Sclerotherapy – The English Method

Huw Davies

Introduction

- Many publications have demonstrated clinical and anatomical results of Ultrasound Guided Foam Sclerotherapy (UGFS)
  - Clinical outcomes and techniques differ nationally and globally
- The 'English method' has been developed over last 10+ years
  - Aiming to maximise anatomical closure, patient reported outcomes and minimise need for further/re-treatment
- Will cover:
  - Techniques, tactics and results of UGFS in UK

Techniques – Cannulation

- Truncal Veins
  - Great Saphenous Vein (GSV) + Accessory Saphenous veins
    - Cannulate every 10-20cm from SFJ
    - Usually 4 cannulations for full length GSV
  - Small Saphenous Vein (SSV)
    - Cannulate retrograde at SPJ and distally
  - Tributaries
    - Cannulate as distally as possible

Techniques - Treatments

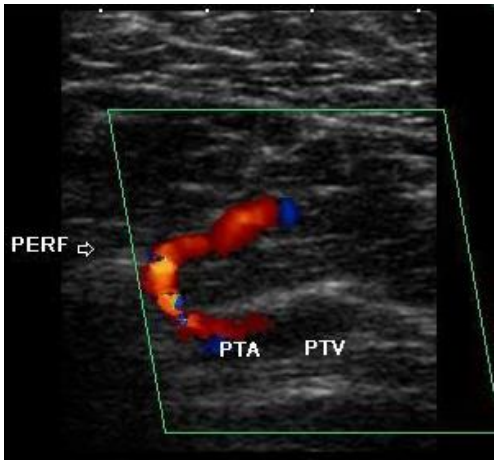
- Elevate leg
  - To empty veins and minimise 'dead space' – bubbles rise!
- Inject foam under ultrasound guidance
  - To minimise risk of extravasation
  - To ensure passage of sclerosant and contraction of vein
- Truncal Veins – 3% STS
- Tributaries – 1% STS
- Leg bandaged in Peha-haft and Class 2 stocking (thigh length for GSV, knee length for SSV)

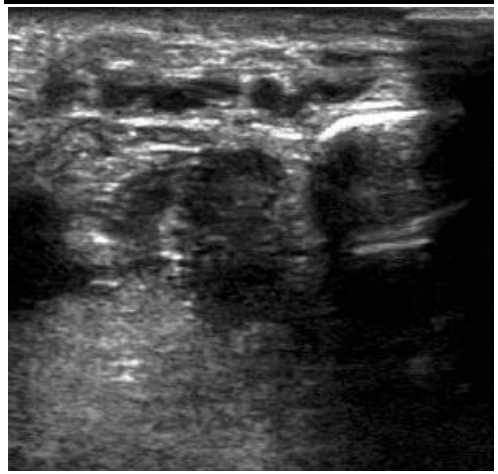
Tactics - 1

- Use cannulae rather than ‘butterfly needles’ etc. as less likely to become displaced
- Inject in slowly (to achieve spasm) in 2ml aliquots – larger aliquots take longer to inject and foam quality may degrade
- Between injecting: dorsi/plantar-flex ankle to ensure flow in deep veins to ‘wash-away’ foam spilt into deep system
- Whilst visualising foam injection can ‘massage’ foam along tortuous tributaries to ensure whole segment is treated

Tactics - 2

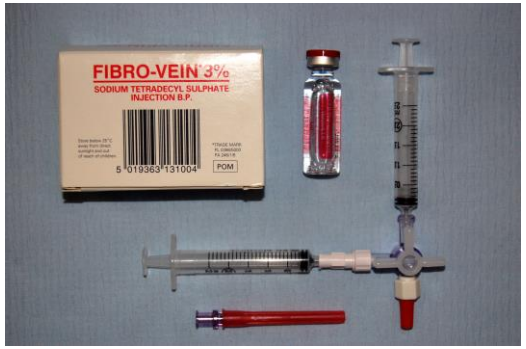
- Perforators
  - Treat vein segment directly proximal/distal to perforator
  - Not directly treated due to risk of foam in deep system
- If truncal vein of large diameter
  - Then ‘double shot’ of sclerosant in proximal 2 cannulae
- Treat ‘venous-plexus’ under ulcerated areas
  - If not possible to cannulate then can directly inject with needle + syringe
- Review at 2-4 weeks with low threshold for aspiration of sclerothrombus





Results

- UGFS accepted as safe treatment for VV
- 'English method' results in
  - Low re-treatment rate
    - Can achieve >90% occlusion (at 1 year)
  - Significant improvement in disease-specific and generic quality of life
  - Durable results to at least 5 years as described by patient reported outcomes



Conclusion

- UGFS performed meticulously as described in appropriate patients is:
  - Safe
  - Versatile
  - Clinically effective
  - Cost effective
  - High levels of patient satisfaction both short and long-term

References

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- Duplex ultrasound outcomes following ultrasound-guided foam sclerotherapy of symptomatic primary great saphenous varicose veins. Darvall et al *Eur J Vasc Endovasc Surg 2010*
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- A review of randomised controlled trials comparing ultrasound-guided foam sclerotherapy with endothermal ablation for the treatment of great saphenous varicose veins. Davies et al *Phleb 2015*
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