MADISON MEDICAL COMPOUNDING PHARMACY

Phone 601-707-7545
Fax 601-856-8985
www.mmcpharmacy.com

Thank you for entrusting in the compounding services at Madison Medical Compounding Pharmacy to help meet the unique medication needs of your patients. We are excited to share our monthly newsletter with you and look forward to working with you. Please don't hesitate to let us know how we can assist you and your practice.

LeAnn Chambers, Pharm.D. and Matthew Chambers, Pharm.D.

Multifaceted Approaches to Hyperpigmentation

Compounding pharmacists possess a wide range of chemical resources to address hyperpigmentation. Over time, the availability and diversity of ingredients available for compounded formulations for hyperpigmentation have significantly expanded.

Hydroquinone (HQ) has long been recognized as the leading active pharmaceutical ingredient (API) for skin lightening. However, its susceptibility to oxidation necessitates the inclusion of adequate antioxidant coverage during the formulation process, with potency considerations. Arbutin (alpha), on the other hand, is enzymatically converted to hydroquinone by skin bacteria such as Staphylococcus aureus and Staphylococcus epidermidis, as well as by the enzyme tyrosinase. Dermatological best practices advise rotating away from HQ therapy after three months, for a three-month period, to mitigate the risk of ochronosis, an adverse event associated with long-term usage.

Several other noteworthy agents have demonstrated promise in the treatment of hyperpigmentation. Ascorbic acid, for instance, facilitates the reduction of o-dopaquinone back to dopa. Niacinamide inhibits the transfer of melanin from melanocytes to keratinocytes, while tranexamic acid reduces the production of melanocyte-stimulating hormone. Methimazole, on the other hand, acts as an inhibitor of peroxidase. Various compounds, including azelaic acid (and its cosmetic form, potassium azelaoyl diglycinate), resveratrol, licorice root, lactic acid, ferulic acid, and mequinol, demonstrate inhibitory effects on tyrosinase.

Formulations that combine stable combinations of ingredients, each exhibiting multiple mechanisms of action are likely to yield a synergistic advantage in terms of clinical efficacy compared to single-entity formulas. Our pharmacist can work with you to determine a combination formulation appropriate for your patient.

J Cosmet Dermatol. 2008;7(3):189-193.
PLoS One. 2017; 12(5): e0177330

Combination Therapy and GA Peels in the Management of Atrophic Acne Scars

Atrophic acne scars are difficult to treat. The demand for less invasive but highly effective treatments for scars is growing.

To assess the efficacy of combination therapy using subcision, microneedling and 15% trichloroacetic acid (TCA) peel in the management of atrophic scars. Fifty patients with atrophic acne scars were graded using Goodman and Baron Qualitative grading. After subcision, dermaroller and 15% TCA peel were performed alternatively at 2-weeks interval for a total of 6 sessions of each. Grading of acne scar photographs was done pretreatment and 1 month after last procedure. Patients own evaluation of improvement was assessed. Out of 16 patients with Grade 4 scars, 10 (62.5%) patients improved to Grade 2 and 6 (37.5%) patients improved to Grade 3 scars. Out of 22 patients with Grade 3 scars, 5 (22.7%) patients were left with no scars, 2 (9.1%) patients improved to Grade 1and 15 (68.2%) patients improved to Grade 2. All 11 (100%) patients with Grade 2 scars were left with no scars. There was high level of patient satisfaction. This combination has shown good results in treating not only Grade 2 but also severe Grade 4 and 3 scars.

J Cutan Aesthet Surg. 2014 Jan;7(1):18-23.