

De la medicina empirica la medicina bazata pe dovezi si managementul individualizat al BVC

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Ce este boala venoasa cronica?

Este o boala a venelor **frecventa** si **multifactoriala** care se datoreaza:

1. Refluxului valvular (primar)
2. Obstructiei
3. Obstructiei (incomplete) si refluxului secundar
4. Deficitului de „pompa musculara,,
5. Factori compresivi externi
6. Factori genetici (hipoplazie/agenezie, duplicatie, lipsa valve)

Insuficienta venoasa cronica C3-C6

- Rezultat al evolutivitatii bolii-prin HT venoasa cronica severa
- Rezultat al unor complicatii acute (tromboflebita)
 - Sdr. post-trombotic
 - Sdr. post-flebitic

Forma clinica cea mai grava: ulcerul venos (de staza)

Edemul unilateral de m. inferior fara reflux in trunchiul safen poate fi considerate Insuf. venoasa?

Edemul asociat cu trunchi safen competent dar cu perforanta Cockett 1-2 incompetenta (reflux) este insuficienta venoasa cr?

Exista insuficienta venoasa „pura,, sau insuficienta veno-limfatica?

Mai multe necunoscute in BVC...

Este BVC o afectiune...ereditara?

Factorii de risc sunt doar o cauza ipotetica sau chiar exista vreo asociere?

BVC poate fi prevenita?

Care este managementul optim in BVC de reflux (VV)?

RCT' sau Randomizarea Mendeliana in BVC?

- RCT sau RM ne pot oferi cateva dintre raspunsuri:
- Exista vreo relatie dovedita intre FR si BVC (de reflux)?
- Exista vreo relatie dovedita intre FR si Boala tromboembolica?
- O relatie cauzala sau intamplatoare (*confounding bias*)

Original Investigation | [Published: 20 May 2017](#)

Assessing the causal relationship between obesity and venous thromboembolism through a Mendelian Randomization study

[Human Genetics](#) **136**, 897–902 (2017)

Si totusi...Genetica!

Genome-Wide Association Study

Cardiometabolic, Lifestyle, and Nutritional Factors in Relation to Varicose Veins: A Mendelian Randomization Study

Shuai Yuan, Maria Bruzelius, Scott M. Damrauer and Susanna C. Larsson ✉

Originally published 20 Oct 2021 | <https://doi.org/10.1161/JAHA.121.022286> | Journal of the American Heart Association. 2021;10:e022286



Clinical and Genetic Determinants of Varicose Veins

Prospective, Community-Based Study of ≈500 000 Individuals

Eri Fukaya, Alyssa M. Flores, Daniel Lindholm, Stefan Gustafsson, Daniela Zanetti, Erik Ingelsson and Nicholas J. Leeper ✉

Originally published 24 Sep 2018 | <https://doi.org/10.1161/CIRCULATIONAHA.118.035584> | Circulation. 2018;138:2869–2880

Varicose veins of lower extremities: insights from the first large-scale genetic study

 Alexandra S. Shadrina,  Sodbo Z. Sharapov, Tatiana I. Shashkova,  Yakov A. Tsepilov








doi: <https://doi.org/10.1101/368365>

Now published in *PLOS Genetics* doi: [10.1371/journal.pgen.1008110](https://doi.org/10.1371/journal.pgen.1008110)

Genetic factors underlying VVs development remain largely unknown

Ce are in comun cu realitatea?

Classification of CVD: CEAP Class 0-6

CEAP Class	0	1	2	3	4	5	6
Description	No visual or palpable signs of CVD	Telangiectasia or reticular veins	Varicose Veins	Edema	Pigmentation: Skin changes assigned to venous disease	Skin changes with healed ulceration	Skin changes with active ulceration
Visual							

Wittens C, Davies AH, Baekgaard N, et al. Clinical Practice Guidelines from the ESVS, *Eur J Vasc Endovasc Surg* 2015;49:678-737

Nu exista nicio relatie de evolutivitate intre stadiul C 1 si C6! Absolut...NICIUNA!
Nu exista niciun fel de trimitere la ...SIMPTOMATOLOGIE-pana in anul 2020!
Nu este utila nici macar in RCT-uri!

Actualizata in 2020...

De ce a trecut atata vreme?

