Laser or Ohmic devices for telangectasia: when and why

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Disclosures: none

Thread veins

Before and after

Selective Photothermolysis

The ideal wavelength should be:
- 100% absorbed by the target tissue
- 0% absorbed by everything else

Selective thermolysis

Exploits differences in absorption spectra

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Therapeutic lasers

- Different wavelengths
  - Selective thermolysis
  - Longer wavelengths penetrate better through darker skin
- Variable spot sizes
- Variable pulse duration and frequency
  - Thermal relaxation time

Therapeutic lasers

Norseld laser

Copper based laser

Therapeutic uses of yellow laser

- Telangiectasia
- Thread veins
- Rosacea
- Port Wine Stains
- Hemangiomas

McCoy et al, Derm Surg, 1996
Owen et al, Aus J Derm 2012

5 weeks after one treatment
5 weeks after one treatment

Ulm et al
195 patients
75% improvement after 2 treatments
Most patients “satisfied”

Upper body: facial telangectasia

Upper body: angiomas

Lower limb

Beware larger veins

• Higher power is needed: thermolysis no longer selective
• Consider longer wavelength laser (with cooling)
• Sclerotherapy for the feeding vein
Cooling devices

- Continuous contact
- Contact pre-cooling
- Cold spray
- Continuous air cooling

- Helps the selective thermolysis
- Reduces pain

IPL (Intense Pulsed Light)

- High intensity light sources
- Polychromatic non-coherent
- Filters allow adjustable wavelengths
- Variable pulse durations

- Multiple uses
  - Hair removal
  - Skin rejuvenation
  - Pigmented
  - Vascular lesions

VeinGogh

- Developed from Veinwave

EVRF

- Veinwave progressed to multi-versatile generator

EVRF

Demirkilic et al
7560 patients treated over 10 years
Effective for fine veins, not for larger
1-3 treatments needed
Two thirds had adjunctive sclerotherapy
Conclusion

- Consider wavelength, power, depth, cooling
- Laser and RF very effective on face
- For legs, the results are very dependent on the quality of adjunctive sclerotherapy
- “The best device is the one you are best at using which is usually the one you already own”