CONTROVERSES ET ACTUALITÉS EN CHIRURGIE VASCULAIRE

CONTROVERSIES & UPDATES IN VASCULAR SURGERY

JANUARY 25-27 2018

MARRIOTT RIVE GAUCHE & CONFERENCE CENTER, PARIS, FRANCE

An Update On The American Venous Forum Guidelines For Superficial Vein

Peter Gloviczki, MD

Mayo Clinic, Rochester, MN, USA

Disclosure

Speaker name:

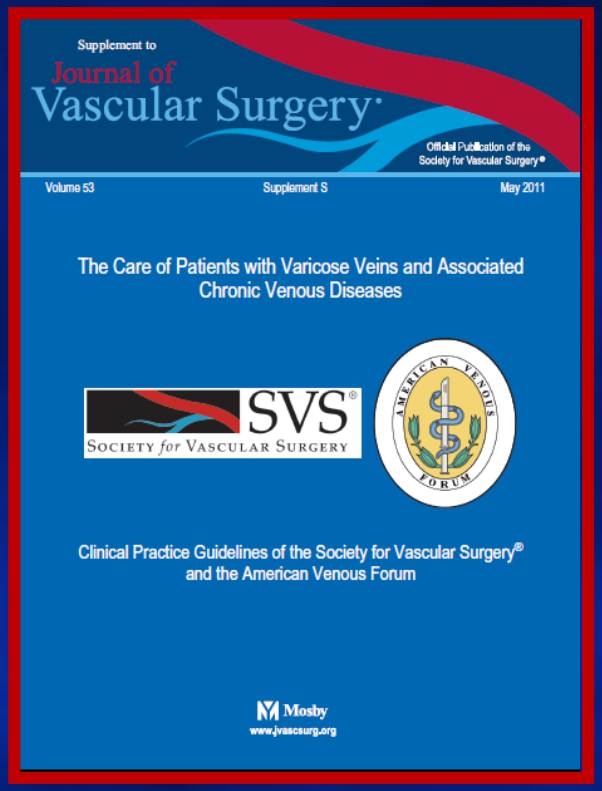
Peter Gloviczki.....

- ☐ I have the following potential conflicts of interest to report:
- ☐ Consulting
- ☐ Employment in industry
- ☐ Shareholder in a healthcare company
- ☐ Owner of a healthcare company
- ☐ Other(s)
- ☒ **I do not have any potential conflict of interest**

Conflict of Interest

None

American Venous Forum Guidelines on Superficial Venous Disease



Management of venous leg ulcers: Clinical practice guidelines of the Society for Vascular Surgery® and the American Venous Forum

Endorsed by the American College of Phlebology and the Union Internationale de Phlébologie

Thomas F. O'Donnell Jr, MD, Marc A. Passman, MD, William A. Marston, MD, William J. Ennis, DO, Michael Dalsing, MD, Robert L. Kistner, MD, Fedor Lurie, MD, PhD, Peter K. Henke, MD, Monika L. Gloviczki, MD, PhD, Bo G. Eklöf, MD, PhD, Julianne Stoughton, MD, Sesadri Raju, MD, Cynthia K. Shortell, MD, Joseph D. Raffetto, MD, Hugo Partsch, MD, Lori C. Pounds, MD, Mary E. Cummings, MD, David L. Gillespie, MD, Robert B. McLafferty, MD, Mohammad Hassan Murad, MD, Thomas W. Wakefield, MD, and Peter Gloviczki, MD

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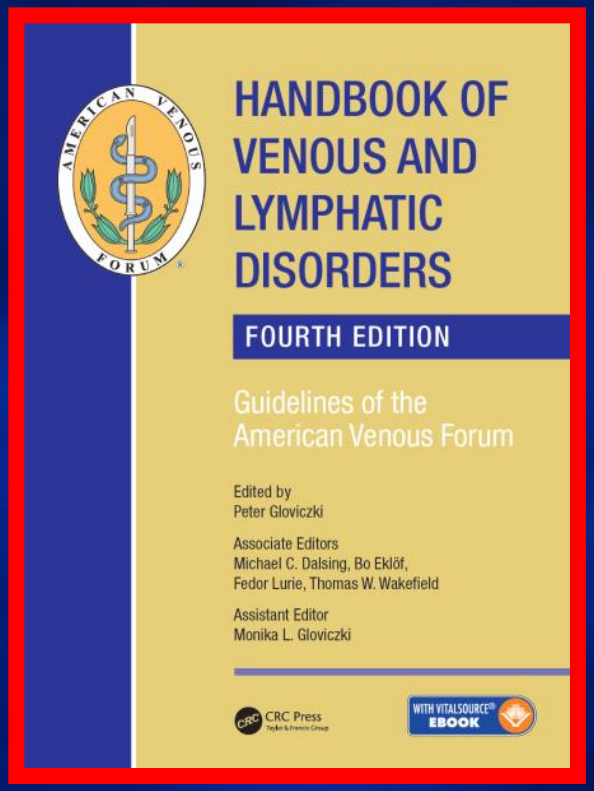
3S