1993, updated in 1996, and revised in 2004,
2017 CEAP Task Force American Venous Forum (Delphi method)

CEAP Classification System and Reporting Standard Revision 2020

C (Clinical Manifestations), **E** (Etiology), **A** (Anatomic Distribution), **P** (Pathophysiology)

C0	No visible or palpable signs of venous disease
C1	Telangiectasias or reticular veins
C2	Varicose veins
C2r	Recurrent varicose veins
C3	Edema
C4	Changes in skin and subcutaneous tissue secondary to chronic venous disease
C4a	Pigmentation or eczema
C4b	Lipodermatosclerosis or atrophie blanche
C4c	Corona phlebectatica
C5	Healed
C6	Active venous ulcer
C6r	Recurrent active venous ulcer

Shaorma cu de toate...

- Avem de toate...
- Avem o istorie in spate...
- Avem un prezent...
- Avem si un viitor...
- Ce ne lipseste?
- Hmmm... Stiinta!

Credem ca stim...

Boala venoasa cronica este plina de mistere si necunoscute! De ce nu le stim inca?

Toate teoriile despre BVC se bazeaza pe „povesti”” Cui foloseste? In niciun caz pacientilor care inghid zilnic pilule minune tot asteptand... sa le dispara varicele...



Traiasca...Net-ul!

NANOVEIN



ASOCIATIA MONDIALA
EXPERTILOR DRENAJILOR
RECOMANDA

PICIOARE FRUMOASE SI SANATOASE

Rezultatul devine ca consecință a cursului
complet de aplicare

- ✓ **Eliberează** de la vizibilitatea simptomelor de varicoză
- ✓ **Previne** evoluția venelor varicoase
- ✓ **Elimină** durerea și greutatea în picioare
- ✓ Conține ingrediente **sigure** și naturale



Preț vechi:
318 RON

Preț nou: 159 RON

Comandă *

REDUCERE
50%



Cum am scăpat de varice într-o săptămână....

Tot cu lipitori si in sec XXI?

- Medicina traditionala castiga din ce mai multi adepti in Romania. Fie ca nu mai au incredere in medicamente. fie ca vor o alternativa la tratamentele obisnuite, romanii se intorc spre terapiile cu care se insanatoseau stramosii. Printre acestea, terapia cu lipitori sau hirudoterapia, unul dintre cele mai vechi tratamente din istoria lumii.
- La Timisoara, medicul DS explica in ce fel aceste vietati activeaza sistemul imunitar si mecanismele de autovindecare (**Hirudoterapie**).



History...



Ancient Egypt

The Ebers Papyrus (27th Pharaonic dynasty, 1580-1320 BC) clearly contraindicated surgery for varicose veins:

"Instruction concerning swelling of blood vessels. If thou examine a swollen blood vessel under the skin of a limb and its aspect increases, becomes sinuous and serpentine, like something swollen with air, then thou will say concerning it, it is a swollen blood vessel—Thou shall not touch something like this".

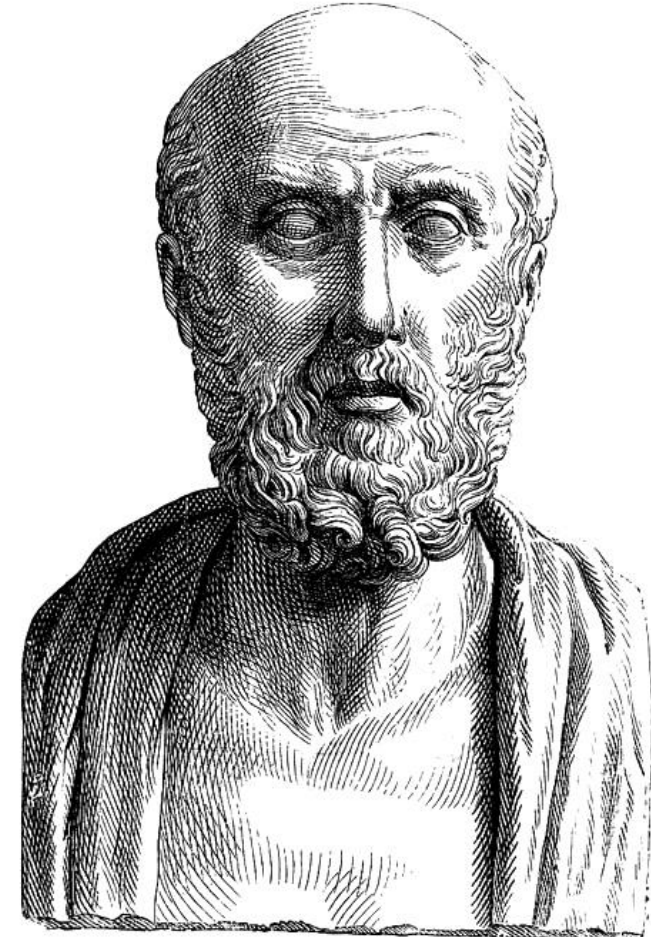
Cum adica?

