CSSM
CANADIAN SOCIETY OF SKIN MEDICINE

Module 5: Microdermabrasion & Physical and Chemical Peels

Qualifying for CNPBC Certification

MODULE OVERVIEW

Module 5: Microdermabrasion & Physician + Chemical Peels consists of didactic & live patient hands-on training and examinations. This certification course is delivered in a small class size and high instructor-to-trainee ratio to ensure a proper delivery of necessary knowledge and clinical expertise in the use of microdermabrasion, and physical and chemical peels for aesthetic enhancement. The pre-requisite for Module 5 is Module 1: Advanced Facial & Neck Anatomy.

RHYTIDOLOGY

1. Discuss Glogau scale of photoaging
2. Discuss dynamic and static wrinkles and introduction to various therapeutic approach to address different levels of aging and different types of wrinkles
3. Review of normal and photo-aged skin physiology and anatomy

INTRODUCTION TO PHYSICAL PEELS & CHEMICAL PEELS

1. Skin anatomy & physiology
2. Partial-thickness wound healing response by second intention
3. History & definitions
    a) Historical Vignette
    b) Physical Peels
        i. Microdermabrasion
        ii. Dermabrasion
        iii. Abrasive exfoliating peels
        iv. Cryo peels/solid CO2 slush
    c) Chemical Peels
4. Technical aspects
    a) Microdermabrasion
        i. System components
        ii. Review of physics
    b) Dermabrasion
        i. Review of engines and abrading hand piece
        ii. Uses of serrated wheel, diamond fraise, and wire brush
        iii. Operator safety issue regarding airborne organic materials
    c) Chemical Peels
        i. Variable factors of peeling
            - Acid concentration (pH)
            - Proton bioavailability
            - Buffering
            - Volume of acid
            - Contact Time
            - Condition of epidermal barrier
            - Extent of degreasing
            - Sebaceous gland density
            - Integrity of epidermal barrier
            - Frequency of peeling

CHEMICAL PEELS

1. Classification of chemical peels by depth of penetration
2. Patient evaluation to optimize outcome
    a) Patient expectation
    b) Fitzpatrick skin photo type
    c) Glogau's classification of photoaging
    d) Tobacco use & medication (Minocycline & Isotretinoin)
    e) HSV, keloid, immunosuppression, PIH

3. Pre-treatment skin conditioning techniques
    a) AHA wash & toner
    b) Hydroquinone
    c) Tretinoin
    d) Sunscreen
    e) Antiviral prophylaxis
    f) Reviews of neutralizing agents
4. Superficial chemical peels
    a) Indications & contra-indications
    b) Preoperative preparation
    c) Chemistry & end-point selection
        i. Glycolic acid
        ii. Salicylic acid
        iii. TCA 10~25%
        iv. Jessner's
        v. Modified Unna's resorcinol paste
        vi. Tretinoin (Retinoic acid)
    d) Medium depth chemical peels
    e) Indications & contra-indications
    f) Chemistry, application techniques, end-point Selection
        i. TCA
        ii. Modified TCA
        iii. Pyruvic acid
    g) Post-operative care
    h) Clinical pearls for optimized outcome
5. Deep chemical peels
    a) Pharmacology & toxicology of phenol
    b) Chemistry, application techniques, end-point selection
        i. Straight phenol
        ii. Baker/Gordon phenol formulation
    c) Post-operative care
    d) Clinical pearls for optimized outcome
6. Special peels
    a) Non-facial peel
        i. Cook body peel
    b) Spot peel
        i. DOT
        ii. CROSS
7. Pitfalls, complications & management strategies
    a) Patient selection
    b) Dyschromia and post-inflammatory hyperpigmentation
    c) Milia
    d) Prolonged erythema
    e) Viral, bacterial, and fungal infection
    f) Acne flare
    g) Scarring
8. Review of recent literature on chemical peels

MICRODERMABRASION

1. Changes induced by microdermabrasion
    a) TWEL
    b) Histologic
    c) Molecular cascade

2. Indications & contra-indications
3. Preoperative preparation
4. Treatment techniques
5. Post-operative care
6. Abrasive crystals
    a) Aluminum oxide
    b) Sodium chloride
    c) Sodium bicarbonates
    d) Operator safety issue regarding chronic exposure to aluminum oxide
7. Clinical pearls for optimized outcome
8. Equipment sanitization & cleaning
9. Pitfalls, complications, & management strategies
    a) Patient selection
    b) Dyschromia and post-inflammatory hyperpigmentation
    c) Prolonged erythema
    d) Viral, bacterial, and fungal infection
    e) Acne flare
    f) Scarring

PATIENT SELECTION & INFORMED CONSENT

1. Discuss effective communication methods to identify patient expectations, predicting clinical outcomes, and to communicate the risks and benefits for patients considering physical and chemical peels.
2. Discuss necessary clinical forms including informed consent for various peels.
3. Discuss recommended photographic equipment and techniques to obtain clinically meaning and consistent pre-& post-treatment photographs.
4. Discuss required level of staff training to timely and accurately answer physical and chemical peeling related questions and common post-peel inquiries.
5. Discussion of procedural charting requirements.
6. Discussion of contraindication, comorbidities, and proper patient selection including psychiatric conditions (e.g. body dysmorphic disorder, injection anxiety).

CLINICAL CASE REVIEW

Present various clinical cases and discuss appropriate peeling modality selection, peeling techniques, and clinical pearls for each individual case.

LIVE DEMONSTRATION OF MICRODERMABRATION & CHEMICAL PEELS WITH HANDS-ON TRAINING

1. Provide demonstration on live patient by instructor: consultations, treatment parameter selection, and post procedural care using superficial and medium chemical peels and microdermabrasion
2. Provide hands-on training by trainee on live models using superficial peels, medium peels, and microdermabrasion
3. Provide mock scenarios of managing microdermabrasion and chemical peel related complications
4. Provide comprehensive feedback on trainee's techniques and address any weakness trainee may have

WRITTEN EXAM

The written exam consists of 30 multiple choice questions and 5 clinical cases. Digital media is used to present the 5 clinical cases. For these 5 clinical cases, trainees are required to assess the level of skin aging and develop an appropriate treatment plan. Trainees automatically fail the exam if the answers include fatal misdiagnosis, omission, and/or errors which may jeopardize the safety of the patient. A grade of 80% or higher in the written exam is required to successfully pass the course.