

ULTRASONIC VIBRATIONAL HANDHELD DEBRIDEMENT TO REDUCE BIOFILM AND PAIN IN CHRONIC WOUNDS

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Introduction

Chronic wounds offer many challenges particularly in the context of an aging population and the diabetes epidemic in the United States. Regular and effective debridement is necessary for chronic wounds to heal. This can be painful for patients and challenging for practitioners.¹

The XsonX™ (XsonX LLC Charlotte, NC) handheld ultrasonic debridement tool allows the practitioner to thoroughly and effectively debride complex wounds in an outpatient setting with topical anesthesia and minimal patient discomfort. In our experience, patients tolerate debridement better and wounds go on to heal in a timelier fashion with regular use of this tool.

Methodology

15 Patients with Venous Leg Ulcers (VLU) were randomly selected for Ultrasonic debridement with XsonX tool versus Standard of Care debridement with a 0.5 mm dermal loop curette. 4% topical lidocaine cream was allowed to soak on the wound bed for 5 minutes. The XsonX tool with the large debriding head attachment was used over the layer of lidocaine cream to debride the wound bed, like how toothpaste is used to brush the teeth. Patients reported less discomfort with the XsonX debridement tool (n= 12/15) and some stated the ultrasonic debridement felt *good* (n = 2/15) when compared to debridement with a scalpel or dermal loop curette. Patients would request the XsonX debridement tool rather than traditional debridement with surgical instruments.



Pre-debridement



Post-debridement

Results

14 of the 15 patients in the XsonX group preferred the Ultrasonic debridement to standard of care debridement because they felt it to be less painful and practitioners noted it was equally effective as standard of care debridement

Conclusion

Debridement is an integral part of wound care and can cause pain and anxiety.³ Ultrasonic debridement seems to be better tolerated by many patients. It can be done regularly with topical anesthesia in the Wound Clinic to reduce biofilm formation and accelerate wound healing.² Debridement is an integral but challenging part of outpatient wound care.⁴ The XsoniX™ Ultrasonic Handheld debridement tool is a valuable, cost effective and practical addition to the wound care practitioner's armamentarium to control biofilm and maximize wound healing in the outpatient setting.

References

