

The use of a new dual sided monofilament debridement pad in managing a complex category 4 heel pressure ulcer

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Introduction

Mayer et al (2024) define debridement as ‘the process of removing both viable (living) and non-viable components from a wound, such as necrotic tissue, slough, microorganisms, biofilm, extracellular polymeric substance (EPS), and foreign materials’¹. When performed correctly, effectively, and safely, debridement offers numerous advantages that support wound healing. This poster presents the results of a case study evaluating the effectiveness and efficiency of a new dual-sided Monofilament Debridement Pad (MDP) in managing a recurrent category 4 heel pressure ulcer.



Method

This case study evaluates a new dual-sided MDP for managing a complex heel wound in a 78-year-old man. Debrisoft® Duo is an innovative MDP designed to deliver versatile and efficient debridement. The newly introduced textured beige side effectively loosens and removes stubborn, fibrous devitalised tissue, including slough, skin flakes, and keratotic buildup. Complementing this, the original soft white side gently yet efficiently clears away debris, slough, exudate, and biofilm from the wound bed. This softer side is particularly gentle on delicate, newly formed granulation tissue, ensuring a balanced approach to wound cleansing and preparation. This patient has a history of multiple embolic cerebrovascular accidents (CVAs), resulting in limited mobility and confinement to a bed or wheelchair. The wound, characterised by persistent thick sloughy fibrous tissue, has not responded to previous attempts at debridement. Moreover, the patient experienced significant pain and sensitivity during previous conservative sharp debridement (CSD). Wound debridement was performed weekly for 5 weeks, assessing MDP efficacy, patient tolerance, impact on wound healing and overall user experience.



The Clinical Journey

This case study highlights a patient with a complex wound history, initially presenting with a wound to his left heel indicative of a category 4 pressure ulcer. After successful treatment and near-complete healing, he was discharged from tissue viability and monitored by nurses within the centre. However, a sudden deterioration occurred, revealing a suspected deep tissue injury that rapidly progressed. Following screening, osteomyelitis was confirmed, necessitating antibiotic treatment and renewed wound care management. The healing process was complicated by persistent, fibrous slough and due to comorbidities and previous experience, sharp debridement was avoided. Despite using alternative debridement pads and cloths, devitalised tissue persisted, prompting the search for a more effective, gentle solution. In this case study, a patient familiar with the original Debrisoft® was introduced to the new Debrisoft® Duo. As such, treatment was initiated with the familiar soft white side before transitioning to the textured side, ensuring clear communication and patient comfort throughout the procedure. Notably, the patient demonstrated improved tolerance compared to previous debridement methods, showing no signs of pain or discomfort during the procedure. The combination of the textured and soft side effectively loosened and lifted fibrous slough and cleaned the heel area without causing distress. Throughout the process, constant communication was maintained with the patient, who remained content. Following initial debridement, the wound measured 1.99cm x 3.5cm x 0.5cm.



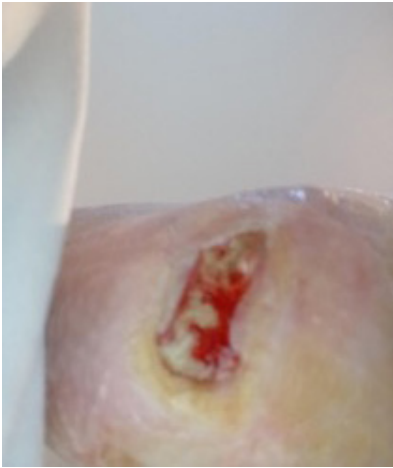
Prior to first use of Debrisoft® Duo



Following first use of Debrisoft® Duo



Following second use of Debrisoft® Duo



Week 3: Debrisoft® Duo



Week 5: Debrisoft® Duo



Results

The recently introduced dual sided MDP demonstrated remarkable efficacy in loosening and removing persistent fibrous slough and enhancing wound healing. Contrary to initial apprehensions about patient discomfort, the treatment was found to be very well-tolerated. The MDP’s innovative textured surface allowed for robust cleansing without causing trauma or bleeding, effectively balancing thoroughness and gentleness. Its unexpectedly gentle application, combined with its powerful cleaning action, positions the new dual sided MDP as a valuable asset in wound bed preparation, especially for individuals unsuitable for CSD. Through the use of this versatile and efficient debridement technique and the application of advanced wound care dressings, we have made significant progress in nearly healing this wound. After five weeks of consistent weekly debridement, the persistent wound showed significant progress and was steadily advancing towards full healing with the wound measuring approx 0.7cm x 1.3 cm.



Conclusion

The new dual sided MDP proved to be both efficient and user friendly, consistently delivering impressive wound cleansing results. Despite being unable to verbalise, the patient communicated his comfort through reassuring cues such as a thumbs up gesture and a warm smile. This level of comfort was further evidenced by the patient relaxing to the point of falling asleep during the procedure, indicating a relatively pain-free experience. The MDP’s unique design has positioned it as a significant advancement in non-invasive debridement techniques. Its ability to effectively cleanse and debride wounds without causing discomfort to the patient represents a substantial improvement over traditional methods. The next challenge is exploring the efficacy of Debrisoft® Duo for managing epibole, a challenging wound complication where the wound edges roll over and stop migrating across the wound bed, causing delayed healing. If proven effective, this could mark a revolutionary approach in treating this difficult aspect of wound care and potentially improving outcomes for many patients with complex wounds.

References:

1. Mayer, D.O., Tettelbach, W.H., Ciprandi, G., Downie, F., Hampton, J., Hodgson, H., Lazaro-Martinez, J.L., Probst, A., Schultz, G., Stürmer, E.K., et al. (2024) Best practice for wound debridement. J Wound Care, 33(Sup6b): p.S5. doi: 10.12968/jowc.2024.33.Sup6b.S1. PMID: 38829182.