Utilizing Cosmeceuticals for Skin Discoloration from Inflammatory Acne

Recent advances in cosmeceutical formulation provide more therapeutic tools to manage scarring and other skin changes from acne.

BY DINA N. ANDERSON, MD

Acne is one of the more common conditions seen in dermatology. Despite the lack of new molecules, clinicians have become adept at treating acne with several mainstay therapies, ranging from topical benzoyl peroxides to oral antibiotics. However, while the treatment of acne is more often straightforward, navigating the aftermath can be a challenge. Skin discoloration resulting from inflammatory acne is a common condition that presents in a variety of ways and can last upwards of two years or longer without proper intervention. In fact, acquiring the most effective treatment for post-inflammatory changes is often the primary concern of many acne patients. Most post-inflammatory changes leave some degree of discoloration in darker skin patients and erythematous lesions in lighter-skin patients, while medium skin individuals usually have elements of both post-inflammatory erythema and dyschromia. One study (239 blacks, 55 Hispanics, 19 Asians) showed that 65.3 percent of blacks, 52.7 percent of Hispanics, and 47.4 percent of Asians developed acne-induced PIH.

In treating and managing various forms of skin discoloration from inflammatory acne, cosmeceutical agents can be useful adjuncts to various mainstay therapies. Moreover, recent advances in cosmeceutical formulation and delivery have provided physicians with an increasing number of products with better penetration and improved tolerability. This article will address novel cosmeceutical agents for the treatment of epidermal changes in acne in both light-skinned and dark-skinned patients.

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AGENTS FOR LIGHTER SKIN

For patients with Fitzpatrick skin types I-III, epidermal changes present often as red scars, for which a number of bioserums, anti-redness agents, and antioxidants can provide aid. These include the Neocutis Bioserum line, which contains Processed Skin Cell Proteins (PSP), an optimal, naturally balanced blend of growth factors, cytokines, and interleukins. Discovered through years of research on scarless wound healing, PSP products have been shown to be effective as adjunctive skin care to help minimize the appearance of scarring and help promote skin recovery. PSP products help promote skin restoration and soothe the skin through the combination of these proteins that regulate wound healing. Patients can apply bioserum to the entire face or with the application of a pen for spot-intensive therapy.

Neocutis’ Peche Redness control with Rosaplex can be especially beneficial for individuals with acne rosacea who present with inflammatory papules, which often leave behind pink-to-red macules. Several redness prone skin conditions including acne were related to an altered presence of anti-microbial peptides such as cathelicidins. Rosaplex contains sodium dextran sulfate, zinc PCA, caf-
feine, and glycerin, which work to restore skin’s balance, as well as improve skin redness and blushing.

In addition to these anti-inflammatory agents, antioxidant-based products can provide some benefit for lighter skinned individuals with red acne scars. Replenex Power of Three by Topix offers triple antioxidant benefits of resveratrol, 90 percent green tea polyphenol isolates, ECGC, and caffeine. Triple therapy guards against damage and visibly reduces the signs of redness and inflammation. CoffeeBerry Whole Fruit Extract is another potent antioxidant featured in several products by RevaleSkin. It is combined with humectants, phospholipids, and skin conditioners to soften and hydrate damaged skin. In addition to the recently launched intensive recovery cream, which contains 50 percent more CoffeeBerry, RevaleSkin’s Illuminesse line also helps even skin tone by adding other plant-based antioxidants, including billberry fruit, grape seed Extract, and olive leaf extracts.

The benefits of cosmeceutical agents for epidermal scarring are wide-ranging. For example, most physician-dispensed cosmeceutical lines (including those already mentioned) incorporate the active ingredients discussed above in daily sunscreens. Sunscreen use is essential to help maintain an even complexion and fade scars. For acne patients who are already using traditional topical therapy, it helps to combine the sunscreen and anti-scarring effects in one step. Another benefit of using these therapies is that they are not irritating and they help repair the epidermal barrier. This is especially important for acne patients since many of the typical therapies for acne—including benzoyl peroxides and topical retinoids—have a drying effect on the skin. Thus, many of these agents for red scars help to offset irritating elements of typical acne therapies.

FOR DARKER SKIN

For patients with Fitzpatrick skin types IV-VI, a number of products are available that help even out skin tone. Hydroquinone in varying strengths has been the mainstay for decades. This skin lightening medication blocks the conversion of three, four/dihydroxyphenylalanine (DOPA) to melanin through the inhibition of the enzyme tyrosinase, an essential step in melanin synthesis.³ The challenge of all skin lightening preparations is that they must contain penetration enhancers that damage the stratum corneum, such as propylene glycol or glycolic acid. Active ingredients must be able to reach the base of the viable epidermis where the melanocytes reside.⁴ Representing the first advancement in improved penetration and tolerability of hydroquinones and among the most effective current prescription variations is Triluma Cream (Galderma). It was developed based on Albert Kligman’s philosophy of the increased effect of combining hydroquinone, tretinoin, and corticosteroid, to help with penetration and tolerability of hydroquinone. Most practitioners worry about long-term use of topical steroids and often stop this portion after six to eight weeks after the patients becomes retinized.

Recently, Topix gave dermatologists the capacity to self-compound hydroquinone in a non-alcohol based pad called Rebrightalize. Integrating skin brighteners and various antioxidants into a penetration-promoting vehicle, Rebrightalize is designed to improve and maintain the tone of the skin and improve brightness. The pads can be used with or without hydroquinone, and I have found that a short burst of higher strength (six to 10 percent) pads has multiple benefits of quick onset and even distribution of lightening. This approach also helps to avoid any potential hazards of long-term hydroquinone use.

Many practitioners break up hydroquinone use with other, more natural products that help to even out skin tone. For example, some physicians have had success dispensing the kojic acid based product, Vibrance from Vivite, as well as OTC agents containing varying degrees of arbutin, niacinamide, soy, licorice, white birch, vitamin C, and/or bearberry. Physicians have also had success using azelaic acid (Finacea, Bayer) in combination with kojic acid-based products. These agents can fill a hydroquinone “holiday,” but they also offer an alternative for patients who wish to avoid the expense of higher-priced products. Companies such as Aveeno and Kiehls have particularly capitalized on building brands around natural ingredients to balance skin tone.

CONCLUSION

Whether you are treating dark spots or red spots, it is a good idea to counsel patients that it will take roughly four to six weeks to see an onset of improvement, and eight to 12 weeks to see the maximum effect of many of these products. If at that point you are still not getting the desired results, you can then discuss adding other agents or consider more rigorous therapies. In my next article, I will examine several of these options, including various chemical peel agents and device-based interventions.

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