Mohamed M, et al., J Clin Dermatol Ther 2018, 5: 028
DOI: 10.24966/CDT-8771/100028

HERALD

HSOA Journal of Clinical Dermatology and Therapy

Letter to Editor

Confetti Leukoderma Following Application of Mequinol: A Case Report

Mariem Mohamed*, Aymen Toumi, Yosra Soua, Hichem Belhadjali and Jameleddine Zili

Department of Dermatology, Fattouma Bourguiba University Hospital, Monastir, Tunisia

Letter to the Editor

Dear Sir,

Skin lightening (bleaching) cosmetics and toiletries are widely used in most African countries [1]. The active ingredient in these cosmetic products is often hydroquinone, glucocorticoids and mercury [1,2]. Since these products are used for long duration, on a large body surface area, or/and under hot humid conditions, percutaneous absorption is enhanced and complications are increased [1,2]. Here in we describe a new case of confetti like leukoderma in a young Tunisian female following application of leucodinine B® cream on melasma.

Case Report

A 34-year-old brown-skinned woman, with a history of facial melasma, was referred to our department with multiple asymptomatic, achromic spots of 2-months duration, localized on the face and the neck. She admitted to have applied on her face mequinol cream during the last year. No other oral or topical medications were used by the patient. On dermatologic examination, she had several small depigmented macules round to oval in shape, with well-defined margins, which were distributed over the face, the neck, the extremities of fingers and the trunk (Figure 1). She had no particular medical history and all immunologic tests were negative. The history of repeated exposure to mequinol, the distribution of macules on the primary chemical exposure site and the presence of numerous acquired confetti or pea-sized macules allowed us to retain the diagnosis of leukoderma-en-confetti induced by mequinol. Improvement of symptoms was noticed 1 year later by stopping mequinol and using topical corticosteroids (Figure 2).

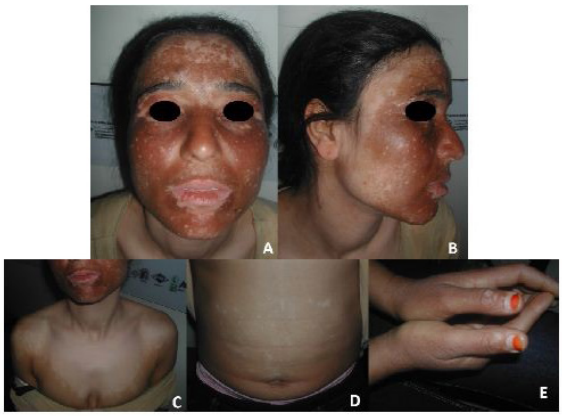

Figure 1: Small depigmented macules round to oval in shape, with well-defined margins distributed over the face (A and B), the neck (C), the trunk (D) and the extremities of fingers (E).

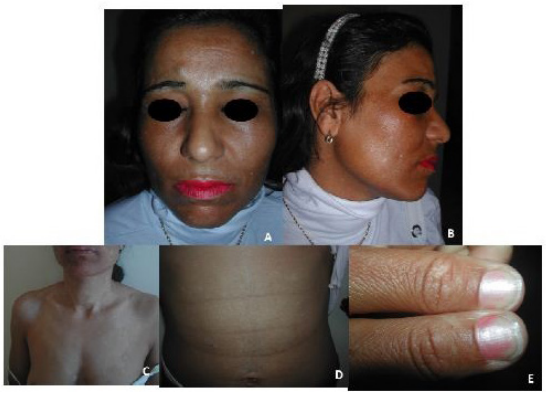

Figure 2: Partial improvement of depigmented macules 1 year later.

Comments

The cosmetic use of skin bleaching products is a common practice in the sub-Saharan Africa, the Maghreb and the Middle East countries [1]. The active principles used included hydroquinone, glucocorticoids, mercury iodide and caustic agents [1,2]. Hydroquinone has been the mainstay of topical therapy for hyperpigmentation disorders such as melasma. Leucodinine B® contains 10% monomethylether of hydroquinone (mequinol). Mequinol or 4-hydroxyanisole is a phenolic compound, which was first shown by Riley to be a strong melanocytotoxic agent [3]. It is intracellularly metabolized by tyrosinase

***Corresponding author:** Mariem Mohamed, Department of Dermatology, Fattouma Bourguiba University Hospital, Monastir, Tunisia, Tel: +216 3447108; E-mail: mariemmohamed79@yahoo.fr

Citation: Mohamed M, Toumi A, Soua Y, Belhadjali H, Zili J (2018) Confetti Leukoderma Following Application of Mequinol: A Case Report. J Clin Dermatol Ther 4: 028.

