[연수강좌]

신개념 피부재생 메조롤러 치료술

김 민 정

미하나클리닉

1.Mesorolling의 기본개념이해
- needle action
- wound healing
- drug action

2.Mesorolling system의 실제적용
- 전처치
- 마취방법
- 롤링방법
- 소독및 보관방법

3.Mesorolling system을 이용한 기미,색소침착, 흉터, 피부노화, 탈모치료등 임상적 적용

4. Mesorolling system 장단점 및 주의점

Mesorolling System

- 원통형 롤러에 192개의 침이 머리카락보다 가늘고 정교하게 부착됨(192 needles,70 ㎛ diameter)
- 200 ㎛(홈케어용)
- 0.5mm,1.5mm(병원시술용)
- 개발자: Holst Liebl(Germany)
  - 10회 rolling시 250holes/㎠

병원시술용 홈케어용

mesoroller system: new delivery method to skin

- Needle action
- Wound healing
- Drug action

mesoroller system: new delivery method to skin

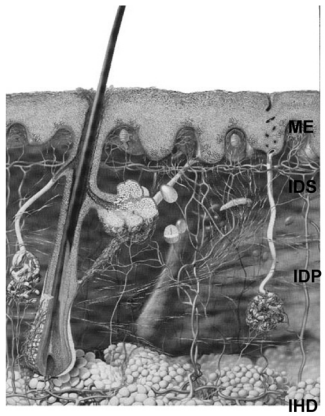
1.physiologic functions are improved
- reconstruction of extracellular matrix
- Change of free radicals impact and DNA damage

2.Improves
- Texture of the skin
- Elasticity

3.Protective effect against cell aging

Drug delivery methods

- Sonophoresis; by ultrasound
- Iontophoresis; by low-voltage electric current
- Jet injection; penetration of high-velosity lipuid droplets
- Aquaphoresis; needle free mesotherapy
- Microneedles; by mocroscopic channel



Skin structure

0 mm — Epidermis: IED

1 mm — Papillary layer: IDS:

2 mm — Reticular layer : IDP

4 mm — Lamellar layer : IHD

Best place for esthetic mesotherapy

Collagen induction

- 192 needles, 0.5mm length
- Back and forth in a star like rolling
- Thousands of micro wound (epidermo-dermo channel is opened)

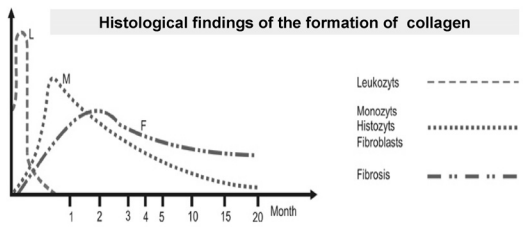
Scar treatment

- 1.5mm roller
  - Any type of scars (except for keloid scar)
    - Acne scars can be treated succesfully
    - Wound and surgical scars
      - Surgical abdominal scars
      - Thoracic scars
      - Breast plastic operation scars
      - Post liposuction, Orthopedic scars
      - Burn contractures

Gene therapy

- For the localized treatment of heritable skin dz.
  - epidermolysis bullosa simplex
  - Various types of malignancy
  - Infectious skin dx
- Chabri study
  - Silicon base microneedle array (150 ㎛ length , 50 ㎛ diameter)
  - Lipid-polycation-Pdna (LPD)nonviral gene delivery complex study

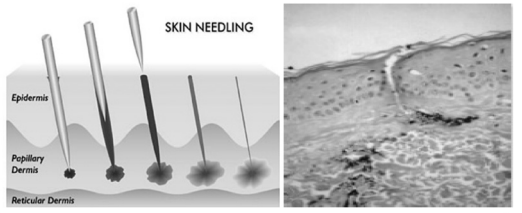
Histological findings of the collagen formation



