Effective debridement in a community setting using a new dual-sided monofilament debridement pad

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Introduction

The primary objective of debridement is to remove non-viable tissue, foreign material and debris from the wound bed, using the most efficient technique that produces the least adverse effects1,2. A variety of debridement methods exist, such as sharp, larval, enzymatic, ultrasound, and surgical techniques. However, these are not always clinically appropriate or feasible in all healthcare settings1. This poster details how an NHS Trust evaluated the effectiveness and efficiency of a new dual sided Monofilament Debridement Pad (MDP) focusing on the journey of 3 patients.

Method

This case series evaluated the new dual sided MDP in both home care and specialised leg ulcer clinics. The newly introduced textured beige side is designed to effectively loosen and remove stubborn, fibrous, and devitalised tissue, such as slough, skin flakes, and keratotic build up. This case series assessed the impact of the new textured surface in removing adherent fibrous slough and hyperkeratosis on various lower limb wounds. Wound assessments and images were taken before and after MDP use. A 0-10 visual analogue pain scale measured patient discomfort during and after debridement, evaluating both efficacy and patient comfort.

Patient 1

An 85-year-old female presented with a persistent haematoma on her right calf which had been present for several months. Upon initial assessment, the wound bed was found to be entirely necrotic, measuring approximately 7.5 x 7.5 cm. Furthermore, The surrounding skin was dry, and exudate levels were low, with no signs of infection such as increased heat, redness, swelling, or pain. Following MDP treatment, a remarkable improvement was observed across the wound. At the conclusion of the evaluation period, the wound was assessed to have 100% newly formed epithelium tissue. This transformation from a fully necrotic wound bed represents a significant positive outcome in the healing process.

Patient 2

A 78-year-old female presented with a chronic venous leg ulcer. Upon initial assessment, the wound bed exhibited a complex composition: with approximately 40% firmly adhered fibrous slough, 20% loose slough and the remaining 40% was healthy granulation tissue. The ulcer measured 11 cm x 5 cm and was producing a moderate amount of exudate. The surrounding skin was dry and hyperkeratotic, suggesting an impaired skin barrier function in the area adjacent to the wound. While there were no overt clinical signs of infection, the presence of biofilm was suspected, impeding the healing process. After 4 weeks of treatment, the wound showed marked improvement. The wound bed tissue changed dramatically, with 10% granulation tissue and 90% epithelial tissue. The ulcer size also reduced to 8 cm x 4 cm, demonstrating a positive response to the MDP regime.

Patient 3

An 85-year-old male presented with a persistent leg wound from a cat bite, present for 5 months. Initially, the wound measured 9.5 x 3cm, with 10% necrotic tissue, 80% firmly adhered fibrous slough, and 10% epithelial tissue. The surrounding skin was dry with moderate exudate. No overt signs of infection were present; however, biofilm was suspected. After one debridement session using the new MDP, the wound improved significantly. The wound tissue changed to 40% firmly adhered fibrous slough, 10% loose slough, and 50% granulation tissue. The wound subsequently reduced to 8 x 2.5cm in the following 7 days. This case highlights the complexity of managing chronic wounds and the importance of effective wound bed preparation.

Patient 1:
Prior to first use of Debrisoft® Duo

Patient 1:
Following use of Debrisoft® Duo

Patient 2:
Pre debridement

Patient 2:
Post debridement

Patient 3:
Pre debridement

Patient 3:
Post debridement

Results

With regular debridement with Debrisoft Duo at every dressing change, this case series demonstrated promising results in both wound healing and reduction in bioburden. The treatment's textured side proved effective at loosening fibrous slough and hyperkeratosis, while the softer side successfully addressed loose slough. Furthermore, the lifting of fibrous slough potentially disrupted and removed the presence of biofilm. These static wounds improved, with reductions in both size and slough coverage. Hyperkeratosis decreased, and patients reported minimal pain during this tolerable debridement process. Furthermore, this suggests effective debridement can be carried out routinely as part of the patient's wound care plan by less experienced clinicians, thus reducing the delay in healing while waiting for specialist treatment such as sharp debridement.

"Very easily assisted with removing a dry plaque/eschar" Clinician

"I like the double sided pad, textured side especially as it helps with build-up of hard dry skin" Clinician

"Happy now that my wound is healing" Patient

Conclusion

The new dual sided MDP demonstrated efficiency and ease of use, delivering consistent and notable improvements across all patients in the study. With a recommended application time of 3-5 minutes, the MDP proved to be an effective and efficient method of wound bed preparation and progression of wound healing. Furthermore, pain assessments and patient feedback indicated acceptance of the MDP among all participants.

References:

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