Cu mii de ani in urma erau contraindicate operatiile de varice...iar acum...

Si totusi...daca aveau dreptate „ANTICII” ?

The Greco-Roman era

- **Hippocrates**, born in Kos (Greece), was also relatively *opposed to surgery for varicose veins*.
- At most, he recommended making punctures or tiny incisions in them once, supplemented by compression, but emphasized that the occurrence of an ulcer could be related to the incisions.





- **Aulus Cornelius Celsus** (Rome, 1st century AD) was probably one of the first to operate on varicose veins, but it is not known with certainty if he was a doctor.
- He performed avulsion of varicose veins with a hook-today this technique is called ***phlebectomy*** by mini-incision.

He gave us a precise description:

“Make an incision of the skin covering a varicose vein, spread apart the edge of the wound with a small hook and use a scalpel to detach the varicose vein from the surrounding parts, taking care not to injure them. After it has been detached, a small blunt hook is placed below it, always leaving a 4-finger interval between the incisions, and the same operation is continued on the vein. It is easy ascertain its direction by the hook method. Thus, after these varicose veins have been detached, they are removed with the hook, next to which they are cut: then the nearest hook is passed, with which the vein is removed in the same manner and is again cut at this place. Thus, after removing all varicose veins from the leg, the edges of the wound are brought close together by applying an agglutinating plaster.”

Stripping-ul a facut... Istorie

- Este considerat *standardul de aur* si cea mai des folosita metoda chirurgicala in boala varicoasa...
- Rata mare de recidiva post-operatorie! Neovascularizatie
- Risc de tromboza post-operatorie...
- Recuperare greoaie
- Risc de suprainfectie...

Maria, 48 ani:

*„Accept sa ma operez de varice, dar cu laser!
In plus, imi garantati ca nu mai apar altele la loc?,,*



Maria are dreptate!

- TVP post-stripping



Recurenta varicoasa



Stati ca?

Persistent reflux below the knee after stripping of the great saphenous vein

Pierre van Neer, MD, PhD,^a Fons G. Kessels, MD,^b Rene J. Estourgie, MD, PhD,^c Ed F. de Haan, MD,^c Martino A. Neumann, MD, PhD,^d and Joep C. Veraart, MD, PhD,^e *Roermond, Rotterdam, and Maastricht, The Netherlands; and Zürich, Switzerland*

Table III. Prospective studies that describe postoperative reflux in the great saphenous vein below the knee after short stripping

<i>First author</i>	<i>Limbs, No.</i>	<i>Reflux GSV, %</i>	<i>Follow-up, y</i>
Blomgren, ³ 2005	50	44	2
Mackenzie, ⁴ 2004	29	48	2
Mackenzie, ⁵ 2002	25	69	2

GSV, Great saphenous vein.

Conclusion: Many patients (91%) that undergo a short stripping procedure will have a persistent reflux of the remnant below knee GSV tributaries postoperatively. This incompetence of the distal GSV is independent from the proximal GSV as well from insufficient perforating veins. There seems to be a tendency to worsening of the clinical signs and symptoms between 6 months and 2 years after surgery, and this goes along with an increase of reflux and diameters of the GSV below knee remnants. (J Vasc Surg 2009;50:831-4.)

Relatia dintre tipul interv. chirurgicale si rata de recurenta varicoasa

Gad, *et al.*: Assessment of causes and patterns of recurrent varicose veins

Table 4: The relationship between the operations performed for the patients of the study before recurrence and the postoperative recurrence duration

Operation performed	Saphenofemoral disconnection without stripping (Trendelenberg operation)		Saphenofemoral disconnection with stripping below knee		Saphenofemoral disconnection with stripping above knee		Saphenopopliteal disconnection with stripping	
	No.	(%)	No.	(%)	No.	(%)	No.	(%)
Less than 2 years	2	6.7	0	0	2	7.1	0	0
2-5 years	6	20	0	0	4	14.2	2	16.6
6-10 years	20	66.6	2	9.1	4	14.2	6	50
More than 10 years	2	6.7	20	90.9	18	64.5	4	33.4
Total	30	100	22	100	28	100	12	100

