

# The Synergistic Effect of Meticulous Debridement Using a Novel Debridement Pad and Sharp Debridement on Diabetic Foot Ulcer Healing: An 8-Patient Case Series

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## Introduction

Debridement, the removal of non-viable tissue, is a universally recognised cornerstone in the clinical management of diabetic foot ulcers (DFUs). It is crucial for stimulating healing, reducing bioburden, and allowing for accurate wound assessment. While sharp debridement is considered the gold standard, its effectiveness can be enhanced by a multi-modal approach. This abstract presents a case series demonstrating the synergistic benefits of combining meticulous sharp debridement with a novel debridement pad to manage complex DFUs.

## Method



Eight patients with chronic, non-healing DFUs were included in this case series. All patients had undergone previous standard care without significant improvement. Following initial comprehensive assessment, each patient's DFU was debrided using a combination of sharp debridement and a novel debridement pad (Debrisoft® Duo). The debridement pad was used to effectively remove loose slough and hyperkeratotic tissue, complementing the precision of sharp debridement for removing harder, non-viable tissue. The appearance of the wounds was documented immediately post-debridement, and patients were followed up weekly for subsequent debridement and management. Long-term outcomes, including wound closure and progression, were documented over a period of 12 weeks.

## Results



Immediate post-debridement, all 8 DFUs showed a significant and immediate improvement in wound bed appearance, with a notable reduction in slough and an increase in healthy granulation tissue. This initial improvement was maintained in subsequent weeks. Over the 12-week follow-up period, all patients demonstrated consistent wound progression. Seven of the eight patients achieved complete wound closure, and the remaining patient showed significant reduction in wound size, with a wound bed that was 95% granulated and clean. There were no adverse events reported, and patient tolerance of the procedure was excellent.

## Discussion



The results suggest that combining a debridement pad with sharp debridement offers a highly effective and well-tolerated approach to managing complex DFUs. The debridement pad played a critical role in loosening non-viable tissue, which facilitated more meticulous and less invasive sharp debridement. This multi-modal approach appears to accelerate wound bed preparation, which is essential for progressing the wound to the proliferative and epithelialisation phases of healing. The consistent long-term improvement observed in all patients highlights the importance of regular and thorough debridement as part of a holistic management plan for DFUs.

## Conclusion



This case series provides compelling evidence that the meticulous combination of Debrisoft® Duo and sharp debridement is a safe and effective strategy for promoting the healing of chronic DFUs. The immediate and sustained improvement in wound appearance, followed by positive long-term healing outcomes, supports the adoption of this combined approach. Further research, such as a randomised controlled trial, is warranted to validate these findings on a larger scale.



Image 1



Image 2



Image 3



Image 4



Image 5



Image 6