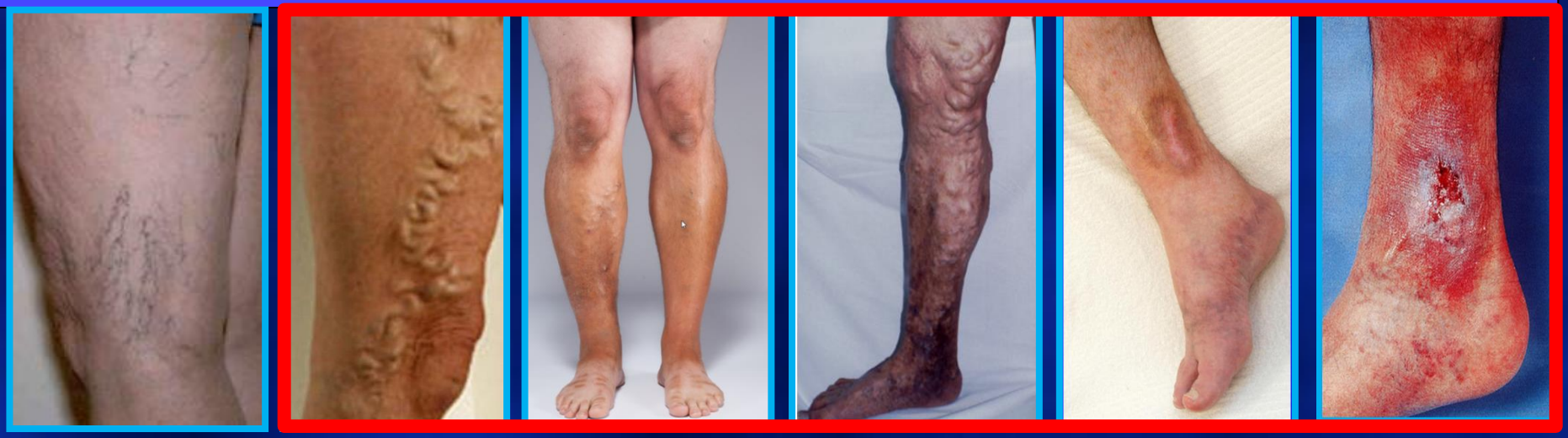


TOP 10

GUIDELINES

10. We recommend using the CEAP classification to describe chronic venous disorders. (GRADE 1B)

Chronic Venous Disorders



C1 C2 C3 C4 C5 C6

Chronic Venous Disease

Chronic Venous Insufficiency

9. Evaluation with Duplex Ultrasound

A cutoff values for reflux

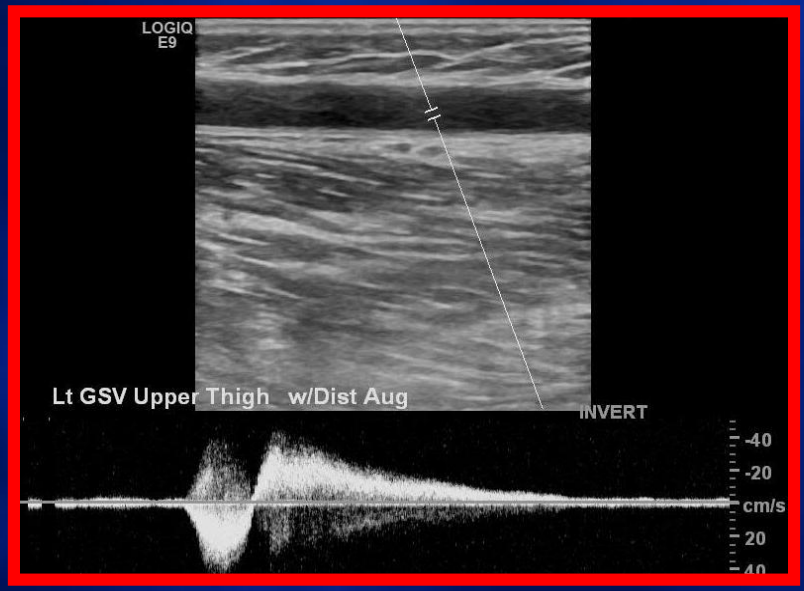
- femoral and popliteal veins: 1 second
- GVS, SSV, tibial, deep femoral veins: 500ms

(GRADE 1B)

“Pathologic” perforating veins

- Reflux time: ≥500 ms
- Diameter: ≥3.5 mm
- Location: beneath healed or open venous ulcers

(GRADE 1B)



8. We suggest compression therapy using moderate pressure (20-30 mm Hg) for patients with symptomatic varicose veins. (GRADE 2C)

1. Palfreyman SJ, Michaels JA. A systematic review of compression hosiery for uncomplicated varicose veins. Phlebology. 2009;24 Suppl 1:13-33.
2. Amsler F, Blattler W. Compression therapy for occupational leg symptoms and chronic venous disorders: a meta-analysis of randomised controlled trials. Eur J Vasc Endovasc Surg. 2008 Mar;35(3):366-72.

7. We recommend against compression therapy as the primary treatment of symptomatic varicose veins in patients who are candidates for saphenous vein ablation. (GRADE 1B)

Randomized clinical trial

Randomized clinical trial comparing surgery with conservative treatment for uncomplicated varicose veins

J. A. Michaels[1], J. E. Brazier[2], W. B. Campbell[3], J. B. MacIntyre[3], S. J. Palfreyman[1] and J. Ratcliffe[2]

[1]Sheffield Vascular Institute, Northern General Hospital, and [2]Health Economics and Decision Science, University of Sheffield, Sheffield and [3]Royal Devon and Exeter Hospital, Exeter, UK

Correspondence to: Prof. J. A. Michaels, Academic Vascular Unit, C... (e-mail: j.michaels@shef.ac.uk)

Background: Surgical treatment of me... effectiveness remains uncertain.

Methods: A randomized clinical trial ... hospitals in different parts of the UK ... 536 consecutive referrals to vascular ... for surgical treatment. Conservative n... surgical treatment (flush ligation of sit... phlebectomies, as appropriate). Chang... 6D and EuroQol (EQ) 5D, quality of l... treatment, symptomatic measures, an...

Results: In the first 2 years after ... 0·083 (95 per cent confidenc... the SF-6D score and 0·1... were also seen in sy...

Conclusion: Su... life in patients referred to secondary ca...

