

The use of simultaneous foam sclerotherapy and thermal ablation in varicose vein treatment: WHY?

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Conflicts of interest TOBIAS HIRSCH

- Consulting: Kreussler, Medtronic,
- Honoraria: Medtronic, Biolitec, Kreussler
- Studies: Medtronic, Biolitec

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Randomized Clinical Trials
Ambulatory Varicosity avulsion Later or Synchronized (AVULS)
A Randomized Clinical Trial

Lane, Tristan R. A. MRCG¹, Kelleher, Damian FRCS², Shepherd, Amanda C. MD³, Franklin, Ian J. FRCS⁴, Eben Surrig⁵, Davies, Alan H. FRCS⁶
Author information ©
Annals of Surgery: April 2015 - Volume 261 - Issue 4 - p 654-661

n = 101
RFA + simultaneous PE vs. RFA + PE/sclero (interval)
Follow-up 6 weeks, 6 months, 12 months

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AVVQ	Delayed & Further Treatment Needed	Simultaneous	Difference	p
Baseline	34.7% (33/94)	22.3% (13/57)	12.4*	0.022
6 Weeks	28.5% (25/75)	18.4% (10/70)	9.1*	0.005
6 Months	15.7% (10/70)	7.4% (5/70)	8.3*	0.002
12 Months	10.7% (10/96)	7.0% (5/71)	3.7	0.228

Table 3: AVVQ values for the delayed and requiring further treatment group and the simultaneous group.

VCSS	Overall	Delayed	Simultaneous	Difference	p
Baseline	7.32 (2.50)	7.68 (2.50)	7.06 (2.50)	0.62	0.212
6 Weeks	3.99 (2.09)	3.70 (2.09)	4.26 (2.09)	0.56	<0.001
6 Months	3.56 (2.06)	3.29 (2.05)	3.83 (2.06)	0.54	0.002
12 Months	3.06 (2.04)	2.92 (2.04)	3.24 (2.04)	0.32	0.001

Table 4: VCSS Outcome over duration of follow-up.

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Volume 8, Issue 2, March 2020, Pages 216-223

Clinical research study
Superficial venous disease
Clinical response to combination therapy in the treatment of varicose veins

Presented at the Thirty-first Annual Meeting of the American Venous Forum, Rancho Mirage, Calif, February 19-22, 2019.
R. Gregory Conway MD, MS¹, Jose L. Almeida MD², Lowell Kabinick MD³, Thomas W. Wakefield MD⁴, Andrea G. Buchwald PhD⁵, Bragesh K. Lal MD⁶, R. Kh

n = 526, American Venous Registry (AVR) 2010 -2015

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Volume 8, Issue 2, March 2020, Pages 216-223

Clinical research study
Superficial venous disease
Clinical response to combination therapy in the treatment of varicose veins

Conclusions
Invasive treatment of C2 chronic venous insufficiency improves symptom severity. Whereas treatment of venous reflux is essential to address venous symptoms, our results suggest that patients further benefit from additional direct treatment of varicosities. For selected patients, CT may present a more effective treatment strategy than saphenous ablation alone.

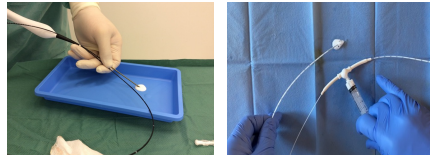
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Simultaneous tributary treatment brings benefits!

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Foam can be administered:

- ClosureFast™, Medtronic
- Venclose™, Venclose Inc.
- ELVeS®, 2ring radial Pro, Biolitec



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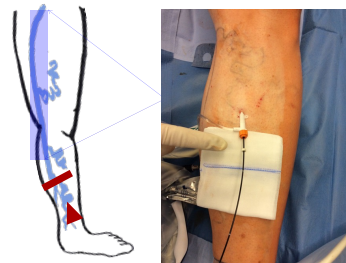
Treatment plan

