

A Clear Solution

New Absorbent Acrylic Wound Technology

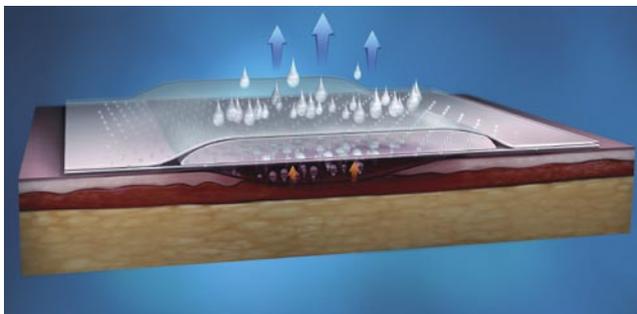


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Background

For over 20 years, hydrocolloids have been a common dressing of choice for use on minimal to moderately exuding pressure ulcers. While most hydrocolloid dressings have improved significantly in design and function since their initial introduction, they still have limitations which can vary by brand and formulation. Common issues with current hydrocolloid use include; lack of visualisation of the wound and surrounding skin, lack of patient comfort (in response to bunching up of dressing in sacral area), dressing failure due to lifting of dressing and contamination from incontinence leading to early replacement and therefore extra costs.

Recently a transparent dressing manufactured with a new absorbent technology and a novel design has been introduced to address the shortcomings of hydrocolloid dressings.



The following case study is one of a series undertaken as part of the evaluation process to introduce a new dressing into a large teaching hospital in South Australia. The primary objectives being improved clinical and patient outcomes with decreased costs.

Aim

The overall aim of the case study was to evaluate 3M™ Tegaderm™ Absorbent Clear Acrylic Dressing on a patient presenting with a necrotic unstageable pressure ulcer¹. Specific aims were; to assess the effectiveness of the product as a primary dressing to manage the exudate, debride the necrosis, provide superior wear time to hydrocolloids, improve patient comfort as well as being easy to apply and remove.

Case Study

A 46 year old lady was admitted to the vascular ward for treatment of an infected diabetic foot ulcer. She presented with a complex medical history which included: type 1 diabetes mellitus, end stage renal failure - dialysis dependent, diabetic retinopathy, diabetic gastroparesis, previous left below knee amputation, ischaemic heart disease and a past cerebrovascular accident. Consequently she was prescribed multiple medications for management of these medical conditions as well as undergoing dialysis three times a week.

Despite extensive treatment, her pain increased daily and there was no improvement in her deteriorating foot. She subsequently consented for and underwent a right below knee amputation. Following the surgery, the patient was transferred to the intensive care unit in response to medical complications which included a myocardial infarction and diabetic ketoacidosis. She was unable to tolerate minimal movement and despite being nursed on a pressure relieving mattress, developed a large unstageable necrotic sacral pressure ulcer.

Photograph of pressure ulcer at commencement of study



(Right side 17.6cm², Left side 11.5cm²) Unstageable necrotic sacral pressure ulcer. Slough present at wound edge with minimal exudate, the peri-wound skin is quite moist.

Photo 2 - Day 3



(First dressing change. Right 17.2cm² Left 11.2cm²)
Photograph showing absorptive capability of the dressing and the ability of the dressing to promote autolytic debridement. Note the colour of exudate in the dressing.



Photo 3



Inspection of wound demonstrating autolytic debridement of necrotic tissue. Peri-wound skin condition has improved with the dressing.



Photo 4



Inspection of wound demonstrating autolytic debridement of necrotic tissue. Peri-wound skin condition has improved with the dressing

Photo 5



Tegaderm Absorbent Dressing in place, providing the ability to visualize the wound and surrounding skin.



Photo 6 - Day 9



(Right 13.6cm², Left 8.4cm²) The necrosis is now debrided, leaving the slough to be autolytic debrided. Islands of granulating tissue continue to form.



Photo 7 - Day 26



(Right 8.2cm² Left 6.3cm²) The patient was discharged to a community rehabilitation centre where the use of Tegaderm Absorbent Dressing was continued.

Conclusion

The Tegaderm Absorbent Clear Acrylic Dressing was effective in improving patient and clinical outcomes. The evaluation led to the introduction and implementation of the dressing for pressure ulcer management across all hospital departments. This was implemented with education, which included a pressure ulcer management guidelines poster for all wards and departments, see page 4.

