

2018 MID-ATLANTIC
CONFERENCE

8th ANNUAL CURRENT CONCEPTS IN
VASCULAR THERAPIES

2018



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**Debate 1: Why Is Tumescence-Based
Therapy The Gold Standard?**

Tumescent based venous therapy: Fight!



Introduction

Tumescent anesthesia

- Administration of a large volume of dilute local anesthetic
- Lidocaine, epinephrine, and bicarbonate in a NS solution



Endothermal Venous Ablation

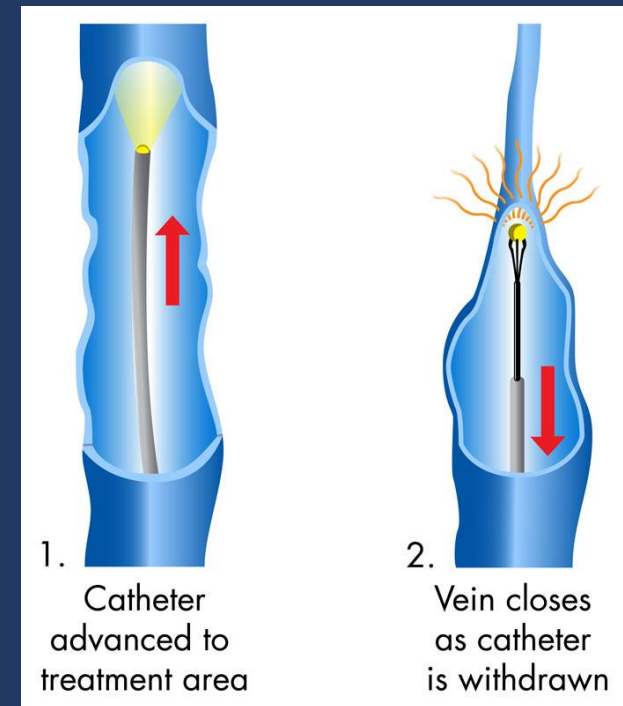
Infiltrate the tissue around the vein

- Anesthetic
- Heat sink to minimize surrounding tissue damage
- Venous compression: maximize vein wall/catheter contact, maximize vein wall/wall contact and minimize amount of blood in the vein

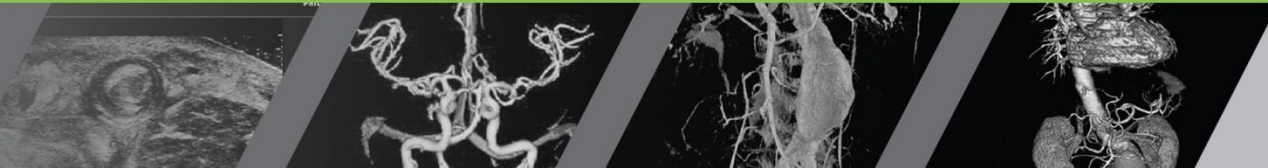


Endothermal Venous Ablation

- Gain venous access
- Introduce and advance thermal tipped catheter to beginning of treatment zone
- Infiltrate tumescent into perivenous tissue
- Use radiofrequency (RFA) or laser (EVLA) to heat seal culprit vein



Do you really want non tumescent therapy?



Non Tumescent Venous Procedures

Sclerotherapy

- IV sclerosant: inflammation → vein wall contraction, scarring and ablation

Mechanical & chemical ablation (MOCA): ClariVein

- Scoring vein wall while infusing a sclerosant



Non Tumescent Venous Procedures

Sapheon: VenaSeal

- Proprietary formulation of n-butyl cyanoacrylate
- Polymerization on contact with blood results in a glue that seals the vein



Why is tumescent based therapy the gold standard

RFA and EVLT

- Large volume of good multicenter research
- 98-99% success rate with the ability to successfully repeat treatment in the 1-2% failures
- Very low complication rate: 5% thrombophlebitis and 3% numbness (both usually self limiting) and <1% eHIT
- Durable: 98% occlusion rates >3 years





Before



After

If it ain't broke.....

The criticisms of these newer techniques or modalities reside in the lack of level I evidence

- Safe and effective
- Statistically better outcomes
- Ultimately need multicenter randomized controlled studies against the gold standard which is tumescent based ablation





**THE
NEXT BEST
THING**



Comparisons

- Foam sclerotherapy only modality with direct comparison to endothermal ablation
- From a safety, efficacy, durability, quality-of-life and cost-effectiveness perspective, endothermal ablation is superior to foam sclerotherapy, and in fact superior to traditional surgery

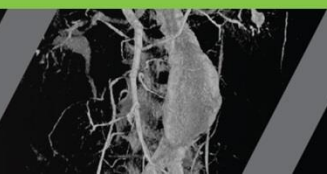
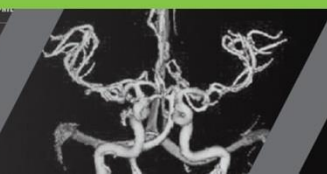
van den Bos R, Arends L, et al. Endovenous therapies of lower extremity varicose veins: a meta-analysis. *J Vasc Surg* 2009; 49: 230–239.



Comparisons

- MOCA and VenaSeal data mostly single-cohort studies
- Comparison to endothermal ablation needs to be reproduced and is still forthcoming
- In addition, the safety and more significantly, the efficacy data, has been conflicting





Most Important

- No durability or long-term safety data
 - leaving a foreign-body (i.e. glue) in the vasculature
- Although one can speculate that the risk is negligible, this needs to be borne out of rigorous analysis



We don't need endorsements, we need good science!



Donald J. Trump

@realDonaldTrump

Following

Dr Mcenroe: @VeinCenterofVA, this vein glue is the way to go!! Don't believe the Haters, covfefe.

RETWEETS
126,707

LIKES
161,616



9:06 PM - 30 May 2017

41K

127K

162K



Advantages

Disadvantages

Tumescent-based
(EVLA, RFA)

- Proven safety profile, efficacy, and durability
- Diminished blood loss
- Avoidance of general anesthesia
- Reduced thermal injury resulting in pain, bruising, paresthesias, pigmentation, skin retraction
- Cost-effectiveness
- Well studied

- Lidocaine toxicity
- Multiple needles sticks and associated procedural pain
- Thermal injury (nerve, skin, etc.)
 - Thrombophlebitis
 - Endothermal heat-induced thrombosis

Tumescent-less
(Foam, MOCATM, SapheonTM)

- Likely safe
- Avoidance of general anesthesia
- No risk of thermal injury

- Efficacy is less for foam
- Limit on amount of sclerotherapy administered
- Thrombophlebitis with Sapheon (acute and chronic)
- Foreign body reaction
- Thrombus extension
- Limited and conflicting efficacy data
- No durability data

Conclusion

- Currently used endothermal techniques are the gold standard because they have been proven safe, efficacious, expeditious, cost-effective and have stood the test of time



Thank you!



DR. TRENDY

In the never-ending quest to fix all the legs in Hampton Roads, Dr. Trendy jumps on the bandwagon of any new and/or trendy procedure.

Once the metamorphosis has begun, it is believed that Dr. Trendy cannot transform back into his original identity until he has glued everyone's veins together!