* Results are statistically significant as P value ≤ 0.05

Overview of treatment approach for VV

Approach	Description
Compression stockings, elevation, life style modification Weight loss	Non-interventional approaches Lack of adherence may limit efficacy
Endovenous obliteration (MOCA, RFA, EVLA)	May use heat, radio waves, chemical agents, or a laser to scar the vein or coagulate blood in the vein to close it
Sclerotherapy	Chemical agent injected into the vein to scar and close it off
Ligation	Small veins are tied off as they branch off larger ones
Phlebectomy	Small 1-2 mm incisions over the entire vein with the vein pulled to the surface and removed after closure upstream
Stripping	Removal of the saphenous vein

De ce ablatia termica/non-termica?

- Ablatia termica/mecanochimica anuleaza refluxul venos in trunchiul safen (*cura refluxului venos!*)
- Anihileaza cauza/sursa HT venoase
- Suprima alimentarea tributarelor/comunicantelor varicoase
- Este rapida/putin sangeranda
- Riscul tromboembolic este minim!
- Mult mai acceptabila de catre pacienti!
- Ligatura crosei? Discutabil...

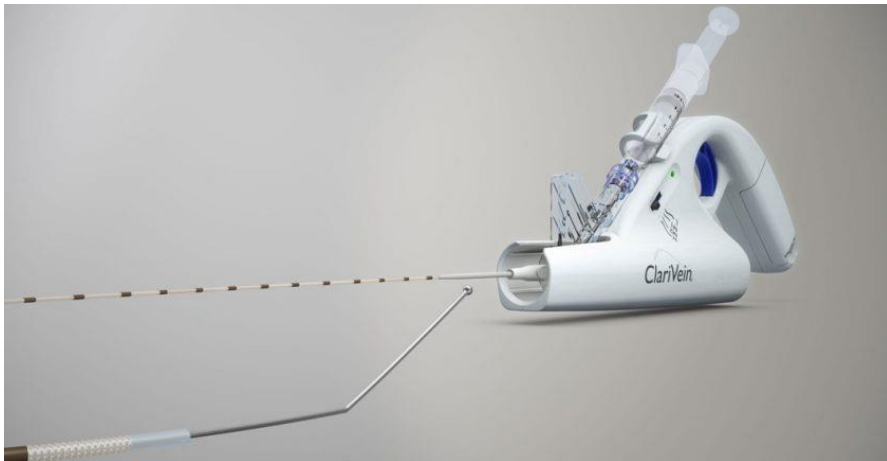
EVLA vs HLS vs RFA

- A meta-analysis including 11 RCTs, reported a statistically significantly lower recurrence rate after EVLA than after high ligation (3.1% after EVLA vs. 10% after HLS; OR 0.28 [95% CI 0.16 e 0.49] $p < .001$)
- Comparing EVLA with RFA, a meta-analysis demonstrated that both have the same safety, efficacy, post-operative pain score, and recanalization rates.
- Recanalisation was the most common cause of recurrence after EVLA, whereas neovascularisation was more frequent after HLS.

He G, Zheng C, Yu MA, Zhang H. Comparison of ultrasound-guided endovenous laser ablation and radiofrequency for the varicose veins treatment: an updated meta-analysis. *Int J Surg* 2017;**39**:267–75.

Ne oprim aici?

MOCA: non-thermal/non-anaesthetic tumescence free



MOCA Versus RFA in the Treatment of Primary Great Saphenous Varicose Veins (MARADONA)

- *Our meta-analysis indicated that MOCA had a lower risk of major complications compared with thermal ablation. Nerve injury was seen in 0.4% and 3.2% cases after MOCA and thermal ablation, respectively.*

Research Article

Mechanical Occlusion Chemically Assisted Ablation (MOCA) for Saphenous Vein Insufficiency: A Meta-Analysis of a Randomized Trial

Johanes Nugroho ^{1,2} **Ardyan Wardhana** ³ and **Cornelia Ghea** ³

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²*Dr. Soetomo General Hospital, Surabaya, Indonesia*

