

Implementing Mechanical Debridement Guided by Wound Imaging Device

ANNETTE GWILLIAM, BSN, RN, CWON, ACHRN¹ · BECKY GREENWOOD, BSN, RN, CWOCN²

¹Intermountain Homecare, Provo, UT · ²Intermountain Healthcare, Home Health & Hospice, Salt Lake City, UT

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BACKGROUND

Wound healing is impeded by the presence of bacterial biofilms, which exist in most chronic wounds. It is not surprising that biofilm disruption is the focus of wound management and essential to the healing process. “Regular debridement is the cornerstone for maintaining a healthy wound bed in most chronic wounds with a potential to heal”¹ Within our large corporation we were looking for ways to improve patient outcomes, shorten wound healing times and help patients with decreased pain and improved healing.

Our agency uses monofilament debridement pads to mechanically debride wounds between wound clinic visits. This study was to show the efficacy of these pads by using point-of-care fluorescence imaging devices for the detection of the presence and location of elevated bacterial loads and biofilm⁶.

METHODS

Patients with chronic wounds were selected for the trial. Wound photos were taken as well as the fluorescence imaging prior to and after the use of monofilament debridement pads. We were able to see that post debridement the bacterial load was decreased.

RESULTS

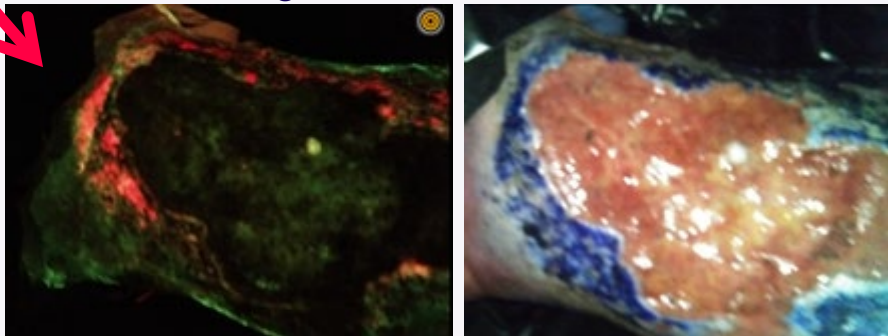
We were able to identify areas that needed to be debrided that were not apparent. The peri wound areas were more contaminated than anticipated.

We found that the use of antimicrobial dressings and wound cleansers kept the wound bed free of bacteria.

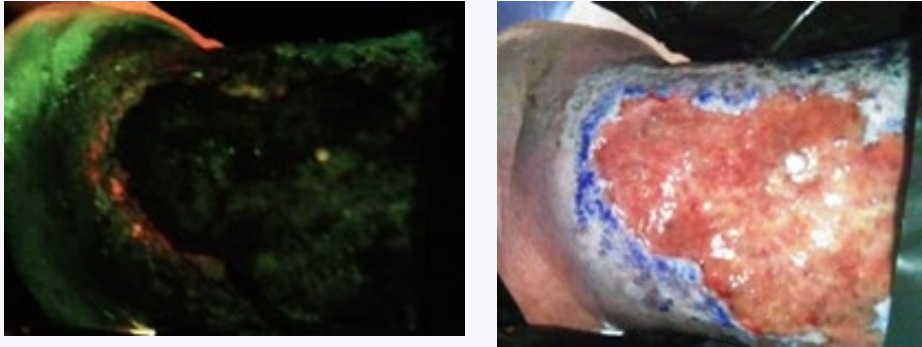
Using the Wound imaging device suggests that the wounds are clean however the peri wound areas needs to be cleansed better.

Patient 1 Venous Leg Ulcer

Pre cleaning



Post cleaning

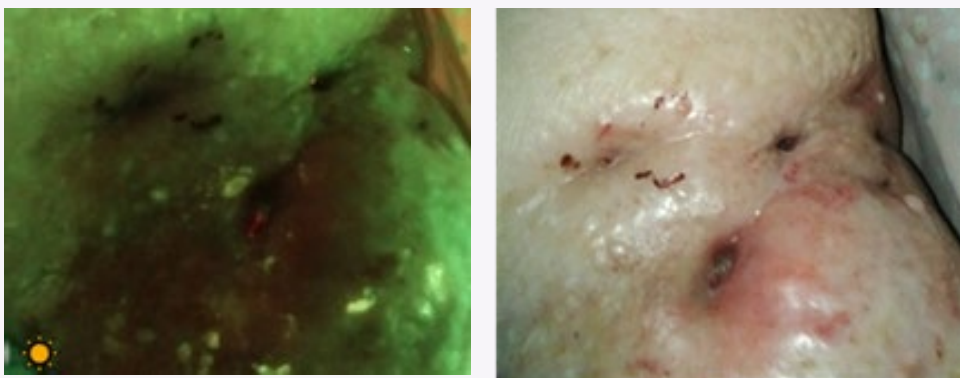


Patient 3 Pressure injury

Pre cleaning



Post cleaning

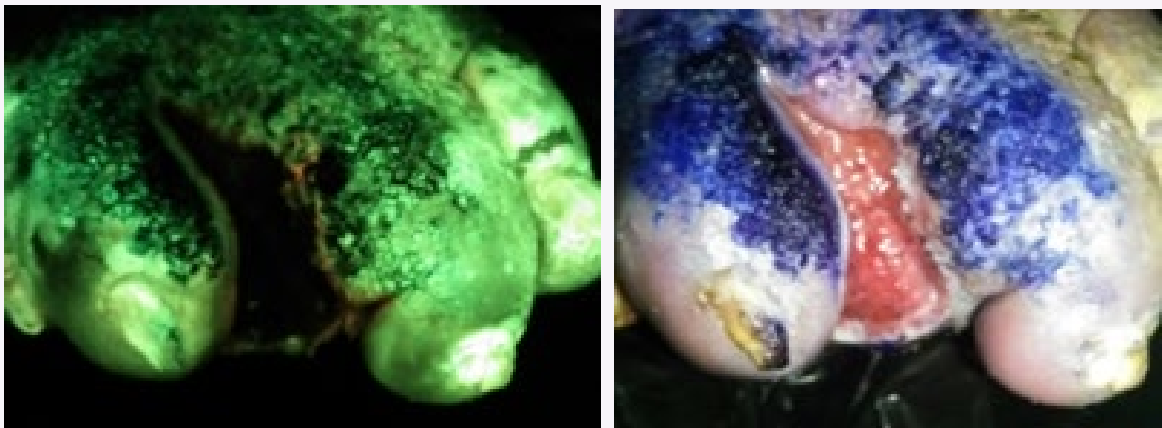


Patient 2 Diabetic foot

Pre cleaning



Post cleaning



CONCLUSION

Mechanical debridement using monofilament pad was effective removing unseen bacteria from wound bed and peri wound area.

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