- GSV: thermal ablation
- Side branches: sclerotherapy

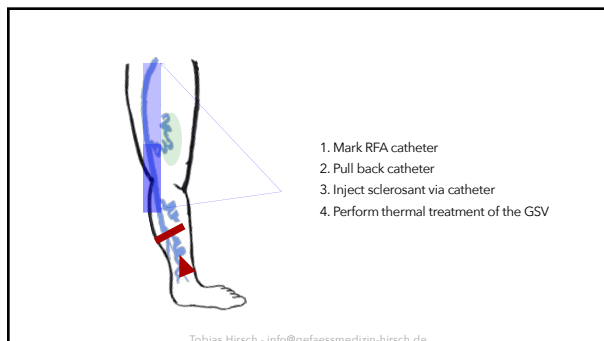
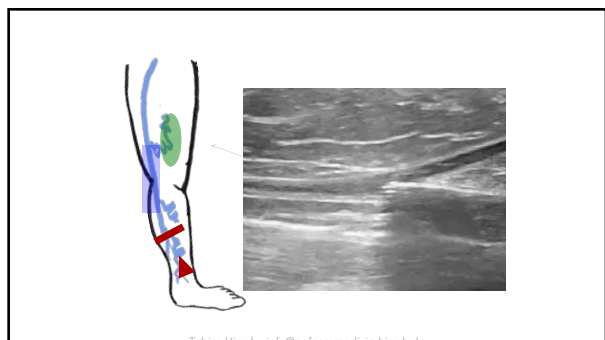
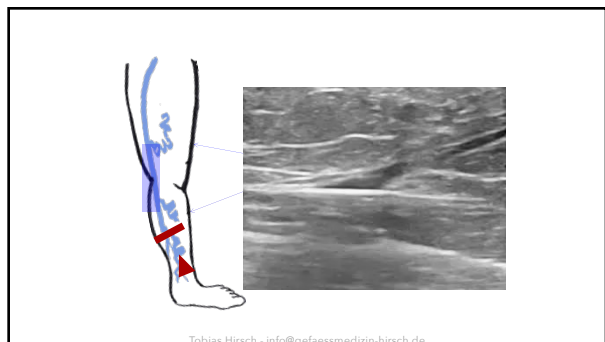
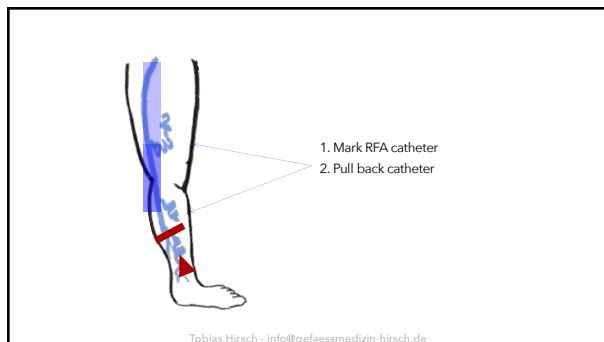
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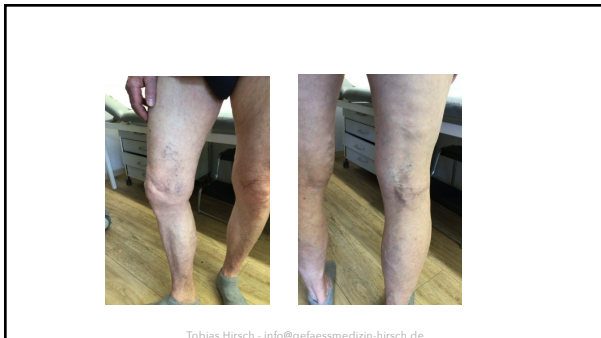


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Transluminal (TLFS) versus Ultrasound-Guided Foam Sclerotherapy (UGFS) During Endovenous Catheter Ablation in Patients with Varicose Veins

Single-center, prospective, randomized study 197 patients undergoing concurrent GSV ablation and sclerotherapy

METHODS	RESULTS
<p>Endovenous ablation of the GSV using a 1470 nm diode laser followed by:</p> <ul style="list-style-type: none"> TLFS (n=103) 7% polidocanol given through the access sheath UGFS (n=94) Concurrent ultrasound-guided foam sclerotherapy 	<p>Patients undergoing TLFS had:</p> <ul style="list-style-type: none"> Significantly improved VCSS (-8.7 vs. -7.4 for UGFS, p<.001) Less need for additional, second-stage sclerotherapy (10% vs. 54% for UGFS, p<.001)

