Optimizing Vascular Lesion Removal in 2019

Kristen M. Kelly, M.D.
Beckman Laser Institute,
Departments of Dermatology and Surgery
University of California, Irvine

Disclosures: Off-label uses will be discussed
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Overview

Optimizing treatment for:
- Telangiectasia/Rosacea
- Poikiloderma
- Port Wine Birthmarks
- Infantile Hemangiomas
- Angiofibromas

Telangiectases/Rosacea

- Multiple Devices can be used with good results and low risk of adverse effects
  - Keep in mind nonablative fractional resurfacing devices can also decrease erythema
    - 595 nm Pulsed Dye Laser
    - 532 nm Nd:YAG
    - 755 nm Alexandrite
    - 810 nm Diode
    - 1064 nm Nd:YAG
    - Combined 1064/532 nm system
    - Combined 1064/595 nm system
    - Intense Pulsed Light

- Know your device and desired end point
  - For example: PDL – vessel disappearance or darker red in vessel without greying
  - Long-pulsed 532 – vessel disappearance
  - Purpura generally not desired for cosmetic treatments so consider using longer pulse durations with lower risk of purpura
  - Pulse stacking can be done safely with PDL but again monitor end point

Fractional Resurfacing (non-ablative or ablative) can also decrease erythema
**Telangiectasia/Rosacea**

- 20 subjects: PDL on left side of the nasal bridge and LP Nd:YAG on right side
- 3 times with 4 week intervals
- Overall improvement was similar
  - PDL better for erythema with mild telangiectasia
  - LP Nd:YAG better for thick, dilated vessels
- Erythema and purpura more common in the PDL group; one patient with LP Nd:YAG developed a blister with subsequent linear furrow that required 6 NAFR laser treatments

Kwon WJ et al. Comparison of efficacy between long-pulsed Nd:YAG laser and pulsed dye laser to treat rosacea-associated nasal telangiectasia.

**Telangiectasia/Rosacea**

- Data pooled from two identically designed phase 3 trials; 885 patients
- Rosacea patients randomly assigned to receive oxymetazoline cream 1.0% or vehicle once daily for 29 days and followed for 28 days posttreatment.
- Primary outcome of ≥2-grade improvement in clinician erythema assessment was achieved by significantly more in the oxymetazoline group (p<0.001)
- Adverse events low (16.4% oxymetazoline versus 11.8% vehicle) and no clinically relevant erythema worsening


**Poikiloderma of Civatte**

- Pulsed dye laser great for poikiloderma if mostly erythema
- Non-ablative fractional resurfacing or Intense pulsed light is another option if both red and brown prominent
- You need to know your device - endpoint is different than telangiectasia treatment – ex. With PDL see mild erythema but not vessel disappearance
- Want to avoid footprint of device
- Keep in mind neck and chest are more sensitive areas than face

**Treatment of Poikiloderma**

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**Port Wine Birthmarks**

Beckman Laser Institute, University of California, Irvine.
**Early Treatment**

What do I recommend for resistant port wine birthmarks

- Varying devices
  - PDL; Alexandrite; AFR (to break up scarring)
  - Adding rapamycin – not useful in all but in the right patient may have some amount of benefit
- ENT collaboration for lip debulking
- Sharing information on new research including that from Sturge Weber Foundation, Vascular Birthmark Foundation and others

**PWB Treatment**

Lasers are the standard of care
Can consider adjunctive topical treatment but added benefit limited
PDT may be an accessible option in the future
  - May require fewer treatments 2-3 as opposed to 10 or more – but may need to treat sections at a time
  - Associated photosensitivity
  - Side effects do occur and will have to be considered in treatment option selection

**Infantile Hemangiomas**

- Most rapid and significant growth 1-3 months of age and generally completed by 5 months of age
- Many IHs leave behind permanent skin changes – important window of opportunity to treat to optimize outcomes (by 1 month)
- Propranolol is drug of choice 2-3 mg/kg day or topical timolol for small thin superficial IHs
- Surgery and/or laser are most useful for treatment of residual skin changes after involution and may be considered earlier to treat some IHs

**Infantile Hemangiomas**

- Standard of care is oral propranolol
- Lasers can play a role:
  - Small lesions - possibly in combination of timolol – but may not need laser
  - Early lesions – stop progression – use caution because can ulcerate
  - Treatment of residual lesion or to speed up regression – if got beta blockers early enough often will not need

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Angiofibromas

**Pearl:** Topical rapamycin can help even if patients are on systemic rapamycin

Angiofibromas: Laser (PDL/AFR) + Rapamycin

- Pulsed-dye laser treatment 10 mm; 1.5 ms; 7.5 J/cm²; 30 ms cooling
- Ablative fractional resurfacing (AFR) 15 mm; 70 mJ; 40%
- Pinpoint electrosurgery to papular fibrotic lesions
- 0.2% topical sirolimus ointment bid

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