Injecting: reticular, venulectasias, and telangiectasias

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Sclerotherapy Defined

- Gold standard for treatment of spider veins
- Known also as ‘cosmetic’ and ‘visual’

Sclerotherapy Defined

- Sclerosant solution injected into the veins
- Irritates endothelium of the vein wall causing thrombosis and subsequent fibrosis
Sclerotherapy Defined

- Obliterates or removes the abnormal vessels without causing damage to adjacent healthy vessels
- Prevents the blood flow through the vein causing the veins to not be visible through the skin

We have proof it works!

Keep goal in mind…
Hang on… I must be doing something wrong. How does that saying go again?

**Treatment progression……**

**Education/ Evaluation**
- Compliance
- Medical vs Cosmetic

**Treatment**
- Where do I start?
- Injection technique

**Post treatment & Follow Up**
- Instructions
- Time frame

**Treatment**

**Sclerosants**
- Which one?
- How much?

**Injection**
- Techniques
- Principles
Basic principles of injecting

- Treat large to small vessels
- Treat reticular and spider vein in each area
- Apply local compression immediately following injection
Reticular Veins

- "Feeder" veins creating a network for communication between tiny spider veins and larger, deeper superficial veins
- Lie within or just beneath the dermis and measure 2-4mm
- May be easily seen in fair skin patients and referred to as "green" veins, though they are clearly blue.
- Clearly visible with the use of a dermal trans-illuminating light
- Valved to allow unidirectional blood flow
- Cosmetic sclerotherapy should begin with reticular veins


Should I inject reticular veins? YES! Otherwise....
Basic principles of injecting

3 Principles of “The Least”

1. Least concentration of sclerosant (MSC)
2. Least amount of volume
3. Least amount of pressure to inject

Meeting of the Minds.....
...least concentration

Sclerosant concentration  Vessel diameter

Least amount of volume

Volume  Vessel diameter
Least amount of pressure

Pressure
Vessel diameter

Injection Technique: Preparation
The Sclerotherapy Tray

- 70% Isopropyl alcohol for prepping the skin
- Non-sterile gloves
- 3cc syringes
- 30g or 32g needles: ½ inch
- Cotton balls/ foam pads for local compression
- Paper tape

Injection Technique: Equipment

- Magnifying/ polarizing light source
Injection Technique: Equipment

• Transdermal illuminating light source for reticular veins

Injecting

• Bend needle to 15-30% angle to get on horizontal level with skin
Injecting

- Stretch skin taut
- Approach skin from flat angle

Injecting

- Bevel position controversy

Injecting

- Use smallest gauge needle possible
- Change needle often
Brisk cannulation of the vein reduces vascular trauma, vasoconstriction and chance of extravasation.

- Bevel of needle in the skin—no threading the vessel.

- Maintain low injection pressure to prevent vascular distention.
- Inject small amounts of solution at each site to help avoid matting and extravasation.
- Inject at approximately 3cm intervals until the entire vessel has been treated.

Did I get in the vein?

YES!

If you saw the vein flush...
Choosing an appropriate sclerosant, the strength and consistency, is the first consideration prior to the injection process.

Minimum volume and concentration along with minimum exposure with sufficient endothelial damage is ideal.

Sclerosants

- There is no perfect sclerosant:
  - painless to inject
  - non-necrotic
  - non-allergenic
  - no matting
  - effective for all veins
  - inexpensive
  - readily available
  - FDA approved
  - ONE AND DONE
Foam Sclerosants
- Any detergent solution can be foamed
- Foaming increases potency by increasing the surface area of the solution on the vein wall and displacing the blood for a longer time.
- Foam is not commonly indicated for use on veins <1mm reticular veins.
- Issues to be considered are the relativity of bubble size, sterility and type of air used to foam.
- Increased incidence of complications is likely, therefore foam sclerosant is not generally used by beginners.

Commonly used with ultrasound guidance for injection of larger veins (>2mm).

Don’t be fooled....

Preparing Foam Homemade
- Foam is prepared by using a 3-way stopcock with 2 syringes
- ½ cc of sclerosant : 2cc of air is the commonly used solution
- Solution must be mixed immediately before use as bubbles dissipate quickly
FDA approved 11/2013
Prepared foam polidocanol
Indication:
  - incompetent veins and visible varicosities of the GSV system

Aspirate to assure placement of needle.
...or use ultrasound
The Power of Foam

Post Injection
- Patient should ambulate immediately
  - Treadmill at office
  - Go shopping!
  - Gastroc contractions

Post Injection
- Send home with post treatment protocol
  - Compression, How long? How much?
  - Avoid prolonged heat exposure, etc
  - Follow up visit 4-6 weeks
    - Treatment / picture
  - Record patient’s experience / comments
  - Pain scale 1-10
Before and After

Before and After

Before and After

Before and After

POOR RESULTS ???

WHY?

1. Underlying high pressure venous pathology unresolved: must identify and treat point of reflux
2. Sclerosant choice:
Lowest concentration of liquid sclerosant for a given vessel diameter will maximize outcomes and decrease adverse sequelae.

3. Technique:
too much pressure,
too much volume,
missed the vein

4. Compression hose ✓, tanning beds ⊗, running ⊗, walking ✓
References

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References

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Thank you…. 