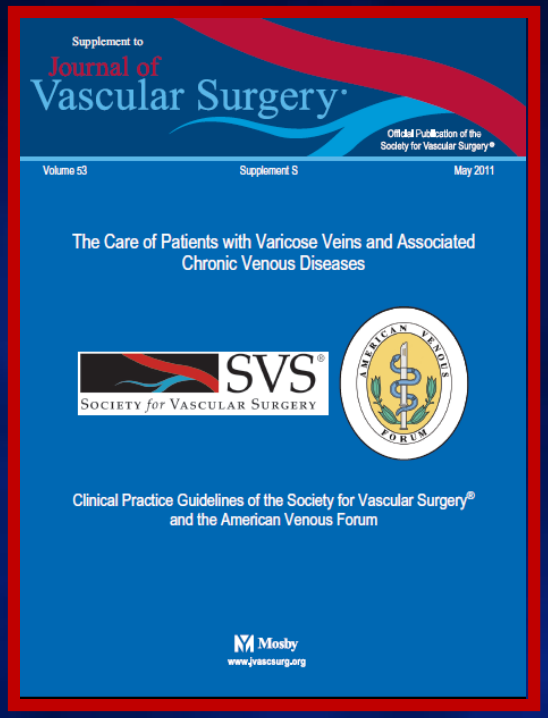
Paper accepted 29 October 2005

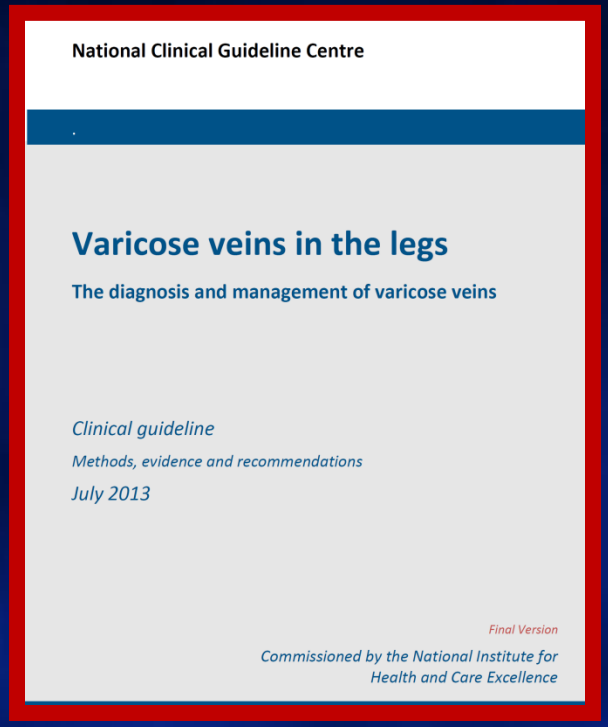
Published online in Wiley InterScience (www.bjs.c...

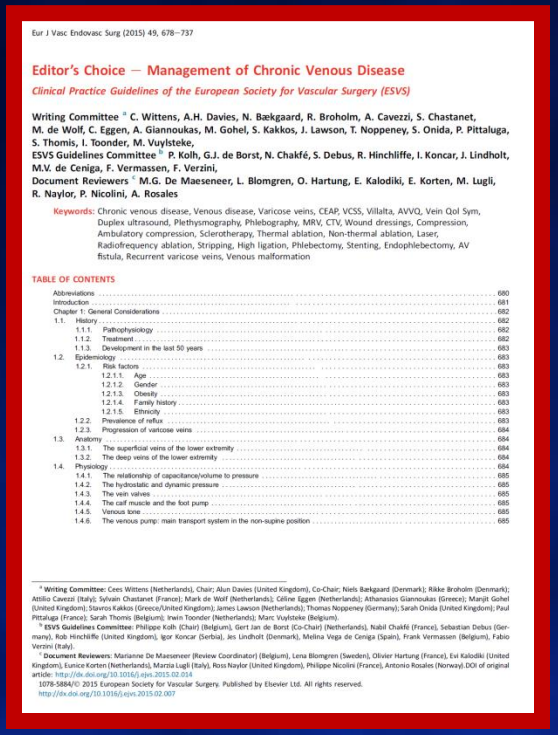
REACTIVE TRIAL

246 patients

At 2 years HLS and phlebectomy provided better symptomatic relief, cosmetic results and significantly more improvement in quality of life than conservative management







The SVS/AVF, the UK NICE and the European Guidelines

Recommend against compression therapy as the primary treatment if the patient is a candidate for saphenous vein ablation

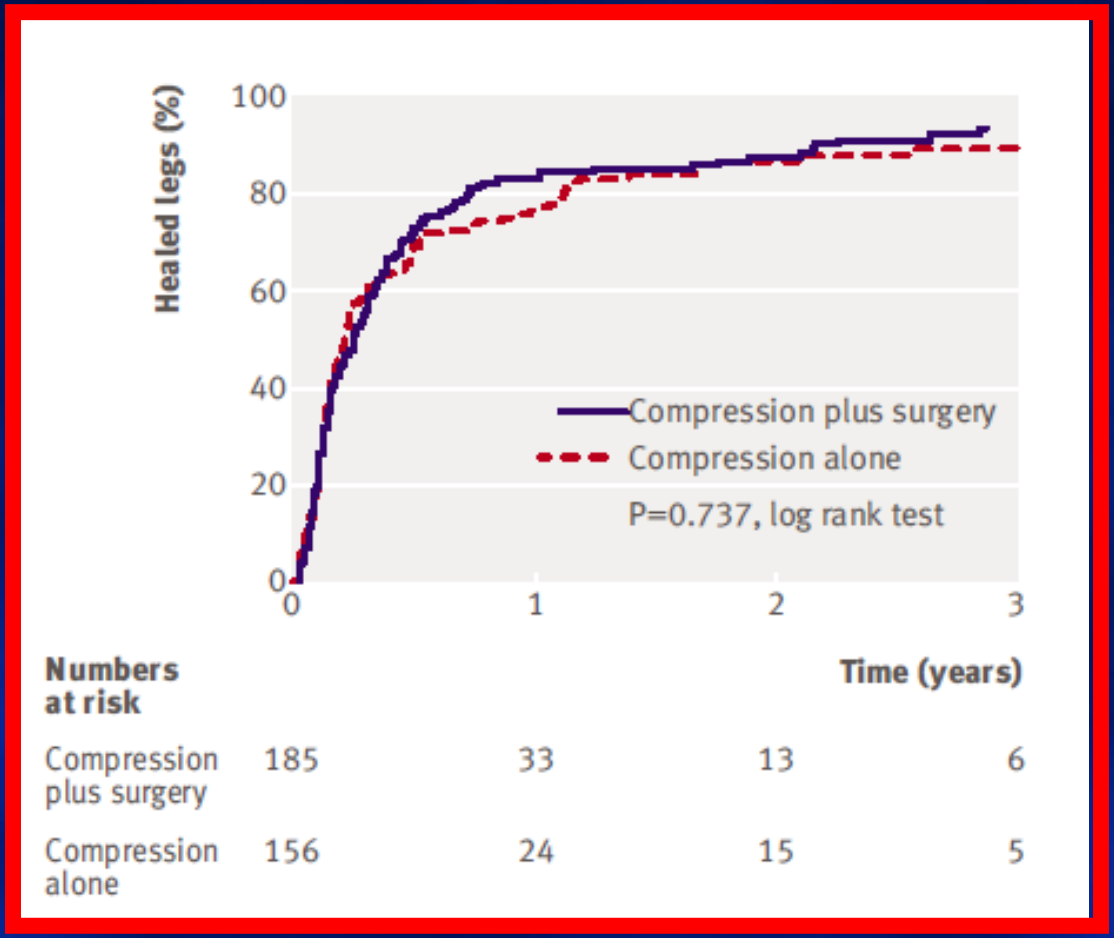
Grade of recommendation: 1 (Strong)

