When Is Sclerotherapy Or Microphlebectomy Alone Appropriate

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Nothing to Disclose

Sclerotherapy vs Phlebectomy

Introduction
• Tributary varicosities often remain after treatment of the primary source of reflux
• Occasionally, the source of reflux is short or difficult to treat
  • High thigh perforators
  • Pelvic reflux
• Typically, these varicosities can be managed in one of two ways
  • Phlebectomy
  • Sclerotherapy
• Choosing which modality to use is dependent on a variety of factors

Sclerotherapy vs Phlebectomy

Indications
• On occasion GSV tributary varicosities may form in the absence of discernable GSV reflux or with a very small GSV
  • Intermittent GSV reflux
  • Segmental GSV reflux
• Injection sclerotherapy or phlebectomies may eliminate the reflux in the GSV
• Theory of varicose vein development
  • Descending
  • Ascending

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Ascending Theory
• The evolution of the varicose disease start in the peripheral veins
• The superficial veins, whose wall is most fragile, are the first to be dilated due to heredity and pregnancy
• The dilatation of the superficial veins begins the process of localized retrograde flow
• Retrograde flow creates an “aspiration effect” on the saphenous vein
• The GSV reflux created by this phenomenon, if caught early, is reversible

Sclerotherapy vs Phlebectomy

ASVAL
• Selective Ablation of Varix under Local Anesthesia
• Elimination of the varicose reservoir to restore saphenous competency
• Phlebectomies
• Sclerotherapy
• Reversibility test (Pittaluga et al)
  • Assessing GSV reflux before and after compression of the varicose tributary
  • If the reflux resolves than the integrity of the GSV is intact and potentially salvageable by removing the varicose reservoir
  • Test is more likely to be positive in females, less symptoms, lower SFJ diameter, and minimal reflux
• 95% PPV for success of treatment
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ASVAL

  - 303 limbs (86 % C2) treated with 4 years follow-up
  - No GSV reflux in 66 % (2/3)
  - Symptoms improved or disappeared in 78 % • recurrent varicose veins in 11 %
- Pittaluga et al, EJVES 2010; 40: 122-8
  - 55 limbs (100 % C2) treated with 1 month follow-up
  - No GSV reflux in 64 %
  - Symptoms improved or disappeared in 75-83 %
  - No GSV reflux in 50 %
  - Symptoms disappeared in 66 %

Sclerotherapy vs Phlebectomy

Micro-phlebectomy: Technique

- Advantages
  - Reduced incidence of post treatment venous coagulum
  - Reduced incidence of hyperpigmentation
  - Faster recovery
- Disadvantages
  - More invasive procedure
  - Time consuming
  - Scarring?
  - Telangiectasias at phlebectomy sites
  - Not ideal for smaller veins

Sclerotherapy vs Phlebectomy

- Advantages
  - Minor procedure
  - Quick procedure
  - Can be used to treat both large and small veins
- Disadvantages
  - Trapped coagulum is common
  - Hyperpigmentation
  - Telangiectatic matting
  - Long recovery

How To Choose

- Varicosity size
  - The larger the varicosity the more difficult it is to treat with sclerotherapy
  - High likelihood of residual coagulum
  - Hyperpigmentation
  - Prolonged full recovery
  - Vessels >5 mm are better treated with phlebectomy
- Skin color
  - Risk of hyperpigmentation with darker skin color
  - Phlebectomy is a better choice
- Varicosity depth
  - Deep varicosity are difficult to remove with phlebectomy
  - Ultrasound sclerotherapy is a better choice

Results

- Few studies compare sclerotherapy to phlebectomy
    - Compared compression sclerotherapy to phlebectomy
    - Prospective randomized trial
    - 48 patients in each arm
    - 25% recurrence at 1 year for sclero vs 1.25% for phlebectomy
    - 37.5% recurrence at 2 years for sclero vs 1.25% for phlebectomy
    - Higher rate of complications in phlebectomy group
      - blisters, telangiectatic matting, scar formation, and bruising from bandaging.
Sclerotherapy vs Phlebectomy
Conclusions

• Treating varicosities with sclerotherapy or phlebectomies alone is the only option
  • Tortuous perforators
  • Pelvic varicosities
  • Neovascularity
  • Venous malformation
• Treating varicosities arising from the saphenous system may be appropriate under certain circumstances
  • Minimal reflux
  • Small GSV
  • Positive reversibility test
• Choosing which modality to use is determined by varicosity size, skin color and vessel depth