

NPWT

CASE STUDY

IMPROVED QUALITY OF LIFE FOR A LEG ULCER PATIENT USING A NEW HYBRID DRESSING

Introduction:

This case study investigates the use of a new hybrid pump for managing a chronic leg ulcer in a 55-year-old female. The patient's leg ulcer had been present for over six months and was causing immense pain, impacting her daily life and mental well-being. Due to delays in vascular referral caused by COVID-19 restrictions, the patient had to wait for proper treatment. The hybrid pump, designed for both traditional and scar line management, offered a portable and reusable solution for home-based treatment, even in the presence of heavy exudate. This case aims to assess the effectiveness of the pump in improving wound healing and the patient's overall quality of life.

History

The patient, a 55-year-old hairdresser, presented with a painful leg ulcer that had been persisting for more than 24 weeks. The ulcer gradually increased in size and caused the patient to experience depression and reliance on oral opiates to manage her daily activities. The nature of her profession, which required prolonged standing, exacerbated the pressure on the ulcer and varicose veins in both legs. The patient had been waiting for a vascular referral, but the COVID-19 pandemic had caused delays in accessing local hospitals.

The ulcer measured approximately 9 cm x 8 cm x 4 cm in depth, with 60% necrotic tissue, 35% loose slough, and 5% small granulation. The wound, located on the lower to middle of the inner calf of the right leg, exhibited red peri-skin with spreading erythema and was hot to touch. The wound also displayed bright green heavy exudate, identified by the experienced clinician as pseudomonas infection. Despite previous assessments indicating no signs of infection, the patient's self-research had led her to fear possible amputation due to the alarming symptoms and odour associated with her condition.

Plan of Care:

The treatment plan involved several steps to address the infection and facilitate wound healing. First, the patient's silver nanoparticle dressing, which had been applied for over three months with no effect on the pseudomonas, was removed due to causing significant pain. The clinician prescribed clindamycin for a week to address the chronic infection. Additionally, iodine, known for its broad-spectrum action and effectiveness against pseudomonas, was applied for one week.

Once the necrosis was cleared from the wound bed, the clinician applied Negative Pressure Wound Therapy (**NPWT**) using the **Genadyne Uno+** portable therapy device with a new hybrid dressing. This treatment aimed to promote healthy granulation and also provided environmental protection, allowing the patient to continue working. To support **NPWT** and manage exudate, retention bandages and stockinet were utilized. The **NPWT** canister remained effective. Compression was applied for venous insufficiency.

Methodology:

Before commencing **NPWT**, Doppler was performed to ensure adequate blood flow to the venous leg ulcer. The wound was cleaned with sterile water, and iodoflex was applied, with dressing changes at 3 and 6 days. Once the necrosis was removed and the wound bed assessed, **NPWT** was initiated using the **Genadyne Uno+** hybrid pump with a silicone borderless foam dressing. Within three days, the exudate decreased significantly due to the combined action of antibiotics and iodine, with no systemic redness observed. The exudate remained heavy, necessitating frequent dressing changes.

Results:

The application of **NPWT** using the **Genadyne Uno+** hybrid pump led to a rapid decrease in the wound size and a significant reduction in pain. The ulcer healed successfully following four weeks of **NPWT** treatment, followed by one week of protective Mepore dressing. The patient's quality of life improved noticeably during the treatment period.

Conclusion:

The use of the new hybrid pump, **Genadyne Uno+**, in combination with appropriate wound care strategies proved effective in promoting wound healing and improving the quality of life for a patient with a chronic leg ulcer. The portable and reusable nature of the pump allowed for home-based treatment, and the ability to manage both traditional and scar line management made it a valuable asset in the wound care process. Further research and more case studies are warranted to explore the broader applicability of this innovative treatment approach in managing leg ulcers and similar chronic wounds.

Reference List

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Department of Nutrition and Dietetics Dietary Information to Promote Wound Healing
NHS university hospitals Coventry and Warwickshire NHS Trust 2020
Appendix exudate understanding for patients
Reference wound care team Doncaster royal Infirmary up to 2016 for patient understanding!



Genadyne Biotechnologies
16 Midland Avenue Hicksville New York 11801 USA
Phone: +1 516 487 8787 Toll free: +1 800 208 2025 Fax: +1 877 487 7878
Email: info@genadyne.com · www.genadyne.com