

Tackling Biofilm in Hard-to-Heal Leg Wounds

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Introduction

Biofilm presence has been recognized as a major barrier in non-healing wounds¹. Eleven patients in a leg clinic were identified as having static or deteriorating lower leg ulcerations that were long standing, having been present between 3 months and 4 years. They had shown limited progression with previous dressing regimes, even though the suggested compression was being used. The decision was therefore made to implement the Wound Hygiene protocol of care as an antibiofilm strategy. Wound Hygiene is a 4-step process of wound preparation and application of an appropriate antibiofilm and antimicrobial dressing².

Method

Step 1: Cleanse, Step 2: Debride, Step 3: Refashion (the wound edges), Step 4: Dress
Wounds were actively cleansed using gauze, water and/or an antimicrobial cleansing solution. Debridement and refashioning of the wound edges were by mechanical means. The dressing at step 4 was AQUACEL® Ag + Extra™ dressing³. These 4 steps were carried out at each dressing change.
All 11 patients had an initial assessment and treatment plan by a leg ulcer nurse specialist. Shared care followed, with other health care professionals, including self-care by 2 of the patients. The wounds were assessed for baseline data at the implementation of wound hygiene and a subsequent assessment at 4 weeks.
Clinical outcomes measured were wound size, exudate level, pain, suspected biofilm, suspected infection, frequency of dressing change and performance compared to previous dressings.

Results

In all 11 patients, the wounds progressed, all showing a reduction in size. Eight patients reported reduced pain levels and there was also a demonstrable reduction in wound exudate. All wounds were considered to have biofilm initially, based on clinical findings and the longevity of non-progression. At final assessment, only 1 wound was considered to still have a biofilm present. Dressing change frequency was the same, or less, and the performance of the protocol and antibiofilm dressing was reported to be more effective than previous regimes. Clinicians commented on the impressive outcomes on some patients where no wound progression had been seen for a long time. All clinicians stated they would adopt wound hygiene in practice and if a biofilm was present would consider AQUACEL® Ag + Extra™ dressing. Patients also showed satisfaction with the progression made in 4 weeks compared to previous weeks and various treatments.

Conclusion

All wounds demonstrated progression towards healing over the 4-week period. The only change to wound care practice was the 4 steps of wound hygiene and the application of AQUACEL® Ag + Extra™ dressing. Other treatments, such as compression were already in place in managing the leg wounds. The 4 steps can be performed in some form by anyone involved in wound care and in any setting, including the patient.

Discussion

Recognising biofilm in hard to heal wounds is essential in implementing an early antibiofilm strategy⁴. The Wound Hygiene protocol with AQUACEL® Ag + Extra™ at step 4 demonstrates effective biofilm treatment and timely progression in wound healing.

Duration of Wound 7 months
Wound Status: deteriorating
3 weeks of Wound Hygiene



Duration of Wound 1.6 years
Wound Status: static
6 weeks of Wound Hygiene



Duration of wound 3 months
Wound Status: static
4 weeks of Wound Hygiene



References:

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