Severe Pressure Ulcer Debridement in the Acute Sector : Case Study Series to Support a Change in Clinical Practice

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Aim

Pressure ulcers (PU) rank within the 'top ten harms' in the NHS in England (Fletcher, J, 2022) and remain a concern for both patient and health professionals. Patients with a PU typically experience pain, increased risk of infection, morbidity, and mortality rates, with category 3 and 4 sacral PU's affecting underlying tissues bringing about extensive destruction (Borojeny et al, 2020).

The aim of this series was to evaluate the celerity of a Bioactive Microfibre Gelling (BMG™) dressing used in direct contact with the wound bed to debride devitalised tissue, manage exudate, reduce bioburden, promote granulation, reduce odour and reduce pain. Standard PU care (regular repositioning and pressure redistribution equipment) also applied.

Method

The evaluation period varied between 14 days to 28 days, and was conducted across our acute hospital trust, with patients being reviewed by the tissue viability team. Trust protocol was followed, and patient consent gained.

Results

Patient 1 : Debridement completed, pain substantially reduced, outstanding levels of granulation and advancement of edges.

Patient 2 : Necrosis debrided, bioburden, pain, exudate levels, slough, overall diameter and depth considerably reduced.

Patient 3: Eschar detached from edges, enabling conservative sharp debridement. Underlying devitalised tissue reduced.

Conclusion

Effective wound debridement removes devitalised tissue, senescent cells and bacteria, stimulating growth factor activity and promoting healing. The patients selected for this trial were particularly challenging due to their complex comorbidities, advanced age, general deconditioning and poor healing potential. The BMG dressing was straightforward to use and well tolerated, accelerated debridement without discomfort, managing exudate and inflammation effectively.

In regard to cost effectiveness, its price is under half of a 15g tub of enzymatic alginogel or a medical grade honey hydrogel sheet of the same size.

Case Study 1: Category 4 pressure ulcer

The patient: 92-year-old female with hypothyroidism, hiatus hernia, asthma, MRSA, aortic stenosis, long standing neuropathy to bilateral lower limbs.

Admitted post fall with right distal femoral fracture and sacral DTI. Lives alone, independent with ADLs, supported by family. Walks with zimmer frame.

The wound: Category 4 pressure ulcer (deteriorated from DTI) to sacrum.

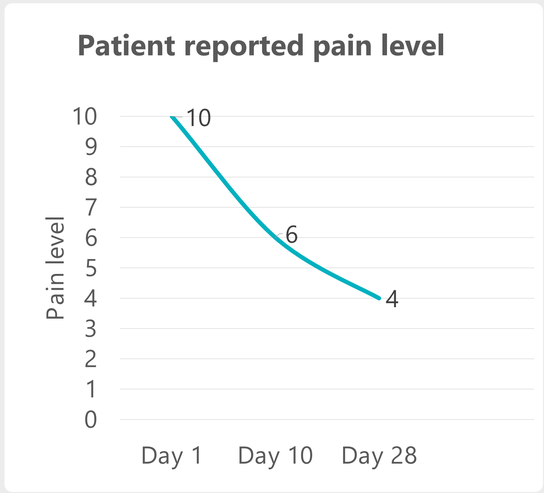
7.8 x 5.6cm, depth unknown. 95% necrosis, 5% slough to edges, locally infected. High levels of haemopurulent odorous exudate. Pain level 10 out of 10.

Previous treatment: Administered antibiotics for rise in inflammatory factors. Did not have previous dressing care plan.

Treatment aims: Commenced BMG dressing with aims to debride, reduce bioburden, reduce pain, manage exudate. Daily dressing changes due to anatomical site and contaminants. Sacral foam bordered dressing and barrier film to periwound.

Results: At 10 days, necrosis debrided, 10% fibrinous slough, 90% granulation to wound bed. Serous exudate.

At 28 days, 100% granulation. 75% decrease in wound surface area. Pain score reduced from 10 to 4 within 28 days.