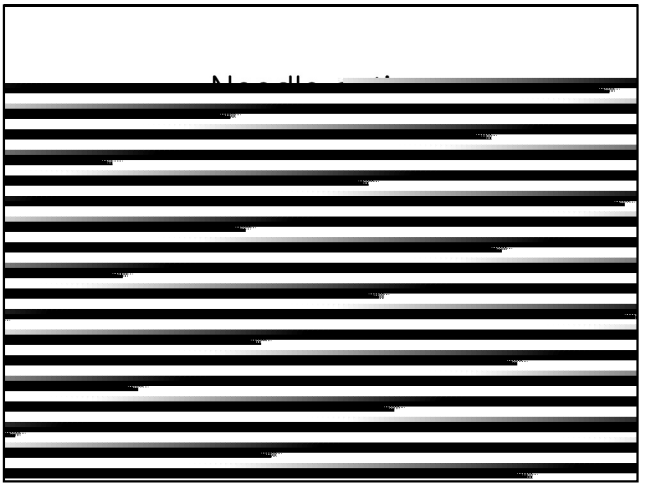
■시술 후 **2**달 정도에 **Fibrosis** 정점에 이르고, 효과가 **1**년 이상 장기간 동안 유지됨

1. Needle action collagen Induction Therapy (CIT)

- Dermis Penetration



- **Without Epidermis**
- **Wound Healing Effect : inducing growth factors**
- **Natural Collagen Induction Process in dermis and basal layer**



Bufluromedil

- **potent piripheral vasodilator; a-blocker**
- **Anti-edema : A-V shunt**에서 **pre-capillary sphincter opening**
- **α2-AR** 차단제로 **lipolysis** 억제
- 미세순환 개선 **:** 혈소판 응집 억제**,** 적혈구 변형능 증가

Calcitonin

- Microcirculation 개선
- Vasoregulation
- Defibrosis effect
- Anti-edematous effect
- Neuromodulator
- Avoid procain

Hyaluronic acid

- Mucopolysaccharide
- Component of extracellular matrix
- Improve physiologic functions of skin
  - Binding water; tissue hydration, lubrication
  - Creates volume of extra cellular matrix
  - Anti radical action
- Improve skin texture, tension, elasticity
- Protect cell from aging process

  ;↑smoothness, softening of skin, ↓wrinkles

Placenta의 esthetic effects

1.미백 효과
- Melanin생성 과정의 억제
- 각질융해 ; 각질의 흐름을 개선시켜
  → 외피의 이물질이나 노폐물의 제거를 재촉→미백효과
- 조직대사 ; 조직의 호흡과 함께 혈행 촉진 작용

2. 보습 효과
3. 세포신생 효과
4. 면역조절 효과
5. 항염증 효과
6. 항산화 효과

Cytokine and Peptide

- ***Cytokine***
  - **EGF (Epidermal Growth Factor)**
  - **bFGF (basic Fibroblast Growth Factor : FGF-2)**
  - **IGF (Insulin like Growth Factor)**
  - **VEGF (Vascular Endothelial Growth Factor)**
  - **TGFβ_3 (Trnasforming Growth Factor- β_3)**
  - **KGF (Keratinocyte Growth Factor)**
  - **SCF (Stem Cell Factor)**
  - **TRX (Thioredoxin)**
  - ***Peptide***

Skin rejuvanation (1.5mm)

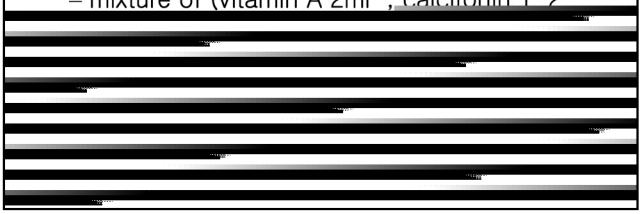
- Mask pack; hydration ,moisture 가장중요
- Post treatment
  - Apply HC 1%
  - Daily care cream
    - 하루 3번 정도 권함
  - 세안: 시술 다음날부터 가능
    - 4-5일 후엔 정상 피부 회복
- 3wk 간격으로 3회 치료

Pigmentation (0.5mm)

- Face peeling
- local anesthesia
- mesorolling therapy
- Mask pack (vitamin C pack, carboxy pack)
- 홈테라피
  - combine therapy (placenta ...)

Scar Treatment (1.5mm)

- local anesthesia
- mesorolling therapy
  - mixture of (vitamin A 2ml , calcitonin 1-2



Caution of mesorolling

- Active acne, eczema, rosacea, severe solar keratosis and rassed moles or warts
- Bleeding tendency
- Keloid
- PIH
- Allergy

Advantage of mesorolling

- Minimal risks
- Cost effective
- Short healing period within days
- Vatious skin problem applied
- No permanent injury of the dermis
- No remove of epidermis

Disadvantage of mesorolling

- Bleeding
- Hyperpigmentation
- Inflammation

Thank You For Your Attention !!!