

Do Cosmeceutical Agents Combined With Pharmaceutical Agents Improve Therapeutics?



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Dermatology is among the few areas of medicine in which pharmaceutical agents, over-the-counter (OTC) drugs, cosmeceutical agents, skin care products, and cosmetics all play important roles, such as in disease treatment and prevention, hygiene, antiaging optimization, and personal appearance, to name a few. No other medical specialty encompasses such diversity or has the potential to promote change in such disparate realms.

The skin is visible, easily manipulated, an accurate indicator of overall health, a marker of chronologic aging, and a source of discomfort when diseased. It can be healed by pharmaceutical therapy, and the positive result can be maintained with cosmeceutical therapy. It would seem that the treatment, maintenance, and prevention aspects of dermatologic care should be somehow combined into another cohesive package. A new idea in dermatology that I have noted is combining OTC skin care products with pharmaceutical agents. The OTC skin care products are placed in the same package as the pharmaceutical agents and are dispensed by pharmacists as one unit. I will discuss this new trend in this article.

Is There an Added Benefit When Cosmeceutical Agents Are Combined With Pharmaceutical Agents?

The rationale behind dispensing OTC skin care products and drugs in the same packaging is to provide the patient with an added benefit at no additional cost (Table 1). The products may be selected to counter the side effects of the drug or provide more rapid improvement in the skin's appearance until the pharmaceutical agent

alleviates the disease. Sometimes, the included OTC skin care products may be valuable to patients who do not know how to optimize the appearance of their diseased skin with proper cleansers and moisturizers.

A study was conducted in patients with mild to moderate rosacea to evaluate the effect of a gluconolactone-containing cleanser and moisturizer used concomitantly with azelaic acid 15% gel versus the effect of patient-selected OTC products.¹ The group using the specially designed gluconolactone-containing products experienced better erythema reduction than the group using self-selected OTC skin care products. This study supports the contention that patients may not be educationally equipped to select optimal OTC skin care products.

There may be a functional benefit in manufacturers combining OTC skin care products with pharmaceutical agents. Some drugs may be negatively influenced by OTC skin care products that either inactivate the drug or decrease its penetration. The pharmaceutical manufacturer may choose to combine the drug with a moisturizer that optimizes the drug's efficacy, perhaps through occlusion and increased stratum corneum hydration, and facilitates penetration. Incompatibilities in pH levels may be minimized by creating a moisturizer with chemical properties that complement the drug.

Finally, the patent life of a drug may be prolonged by combining it with an OTC skin care product, thereby creating a new, branded entity. Doing so provides the patient with OTC skin care products at no added cost and allows the dermatologist to continue prescribing a branded drug in the current insurance environment that prefers generics.

How Are Cosmeceutical Agents and Pharmaceutical Agents Linked?

Cosmeceutical agents and pharmaceutical agents are usually carefully linked by clinical studies demonstrating their physical and chemical compatibility. For example, a study that I performed on a nonalkaline skin cleanser

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TABLE 1

Possible Benefits of Combining Skin Care Products With Pharmaceutical Agents

- The skin care product may increase the initial tolerability of the pharmaceutical agent
- The skin care product may minimize inevitable long-term side effects of certain topical drugs
- Certain disease states are associated with common skin characteristics. Skin care products may be selected that will hasten disease resolution more rapidly than the pharmaceutical agent alone
- The pharmaceutical manufacturer may select skin care products that do not interfere with drug delivery
- The pharmaceutical manufacturer may educate patients on which skin care products function optimally in persons predisposed to certain disease states
- Increased patient satisfaction and compliance may result from receiving complementary skin care products as an added benefit with a pharmaceutical agent
- Extended patent life results when a branded pharmaceutical agent is combined with skin care products in a single-dispensed package

demonstrated the suitability of this cleanser for patients with rosacea with a damaged skin barrier.² This study showed that twice-daily cleansing preserved the function of the skin barrier, improved overall hydration, resulted in no skin damage, and produced no increase in trans-epidermal water loss. Likewise, a study performed on metronidazole 1% gel found that twice the daily recommended dosing over 2 weeks did not damage the sensitive skin barrier of patients with mild to moderate rosacea (unpublished data). For this reason, a skin cleanser is now dispensed simultaneously with the drug for rosacea.

TABLE 2

Potential Combinations of Cosmeceutical Agents and Pharmaceutical Agents to Treat Certain Disease States

- Topical drugs for rosacea may be combined with a mild facial cleanser to prevent skin-barrier damage and minimize stinging and burning
- Botanical anti-inflammatory–containing facial moisturizers may be combined with topical drugs for rosacea to aid in erythema reduction
- Topical retinoids may be combined with a moisturizer to minimize desquamation and irritation
- Oral antibiotics for acne may be combined with a topical acne-treatment regimen consisting of cleanser, astringent pad, and mask for reducing facial sebum
- Topical drugs for psoriasis may be combined with a moisturizer containing ingredients that enhance penetration in thick, keratotic plaques

Another study evaluated the additive clinical benefit of combining an oral antibiotic (minocycline hydrochloride) with a line of acne skin care products (unpublished data). The basis of this combination was that oral antibiotics take 4 to 8 weeks to produce visible improvement, which could be hastened by using barrier-enhancing complementary skin care products. This same concept was used to develop a retinoid and skin care combination that consists of tretinoin dispensed with barrier-enhancing skin care products. The simultaneous dispensing of products may improve patient compliance and ultimately hasten disease resolution. With the reduction in novel dermatologic drugs, the trend of combining cosmeceutical agents with pharmaceutical agents appears to be emerging.

Summary

Combining cosmeceutical agents with pharmaceutical agents may enhance therapeutics if the complementary products are carefully researched. It may be that the optimal way to prescribe is to control all aspects of skin therapy by including skin care maintenance products

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with drug treatment. This is certainly a new concept in dermatology. Dermatology lends itself to this approach better than any other medical specialty. It is conceivable, however, that these product combinations do not exist. Table 2 lists some of the possibilities for simultaneous dispensing of dermatologics. Currently, 2 products are available: a cleanser dispensed with a topical rosacea drug (metronidazole 1% gel) and an oral antibiotic (minocycline hydrochloride) dispensed with an acne skin care line. It may be that successfully combining cosmeceutical agents with the pharmaceutical agents improves therapeutics.

References

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