

EVIDENCE BASED STATEMENT

DOMAIN 3, Statement 6

TOPIC: **Glue ablation clinical and anatomical performance**

SEARCH TERMS & SOURCES

(glue) AND (vein)

INCLUSION CRITERIA

- Lower limb only
- Reviews
- Publication < 10 years, only ENG

SEARCH RESULT BEFORE - AFTER SELECTION

40/16

PERTINENT LITERATURE NOT IDENTIFIED BY THE LITERATURE SEARCH

1. Guo J, Zhang F, Guo J, et al. A systematic review and meta-analysis comparing the efficacy of cyanoacrylate ablation over endovenous thermal ablation for treating incompetent saphenous veins. *Phlebology*. 2021 Sep;36(8):597-608.
2. O'Banion LA, Reynolds KB, Kochubey M, et al. A comparison of cyanoacrylate glue and radiofrequency ablation techniques in the treatment of superficial venous reflux in CEAP 6 patients. *J Vasc Surg Venous Lymphat Disord*. 2021 Sep;9(5):1215-1221.

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IDENTIFIED REFERENCES

- 1: Epstein D, Bootun R, Diop M, et al. Cost-effectiveness analysis of current varicose veins treatments. *J Vasc Surg Venous Lymphat Disord*. 2022 Mar;10(2):504-513.e7.
- 2: Chan SSJ, Chan YC, Walsh SR, et al. Endovenous cyanoacrylate ablation for chronic venous insufficiency and varicose veins among Asians. *Ann Acad Med Singap*. 2021 Mar;50(3):241-249.
- 3: Dimech AP, Cassar K. Efficacy of Cyanoacrylate Glue Ablation of Primary Truncal Varicose Veins Compared to Existing Endovenous Techniques: A Systematic Review of the Literature. *Surg J (N Y)*. 2020 Jun 19;6(2):e77-e86.
- 4: Hartmann K. Endovenous (minimally invasive) procedures for treatment of varicose veins : The gentle and effective alternative to high ligation and stripping operations. *Hautarzt*. 2020 Dec;71(Suppl 2):67-73.
- 5: Parsi K, Roberts S, Kang M, et al. Cyanoacrylate closure for peripheral veins: Consensus document of the Australasian College of Phlebology. *Phlebology*. 2020 Apr;35(3):153-175.
- 6: Radak D, Djukic N, Neskovic M. Cyanoacrylate Embolization: A Novelty in the Field of Varicose Veins Surgery. *Ann Vasc Surg*. 2019 Feb;55:285-291.
- 7: Epstein D, Onida S, Bootun R, et al. Cost-Effectiveness of Current and Emerging Treatments of Varicose Veins. *Value Health*. 2018 Aug;21(8):911-920.
- 8: Bissacco D, Stegher S, Calliari FM, Viani MP. Saphenous vein ablation with a new cyanoacrylate glue device: a systematic review on 1000 cases. *Minim Invasive Ther Allied Technol*. 2019 Feb;28(1):6-14.
- 9: Geersen DF, Shortell CEK. Phlebectomy Techniques for Varicose Veins. *Surg Clin North Am*. 2018 Apr;98(2):401-414.
- 10: Lam YL, De Maeseneer M, Lawson J, et al. Expert review on the VenaSeal[®] system for endovenous cyano-acrylate adhesive ablation of incompetent saphenous trunks in patients with varicose veins. *Expert Rev Med Devices*. 2017 Oct;14(10):755-762.
- 11: Meissner MH. What is effective care for varicose veins? *Phlebology*. 2016 Mar;31(1 Suppl):80-7.
- 12: Whiteley MS. Glue, steam and Clarivein--Best practice techniques and evidence. *Phlebology*. 2015 Nov;30(2 Suppl):24-8.
- 13: Bootun R, Lane TR, Davies AH. The advent of non-thermal, non-tumescent techniques for treatment of varicose veins. *Phlebology*. 2016 Feb;31(1):5-14.
- 14: Sadek M, Kabnick LS. Are Non-Tumescent Ablation Procedures Ready to Take Over? *Phlebology*. 2014 May;29(1 suppl):55-60.
- 15: Toonder IM, Lam YL, Lawson J, Wittens CH. Cyanoacrylate adhesive perforator embolization (CAPE) of incompetent perforating veins of the leg, a feasibility study. *Phlebology*. 2014 May;29(1 suppl):49-54.
- 16: Guex JJ. Endovenous chemical (and physical) treatments for varices: what's new? *Phlebology*. 2014 May;29(1 suppl):45-48.

