



Venous Leg Ulcer Management: Updating the Care Algorithm

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CORE VLU CARE ALGORITHM

Introduction

- The development of venous leg ulcers (VLUs) is the result of chronic venous insufficiency (CVI).
- Management of VLUs can be challenging.
- The use of multiple treatments is often required to achieve complete wound closure.
- This care algorithm represents a systematic approach to the management of VLUs based on current literature and the author's clinical experience.
- This small quality assurance project was used as a review to demonstrate the synergies of the Hartmann product line to support desired clinical outcomes.

Methods

The CORE algorithm was developed to provide multimodal evidence-based recommendations on best practices in VLU management in the author's clinical practice.

- C:** compression
- O:** optimize the local wound environment
- R:** review contributing factors
- E:** establish a maintenance plan

VLU closure will not typically occur with the use of a singular product. Systemic and local factors must be addressed to support wound healing. Thus, synergistic wound dressing selection is of utmost importance.

The Hartmann line of advanced wound care dressings was clinically evaluated for use in the CORE algorithm from February 2021-December 2022.

Compression

- Untreated CVI leads to venous hypertension, ultimately destroying the normal vein wall architecture and causing an inflammatory response
- This inflammation and high venous pressures produce a cycle of chronic ischemia-reperfusion contributing to skin breakdown and VLU formation
- Controlling venous hypertension via compression therapy is key
- Compression therapy harnesses the basic principles of physics to reduce lower extremity edema
- Multilayer compression bandages contain both inelastic and elastic wraps
- This combination allows for use across all patients with VLUs

TwoPress® 2 Lite | Case Example

The auto adhesive components of the Hartmann TwoPress® 2 Lite compression system sustained therapeutic pressure, resisted wrinkling and stayed in place for up to 7 days with high patient satisfaction based on patient reported outcomes measures



- 62 yo male with a 2-month history of non-healing VLU LLE
- +2 pitting edema present on intake
- Moderate drainage present
- No signs of infection
- ABI 0.98

Review Contributing Factors

- The chronic wound environment is complex
- Controlling the contributing factors to wound chronicity is key to successful treatment of VLUs
- When tissue hypoxia is present, inflammation worsens, and harmful matrix metalloproteinases cause dermal tissue fibrosis
- Disorganization of the extracellular matrix and dysfunctional collagen synthesis delays tissue regeneration
- Additionally, increased levels of bacteria can colonize wounded tissues leading to infection
- Controlling these pathologic processes is imperative to support the wound healing process
- Choosing a wound dressing that contains active ingredients known to combat these pathologic processes is an essential part of the VLU care algorithm

Optimize

- VLUs are notoriously heavily draining and slough-covered wounds
- During the inflammatory response blood vessel walls dilate and become more porous allowing leakage of protein-rich fluid into the wounded area
- When compounded with venous insufficiency, the amount of exudate can increase exponentially
- Patients often feel isolated due to the excessive amount of exudate and odor produced by their wounds
- Managing wound exudate, preventing maceration, and protecting peri-wound tissue is a constant challenge

Zetuvit® Plus | Case Example

The 4-layer Zetuvit® superabsorbent dressing successfully trapped fluid to manage high-levels of exudate up to 7-days without wound adherence and without peri-wound maceration based on weekly wound assessments



- 54 yo female with a 6-week history of non-healing VLU RLE
- Moderate/severe serosanguinous drainage
- Tolerated daily dressing changes of Zetuvit® Plus well
- No skin irritation or maceration noted

ColActive® PLUS | Case Example

ColActive® PLUS fish-derived collagen is available in sheet and powder forms. These dressings contain a patented combination of collagen, EDTA, alginate and carboxymethylcellulose which aids in lowering harmful MMPs. This unique formulation contains EDTA, which has shown to be a potent inhibitor of biofilm formation and disruptor of mature biofilms



- 90 yo male with 3-month history of non-healing VLU LLE
- Treated with ColActive PLUS® to lower elevated MMPs and support wound healing
- Complete wound resolution achieved in 4 weeks

Conclusion

- The CORE algorithm provides an evidence-based approach to the treatment of VLUs.
- This algorithm is multimodal, and the utilization of effective wound dressings is especially important.
- It is the author's clinical experience that the Hartmann line of dressing products supports the CORE algorithm and produces positive patient outcomes.

Investigational Product



TwoPress® 2 Lite Compression System



Zetuvit® Plus



ColActive® PLUS



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