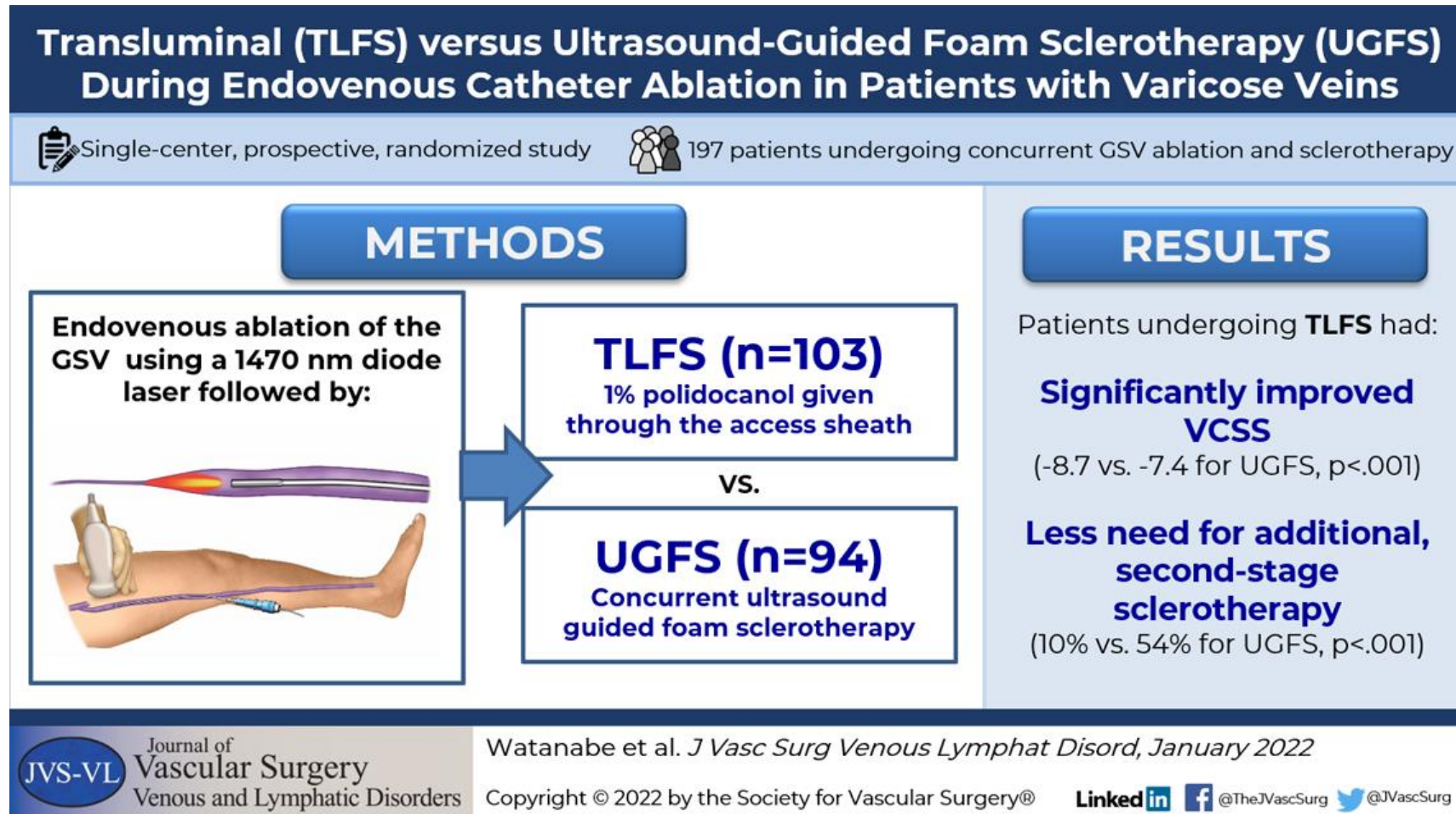
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Conclusions

TLFS combined with EVLA is a safe and feasible procedure that improves the VCSS and reduces the need for additional second-stage interventions compared with UGFS combined with EVLA.



A venit vremea altei abordari in BVC?

- Cu siguranta, Da! De ce acum?
- A trecut vremea stripping-ului de dragul chirurgiei varicoase?
- Fara o examinare Doppler prealabila, orice interventie chirurgicala pare acum o agresiune pe un teren total necunoscut!
- Cine intra in ea risca un dosar de malpraxis! Cele mai multe dosare de malpraxis in Occident sunt ptr operatii de varice!
- Ce trebuie schimbat in managementul BVC?

- ESTE OARE POSIBILA SCHIMBAREA?



LINDA HARRIS, MD

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Cand este necesara o interventie medicala in BVC?

