CHAPTER

47 Chemical Peels

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The use of a chemical exfoliant to injure specific tissue layers to lessen fine facial rhytids, to decrease dispigmentation and actinic changes, and to rejuvenate damaged areas in a minimally invasive manner.

Indications

1. Photo dyspigmentation
2. Superficial rhytids
3. Melasma
4. Acne vulgaris
5. Ephelides

Contraindications

1. Active cutaneous infection (i.e., herpes)
2. Ice-pick or deep atrophic acne scars
3. Allergy to agent
4. Extreme sunburn
5. Open wounds (open acne wounds will propagate peel depth)
6. Unrealistic patient expectations
7. Patient is unable or unwilling to perform postoperative care
8. Caution with patients using skin sensitizers (i.e., Retin-A, Retinol, Accutane)

Anatomy

Epidermis: Layers from superficial to deep: stratum corneum, stratum granulosum, stratum spinosum, and stratum basale

Dermis. Layers from superficial to deep: papillary dermis and reticular dermis

Pretreatment Protocol for Chemical Peel Patients

1. Commercially prepared skin systems that contain tretinoin 0.05–0.1 and 4% hydroquinone, such as Obagi Nu-Derm (Skin Specialists, PC, Omaha, NE), are available and are recommended for 4–6 weeks prior to the application of a peel in order to allow for a more uniform depth of peel and to minimize complications associated with melasma and postinflammatory pigmentation.
2. Valacyclovir (Valtrex) is recommended beginning the day prior to the peel and for 7–14 days post-peel.

Technique: Medium Depth Chemical Peel

1. All patient consents are reviewed, signed, and all patient questions are answered. All patient make up is removed, and the maxillofacial skeleton is prepped with alcohol from the hairline to a point several inches below the inferior border of the mandible.
2. For medium depth and deep peels, intravenous sedation is performed.
3. The patient is positioned supine on the surgical table. The skin is degreased with acetone and standard nerve blocks are performed with long-acting local anesthetic in the areas of the anticipated peel.
4. A pre-peel is performed with Jessner's solution to include the forehead, periorbital region (the upper lids and thin tissue below the lower lid lash lines are avoided), the nasal bridge, the perioral region, and the lower face to the inferior border of the mandible (see Figure 47.2 in Case Report 47.1). After the Jessner's solution has dried and a thin layer of frosting has occurred, 25–35% Trichloroacetic acid (TCA) is applied to the above-mentioned regions with 4×4 gauze (see Figure 47.3 in Case Report 47.1).
5. When using TCA solution, it is important to wait several minutes after the application of the solution in order to allow for the frosting of the tissue and to assess the depth of the peel. The peel is typically carried into the hairline in order to minimize any demarcations of the peel. Areas such as the central forehead, glabellar region, and perioral region contain thicker tissue and are resilient to peels. Additional solution may be applied to these areas. The use of a cotton-tipped

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