Superficial Chemical Peeling

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Superficial Chemical Peeling

- **Is defined as the controlled application of specifically formulated chemical agents to the skin's surface, with the intention of causing controlled destruction to the epidermis, leading to exfoliation and subsequent regeneration.**

Common Superficial Agents

1. Glycolic acid (20–70%)

- **The depth is controlled by concentration (lower % for more superficial) and, most importantly, application time. (A 30-second application of 70% glycolic acid is superficial, while a 5-minute application is much deeper).**

2. Lactic Acid (20-50%)

- **It is gentler than glycolic acid and has excellent hydrating properties.**

3. Salicylic Acid (20-30%)

- **Because it is lipid-soluble, it penetrates effectively into pores.**

4. Jessner's Solution

- **It is a combination formula (14% Salicylic Acid, 14% Lactic Acid, and 14% Resorcinol in Ethanol).**

Indications at a Glance

- **Glycolic Acid**
- **Ideal Skin Type / Concern: Dull skin, mild fine lines, uneven texture and tone, hyperpigmentation (like mild sun spots).**
- **Lactic Acid**
- **Ideal Skin Type / Concern: Dry, dehydrated, and sensitive skin; mild dyschromia (uneven color) and loss of radiance.**
- **Salicylic Acid**
- **Ideal Skin Type / Concern: Oily and acne-prone skin, blackheads (comedones), enlarged pores, and inflammatory acne.**

Indications at a Glance

- **Mandelic Acid**
- **Ideal Skin Type / Concern: Hyperpigmentation (especially melasma and post-inflammatory hyperpigmentation), sensitive skin, and darker skin tones (Fitzpatrick IV-VI).**
- **Jessner's Solution**
- **Ideal Skin Type / Concern: Mild to moderate photodamage, acne-prone skin, and rough texture; an excellent all-rounder for combination skin.**
- **Trichloroacetic Acid (TCA) 10-15%**
- **Ideal Skin Type / Concern: Focal lesions like solar lentigines (age spots) or seborrheic keratoses; also used for priming skin before a deeper peel. Note: Not a beginner's peel.**

The Clinical Procedure

Phase 1: Pre-Procedural Protocol

1. Patient Consultation and Selection:

- **A thorough history must be taken. Absolute contraindications must be screened for, including pregnancy, active herpes simplex virus infection, a history of keloid scarring, recent treatment with isotretinoin (within the last 6-12 months), and known hypersensitivity.**
- **Patient expectations are managed. It is explained that results are cumulative and subtle**

2. Informed Consent:

- **A detailed informed consent is obtained. Potential side effects, such as transient erythema, mild edema, and desquamation, are explicitly discussed.**

Phase 1: Pre-Procedural Protocol

3. Skin Preparation and Cleansing:

The patient's skin is now thoroughly cleansed with a gentle, non-residue cleanser.

Critical Step: The skin is then meticulously degreased using a solvent such as alcohol or acetone. This is performed to ensure uniform penetration of the chemical solution; any residual oils will act as a barrier and lead to an uneven peel.

Phase 2: Application and Neutralization

4. Application Technique:

- **The chosen chemical solution is applied using saturated gauze pads or large cotton-tipped applicators.**
- **A standardized sequence is followed: first the forehead, then the cheeks, nose, and finally the chin. The peri-orbital area and the vermilion border are typically avoided.**
- **A smooth, uniform, single-pass application is performed. The endpoint is a uniform "frosting" or shiny, moistened appearance of the skin.**

Phase 2: Application and Neutralization

5. Clinical Observation and Timing:

- **The timer is started immediately upon application.**
- **The patient is continuously monitored for any reports of significant discomfort or burning, which would necessitate immediate neutralization.**
- **For a superficial peel, the contact time is typically short, ranging from 1 to 4 minutes.**

Phase 2: Application and Neutralization

6. Neutralization:

- **This is the most critical safety step. After the predetermined time has elapsed, the peel is terminated.**
- **The neutralizing agent (e.g., bicarbonate solution for glycolic acid) is copiously applied using water-saturated gauze to halt the chemical reaction completely. The skin is gently blotted, not rubbed.**

Phase 3: Post-Procedural Care

7. Soothing and Protection:

- **A bland, fragrance-free moisturizer is immediately applied to soothe the skin.**
- **The patient is instructed on the mandatory use of a broad-spectrum, high-SPF sunscreen. The importance of sun protection cannot be overstressed, as the newly revealed skin is highly photosensitive.**

Clinical Pearls and Management of Observations

- **Erythema (Redness)**: Mild to moderate erythema is the expected and desired endpoint for a superficial peel. It typically resolves within minutes to a few hours. The intensity of the erythema is directly related to the strength of the agent and the application time.
- **Frosting**: A light, speckled white frosting indicates epidermolysis. In a superficial peel, a dense, white frosting is not the goal and suggests a deeper penetration than intended.
- **Patient Sensation**: A mild tingling or warm sensation is normal. A sharp, stabbing, or burning pain is not. This must be immediately reported by the patient and acted upon by the clinician with prompt neutralization.

Clinical Pearls and Management of Observations

- **Post-Peel Desquamation (Peeling): Patients should be advised that visible flaking or subtle peeling may occur 2-4 days post-procedure. This is a normal part of the healing process. They must be instructed not to pick or pull at the skin, as this can cause erosion and hyperpigmentation.**
- **Complication: Post-Inflammatory Hyperpigmentation (PIH): This is the most common complication in darker skin types. It is prevented by proper patient selection, meticulous sun protection, and potentially by using a priming agent like hydroquinone pre-treatment in high-risk patients.**


THANK YOU