Hot Topics in Cosmetic Dermatology: Comprehensive Neck and Chest Rejuvenation

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30% of dermatologists in 2008 reported employing physician assistants and/or nurse practitioners\textsuperscript{1}
- 40% increase compared to 2002
- Cosmetic/surgical dermatologists were more likely than general dermatologists to have PAs/NPs
  - 40% vs. 26%

A 2011 study published in Dermatologic Surgery found that physician extenders in dermatology offices dedicated between 7-15% of their time on cosmetic patients\textsuperscript{2}
Considerations for neck and chest rejuvenation

- Ensures harmonious transition from face to neck and chest

- Increased risk for complications given:
  - Thinner epidermis
  - Thinner dermis
  - Decreased pilosebaceous units
The Neck
Cryolipolysis for decreasing submental fat

- Commercially available as CoolMini (CoolSculpting systems; ZELTIQ)

- Takes advantage of the fact that lipid rich adipocytes are more susceptible to cold injury than cells with water
  - Apoptosis → inflammatory response

- Safe in all skin types

- Phase III study\(^3\)
  - 91% of photographs were correctly identified as baseline and post rx by blinded reviewers
  - 83% of subjects were satisfied
  - 80% would recommend to friend
Treatment protocol

- Treatment cycle of 60 minutes at -10 C, vacuum of 50
  - Reduced to 45 mins with new chips

- Initially one application per rx visit, but now recommendation is to place right and left of midline so two cycles at one visit

- 2 minute post treatment massage
  - Crucial

- Repeat every 5-6 weeks
  - 1-3 rxs needed

- Results in as early as 3 weeks, maximum in 3-4 months

- Erythema, edema, numbness, bruising, pin prick sensation
  - More tolerable compared to deoxycholic acid
Four weeks post one treatment cycle
Deoxycholic acid

- Kybella (Allergan)
- Synthetic injectable bile acid that causes adipocyte lysis
  - Inflammatory response ensues
  - May cause neocollagenesis
- FDA approved in 2015 for treatment of submental fat
- Safe for all skin types
Deoxycholic acid treatment protocol

- Anesthesia recommended
- No more than 6 cc per treatment session
- 0.2 cc per injection, spaced 1 cm apart
- Inject in subcutaneous tissue to decrease risk for epidermal ulceration
  - Pinch treatment area
- Treatment intervals every 4 weeks
  - Because of inflammatory response, increasing to 6-8 weeks
- Erythema, bruising, tenderness, induration, nodules, swelling (bullfrog appearance), numbness
- Rare, but reported risks:
  - marginal mandibular nerve injury, dysphagia
Deoxycholic acid Pearls

- Not recommended in those with excess skin
- Takes photos with patient smiling and puckering at baseline
- Have patient say “eeeeeeeee” to assess for preplatysmal fat
- Although tempting, do not treat jowel as risk to marginal mandibular nerve is too high
Kybella 3 rxs, 25.6 cc total
Kybella 3 rxs, 25.6 cc total
Kybella 2 rxs, 8 cc total
On the horizon

- Microfocused ultrasound with visualization (Ulthera)
- Non-inferiority study evaluating 2 lines delivered simultaneously (Simulines hand piece) versus 1 line (Standard hand piece) currently underway
  - Lower face and neck
  - 4.5 and 3.0 mm depths
  - ~672 pulses vs. 366 pulses
- Assessing efficacy and tolerability
Final thoughts

- Fat removal is permanent

- Unveiling of platysmal bands can be treated with neuromodulators
  - ~ 30 units of onabotulinum toxin, 5 units per injection
  - ~ 60 units of abobotulinum toxin

- Skin laxity can be treated with microfocused ultrasound or radiofrequency
  - Reports of both cryolipolysis and deoxycholic acid causing skin tightening
  - Newest device is subsurface radiofrequency
The Décolletage

Methods for improving wrinkles, laxity, creepiness
Neuromodulator for Décolleté Wrinkles

- First reported in 2002\textsuperscript{5}
- Smooths vertical and horizontal wrinkles of chest wall
- Taking advantage of the platysma muscle which inferiorly inserts on the 2\textsuperscript{nd} or 3\textsuperscript{rd} rib and medially creates traction in the deep central chest
- Will not alleviate wrinkles from positional habits during sleep or gravity
- Off label use
Injection sites for vertical wrinkles

Injection sites for horizontal wrinkles

- Onabotulinum toxin
  - ~15-30 units per session
- Abobotulinum toxin\(^6\)
  - 12 injection points with 10 U/injection point
  - ~75-100 U/session
- Needle should be perpendicular to skin and about 4 mm deep
Baseline

4 weeks post 80 units of abobotulinum toxin
Platysma baseline and post injections
Poly-L-Lactic Acid (PLLA)

- Semi-permanent filler
  - Lasts 2 years or more

- Stimulates fibroblasts inducing neocollagenesis
  - Results not immediate

- Improves skin texture, volume and laxity

- Higher risk for nodule formation compared to hyaluronic acid
  - Higher dilutions
  - Dilute for longer periods of time
  - Avoid excessive quantities or overinjection
  - Space injections at least 4 weeks apart
  - Rule of 5’s massage
PLLA for chest rejuvenation

- Recommend 16 mL dilution

- 48-72 hours prior to treatment
  - 7 mL of sterile or bacteriostatic water is slowly added

- Day of procedure
  - Vial should be at room temperature
  - Add 2 mL 1% lidocaine +/- epi
  - Add 5 mL sterile or bacteriostatic water
  - Roll vial gently, do not shake

- 27 or 25 G, 1.5 inch needle
  - 22 G, 5 cm cannula

- Retrograde injections in subcutaneous tissue

- Massage vigorously

- Off label use
Post 3 sessions, 1 m apart
Microfocused ultrasound with visualization (MFU-V)

- Ultherapy
- Ultrasound
  - Produces microthermal zones of coagulation (1 mm³) in the mid to deep reticular demis → neocollagenesis and collagen remodeling
  - Preselected depths to intended tissue plane
  - Visualization allows for avoiding vessels and bone
  - Safe in all skin types
  - Originally FDA approved for noninvasive eyebrow lift (2009)
    - Neck and submental lift
    - Lines and wrinkles of décolletage (2014)

- Improves laxity and skin wrinkles
MFU-V: Treatment protocol

- Analgesia almost always required:
  - Ibuprofen, acetaminophen, benzodiazepines, narcotics

- 4.0 MHz, 4.5 mm and 7.0 MHz, 3.0 mm depths
  - 120 lines at each depth
    - Advance 2-3 mm
  - Targeting fibromuscular tissue surrounding pectoralis and reticular dermis
  - If bone or breast implants are seen perform all lines at 3.0 mm depth

- Improvement seen at 3-6 m

- Rx intervals of every 6-12 m PRN
6 m post 1 rx
6 m post 1 rx
Dyschromias and Erythema of neck and chest

- Decrease fluence, density and number of passes
- Light peels and “Light” medium depth peels
- Intense pulsed light
- Q-switched and picosecond lasers
- Resurfacing lasers
  - Fractionated, non-ablative
  - Fractionated, ablative
Sources


