

Chemical Peeling

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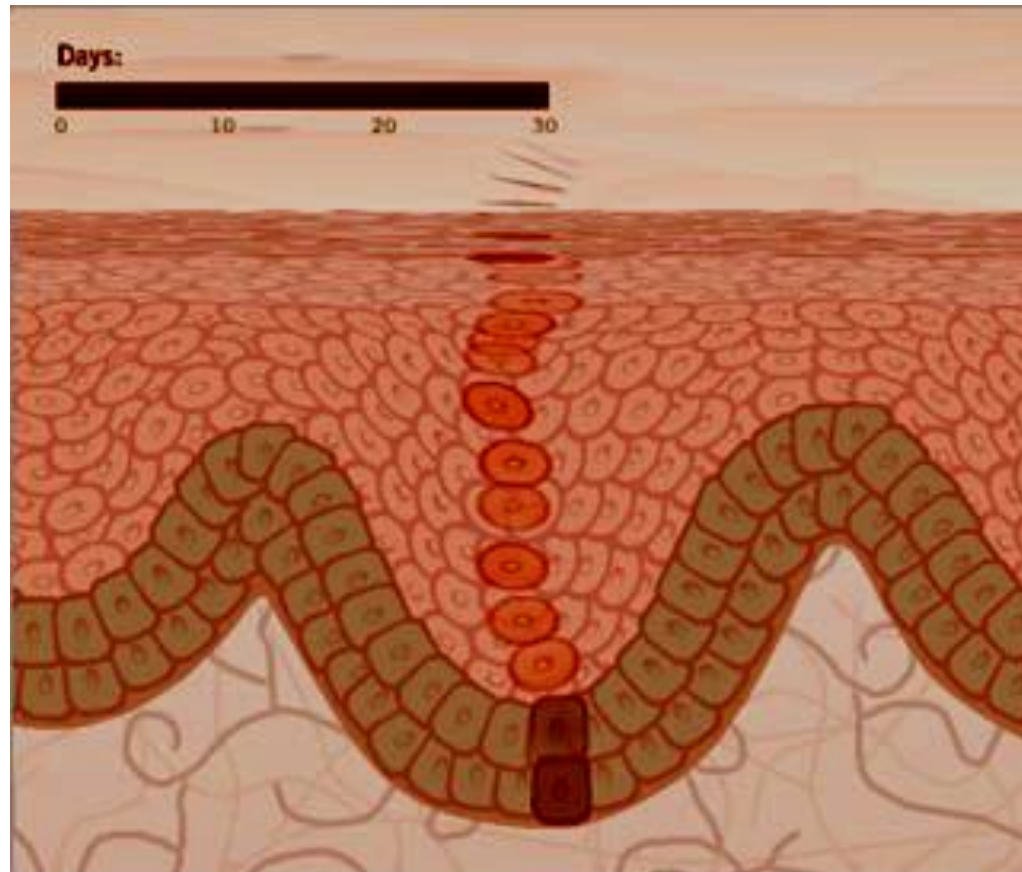
- Key Features
- Classification of peels
- Chemicals commonly used
- Indications of chemical peeling
- Contraindications of chemical peeling
- Method at your clinic
- Postpeeling care

References

- Manual of chemical peels. By: Mark Rubin. Lippincott company.
- Color Atlas of Chemical Peels. By: Tosti, Grimes, De Padova. Springer.
- Procedures in Cosmetic Dermatology Series: Chemical Peels. By Rubin, Tung. Elsevier.

Introduction

- Skin is a dynamic growing organ.
- Cell exfoliation is a normal daily event.



What is chemical peeling?