75%
decrease
in wound surface area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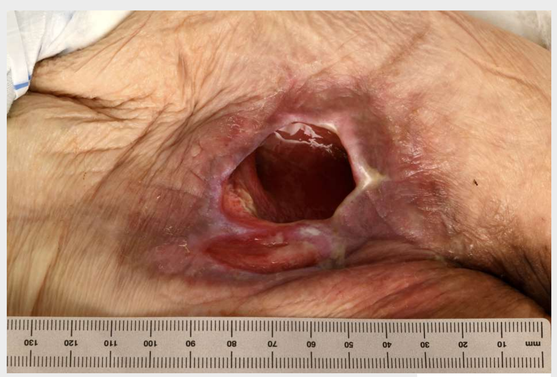
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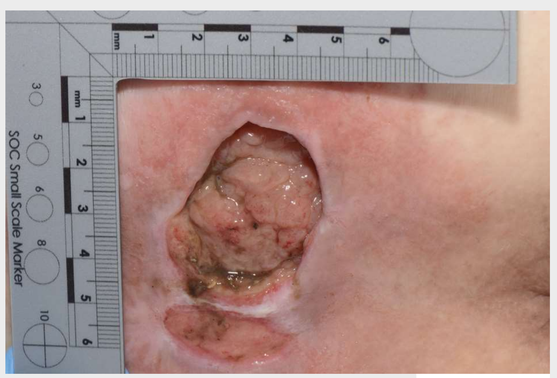

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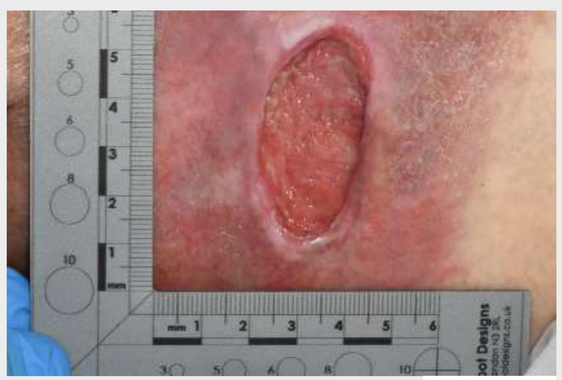
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AXIO® INSPIRED MED-TECH

Bioactive Microfibre Gelling (BMG) technology dressing used in this evaluation was MaxioCel.

EWMA Conference 2024, London.

References: Jacqui Fletcher 'National Wound Care Strategy update: Pressure ulcers prevention and the PSIRF exemplar' Wounds UK, Vol 18, No4, 2022,. Afzali Borojeny et al. "The Incidence of Pressure Ulcers and its Associations in Different Wards of the Hospital: A Systematic Review and Meta-Analysis." International journal of preventive medicine vol. 11 171. 5 Oct. 2020, doi:10.4103/ijpvm.IJPVM_182_19.

Case Study 2: Unstageable pressure ulcer

The patient: 84-year-old female with chronic lymphocytic anaemia, caecal CA. Admitted post fall and prolonged lie on floor with community acquired pneumonia and sacral deep tissue injury.

The wound: Unstageable pressure ulcer (deteriorated from DTI) to sacrum. 4.6 x 4.1cm, depth unknown. 85% necrosis, 15% granulation. Low level seropurulent odorous exudate. Locally infected. Hyperkeratoic and pruritic periwound. Pain level 7 out of 10.

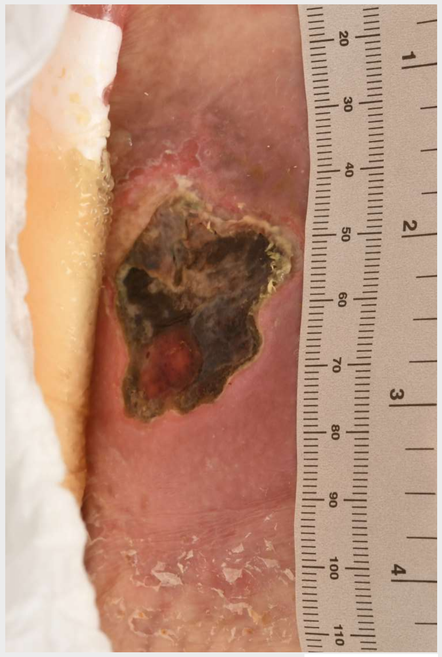
Previous treatment: Medical grade honey hydrogel and sacral bordered foam dressing.

Treatment aims: Commenced BMG dressing with aims to debride, reduce bioburden, manage exudate and improve condition of periwound. Daily dressing changes due to anatomical site and contaminants. Sacral foam bordered dressing and barrier film to periwound.

Results: At 14 days, necrosis completely debrided, 50% fibrinous slough, 50% granulation to wound bed. Very low levels of serous exudate. Pain level reduced to 3 out of 10.

At 21 days, 40% fibrinous slough, 60% granulation. 55% decrease in wound surface area.

Pain levels reduced to 2 out of 10 within 21 days.