Level of Evidence: B (Moderate Quality)

6. We recommend compression as primary treatment for healing venous ulcers.

(GRADE 1A)

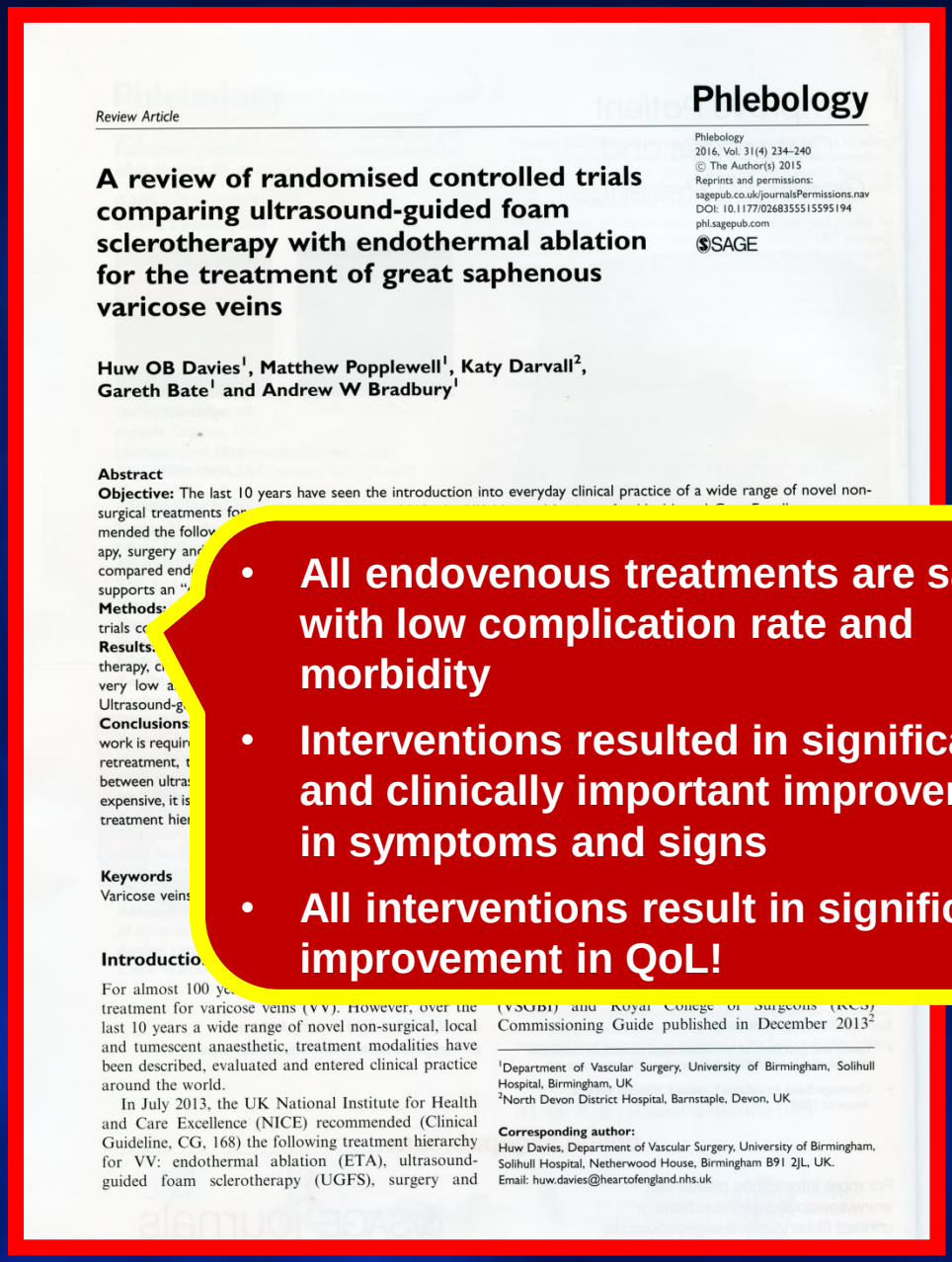
Ulcer Healing at 4 years ESCHAR Trial



Gohel MS et al, BMJ. 335(7610):83, 2007 Jul 14.

5. We recommend endovenous thermal ablations (laser and radiofrequency ablations) and ultrasound guided foam sclerotherapy over surgery for treatment of saphenous incompetence.

(GRADE 1B)



Review Article

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SAGE

A review of randomised controlled trials comparing ultrasound-guided foam sclerotherapy with endothermal ablation for the treatment of great saphenous varicose veins

Huw OB Davies[1], Matthew Popplewell[1], Katy Darvall[2], Gareth Bate[1] and Andrew W Bradbury[1]

Abstract

Objective: The last 10 years have seen the introduction into everyday clinical practice of a wide range of novel non-surgical treatments for
mended the follow
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compared end
supports an "
Methods:
trials co
Results.
therapy, c
very low a
Ultrasound-g
Conclusions
work is requir
retreatment, t
between ultras
expensive, it is
treatment hier

Keywords
Varicose veins

Introductio

For almost 100 ye
treatment for varicose veins (VV). However, over the last 10 years a wide range of novel non-surgical, local and tumescent anaesthetic, treatment modalities have been described, evaluated and entered clinical practice around the world.

