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Journal
Dermatology Online Journal, 26(7)

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Publication Date
2020

DOI
10.5070/D3267049570

Camouflaging vitiligo using a spray tan

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Abstract

Vitiligo is a depigmenting skin disorder that can cause significant patient distress. Treatment of vitiligo is challenging and should address patient's concern for cosmetic treatment. Herein, we report the case of a 60-year-old patient who achieved temporary improvement in pigmentation using a spray tan. Camouflaging vitiligo using a spray-tan is a reasonable, safe, and effective mechanism for management of vitiligo.

Keywords: vitiligo; vitiligo treatment; vitiligo camouflage; spray-tan; DHA

To the Editor:

Vitiligo is an acquired depigmenting skin disorder affecting 1-2% of the population and significantly affects quality of life. Few treatments exist for successful repigmentation and the only FDA-approved treatment is monobenzone, which functions by depigmenting the remainder of a patient's skin [1]. With so few treatments, patients often seek mechanisms to hide their disease. Although many cosmetic options exist and are being utilized by patients, there are few reports in the literature documenting these options. Herein, we report successful camouflage of long-standing vitiligo using a spray-tan to cover depigmented patches of vitiligo.

A 60-year-old man with stable, long-standing vitiligo presented with large depigmented patches on the trunk and extremities, representing about 20% body surface area (**Figure 1**). The patient declined treatment but inquired about camouflage for special occasions. The patient decided to attempt a spray-tan using dihydroxyacetone (DHA) for improved cosmetic appearance of the depigmented areas. After one treatment session (**Figure 2**), the patient noticed significant improvement in the uniformity of his skin tone and was highly satisfied with the degree of camouflage. He noticed no adverse effects of the spray-tan. On follow up, he reported that the effects lasted approximately one week.

Treatment of vitiligo is challenging, with topical corticosteroids, calcineurin inhibitors, and phototherapy utilized most frequently. Rates of repigmentation, however, approximate 50-60%, even after months of treatment [2, 3]. Although new treatment modalities are on the horizon with immunomodulators like JAK inhibitors, a primary approach for treatment may be to achieve acceptable cosmetic appearance given the great psychosocial burden imposed by vitiligo [3].

To this end, camouflaging techniques have become paramount for patients. The market for temporary, topical camouflage like Dermablend® (Division of

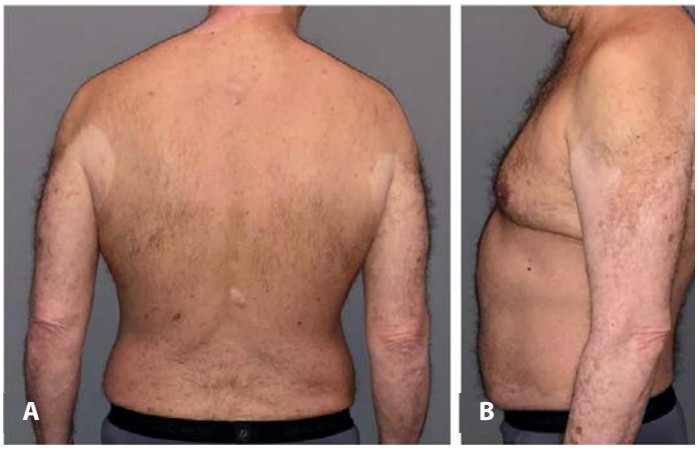

Figure 1. *Pre Spray-tan. Posterior **A)** and lateral **B)** photographs of patient showing depigmented patches noted on the posterior arms and neck.*

Figure 2. *Post spray-tan. Posterior and lateral photographs demonstrating notable improvement in uniformity of skin pigmentation. The line of demarcation on the buttocks, where the patient did not receive any DHA, is visible.*

L'Oreal USA, New York, NY) or Cover FX® (Cover FX Skin Care Inc, Toronto, Ontario, Canada) has become increasingly popular [3]. Dihydroxyacetone (DHA), the primary ingredient in self-tanners, is another flexible and convenient option that can last for several days. Through oxidation of histidine and tryptophan present in peptides of keratinocytes, DHA stains the stratum corneum brown. The degree of darkening can be titrated to match a patient's skin tone over multiple applications, with more applications correlating to a darker color.

Several studies have assessed DHA in a topical cream for patients with vitiligo and piebaldism and found it to be a safe and effective camouflage option in recalcitrant disease [2, 4]. Spray-tans also utilize DHA but are applied using a different delivery method. Spray-tans are typically performed in a salon setting and use an aerosolized formulation of DHA, which delivers DHA to patient's skin in a uniform concentration. Unlike at-home self-tanners, spray-tans have higher concentrations of DHA, allowing for a faster coloration without multiple applications with a similar duration of effect. Many spray-tan salons can match DHA concentration to a patient's natural skin type to provide a more seamless appearance. In addition, spray-tans can quickly cover large body surfaces. This may be preferable for patients who have high disease burden or for patients who may want to camouflage their vitiligo for a special event. In our patient, the decreased contrast between depigmented and normal skin post spray-tan was immediate and dramatic (**Figure 2**).

Importantly, internet blogs and patient education groups advocate using spray-tanning as an option for camouflage. Currently, little or no scientific literature exists on its use in vitiligo or depigmenting skin disorders, to the detriment of patients and providers alike.

We present this case to demonstrate that spray-tanning is an easy, effective, temporary camouflage for patients with extensive skin areas affected by vitiligo. Such options are necessary tools in the dermatologist's armamentarium to help patients with vitiligo. Adding these options to treatment algorithms may help mitigate the psychological effects of this disease and improve patients' quality of life.

Potential conflicts of interest

Dr. Zampella is a consultant for X4 Pharmaceuticals, but this relationship is not relevant to the nature of this article. The authors have no other conflicts of interest or funding sources to disclose. This case is not under consideration elsewhere and has not been previously published.

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