Method of skin resurfacing

**Accelerating Exfoliation
by using irritant chemicals**

synonyms

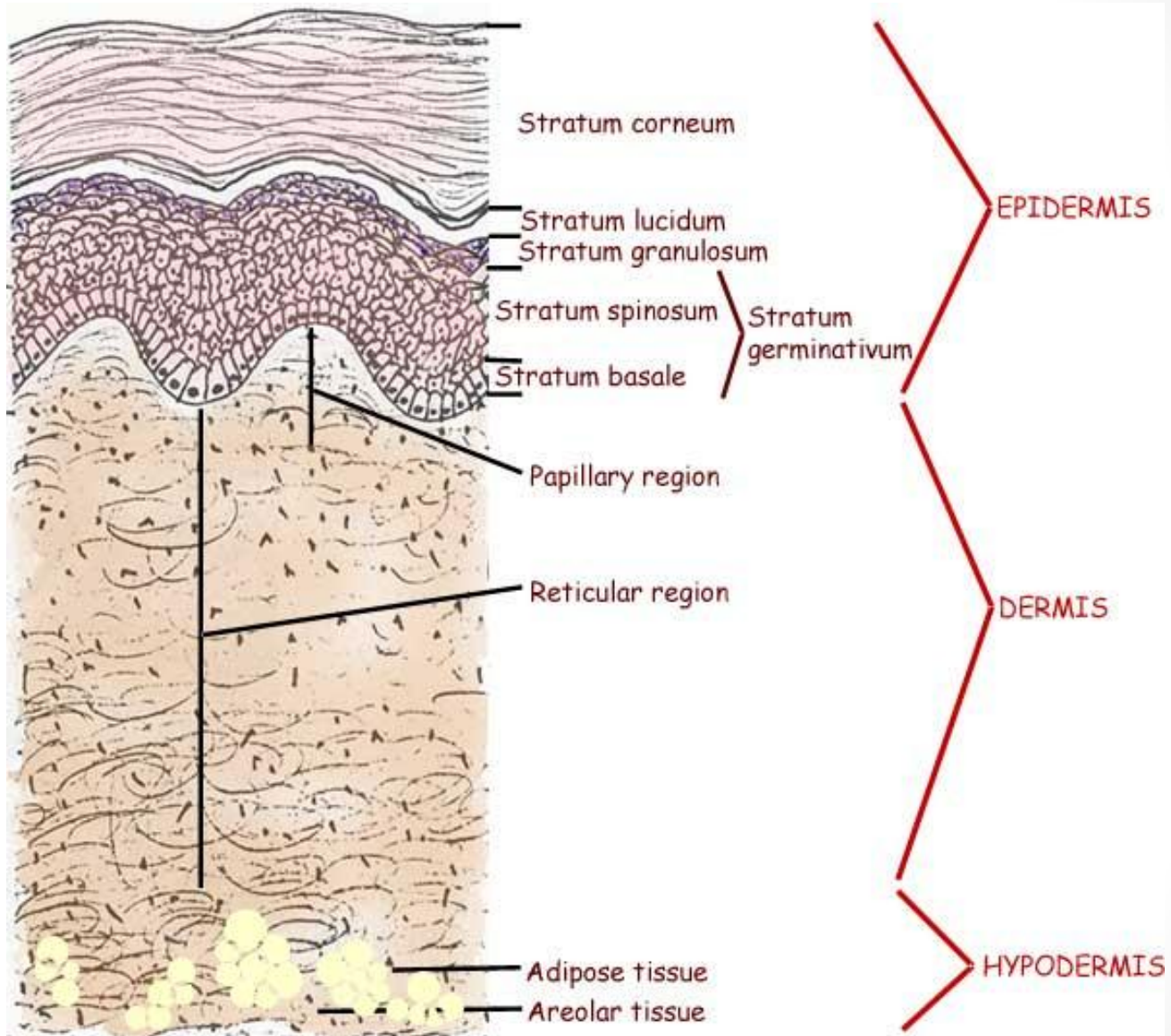
Chemical resurfacing

Chemexfoliation

Classification of Chemical Peels

According to the level of their injury

- Superficial
- Medium-depth
- Deep



Superficial – Very Light Peels

Injury is limited to the str. corneum and only creates exfoliation

- AHAs
- 10-15% TCA
- Tretinoin
- Salicylic acid

Superficial – Light Peels

Injury to the entire epidermis down to the basal layer , stimulating regeneration of fresh new epithelium

- 70% glycolic acid
- Jessner's solution
(resorcinol + salicylic acid + lactic acid + ethanol)
- 20-30% TCA

Medium-depth Peels

Injury through the entire epidermis and papillary dermis.