In July 2013, the UK National Institute for Health and Care Excellence (NICE) recommended (Clinical Guideline, CG, 168) the following treatment hierarchy for VV: endothermal ablation (ETA), ultrasound-guided foam sclerotherapy (UGFS), surgery and (VSGBI) and Royal College of Surgeons (RCS) Commissioning Guide published in December 2013[2]

[1]Department of Vascular Surgery, University of Birmingham, Solihull Hospital, Birmingham, UK
[2]North Devon District Hospital, Barnstaple, Devon, UK

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Email: huw.davies@heartofengland.nhs.uk

- **All endovenous treatments are safe, with low complication rate and morbidity**
- **Interventions resulted in significant and clinically important improvement in symptoms and signs**
- **All interventions result in significant improvement in QoL!**

The NEW ENGLAND JOURNAL of MEDICINE

ORIGINAL ARTICLE

A Randomized Trial Comparing Treatments for Varicose Veins

Julie Brittenden, M.D., Seonaidh C. Cotton, Ph.D., Andrew Elders, M.Sc., Craig R. Ramsay, Ph.D., John Norrie, M.Sc., Jennifer Burr, M.D., Bruce Campbell, M.B., B.S., Paul Bachoo, M.B., Ch.B., Ian Chetter, M.B., Ch.B., M.D., Michael Gough, M.B., Ch.B., Jonothan Earnshaw, D.M., Tim Lees, M.B., Ch.B., M.D., Julian Scott, M.B., Ch.B., M.D., Sara A. Baker, M.Sc., Jill Francis, Ph.D., Emma Tassie, M.Sc., Graham Scotland, Ph.D., Samantha Wileman, Ph.D., and Marion K. Campbell, Ph.D.

Randomized clinical trial comparing endovenous laser ablation, radiofrequency ablation, foam sclerotherapy and surgical stripping for great saphenous varicose veins

L. H. Rasmussen, M. Lawaetz, L. Bjoern, B. Vennits, A. Blemings and B. Eklof

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Comparing endovenous laser ablation, foam sclerotherapy, and conventional surgery for great saphenous varicose veins

Anke A. M. Biemans, MD,[a] Michael Kockaert, MD,[a] George P. Akkersdijk, MD,[b,*] Renate R. van den Bos, MD, PhD,[a] Marianne G. R. de Maeseneer, MD, PhD,[a,c] Philip Cuypers, MD, PhD,[d] Theo Stijnen, PhD,[e] Martino H. A. Neumann, MD, PhD,[a] and Tamar Nijsten, MD, PhD,[a] *Rotterdam, Eindhoven, and Leiden, The Netherlands; and Antwerp, Belgium*

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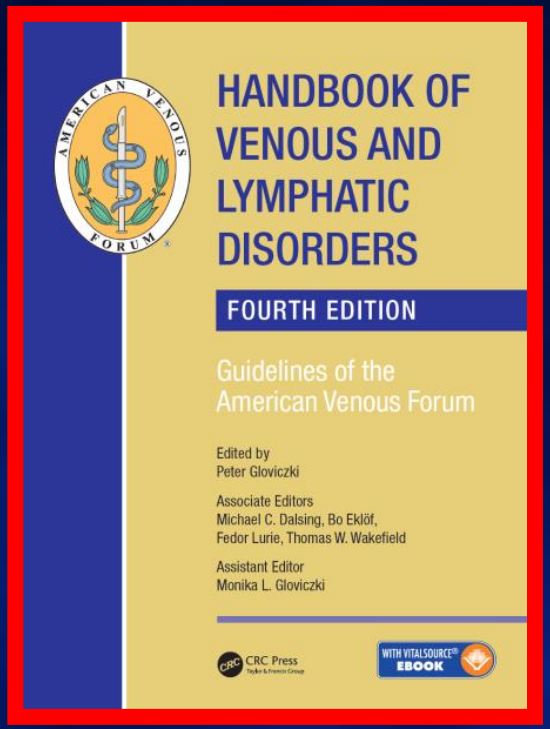
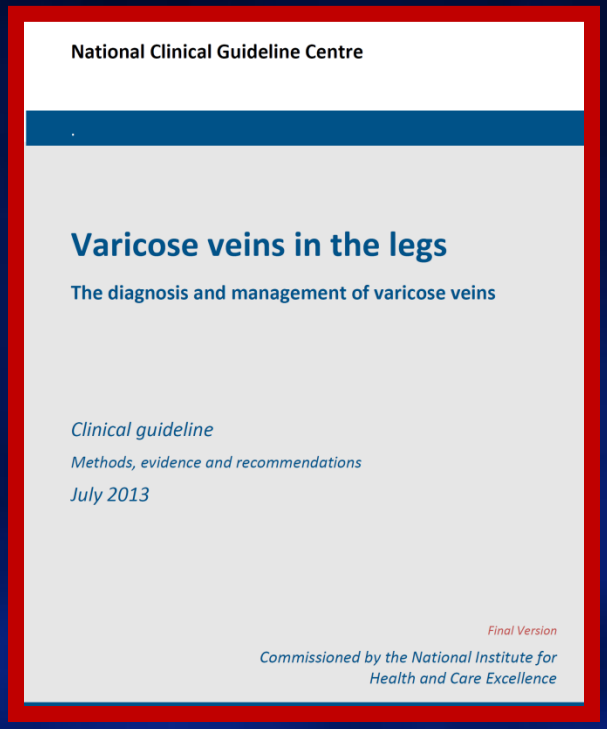
esvs Journal

Cost and Effectiveness of Laser with Phlebectomies Compared with Foam Sclerotherapy in Superficial Venous Insufficiency. Early Results of a Randomised Controlled Trial☆

C.R. Lattimer[a,*], M. Azzam[a], E. Kalodiki[a], E. Shawish[a], P. Trueman[b], G. Geroulakos[a]





The AVF, the UK NICE and the European Guidelines

Recommend endovenous thermal ablation (RF or laser) or ultrasound guided foam sclerotherapy (UGFS) over high ligation and stripping

Grade of recommendation: 1 (Strong)

Level of Evidence: B (Moderate Quality)

Systematic review and meta-analysis of endovascular and surgical revascularization for patients with chronic lower extremity venous insufficiency and varicose veins

Sreekanth Vemulapalli, MD,[a,b] Kishan Parikh, MD,[b] Remy Coeytaux, MD, PhD,[a,c,d] Victor Hasselblad, PhD,[c] Amanda McBroom, PhD,[a,d] Abigail Johnston, BA,[f] Giselle Raitz, MD,[a] Matthew J. Crowley, MD, MHSc,[g] Kathryn R. Lallinger, MSLS,[a,d] W. Schuyler Jones, MD,[a,b] and Gillian D. Sanders, PhD[a,d,h] *Durham, NC*

Background Chronic lower extremity venous disease (LECVD) is twice as prevalent as coronary heart disease, and invasive therapies to treat LECVD accounted for an estimated $290 million in Medicare expenditures in 2015. Despite increasing use of these invasive therapies, their comparative effectiveness is unknown.