- **Medically necessary** is typically defined as treatments that are reasonable based upon evidence-based medicine, or interventions that—if not performed—could adversely affect patients' conditions.
- In ce baza luam decizia unui anume tratament: medical, chirurgical, minim invaziv, conservativ?
- Ex clinic? Simptome?
- Scorul CEAP? Scorul VCSS? Scor QOL?
- RCT?
- In baza unui „accord,, cu pacientul?

„Clearly, the problem with treatment of superficial venous disease is the ability to differentiate patients with purely cosmetic issues from those with more advanced disease”

EBM! Pentru ca este absoluta nevoie...

Indian Journal of Surgery (2018) 80:171–182
<https://doi.org/10.1007/s12262-018-1726-3>

REVIEW ARTICLE



Evidence-Based Clinical Practice Points for the Management of Venous Ulcers

Ravul Jindal¹ • D. B. Dekiwadia² • Pinjala Rama Krishna³ • Ajay K. Khanna⁴ • Roy Varghese⁷



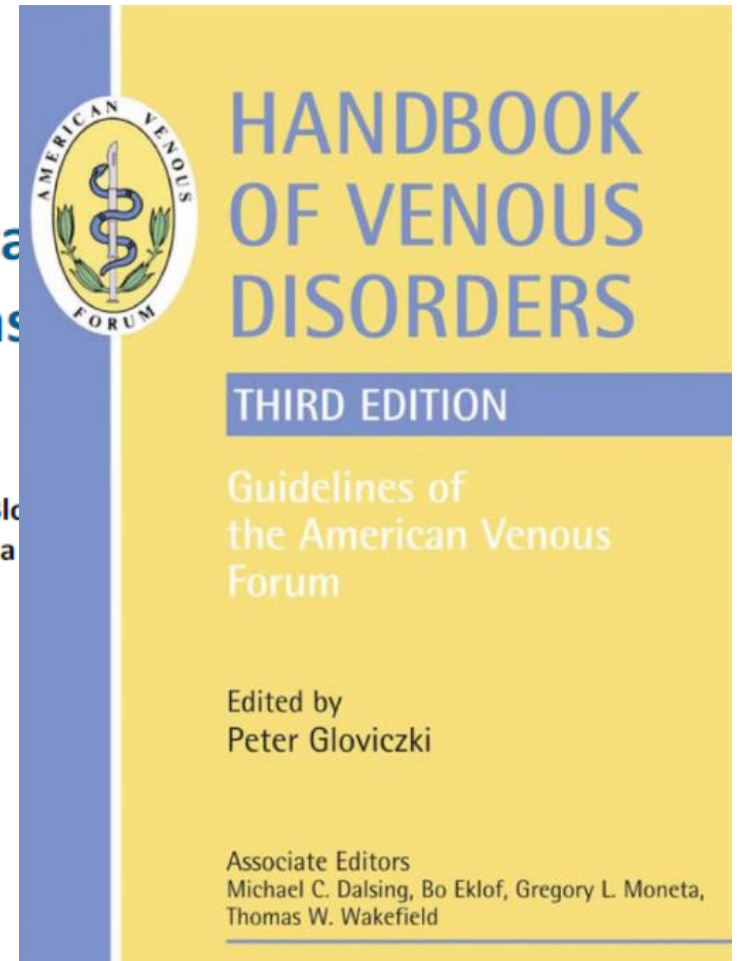
Nu de ghiduri ducem lipsa azi...

Eur J Vasc Endovasc Surg (2021) xxx, 1–84

CLINICAL PRACTICE GUIDELINE DOCUMENT

European Society for Vascular Surgery (ESVS) 2022 Clinical Guidelines on the Management of Chronic Venous Disease Limbs[☆]

Marianne G. De Maeseneer^{*,a}, Stavros K. Kakkos^a, Thomas Aherne^a, Niels Baekgaard^a, Stephen Black^a, Lena Blomqvist^a,
Manjit Gohel^a, Rick de Graaf^a, Claudine Hamel-Desnos^a, Arkadiusz Jawien^a, Aleksandra Jaworucka-Kaczorowska^a,
Giovanni Mosti^a, Thomas Noppeney^a, Marie Josee van Rijn^a, Gerry Stansby^a



Ghidurile de tratament nu sunt suficiente!

- Managementul individualizat este influențat de mai multe variabile:
- experiența medicului cu o anumită tehnică/procedură
- dotarea cu diverse echipamente
- politicile de rambursare ale Asiguratorilor/costuri
- rezultatul Doppler
- comorbidități (BMI>40Kg/mp, DZ dezechilibrat, BOAP (ABI<0.6), treatment ACO permanent)
- stadiul CEAP C1-C6

International Delphi-based consensus on management criteria for patients presenting with venous symptoms, clinical signs of CVD, and superficial venous reflux confirmed by DUS.