Received: March 14, 2017; **Accepted:** April 03, 2018; **Published:** April 18, 2018

to form catechol and then o-quinone, which is highly cytotoxic. In fact, this product inhibits melanogenesis by its binding to the enzyme tyrosinase, or by oxidation of toxic free radicals that damage lipoprotein membrane of melanocytes. Thus, mequinol has been shown to be more effective and less irritating than hydroquinone and has been used extensively in Europe [4].

All bleaching agent may have multitude of dermatologic and systemic complications. With mequinol, many subjects experienced minor side effects such as redness, burning/stinging, hypopigmentation and desquamation. These side effects quickly resolved on reduced dosing frequency or temporary cessation of treatment, and most subjects were able to reinitiate treatment. One of the advantages of a topical treatment with mequinol is that management of the level of response or depigmentation can be controlled by the patient or by the patient in consultation with the physician [5]. In our case, we report serious and unexpected adverse event in patient when applying mequinol developed a confetti-like and pinpoint depigmented macules.

Leukoderma-en-confetti has been described previously in association with chemical leukoderma [6]. The majority of these chemicals are aromatic or aliphatic derivatives of phenols and catechols. Leukoderma-en-confetti occurs due to direct skin exposure to these chemicals that are selectively toxic to melanocytes. This exposure can occur either in the workplace or even in day-to-day products, such as lightening agents in bleaching creams like hydroquinone or mequinol [7].

Chemical leucoderma should indeed be considered in the differential diagnosis of every case of idiopathic vitiligo or leucomelanoderma. Chemical leucoderma, like vitiligo, lacks definitive diagnostic features. Clinicohistopathologically, no absolute criteria can differentiate chemical leucoderma from vitiligo. However, chemical leucoderma can be diagnosed clinically by a history of repeated exposure to a known or suspected depigmenting agent at the primary site, distribution of macules corresponding to chemical exposure and the presence of numerous acquired confetti or pea-sized macules [8]. Chemical leucoderma develops not only at the site of chemical contact but also remotely as observed in our case.

The patients were managed by counselling, strict and permanent avoidance of causes, topical corticosteroids or tacrolimus, oral Psoralen Plus Ultraviolet A (PUVA) or narrowband UVB [8]. Prompt treatment with a topical corticosteroids and cessation of mequinol in the patient case led to improvement of symptoms.

Our case report highlights the need for awareness that mequinol may potentially lead to leukoderma-en-confetti.

References

1. Ly F, Soko AS, Dione DA, Niang SO, Kane A, et al. (2007) Aesthetic problems associated with the cosmetic use of bleaching products. Int J Dermatol 46: 15-17.

2. Mahé A, Ly F, Aymard G, Dangou JM (2003) Skin diseases associated with the cosmetic use of bleaching products in women from Dakar, Senegal. Br J Dermatol 148: 493-500.

3. Riley PA (1969) Hydroxyanisole depigmentation: *In-vivo* studies. J Pathol 97: 185-191.

4. Boyle J, Kennedy CT (2005) Mequinol 2%/tretinoin 0.01% topical solution monotherapy and combination treatment of solar lentigines and post-inf lammatory hyperpigmentation. J Am Acad Dermatol 52: 145.

5. Fleischer AB, Schwartzel EH, Colby SI, Altman DJ (2000)The combination of 2% 4 -hydroxyanisole (Mequinol) and 0.01% tretinoin is effective in improving the appearance of solar lentigi nes and related hyperpigmented lesions in two double-blind multicenter clinical studies. J Am Acad Dermatol 42: 459-467.

6. Sosa JJ, Currimbhoy SD, Uk oha U, Sirignano S, O'Leary R, et al. (2015) Confetti-like depigmentation: A potential sign of rapidly progressing vitiligo. J Am Acad Dermatol 73: 272-275.

7. Bajaj AK, Saraswat A, Srivastav PK (2010) Chemical leucoderma: Indian scenario, prognosis, and treatment. Indian J Dermatol 55: 250-254.

8. Ghosh S, Mukhopadhyay S (2009) Chemical leucoderma: A clinico-aetiological study of 8 64 cases in the perspective of a developing country. Br J Dermatol 160: 40-47.