Methods We conducted a systematic review and meta-analysis of treatments for patients (symptomatic and asymptomatic) with lower extremity varicosities and/or lower extremity chronic venous insufficiency/incompetence/reflux. We searched PubMed, Embase, and the Cochrane Database of Systematic Reviews for relevant English-language studies published from January 2000 to July 2016. We included comparative randomized controlled trials (RCTs) with >20 patients and observational studies with >500 patients. Short-, intermediate-, and long-term outcomes of placebo, mechanical compression therapy, and invasive therapies (surgical and endovascular) were included. Quality ratings and evidence grading was performed. Random-effects models were used to compute summary estimates of effects.

Results We identified a total of 57 studies representing 105,878 enrolled patients, including 53 RCTs comprised of 10,034 patients. Among the RCTs, 16 were good quality, 28 were fair quality, and 9 were poor quality. Allocation concealment, double blinding, and reporting bias were inadequately addressed in 25 of 53 (47%), 46 of 53 (87%), and 15 of 53 (28.3%), respectively. Heterogeneity in therapies, populations, and/or outcomes prohibited meta-analysis of comparisons between different endovascular therapies and between endovascular intervention and placebo/compression. Meta-analysis evaluating venous stripping plus ligation (high ligation/stripping) compared with radiofrequency ablation revealed no difference in short-term bleeding (odds ratio [OR] = 0.30, 95% CI −0.16 to 5.38, P = .43) or reflux recurrence at 1-2 years (OR = 0.76, 95% CI 0.37-1.55, P = .44). Meta-analysis evaluating high ligation/stripping versus endovascular laser ablation revealed no difference in long-term symptom score (OR 0.02, 95% CI −0.19 to 0.23, P = .84) or quality of life at 2 years (OR 0.06, 95% CI −0.12 to 0.25, P = .50).

Conclusions The paucity of high-quality comparative effectiveness and safety data in LECVD is concerning given the overall rise in endovascular procedures. More high-quality studies are needed to determine comparative effectiveness and guide policy and practice. (Am Heart J 2018;196:131-143.)

Systematic review and meta-analysis of randomized controlled trials evaluating long-term outcomes of endovenous management of lower extremity varicose veins

Elrasheid A. H. Kheirelseid, PhD, FRCS, Gillian Crowe, MBBS, Rishabh Sehgal, MD, MRCS, Dimitrios Liakopoulos, MD, Hafiz Bela, MD, Edward Mulkern, MD, FRCS, Ciaran McDonnell, MD, FRCS, *and* Martin O'Donohoe, McH, FRCS, *Dublin, Ireland*

ABSTRACT

Background: Early studies have demonstrated that endovenous therapy for varicose veins is associated with a faster recovery and lower complication rates compared with conventional therapy. More than one million procedures have been performed worldwide. The objective of this study was to determine long-term efficacy of currently available endovenous therapy methods for varicose veins compared with conventional surgery (saphenofemoral ligation and stripping of great saphenous vein [GSV] with or without multiple avulsions) in management of GSV-related varicose veins.

Methods: In July 2017, we searched MEDLINE, Cumulative Index to Nursing and Allied Health Literature, Embase, Scopus, Cochrane Library, and Web of Science without date or language restriction for relevant randomized controlled trials (RCTs). Bibliographies of included studies were also searched for additional studies. RCTs comparing conventional surgery and endovenous therapy for treating lower extremity varicose veins with 5 years or more of follow-up were selected. Data extraction and quality assessment were performed independently by two review authors, and any disagreements were resolved by consensus or by arbitration of a third author. Cochrane RevMan 5 was used for analysis.

Results: At time of data extraction, long-term follow-up was available for endovenous laser therapy (EVLT), radiofrequency ablation (RFA), and ultrasound-guided foam sclerotherapy. Included in the review were nine RCTs. The RCTs included 2185 legs; however, only 1352 legs were followed up for 5 years (61.9%). There was no statically significant difference in recurrence rate in comparing EVLT with conventional surgery in treating GSV incompetence (36.6% vs 33.3%, respectively; pooled risk ratio, 1.35 [95% confidence interval, 0.76-2.37]; P = .3). Also, no significant difference was determined for recurrence rate in comparing RFA with surgery or EVLT.

Conclusions: Although the analysis showed that EVLT and RFA are as effective as conventional surgery in treating saphenous venous insufficiency, the number of patients available for analysis was too small for definitive conclusions to be drawn. (J Vasc Surg: Venous and Lym Dis 2017;■:1-15.)

4. We recommend mini-phlebectomy under local anesthesia for treatment of varicose tributaries, either simultaneously with saphenous ablation or at a later stage.

(GRADE 1B)

3. For perforator vein ablation, we suggest percutaneous techniques over the SEPS procedure

(GRADE 2C)

