



Introduction

The pain associated with sharp or enzymatic debridement of wounds in sensitive areas, such as the perineum, can be intolerable. An alternative debridement method is needed for such cases. Acoustic pressure wound therapy (APWT)* is a noncontact, low-frequency, nonthermal ultrasound therapy indicated for cleansing and maintenance debridement of yellow slough, fibrin, tissue exudates, and bacteria. In a retrospective study of 15 patients with lower-extremity wounds, a statistically significant 80% reduction in patient-reported pain scores (visual analog scale) was observed after 2 to 4 weeks of APWT.¹

Purpose

This case report describes the use of APWT for painless debridement of a sensitive perineal wound.

Conclusions

APWT appears to offer a painless debridement alternative in sensitive wounds where patients cannot tolerate sharp or enzymatic debridement.

References:

¹ Gehling ML, Samies JH. The effect of noncontact, low-intensity, low-frequency therapeutic ultrasound on lower-extremity chronic wound pain: a retrospective chart review. *Ostomy Wound Manage*. Mar 2007;53(3):44-50.

* MIST Therapy System, Celleration Inc., Eden Prairie, Minnesota

** Kristen Ragan is no longer at Evergreen Healthcare Center. She currently works at Loyola University Medical Center, Maywood, Illinois.

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A Case Report of Noncontact, Low-Frequency Ultrasound Therapy* for Debridement of a Sensitive Perineal Wound

Donna Radochonski, PT, and Kristen Ragan, PT, DPT,** Evergreen Healthcare Center, Evergreen, Illinois

The Patient

A 36-year-old woman with hypertension and type 2 diabetes was admitted to our facility post surgical debridement of a full-thickness perineal wound. The wound was not suitable for negative pressure wound therapy (NPWT) due to 70% slough tissue (manufacturer guidelines indicate use with <20% slough). The patient was unable to tolerate sharp or enzymatic debridement due to the sensitive location of the wound and intense pain.

The Treatment

Over a 7-day period, APWT was administered 6 times for 7 minutes per session. The wound was dressed with calcium alginate and foam. Patient-reported pain was rated using the 10-point visual analog scale (VAS).

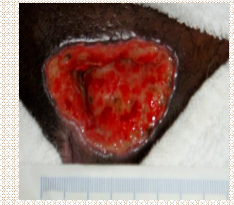
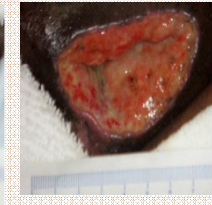
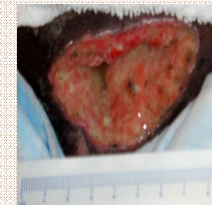
The Outcomes

After 7 days of treatment, the wound presented with 80% granulation tissue and was now appropriate for NPWT (see photos). At this time, the patient was discharged home on portable NPWT. During the 7 days of APWT treatment, wound volume and area decreased as did undermining (see table). The patient reported no pain with debridement. VAS pain scores at rest and with dressing changes decreased markedly (see table). The wound closed completely within 4 weeks on NPWT at home.

Feb. 27

Feb. 29

Mar. 4



	Feb. 27	Feb. 29	Mar. 4
Dimensions	Area: 26 cm ² Volume: 125 cm ³	Area: 25 cm ² Volume: 99 cm ³	Area: 22 cm ² Volume: 63 cm ³
Tissue content	Slough: 70% Granulation: 30%	Slough: 60% Granulation: 40%	Slough: 20% Granulation: 80%
Undermining	2.2 cm at 11:00-3:00	2.1 cm at 11:00-3:00	1.8 cm at 11:00-3:00
Wound edges	Indurated	Induration decreased from baseline	Epithelializing
Erythema	Spreading	Local	Local
Drainage	Moderate serosanguinous	Moderate serosanguinous	Minimal serosanguinous
Pain	At rest: 6 Dressing changes: 8	At rest: 3 Dressing changes: 6	At rest: 2 Dressing changes: 5