

EVIDENCE BASED STATEMENT

DOMAIN **07**, Statement **8**

TOPIC: “**Advanced wound dressings evidence-based need in wound care**”

SEARCH TERMS & SOURCES

(dressing) AND (venous ulcer)

INCLUSION CRITERIA

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

SEARCH RESULT BEFORE - AFTER SELECTION

187/20

PERTINENT LITERATURE NOT IDENTIFIED BY THE LITERATURE SEARCH

1. Verdú-Soriano J, de Cristino-Espinar M, Luna-Morales S, et al. Superiority of a Novel Multifunctional Amorphous Hydrogel Containing *Olea europaea* Leaf Extract (EHO-85) for the Treatment of Skin Ulcers: A Randomized, Active-Controlled Clinical Trial. J Clin Med. 2022 Feb 25;11(5):1260.
2. Holmes SP, Rivera S, Hooper PB, et al. Hydrocolloid dressing versus conventional wound care after dermatologic surgery. JAAD Int. 2021 Dec 21;6:37-42.
3. Norman G, Westby MJ, Rithalia AD, et al. Dressings and topical agents for treating venous leg ulcers. Cochrane Database Syst Rev. 2018 Jun 15;6(6):CD012583.

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IDENTIFIED REFERENCES

1. Emmert S, Pantermehl S, Foth A, et al. Combining Biocompatible and Biodegradable Scaffolds and Cold Atmospheric Plasma for Chronic Wound Regeneration. *Int J Mol Sci.* 2021 Aug 25;22(17):9199.
2. Massand S, Lewcun JA, LaRosa CA. Clinical and cost efficacy of advanced wound care matrices in the treatment of venous leg ulcers: a systematic review. *J Wound Care.* 2021 Jul 2;30(7):553-561.
3. Shaydakov ME, Ting W, Sadek M, et al. Review of the current evidence for topical treatment for venous leg ulcers. *J Vasc Surg Venous Lymphat Disord.* 2022 Jan;10(1):241-247.e15.
4. Nair H, Venkateshwaran N, Seetharaman S et al. Benefits of sucrose octasulfate (TLC-NOSF) dressings in the treatment of chronic wounds: a systematic review. *J Wound Care.* 2021 Apr 1;30(Sup4):S42-S52.
5. McLain NE, Moore ZE, Avsar P. Wound cleansing for treating venous leg ulcers. *Cochrane Database Syst Rev.* 2021 Mar 10;3(3):CD011675
6. Goldschmidt E, Schafer K, Lurie F. A systematic review on the treatment of nonhealing venous ulcers following successful elimination of superficial venous reflux. *J Vasc Surg Venous Lymphat Disord.* 2021 Jul;9(4):1071-1076.e1.
7. Raffetto JD, Ligi D, Maniscalco R, et al. Why Venous Leg Ulcers Have Difficulty Healing: Overview on Pathophysiology, Clinical Consequences, and Treatment. *J Clin Med.* 2020 Dec 24;10(1):29.
8. Ren SY, Liu YS, Zhu GJ, et al. Strategies and challenges in the treatment of chronic venous leg ulcers. *World J Clin Cases.* 2020 Nov 6;8(21):5070-5085.
9. Zhao M, Zhang D, Tan L, Huang H. Silver dressings for the healing of venous leg ulcer: A meta-analysis and systematic review. *Medicine (Baltimore).* 2020 Sep 11;99(37):e22164.
10. Oliveira BGRB, Carvalho MR, Ribeiro APL. Cost and effectiveness of Platelet Rich Plasma in the healing of varicose ulcer: Meta-analysis. *Rev Bras Enferm.* 2020 Jun 24;73(4):e20180981.
11. Joshi CJ, Hassan A, Carabano M, Galiano RD. Up-to-date role of the dehydrated human amnion/chorion membrane (AMNIOFIX) for wound healing. *Expert Opin Biol Ther.* 2020 Oct;20(10):1125-1131.
12. Hoversten KP, Kiemele LJ, Stolp AM, et al. Prevention, Diagnosis, and Management of Chronic Wounds in Older Adults. *Mayo Clin Proc.* 2020 Sep;95(9):2021-2034.
13. Dini V, Janowska A, Oranges T, et al. Surrounding skin management in venous leg ulcers: A systematic review. *J Tissue Viability.* 2020 Aug;29(3):169-175.
14. Dissemmond J, Augustin M, Dietlein M, et al. Efficacy of MMP-inhibiting wound dressings in the treatment of chronic wounds: a systematic review. *J Wound Care.* 2020 Feb 2;29(2):102-118.
15. Lurie F. Advanced Stages of Chronic Venous Disease: Evolution of Surgical Techniques and Advantages of Associated Medical Treatment. *Adv Ther.* 2020 Feb;37(Suppl 1):6-12
16. Nicolaidis AN. The Most Severe Stage of Chronic Venous Disease: An Update on the Management of Patients with Venous Leg Ulcers. *Adv Ther.* 2020 Feb;37(Suppl 1):19-24.
17. Xia Y, Zhao J, Xie J, et al. The Efficacy of Platelet-Rich Plasma Dressing for Chronic Nonhealing Ulcers: A Meta-Analysis of 15 Randomized Controlled Trials. *Plast Reconstr Surg.* 2019 Dec;144(6):1463-1474.
18. Hirotsu K, Kannan S, Brian Jiang SI. Treatment of Hypertrophic Granulation Tissue: A Literature Review. *Dermatol Surg.* 2019 Dec;45(12):1507-1516.
19. Serena TE, Chadwick P, Davies P, et al. Multifunctional and patient-focused Mepilex Border Flex: an exploration of its holistic clinical benefits. *J Wound Care.* 2019 Jun 1;28(Sup6b):S1-S31.
20. Schneider HP, Landsman A. Preclinical and Clinical Studies of Hyaluronic Acid in Wound Care: A Case Series and Literature Review. *Wounds.* 2019 Feb;31(2):41-48. PMID: 30694210.

