatory and resistant to conventional treatment; necrotizing cellulitis; extensive scabies with crusted lesions; and tinea versicolor is also more common.

The mode of use described above increases the likelihood of systemic absorption, which can lead to hypertension and diabetes<sup>5</sup>, especially if use is continued for more than 10 years, and to Cushing syndrome or adrenal insufficiency when discontinued.<sup>4</sup>

The use of corticosteroids reduces the irritation caused by other compounds that are added to the product, such as hydroquinone.<sup>3</sup> This is a benzene derivative that blocks melanin synthesis. It is used at concentrations higher than 5% and could act as a carcinogen.<sup>4</sup> Both properties



**Figure 1** Striae and marked atrophy caused by the long-term use of corticosteroids.



**Figure 2** Clinical diagnosis of extensive dermatophytosis on the buttocks and perineal area in a patient who used *Xeesal*.

would theoretically increase the risk of skin cancer in a race in which this is rare, although no case has yet been reported.

The practice can cause irritant or allergic contact dermatitis, telangiectasias, atrophy, acne, neuropathy, anaphylactic reactions and, due to their photosensitizing effect, may be associated with rashes similar to lupus erythematosus.<sup>3,6</sup> In addition, it causes exogenous ochronosis (Figure 3) in which hyperpigmented macules or papules appear in the skin due the deposition of yellow-brown pigment in the dermis; these lesions are associated with the topical application of products such as hydroquinone.<sup>6</sup>

Its effect is potentiated by the action of the corticosteroid, which also inhibits its eczematogenic effect. In most cases, the products do not contain any type of sun screen.

Mercury is used in the form of soaps or creams containing mercury iodide (1%-3%), or mercury chloride (6%-8%). Their systemic absorption causes nephrotic syndrome



**Figure 3** Periocular hyperpigmentation and exogenous ochronosis associated with the use of hydroquinone in skin lightening creams (clinical diagnosis).

due to reversible nephropathy with minimal changes and neurological disturbances affecting both the central nervous system (irritability, insomnia, impaired memory) and the peripheral nervous system (demyelinating neuropathy). The use of these products during pregnancy can provoke anemia, kidney failure, and cataracts in the newborn.<sup>4</sup>

The use of mercury is regulated and is currently prohibited in cosmetics within the European Union.

The products include caustic agents such as liquid soaps, hydrogen peroxide, salicylic acid preparations at concentrations of 10% to 30%, and other primary irritants.

Other components detected in the creams include sodium hypochlorite, plant extracts, carotene, sun screens, and other products of unknown origin.<sup>2,3,7</sup>

Although attempts are made to conceal the practice, it can be identified by hyperpigmentation of the skin over the back of the interphalangeal joints (with 100% specificity in users in 1 study)<sup>5,7</sup> or periocular hyperpigmentation similar to Berloque dermatitis (Figure 3).<sup>3</sup>

In western countries we should also be aware of this practice due to the large numbers of immigrants from Africa and continuation of the practice in the destination country.<sup>3</sup> In France, it is possible to acquire the products in specialized African shops, where they are sold as harmless cosmetic creams. In the United Kingdom, the sale of large quantities of skin lightening creams to Afro-Caribbean and

Asian women has also been identified.<sup>2</sup>

In our hospital, we have only seen 1 black patient who used *Xeestal* and who attended for facial nodular-cystic acne without presenting any of the other complications mentioned.

Knowledge concerning the potential diseases associated with this practice leads us to advise very strongly against it and to warn of the risks involved in the use of these products, as well as their adverse cosmetic effects, which are frequently untreatable.

## References

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