

# Pulsated Irrigation to clean and debride cavity Pressure Ulcers in community: Clinical Case



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## Introduction

Pressure ulcers (PU) are considered to an adverse event and constitute a constant challenge for all health professionals and institutions. Closed PU cause pain and suffering, and can lead to infection and even death, especially extensive cavity wounds, require high levels of care (1,2,3). Removing slough, debris and necrotic tissue from a cavity wound can be challenging and may require a modified approach to care. Necrotic tissue may be removed by sharp or surgical debridement but this needs specialist skills and frequently needs to be combined with alternative debridement techniques (4). Pulsar II AWI offers an innovative and safe pulse irrigation system to provide selective hydro-mechanical debridement to chronic non-healing wounds.

## Aim

Describe strategy of treatment of Cavity pressure ulcers in several anatomic areas, evaluating safety and efficacy of a pulsated irrigation to clean and debride the wound bed, providing conditions to advanced dressings, Negative Pressure Therapy or surgery. It's imperative to have a correct assessment because cavity wounds are really difficult to monitor

## Methodology

Male, 46 years, Cavity pressure ulcer with 6 months of evolution, admission at the hospital per acute disease and infection. Total dependency of daily life activities, well nourished. Pulsar II AWI was carried out both in the hospital and community setting. In this case study the patient was treated for four weeks (=4 sessions) with Pulsar II AWI. The cavity lesion had a depth of about 5cm, with tunneling, rolled edge. The maceration of the tissues were really evident, and the patient referred harrowing pain. The plan was to clean/debride with Pulsar II AWI and then prepare the wound bed to other technologies as NPWT and others.

## Results

Cavity pressure ulcer category IV. Wound Area of 270 cm<sup>2</sup>. Initially more than 50% area with necrosis, undermining and tunnelling present, moderate exudation and some maceration of the perilesional skin (Img 1, 2).

Very adherent tissue with pain reported by the patient in local cleaning. High pressure irrigation and sharp debridement were performed during the first week. It was possible to substantially reduce the amount of necrotic tissue, leaving the wound bed prepared for NPWT

Pulsar II AWI uses low pressure irrigation (8–15psi) with volumes 3000 ml of saline. (img. 4). There was an improvement in terms of reduction in wound size and/or reduction in necrotic/slough tissue and increase in granulation tissue (Img. 5). Exudation and odour were immediately reduced in four sessions

The Pulsar II AWI was only used only for 1 week at the patient bed.

The area was prepared for Surgical intervention or NPWT or even conventional treatments (img 6).

image 5 - Pulsar II AWI



Image 1 - Necrosis

Image 2 - Maceration of the perilesional skin

Image 3 - Undermining and tunnelling

The treatment was performed 4 consecutive days, with the daily evaluation of the tissues on the Sacrum. From the second week on, was already with less devitalized tissue but kept a high exudate with decreased odor (Img. 4)

Image 4 - less devitalized tissue



Image 5 - reduction in necrotic/slough tissue and increase in granulation

Image 6 - NPWT

**This Specific debridement with Pulsar II AWI lasted about 1 week and was really effective!**

## Conclusions

There is a lack of clinical evidence over conventional wound dressing specially when we talk about odour and highly exudation wounds. The extent of a cavity wounds can be difficult to visualize and such wounds require precise documentation and wound measurement if progress is to be accurately monitored and patient safety maintained.

Pulsated Irrigation has demonstrated excellent ability to clean and debride the wound bed surface creating the conditions to a more advanced intervention as NPWT in the community, with safety on the infection control regarding the use of irrigation bags, providing the ideal environment for healing ensuring the quality of life of the patient / family. This technology reduces the healing time and increases the possibility of success of treating a complex, cavity wound at the patient's home.

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