2. We recommend against selective treatment of perforating vein in patients with simple varicose veins

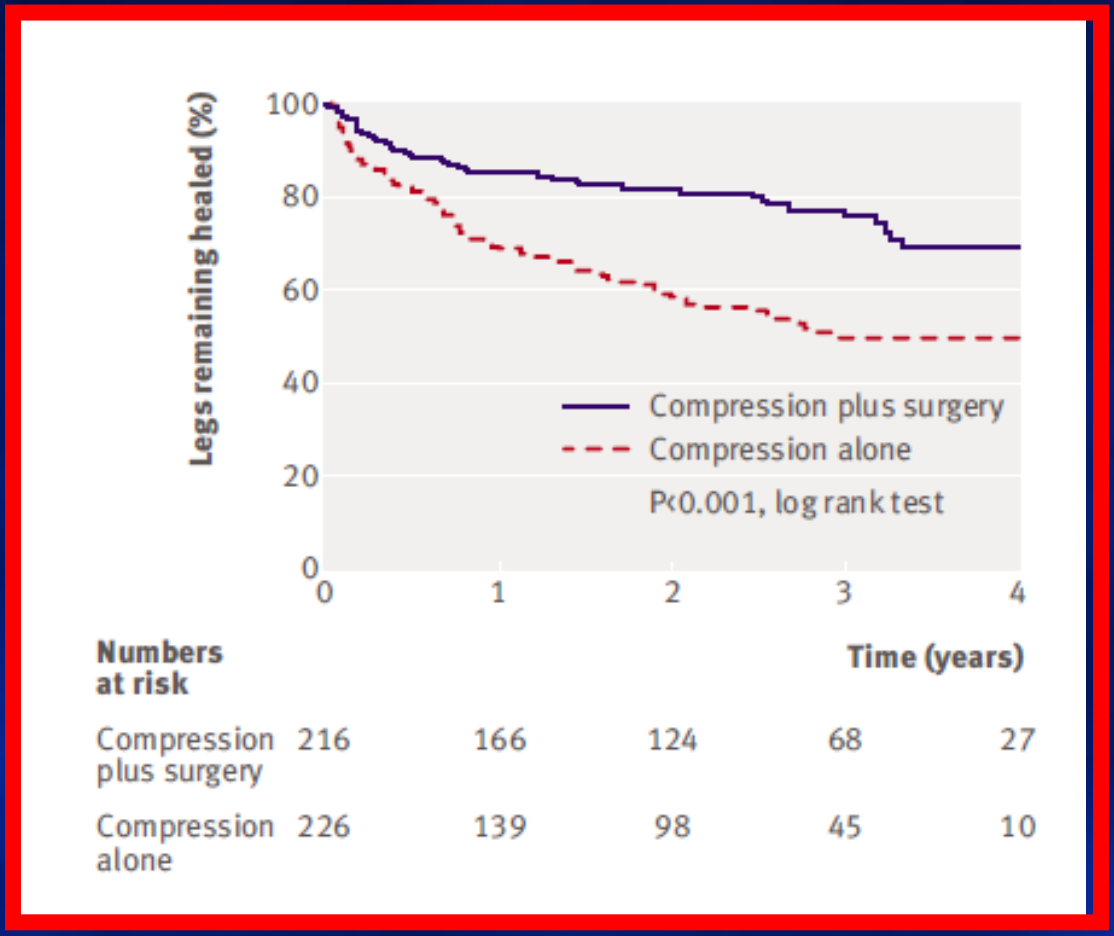
(C2). GRADE 1B

1. Kianifard B, et al. Randomized clinical trial of the effect of adding subfascial endoscopic perforator surgery to standard great saphenous vein stripping. Br J Surg. 2007 Sep;94(9):1075-80.
2. van Gent WB et al Conservative versus surgical treatment of venous leg ulcers: a prospective, randomized, multicenter trial. J Vasc Surg. 2006 Sep;44(3):563-71.

1. For prevention of venous ulcer recurrence we recommend ablation of the incompetent superficial veins over compression therapy alone.

(GRADE 1B)

Ulcer Recurrence at 4 years ESCHAR Trial



Gohel MS et al, BMJ. 335(7610):83, 2007 Jul 14.

Emerging Non-thermal Non-tumescent Endovenous Technologies suggested for Saphenous Ablation

- Mechanical Occlusion Chemically Assisted (MOCA)

  GRADE 2 B

- Cyanoacrylate Embolization (CAE).

  GRADE 2 C

A systematic review and meta-analysis of two novel techniques of nonthermal endovenous ablation of the great saphenous vein

Cornelis G. Vos, MD, PhD,[a] Çağdaş Ünlü, MD, PhD,[a] Jan Bosma, MD, PhD,[b] Clarissa J. van Vlijmen, MD, PhD,[c] A. Jorianne de Nie, MD,[a] *and* Michiel A. Schreve, MD,[a] *Alkmaar and Amsterdam, The Netherlands*

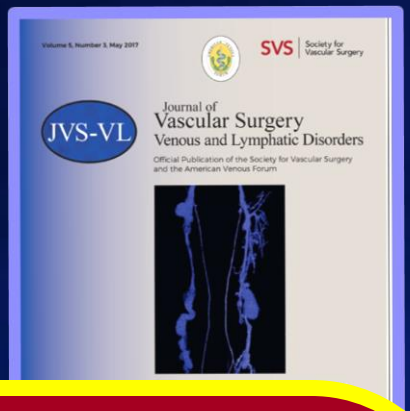
ABSTRACT

Background: Endothermal treatment of the great saphenous vein (GSV) has become the first-line treatment for superficial venous reflux. Nonthermal ablation has potential benefits for acceptability by patients and decreased risk of nerve injury. We performed a systematic review and meta-analysis to evaluate the efficacy of mechanochemical endo-venous ablation (MOCA) and cyanoacrylate vein ablation (CAVA) for GSV incompetence.

Methods: MEDLINE, Embase, Cumulative Index to
searched for papers published between January
included patients treated for GSV incompeten
available, case reports, retrospective studies,
saphenous vein incompetence, and recurre
outcomes were initial technical success. Ve
complications.

Results: Fifte
6 months an
Questionnaire sco

Conclusions: These resul
techniques. However, to det
comparing these novel modalities
2017;5:880-96.)



15 studies (2 RCTs), 1645 patients

- **Anatomic success for MOCA (n=691) and CAVA (n=954) was**
  - **94.7% and 94.8% at 6 months**
  - **94.1% and 89.0% at 1 year**

