Pediatric Skin of Color Symposium
Masters of Pediatric Dermatology 2021

Keloids

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Off-label: Some drugs discussed may be off-label for the pediatric population

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Objectives

• Compare the prevalence of keloids in patients with skin of color to those without skin of color
• Identify some conventional treatment options
## Biology of Skin of Color

<table>
<thead>
<tr>
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<th>Caucasian</th>
<th>African descent</th>
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<tbody>
<tr>
<td><strong>Dermis</strong></td>
<td>Thin, less compact</td>
<td>Thick, compact</td>
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<tr>
<td><strong>Fibroblasts</strong></td>
<td>Few</td>
<td>Large, numerous</td>
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Fibroblasts interact with other cells and growth factors → keloid formation
Keloid Stats

• African descent affected 5-16 times more than those with light skin tones
  – Hispanics and Asians also at higher risk

• Onset most common after puberty
  – Average age 22-23 years old

Taylor and Kelly’s Dermatology for Skin of Color, 2nd edition
Most Common Locations

- Earlobes
- Pre-sternal
When to treat?

- Treat as soon as possible... BUT
  - Patient should be willing participant
  - Expectations should be set
    - More than one treatment
    - Discomfort
• Topical Anesthetic
  – Ex. Prilocaine-lidocaine cream

• Distractors
  – Phone/Tablet
Intralesional Steroids

• Set Expectations
  – Symptomatic relief
  – Flattening
  – The skin will not return to a normal appearance even if it is flatter
  – dyspigmentation
Intrallesional triamcinolone

• Concentration
  – Bottles: 10mg/mL and 40 mg/mL
  • For keloids, I usually use 20mg/mL or 40mg/mL
Intraleisonal triamcinolone: Avoid Common Pitfalls

• If diluting the triamcinolone
  – Mix appropriately (precipitates) - roll
  – Don’t over dilute
  – saline vs. lidocaine

• Equipment
  – Luer-lock syringes to avoid the needle flying off the syringe and creating a splash/spray
Intralosional triamcinolone technique

• Create a tunnel
  – Retrograde injection

• Goal= not to inject subcutaneously
Corticosteroids (topical/intralesional)

• Decreases collagen synthesis
  – by inhibiting fibroblast proliferation

• Decrease Pro-inflammatory mediators

• Collagenase degrades collagen
  – Steroids inhibit collagenase inhibitors
Topical corticosteroids

- Topical steroids from the highest potency class
- Steroid imbedded tape
  - Flurandrenolide tape
SOC: higher risk of pigmentary alterations
  – Fractional nonablative lasers - better option for scars in skin types IV to IV

Ablative lasers
  – Carbon dioxide alone: recurrence 39-92%
    • With ILK: recurrence 25-74%
Excision

- Monotherapy excisions have a very high risk of recurrence
  - Some say 80-100% and others 50-100%
  - Less for earlobe keloids

Park TH, Chang CH. Aesthetic Plast Surg. 2013
Surgical considerations

• Smallest possible excision to remove all of the keloidal tissue

• Limit wound tension

• If sutures are necessary, select type that will cause the least amount of inflammation and lowest risk of infection
  – monofilament

Post-Excision

• Intralesional triamcinolone helps to delay recurrence post-op
  – immediately on the day of the surgery
  – Repeat post-op intralesional triamcinolone every 2 weeks for 6 weeks post op, then monthly, then every 2 months
Earlobe Keloid Post Excision

• Pressure earrings
  – More stylish than the used to be
  – Ex. Etsy
Setting Expectations

• Avoid tattoos, piercings, elective surgery

• If surgery is mandatory:
  – Silicone gel products
    • Worn 24 h/d for up to 12 months, 34% showed excellent improvement, 37.5% showed moderate improvement, and 28% demonstrated no or slight improvement.
  
  – Intralesional triamcinolone

Hsu K et al. Review of Silicone Gel Sheeting and Gel 2017
Mother of a Black infant calls to ask if it is ok to pierce her baby’s ears

What things do you consider?
Keloids

- Family history?
  - Based on a survey study, piercing before age 11 y/o reduces chance of earlobe keloids

Lane JE et al. Relationship between age of ear piercing and keloid formation. Pediatrics 2005
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