De la Medicina empirica la EBM... si cost-eficiente (metoda Delphi)

WHAT EXACTLY IS THE DELPHI METHOD?

The 'standard Delphi method' or usual format consists of a series of questionnaires (called 'rounds') about some important question or problem, which are usually mailed to a sample of individuals who are considered 'experts'. Each round are sent to the same individuals, and the results of each round are discussed in a group setting. This process is repeated until a consensus is reached. The Delphi method is a study, and further confirmation of diverse and minor opinions.
Barrington

Original Article

Towards an individualized management strategy for patients with chronic venous disease: Results of a Delphi consensus

SK van der Velden¹, RR van den Bos¹, O Pichot², T Nijsten¹
and MGR De Maeseneer¹

Phlebology

Phlebology

2018, Vol. 33(7) 492–499

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 SAGE



EVA vs HL/S

Table 2. Results of Delphi consensus.

EVA : endovascular ablation (thermal or nonthermal)/HL/S (high ligation/stripping)	Delphi rounds		
	1	2	3
Statements			
EVA vs. HL/S			
Nowadays, with the availability of endovenous treatments, HL/S is only rarely indicated.	84%		
In case of saphenous reflux, EVA is indicated rather than HL/S, even if there is C4–C6 disease.	83%		
In patients with venous symptoms and reflux in a saphenous trunk, EVA is indicated rather than HL/S, even in the presence of TV reflux.	83%		
In patients with venous symptoms and reflux in a saphenous trunk, EVA is indicated rather than HL/S, even in the presence of a large (>10 mm) saphenous diameter.	79%		
In patients with venous symptoms and reflux in a saphenous trunk, EVA is indicated rather than HL/S, even in the presence of one or more focal dilatations.	79%		
Presence of a venous aneurysm (>20 mm) within 2 cm from the SFJ or SPJ is an indication for HL/S rather than EVA.			
HL should not be added to patients being treated with EVA.	96%		

„UGFS is usually considered as the second best option of the minimally invasive treatments for abolishing ST reflux”

UGFS

In the presence of C4-C6 disease in patients with reflux in a saphenous trunk > 4 mm in diameter, UGFS is a treatment option.^{a,b}

In the presence of C4-C6 disease in patients with reflux in a saphenous trunk < 4 mm in diameter, UGFS is a valuable treatment option.*

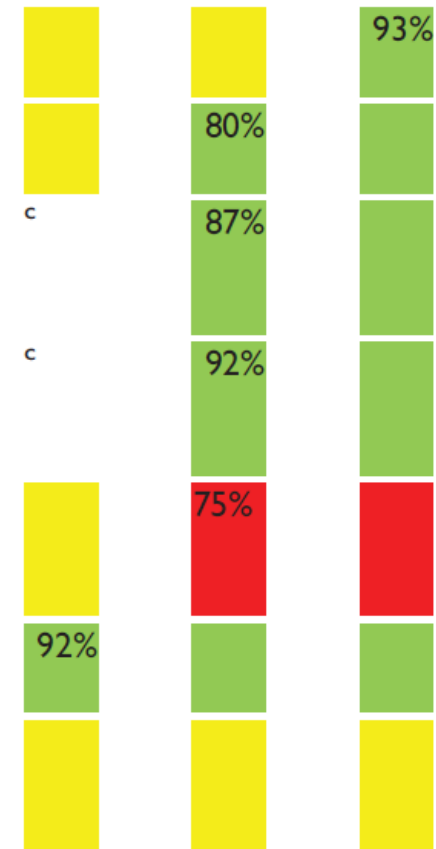
In the presence of C4-C6 disease in patients with reflux in a saphenous trunk < 4 mm in diameter and refluxing tributaries in a diseased skin area, UGFS of tributaries is preferred rather than phlebectomies.

In the presence of C4-C6 disease in patients with reflux in a saphenous trunk < 4 mm in diameter and refluxing tributaries, UGFS and phlebectomies of tributaries at a distance from the diseased skin area, are both valuable treatment options.

In patients with venous symptoms and reflux in a saphenous trunk, UGFS (without tumescent anesthesia) is a valuable treatment option, even in the presence of a large (>10 mm) saphenous diameter.^a

In patients with venous symptoms and reflux in a saphenous trunk vein > 10 mm in diameter, where ablation is indicated, EVA is preferred rather than UGFS.