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TEXT FOR INCLUSION IN THE DOCUMENT

DOMAIN 3, Statement 6, TOPIC: “Glue ablation clinical and anatomical performance”

A 2021 meta-analysis reported no statistical difference in closure rates between cyanoacrylate ablation and endovenous thermal ablation by laser or radiofrequency. Symptoms were controlled similarly by the different techniques. Cyanoacrylate group showed less ecchymosis than RFA and a significantly lower incidence ecchymosis, phlebitis and paresthesia compared to endovenous laser.

[Guo J, Zhang F, Guo J, et al. A systematic review and meta-analysis comparing the efficacy of cyanoacrylate ablation over endovenous thermal ablation for treating incompetent saphenous veins. Phlebology. 2021 Sep;36(8):597-608].

It must be specified data at 5 years follow up are related only to a specific glue (Venaseal™), following the randomized trial in comparison with radiofrequency ablation.

[Morrison N, Gibson K, Vasquez M, et al. Five-year extension study of patients from a randomized clinical trial (VeClose) comparing cyanoacrylate closure versus radiofrequency ablation for the treatment of incompetent great saphenous veins. J Vasc Surg Venous Lymphat Disord. 2020 Nov;8(6):978-989]

In a 2020 network meta-analysis, at 6 months follow up, Venaseal™ demonstrated to be competitive against traditional surgery, laser, radiofrequency and MOCA in terms of anatomical recurrence, post-operative pain and adverse events.

***[Kolluri R, Chung J, Kim S, et al. Network meta-analysis to compare VenaSeal with other superficial venous therapies for chronic venous insufficiency. J Vasc Surg Venous Lymphat Disord. 2020 May;8(3):472-481.e3].**

Cost-effectiveness resulted not competitive compared to laser and radiofrequency ablation according to the United Kingdom health system analysis.

[Epstein D, Bootun R, Diop M, et al. Cost-effectiveness analysis of current varicose veins treatments. J Vasc Surg Venous Lymphat Disord. 2022 Mar;10(2):504-513.e7].

Venaseal™ demonstrated safety and efficacy also in ulcer patients reflux treatment, with potential benefit compared to saphenous reflux suppression by radiofrequency.

[Aydin E, Kocaaslan C, Bademci MS, et al. The role of glue ablation in patients with venous ulcer. Vascular. 2019 Aug;27(4):456].

It must be clearly stated to the patient that the procedure leads to the deposition of a foreign body and that more than 2% of cases might developed related complications.

[Sermsathanasawadi N, Pruekprasert K, Chinsakchai K, et al. Cyanoacrylate Granuloma After Cyanoacrylate Closure of Incompetent Saphenous Veins. Dermatol Surg. 2021 Oct 1;47(10):1372-1375].

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STATEMENT FOR PUBLIC EVIDENCE-BASED AWARENESS

DOMAIN 3, Statement 6

Ablation of the great saphenous vein by glue has a clinical result not inferior to radiofrequency (Venaseal®) at 5 years and not inferior to Laser at 2 years (Venablock®). The patient must be informed the glue will remain as foreign body. Different glues have different scientific validation and this must be clearly stated.

4 SELECTED REFERENCES

1. Guo J, Zhang F, Guo J, et al. A systematic review and meta-analysis comparing the efficacy of cyanoacrylate ablation over endovenous thermal ablation for treating incompetent saphenous veins. *Phlebology*. 2021 Sep;36(8):597-608.
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3. *Kolluri R, Chung J, Kim S, et al. Network meta-analysis to compare VenaSeal with other superficial venous therapies for chronic venous insufficiency. *J Vasc Surg Venous Lymphat Disord*. 2020 May;8(3):472-481.e3
4. Epstein D, Bootun R, Diop M, et al. Cost-effectiveness analysis of current varicose veins treatments. *J Vasc Surg Venous Lymphat Disord*. 2022 Mar;10(2):504-513.e7
5. Aydin E, Kocaaslan C, Bademci MS, et al. The role of glue ablation in patients with venous ulcer. *Vascular*. 2019 Aug;27(4):456
6. Sermsathanasawadi N, Pruekprasert K, Chinsakchai K, et al. Cyanoacrylate Granuloma After Cyanoacrylate Closure of Incompetent Saphenous Veins. *Dermatol Surg*. 2021 Oct 1;47(10):1372-1375

IDENTIFIED LITERATURE BIAS

Heterogenous study populations among different types of glue.

SUGGESTED NEXT LINES OF RESEARCH

Head to head comparison of different glue types in clinical, hemodynamic and PRO outcomes