Journal of Vascular Surgery: Venous and Lymphatic Disorders | Watanabe et al. J Vasc Surg Venous Lymphat Disord, January 2022
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RCS
VASCULAR
Ann R Coll Surg Engl 2014; 96: 279-283
doi:10.1308/RCSVS.2014.014313814021679474

Single-visit endovenous laser treatment and tributary procedures for symptomatic great saphenous varicose veins

ES Alder, MA Rahi

124 legs (91 pt.):
EVLT (48) vs. EVLT + foam (25) vs. EVLT + PE (51)
Follow-up: 14 months DUS, 4 years questionnaire

Results: initial success PE > foam
no significant difference in patient satisfaction

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Cardinale, Marco R. et al.
DOI: 10.1007/s10270-011-0129-1

CLINICAL INVESTIGATION

Endovenous Laser Ablation and Concomitant Foam Sclerotherapy: Experience in 504 Patients

Saim Yilmaz · Kagan Ceken · Ahmet Alparlan · Selat Durmaz · Timur Sindel

944 legs: RFA/EVLA saphenous veins + DGFS (1-3% pol) of varicosities
Follow-up: 1, 6, 12 months DUS

Results: occlusion rate 98.3%,
complications 1.4% (skin necrosis, crural DVT)

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EMES Vascular Forum (2020) 47, 83–86

ORIGINAL RESEARCH

Effect of Transluminal Injection of Foam Sclerotherapy Combined with Endovenous Thermal Ablation of Varicose Veins

Satoshi Watanabe¹, Soji Nishih, Takafumi Tsuji, Shinya Fujita, Eisuke Kyo
Department of Cardiology, Kusatsu Heart Center, Japan

n = 103 (97 consecutive pat.), ELVT + foam vs. ELVT VCSS, additional procedures

Variable, n (%)	Control n=50 (48%)	SCL n=53 (52%)	p value
Major complications	0 (0%)	0 (0%)	
Thrombophlebitis	0 (0%)	2 (3%)	.12
Additional sclerotherapy	33 (66%)	2 (3%)	<.0001
Assessment of VCSS			
Pre-procedure VCSS	10.4±2.7	11.2±2.3	.07
Post-procedure VCSS	7.1±3.5	6.8±2.5	.63
Changes in VCSS (Post-Pre value)	-3.3±1.7	-4.4±1.0	<.0001

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n = 103 (97 consecutive pat.), ELVT + foam vs. ELVT VCSS, additional procedures

TLFS+EVLA may be an easy, safe, and effective procedure, with acceptable complications vs. EVLA alone and may also reduce additional second stage interventions.

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ORIGINAL STUDY | VOLUME 35, ISSUE 5, P193-198, JUNE 01, 2018

A Comparison of Concomitant Tributary Laser Ablation and Foam Sclerotherapy in Patients Undergoing Truncal Endovenous Laser Ablation for Lower Limb Varicose Veins

Ji-Cheng Wang, MD¹, Yan-Li, MD¹, Guang-Mei, MD¹, Qing-Me, MD¹, Jian-Lin Liu, MD¹, Shao-Ying Lu, MD, PhD² | [Show all authors](#)

Published: April 26, 2018 | DOI: <https://doi.org/10.1016/j.jvs.2018.01.174> | [Check for updates](#)

n = 542 (418 pat.), ELVT + foam vs. ELVT AVVQ, EQ-5D, NRS

Conclusions

These results confirm the feasibility and safety of simultaneous tributary EVLA and FS. In addition, they indicate **better early quality-of-life improvement and a reduced reoperation rate** of simultaneously combined truncal EVLA and tributary FS.

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The use of simultaneous foam sclerotherapy and thermal ablation in varicose vein treatment:

WHY?

- The results of thermal treatment combined with foam sclerotherapy and phlebectomy are comparable
- Combined endovenous ablation and foam sclerotherapy delivers improved clinical outcomes
- The primary use of the combined treatment reduces the need for second stage interventions.

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Thank you for your attention!

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