If you have decided to ablate the saphenous trunk, in the presence of C2-C3 disease in patients with venous symptoms and reflux in a saphenous trunk vein < 4 mm in diameter, UGFS is preferred rather than EVA.^{a,b}



UGFS: Ultrasound Guided Foam Sclerotherapy

10.13. What are the main areas that need further research?

- *Which patients with varicose veins are at risk of developing skin damage and possibly getting a venous leg ulcer later on?*
- *Which patients with varicose veins need investigations other than just an ultrasound of their legs?*
- *Are compression stockings really needed after treatment of superficial veins?*
- *In a patient with a venous leg ulcer, what is the expected benefit of an intervention for leaking superficial veins, if the ulcer has been open for more than six months? Is it still worthwhile?*

Managementul bazat pe evaluarea hemodinamica (procedeeul CHIVA). Prima optiune?

UPDATE IN RADIOLOGY

Doppler ultrasound study and venous mapping in chronic venous insufficiency[☆]

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Received 10 July 2015; accepted 27 October 2015

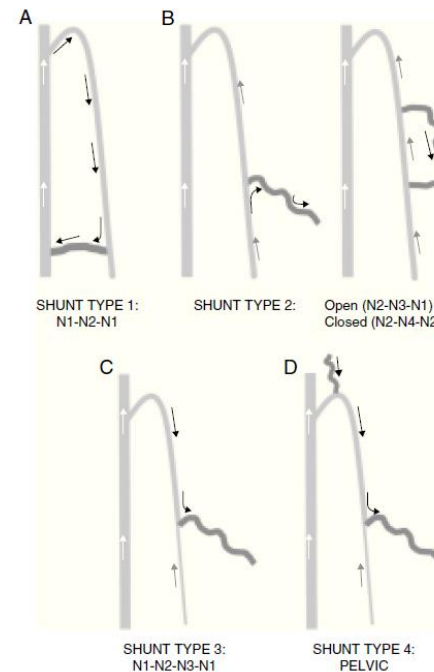


Figure 5 Types of shunts. (A) Type 1. (B) Type 2. (C) Type 3. (D) Type 4.

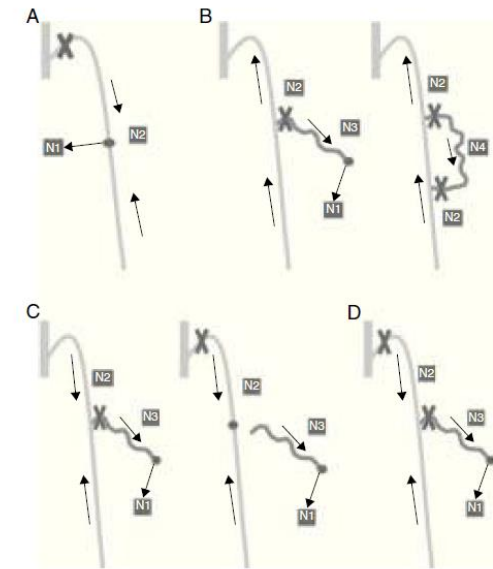



Figure 6 (A) CHIVA 1 in shunt Type 1. (B) CHIVA 1 in shunt Type 2. (C) CHIVA 2 in Type 3. (D) CHIVA 1+2.

The CHIVA strategy

In the 1980s Francesci¹⁴ described a procedure for treating CVI based on acting on the hemodynamic elements that

Review

Medicine and Phlebology: Time to Change?

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- *A more comprehensive approach to the basic pathophysiology of chronic venous and lymphatic insufficiency and the inclusion of pharmacoeconomics analyses would benefit overall patients' management*
- *An overall critical view of the scientific evidence and innovations in phlebology could be of help to improve efficacy, safety, and sustainability of current practice*
- *Translational and integrative medicine may contribute to a patient-centered approach.*

Concluzii...

Managementul BVC-VV

- este deosebit de complex
- sa urmeze ghidurile de practica medicala in domeniu dar cu individualizare in functie de multipli itemi care urmeaza a fi inclusi si in monitorizarea post-procedura
- este nevoie de Registre nationale de Boala venoasa. Rezultatele unor studii locale sau regionale nu pot fi extrapolate la nivel national
- companiile de asigurari ar trebui sa includa diversele proceduri (minim invazive) in vederea decontarii din costuri (adesea prohibitive)