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TEXT FOR INCLUSION IN THE DOCUMENT

DOMAIN 07, Statement 8 , TOPIC: “**Advanced wound dressings evidence-based need in wound care**”

A 2018 cochrane network meta-analysis reviewed 78 randomized comparative trials on the use of advanced dressings for venous ulcer healing. The conclusion states that more research is needed to determine whether particular dressings or topical agents improve the probability of healing of venous leg ulcers.

It also focuses on the main outcome parameter of the review being the complete ulcer healing, while other variable should be taken into considerations, such as patient preference, quality of life and cost-effectiveness.

***[Norman G, Westby MJ, Rithalia AD, et al. Dressings and topical agents for treating venous leg ulcers. Cochrane Database Syst Rev. 2018 Jun 15;6(6):CD012583].**

A recent review reported a great variation in clinical and cost efficacy of advanced wound care matrices. Four randomized comparative trials showed significant improvement over standard therapy by using bilayered skin substitute, dehydrated human amnion/chorion membrane, extracellular wound matrix and advanced matrix. The inconsistency in the related studies methodology was pointed out, urging more appropriate data collection on the topic.

[Massand S, Lewcun JA, LaRosa CA. Clinical and cost efficacy of advanced wound care matrices in the treatment of venous leg ulcers: a systematic review. J Wound Care. 2021 Jul 2;30(7):553-561].

From 2014 to 2021, 43 randomized comparative trials investigated the use of topical products for venous ulcer healing. A review grouping their results demonstrated how, despite the many products commercialized, there is no strong evidence to support their use, urging properly conducted studies on the topic.

[Shaydakov ME, Ting W, Sadek M, et al. Review of the current evidence for topical treatment for venous leg ulcers. J Vasc Surg Venous Lymphat Disord. 2022 Jan;10(1):241-247.e15].

The same wound cleansing specifics remain uncertain, with insufficient evidence to support the use of polyhexamethylene biguanide compared with saline solution, aqueous oxygen peroxide compared with sterile water; propyl betaine and polihexanide compared with a saline solution or octenidine dihydrochloride/phenoxyethanol compared with Ringer's solution makes any difference

[McLain NE, Moore ZE, Avsar P. Wound cleansing for treating venous leg ulcers. Cochrane Database Syst Rev. 2021 Mar 10;3(3):CD011675]

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STATEMENT FOR PUBLIC EVIDENCE-BASED AWARENESS

DOMAIN 7, Statement 8

Advanced wound dressings might improve ulcer healing process, but no strong evidence is supporting one product over another.

SELECTED REFERENCES

1. ***Norman G, Westby MJ, Rithalia AD, et al. Dressings and topical agents for treating venous leg ulcers. Cochrane Database Syst Rev. 2018 Jun 15;6(6):CD012583**
2. **Massand S, Lewcun JA, LaRosa CA. Clinical and cost efficacy of advanced wound care matrices in the treatment of venous leg ulcers: a systematic review. J Wound Care. 2021 Jul 2;30(7):553-561**
3. **Shaydakov ME, Ting W, Sadek M, et al. Review of the current evidence for topical treatment for venous leg ulcers. J Vasc Surg Venous Lymphat Disord. 2022 Jan;10(1):241-247.e15**
4. **McLain NE, Moore ZE, Avsar P. Wound cleansing for treating venous leg ulcers. Cochrane Database Syst Rev. 2021 Mar 10;3(3):CD011675**

identified LITERATURE BIAS

Lack of properly conducted rct on homogeneous study populations

SUGGESTED NEXT LINES OF RESEARCH

Multi-center head to head comparisons, including complicated ulcers