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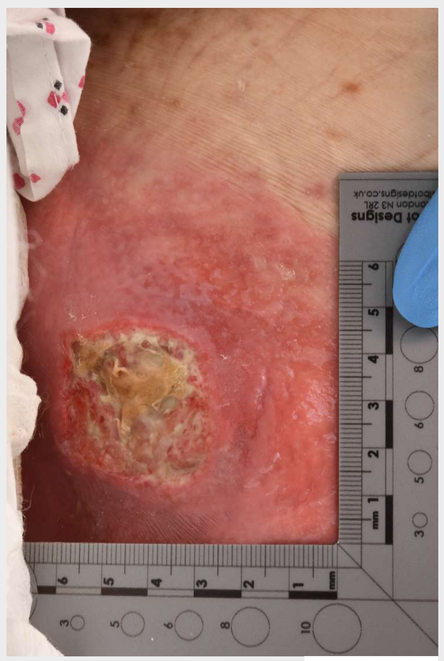

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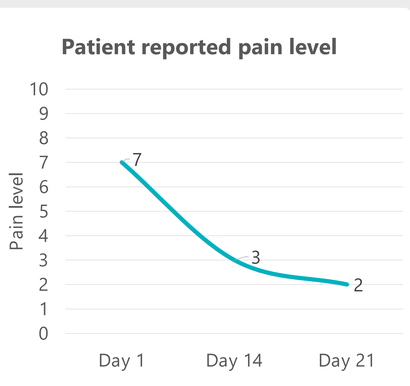
55%
decrease
in wound surface area



21
days

Case Study 3: Unstageable pressure ulcer

The patient: 72-year-old male with recent E Coli bacteremia, chronic hyponatremia, recurrent constipation, asthma, osteoarthritis, pancreatic insufficiency, gastritis/duodenitis, grand mal seizure, CVA, hypertension, necrotising enterocolitis, Parkinsonism.

Admitted with community acquired DTI. Difficulty breathing and weakness, unable to reposition independently. Lived alone in sheltered accommodation with double package of care five times per day. Transferred via hoist. Inability to mobilise/reposition.

The wound: Unstageable pressure ulcer (deteriorated from DTI) to sacrum. 8.6 x 5.3cm, depth unknown. 95% necrosis, 5% slough to edges. Moderate levels of seropurulent odorous exudate, locally infected. Pain level 5 out of 10.

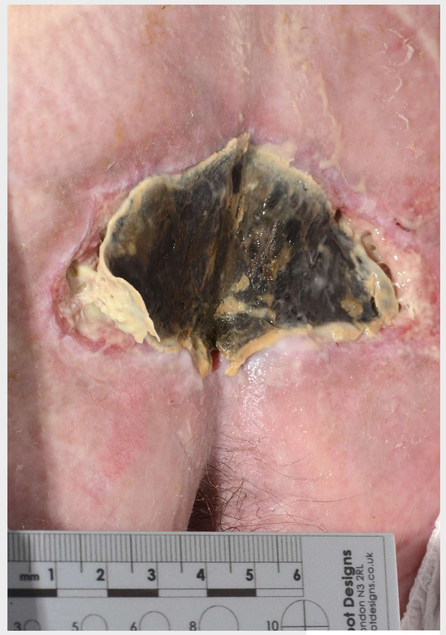
Previous treatment: Administered antibiotics for urinary tract infection. PU was treated with enzymatic alginogel and sacral bordered foam dressing. Superficial eschar removed with bedside conservative sharp debridement.

Treatment aims: Commenced BMG dressing with aims to debride, reduce bioburden, manage exudate, promote healing. Daily dressing changes due to anatomical site and contaminants. Sacral foam bordered dressing and barrier film to periwound.

Results: At 7 days, necrosis reduced to 20%, with 30% fibrinous slough and 50% granulation to wound bed. Serous exudate.

At 14 days necrosis reduced to 5% , with 40% fibrinous slough, 55% granulation.

32% decrease in wound surface area within 14 days.



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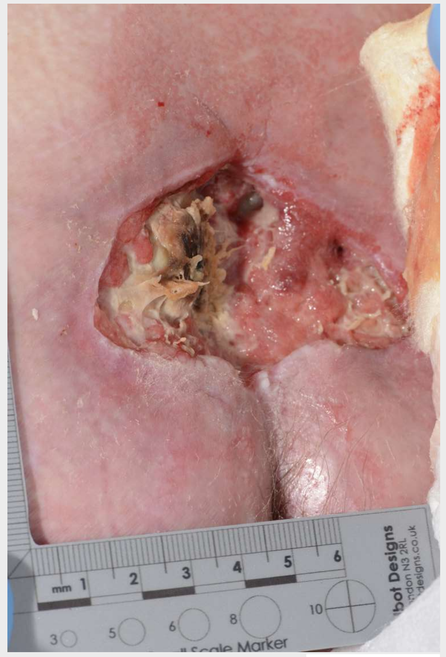

13.12.2023

14
days

90%
reduction
in necrosis

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