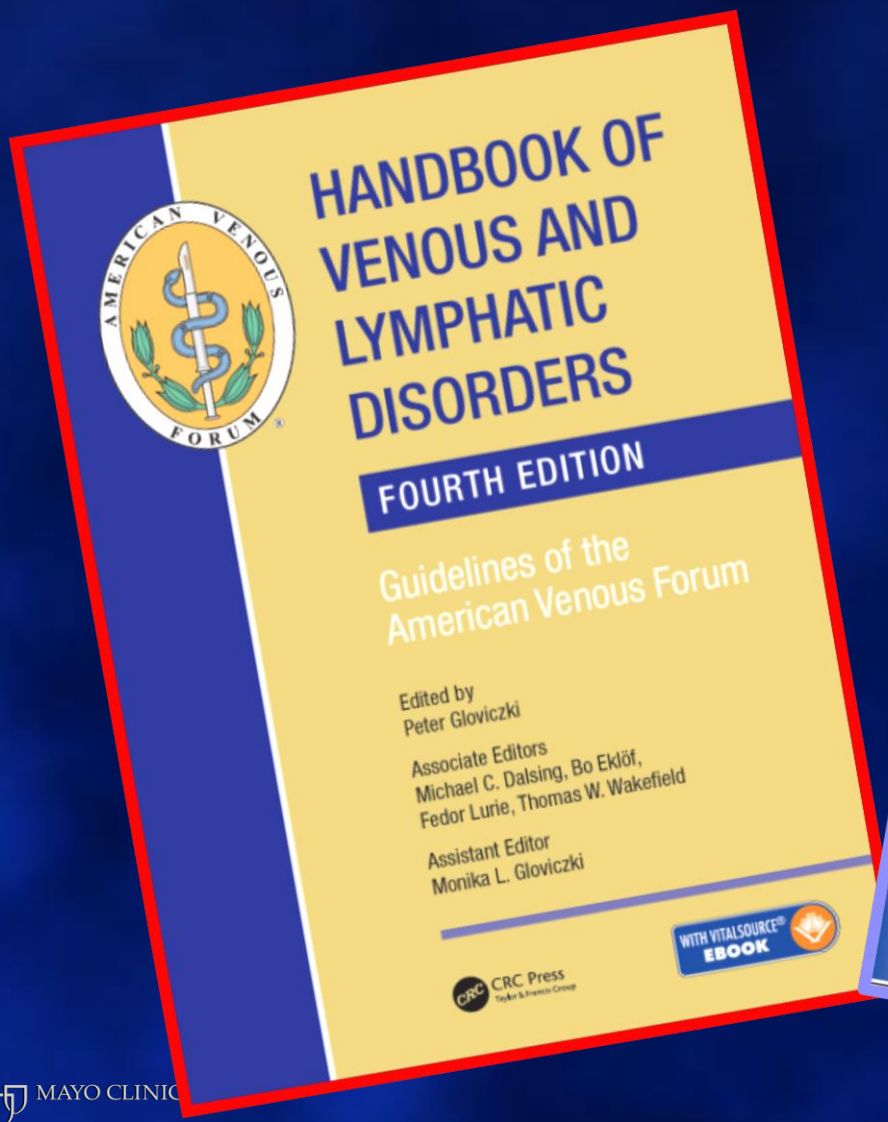
- **VCSS and Aberdeen VVQ score significantly improved after both treatment**

TAKE HOME MESSAGE

- Evidence based guidelines should be consulted for correct evaluation and treatment of venous disease

- Some of the technology is either not available for the physician or not affordable for the patient

Thank You!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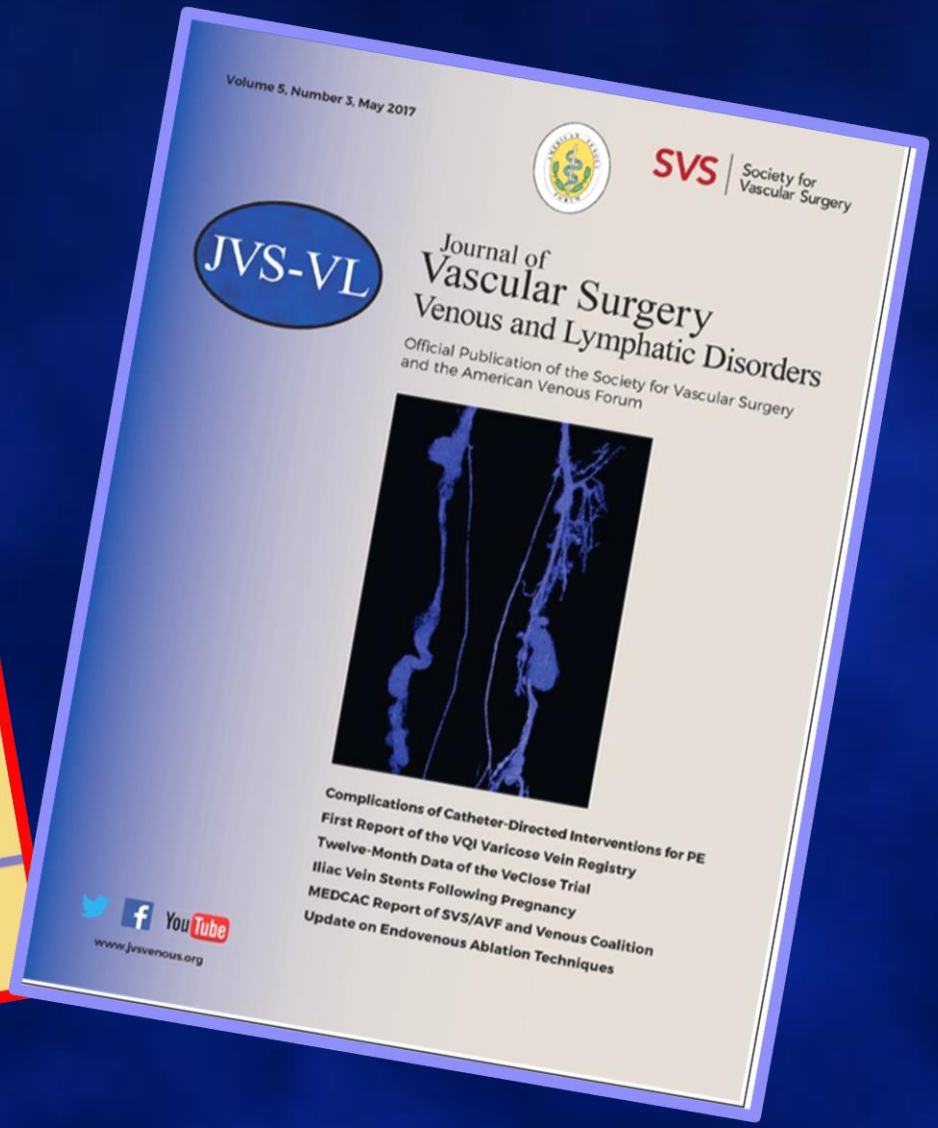
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Venous and Lymphatic Disorders
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