

Use of Kylon Fabric for Wound Hygiene and Debridement

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Introduction: Traditional wound hygiene often has limitations in terms of efficacy and patient comfort. A novel wound care material, kylon* fabric, offers a promising approach to enhance wound hygiene and debridement. This abstract explores the potential benefits of kylon fabric in wound care, highlighting its unique properties and clinical applications.

Methods: Kylon is a medical fabric coated with an array of stiff nylon hooks serving as curettes and brushes to clean and mechanically debridement different tissue types within complex wounds. Its unique structure allows for both wound hygiene and debridement depending on method of use. The fabric's micro-curette properties minimize trauma during debridement, reducing pain and discomfort for patients while still allowing for debridement at the epidermis, dermis, and subcutaneous levels. Additionally, kylon fabric can be used for wound hygiene, gently removing necrotic tissue and exudate from the wound bed.

Results: Clinical studies have demonstrated the effectiveness of kylon fabric in various uses including collecting samples for microbial analysis, debridement, and wound hygiene. Furthermore, a study surveying patients and providers reported increased comfort and satisfaction with kylon fabric devices due to their atraumatic nature and ease of use. Field use considerations for use beyond wound hygiene (ie debridement) include educational preparation, state nurse practice act, facility policy, and training. In settings without practice barriers nurse practitioners can perform surgical debridement in the wound clinic setting including the use of kylon fabric with pressure applied leading to micro-curette deployment and resulting sharp debridement.

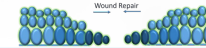
Indications Identified



Image, left: curette style kylon device used for tunnels and tissue sampling. Note stiff nylon hooks that enable frictional debridement, with pressure becoming sickle shaped and performing sharps level

Wound hygiene

- Frictional debridement (appropriately trained RN can perform)
- Check state nurse practice act, facility policies
- Thorough cleansing of wound bed to remove inflammatory exudates and bioburden
- Debridement, wound hygiene, and refashioning of the wound edges



Sharp Debridement

- Removal of softened slough
- Use conducive to any environment (eg. does not require sharps container for disposal)
- Ability to micro-perforate some eschar to allow for ointment penetration
- Removal of senescent cells, biofilm, and bioburden
- Re-initiates the healing cascade

Biopsy

- Biopsy sample of wound tissue for DNA/RNA analysis
- Well tolerated compared to punch and shave biopsies



Images, right: Full thickness right lower extremity wound evolution over two months of treatment at the wound center with regular wound hygiene and debridement. Note decreased peri-wound edema, slough, dimensions and increased bright red granulation tissue



Image, left: Ulcer of right lower extremity exhibiting softened slough and eschar indicating an appropriate wound bed for kylon use



Limitations

Sharp Debridement

- Sharps required for: bone; tough or dry eschar; most callus; very adherent, stringy slough



Biopsy

- Collection via kylon device for microbial analysis only, not for use with histologic wound specimens



Discussion: In conclusion, kylon fabric offers a valuable tool for wound care professionals. The ease of use and disposal requirements makes it uniquely suited for use by multitudinous healthcare specialties in diverse care environments. Its unique properties, including multi-indication use, tolerability, and debridement capabilities, make it a promising alternative to traditional debridement methods.

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