First days:

Epidermal necrosis + papillary dermal edema + lymphocytic infiltration

Next 3 months:

Increased collagen production

- 35% TCA
- Jessner's + 35% TCA
- 70% glycolic acid + 35% TCA

Deep Peels

- Injury through the papillary dermis , into the upper- reticular dermis and may extend to mid – reticular dermis
- TCA > 50% (scarring)
- Phenol containing preparation

Combination Peels

- Effective with fewer side effects
- Preventing the HOT SPOTS that can cause dyschromias and scarring seen with higher conc. of TCA
- Starting with glycolic 70% or Jessner's solution before 35%TCA

*weakens the epidermal barrier

*allows deeper, more uniform penetration of 35%TCA

Level of penetration is better controlled

CHEMICALS THAT ARE USED

AHAs

- Most commonly performed; being safe and non-toxic naturally occurring compounds
- Glycolic acid is derived from sugar cane
- Lactic acid from sour milk
- Citric acid from citrus fruits
- Phytic acid from rice
- Depth of injury depends on : **conc. of free acid**, volume applied, and duration of contact

Glycolic Acid

- Most popular & commonly used AHA
- Present in various conc. up to 70%
- Neutralized or non-neutralized
- Not light sensitive
- Stable for more than two years
- Time of application is critical should be rinsed off with 5% sodium bicarbonate within 2-4 min.
- Can be used weekly for tt. of acne, mild photoaging & melasma

AHAs

- Low conc. decrease the cohesion of corneocytes at junction of st. corneum & st. granulosum
- Higher conc. induce complete epidermolysis
- Daily use of products containing AHA results in increase
 - * skin thickness
 - * acid mucopolysaccharides
 - * density of collagen
 - * improvement of elastic fiber quality

Efficient For Treatment of Photoaging

BHA

- Salicylic acid (SA) is a BHA; used alone or in Jessner's solution
- BHA has a stronger comedolytic effect than AHA
- Comedonal acne ; lipophylic & concentrates in pilosebaceous unit and exfoliates the pores
- BHA needs no neutralization

BHA

- White ppt appears once peel is complete (2 min.)

This is not Frosting

- White ppt of SA is a guard so that inadequately treated areas can be easily identified and retreated

Jessner's Solution

- Combination of keratolytic ingredients (resorcinol + salicylic acid + lactic acid + ethanol)
- Inflammatory & comedonal acne (resorcinol)
- Rosacea (SA)
- Intense keratolytic activity induces loss of corneocyte cohesion within the str. corneum
- Can be used with other peels because it does not need neutralization

Trichloroacetic Acid Peels

- Different concentrations: 10-35%
- 10-15% TCA: intra epidermal superficial peel.
Improves fine wrinkles and dyschromias to give smooth healthy appearance
- 30-35% TCA: papillary dermis, medium depth peel.
Produce epidermal & dermal necrosis without systemic effects
- Be cautious with dark skin.

TCA

- Not light or heat-sensitive
- Stable for about 6 months
- No need for neutralization
- The clinical end point of tt. is frosting
- Frosting is due to denaturation of proteins
- Frosting appears within 7sec up to 20min according to the conc. used
- Healing time within a week if used alone , 10 days if used in combination

Phenol Deep Peel

Baker's Formula

- Pure undiluted 88% phenol + croton oil + septisol liquid soap + water

Indications for Chemical Peeling

1. Photo-aging & wrinkles
2. Pigmentary Dyschromias
3. Skin diseases; acne, actinic keratoses & lentigines

Pigmentary Dyschromias



Acne



Contraindications of chemical peel

- **Absolute:**
- Poor physician-patient relationship
- Unrealistic expectations
- Isotretinoin therapy within the last 6 months (scar)
- Active infection or open wounds (HSV, open acne cysts)

