EA DV CONGRESS
AMSTERDAM 25-28 SEPTEMBER 2024
EUROPEAN ACADEMY OF DERMATOLOGY & VENEREOLOGY

Abstract N°: 2764

axillary hyperpigmentation treatment: a review of the literature

Ifa Etesami*[1], Yasamin Kalantari[1]

[1]Tehran University of Medical Sciences, Department of Dermatology, Tehran, Iran

Introduction & Objectives:

Axillary hyperpigmentation is a common dermatologic complaint observed in practice, especially in darker skin patients. It is believed that axillary hyperpigmentation is a type of post-inflammatory hyperpigmentation (PIH) following persistent irritation and skin damage. Furthermore, it has been pointed out that axilla is different from other tissues in that it consists of more hair follicles, glands, and has weaker skin barriers.

To date, there exists no gold standard treatment for treatment of axillary hyperpigmentation. Various topical agents such as hydroquinone (HQ), tretinoin, and vitamin C as well as light and laser-based treatments namely QS Nd-YAG laser are being used in clinical practice.

In this study, we aim to address the efficacy and safety of the studied treatment modalities for axillary hyperpigmentation.

Materials & Methods:

We searched PubMed/Medline database and Google Scholar engine for the relevant articles published from inception until July 2023 by using the following keywords: Axilla, axillary hyperpigmentation, underarm, armpit, lightning, whitening, treatment, topical, and light and laser.

Notably we exclusively included the studies that only had a focus on treating the hyperpigmentation in the axillary area and not elsewhere.

Results:

Seven articles were included in this study. We categorized retrieved articles into three categories namely “topical treatments” and “light and laser-based modalities”, and “comparing topical and light and laser-based modalities”. Regarding topical treatments, one study compared the efficacy of niacinamide 4% with desonide 0.05% that showed that both modalities were effective and desonide showed a better depigmenting effect. The other compared the efficacy of Cyperus rotundus oil and hydroquinone (HQ) that showed both modalities were effective ($P < 0.05$) with similar efficacy and HQ had more side events. Last article studied the efficacy of *Perilla frutescens* L. leaves extract (PFLE) serum and confirmed the effectiveness of this extract. Regarding light and laser-based treatments, all three studies evaluated the effectiveness of Q-switched Nd:YAG laser and in one of these three studies, the effectiveness of Q-switched Nd:YAG laser was compared with IPL that showed no difference between Qs Nd:YAG and intense pulsed light (IPL). Regarding comparing topical and light and laser-based modalities, the comparison of alpha hydroxy acid (AHA) 40 % and IPL showed better results in favor of IPL.

Conclusion:

In this study, we found that both topical in addition to light and laser-based therapies are effective. The studied topical agents for axillary hyperpigmentation were Niacinamide, Desonide, CREO, AHA, HQ, and PFLE. Light and laser therapies applied for axillary hyperpigmentation were QS-Nd YAG and IPL. The most frequently used laser in treating axillary hyperpigmentation was QS Nd-YAG without having any severe adverse effect. Based on this

review, very few studies are available in the literature, and larger randomized studies in this field are essentially needed.