Contraindications for chemical peeling

- **Relative:**
- History of scar or delayed wound healing
- History of recent facelift operation
- History of topical radiation therapy

METHOD AT YOUR CLINIC

How to carry out a proper peel:

1. Proper patient selection

2. Good Priming

3. Peeling technique

4. Peeling tips

Proper Patient Selection

**Consultation is very
important
??????**

Discussing the procedure is an essential step for setting good and realistic results

Proper preparation

- **Skin should be well prepared before peeling for achieving good results:**
 - Photo-protective measures (at mornings)
 - Tretinoin (at night)
 - Bleaching agents hydroquinone (at night)
 - Antivirals acyclovir 400mg 3x daily for 2 weeks (medium or deep peel only)

Benefits of Good Priming

- Reduces wound healing time
- Allows uniform penetration of peeling agent, decreasing the PIH
- Enforces the concept of a maintenance regimen and determine which product the patient's skin tolerates
- Establishes patient compliance and eliminates inappropriate patients

Chemical resurfacing procedure

1- Examine:

- Thin skin requires lower conc.
- Thick skin requires higher conc.
- Greasy skin gives better results than dry skin

2-Safety precautions:

- Always check the label by yourself
- Write down the date of the prepared formula on the bottle
- Always shake or tilt the bottle before use
- Always ask the patient to close their eyes during the procedure
- Watch for tears, dry immediately; tears running down can create a streak of peeling
- Never pass an open container over a patient's face

3-Important tips:

1. Avoid topical anesthetic creams before sessions
2. Do not peel the eyelid as a beginner (semi -dry)
3. Rubbing using gauze is better than painting
4. Apply to small dark areas first then to whole skin
5. Continue to the hairline
6. Extend for 1cm before the jaw line (feathering)

4-Technique:

1-Patient lies in 45 position

2-Cleaning vigorously with alcohol and acetone removes residual oils, debris, and excess st. corneum
EXTREMELY IMPORTANT

3-Use cotton-tipped applicators or gauze pads
*Moist but not dripping

According to the type of peel applied

Examine the face and wait

- *Minimal erythema +shiny skin--- VL
superficial peel
- *Erythema + streaky frosting----- Superficial
peel
- *Erythema+ level I or II frosting----Medium-
depth peel

Frosting:

- The time lag between applying the chemical peel and the appearance of the frost varies according to the conc. of the acid used

To AVOID OVERTREATMENT

- 10-15% TCA frosts within 15 sec-----15min.
- 35% TCA frosts within 30sec-----2 min.

Immediate Post peel:

- Patient feels stinging sensation with superficial peels
- Immediate burning sensation with medium depth peel that resolves fully by time of discharge
- Cool saline compresses or rinsing with water gives symptomatic relief (TCA)
- Sodium bicarbonate after glycolic acid for neutralization
- Avoid topical potent steroids?
- Apply antibiotic ointment + sunscreen

Post-peel Care

All levels of peels are chemical burns of the skin

- Good wound-healing environment
 - *proper healing
 - *patients comfort
- Emollient or ointments are used with deeper peels, as skin becomes very dry during healing
- If the skin is not adequately moisturized; irritation, itching, or infection
- Sunscreens
- Hydroquinone

Post peel

Expect

1. Look and feel tight
2. Look terrible for 7-10 days after medium depth peel
3. During the first two days skin is slightly pink
4. During the third and fourth day skin darkens
5. By day five skin starts peeling in sheets
6. Erythema may last up to two weeks
7. Epidermal hyperpigmentation will darken (melasma)

Complications

- Irritant contact dermatitis
- Post inflammatory hyperpigmentation
- Infections
- Scarring

Re-peeling

- Very superficial peels: once a week.
- Superficial peels: once every 2 weeks.
- Medium depth peels: Once every 3-4 weeks.

Never repeat peeling for patients who have sensitivity or persistent erythema from a previous peel.

Thank you