The patient and clinical outcomes were:

- Increased wear time versus previous hydrocolloid use.
- Visualisation of the wound and surrounding area.
- Patient comfort - patient able to easily shuffle in bed and transfer with slide board without dressing dislodgement.
- Waterproof dressing - ability to shower.
- Ability to provide the optimal environment for autolytic debridement, granulation and epithelialisation.
- Improved condition of peri wound skin compared to previous hydrocolloid use.
- Ease of application & removal
- Improved cost effectiveness of treatment plan

Acknowledgments

I would like to acknowledge the assistance of Karen Simunov, staff Development Consultant - Nursing, for her help in developing the Pressure Ulcer Guidelines.

References

1. Clinical Practice Guidelines for the Prediction and Prevention of Pressure Ulcers. Australian Wound Management Association. 1st Edition, August 2001. Cambridge Publishing, Western Australia.



Application Steps for Tegaderm Absorbent



a) Hold the dressing by a tab and peel the liner from the dressing, exposing the adhesive surface.



c) Gently press the dressing in place, smoothing from the centre outwards.



b) Centre the dressing over the wound adhesive side down. Avoid stretching the dressing.



d) Slowly remove the frame while pressing down and smoothing the film border to ensure good adhesion.

Pressure Ulcer Management Guidelines

A pressure ulcer is defined as a localized area of tissue damage that develops when soft tissue is compressed between a bony prominence and an external surface for a prolonged period of time.

Risk Identification and Management

- Identify risks with Braden Scale Risk Assessment Tool
- Prevent further tissue damage
- Relieve / reduce pressure (ie appropriate mattress, use of pillows, wedges, cushions)
- Assess skin daily for potential or actual damage and initiate wound assessment/documentation chart as appropriate
- Complete incident report for presence of tissue damage
- Maintain appropriate documentation and activate UOC in Excelcare

Foot Pressure Ulcers

- **DO NOT DEBRIDE** any foot ulcer without checking for palpable pulses and healing ability, especially in diabetic clients - may require ABI/Toe Pressures
- If vascular status intact refer to chart guidelines below for further instructions
- If vascular status unclear
 - o maintain a dry environment for stable heel ulcers with a protective eschar covering
 - o consider use of Inadine™ (reduces gram +ve and -ve bacteria)
 - o may require further vascular review
- Refer to THE WOUND ADVISOR (intranet site) and /or orthotics department for pressure relieving devices

Wound Advisory Group (WAG) - The Queen Elizabeth Hospital, Woodville South Australia. References: SA Safety & Quality Council - <http://www.safetyandquality.sa.gov.au/>

Staging Pressure Ulcers



Stage I

Observable pressure-related alteration of intact skin. Presents clinically as a defined area of persistent redness in lightly, pigmented skin. In darker skin tones, the skin may appear with persistent blue or purple hues.

Stage I

- **Is this a foot ulcer?** If YES see check box above
- Avoid friction – apply film dressing to heels and/or elbows if required and tolerated
- Ensure skin clean and dry and protect with 3M™ Cavilon™ Barrier Cream or 3M™ Cavilon™ No-Sting Barrier Film Wipes



Stage II

Partial thickness skin loss involving epidermis, dermis, or both. Ulcer is superficial and presents clinically as an abrasion, blister, or shallow crater.

Stage II

- **Is this a foot ulcer?** If YES see check box above
- Ensure skin clean and dry (as per Stage I) and apply Tegaderm Absorbent to promote moist healing
- Date and place  top sticker on the dressing



Stage III

Full thickness skin loss involving damage to subcutaneous tissue that may extend down to, but not through underlying fascia. Ulcer presents clinically as a deep crater with or without undermining.

Stage III & IV

- Is this a foot ulcer? If YES see check box above
- Ensure skin clean and dry (see Stage I)
- Remove devitalized tissue as appropriate (see foot pressure ulcer box above)
- Fill dead space with Aquacel™ if moderate – high exudate
- Cover with Tegaderm Absorbent



Stage IV

Full thickness skin loss, which presents clinically as extensive destruction or damage to muscle, bone, or supporting structures. Undermining and sinus tracts may be present.

- Date and place  sticker on the dressing
- Referral to dietitian as appropriate
- **For infected Stage III or IV consider Aquacel Ag™ with Tegaderm Absorbent**



Stage V (Unstageable)

Presents clinically with necrosis or extensive slough and unable to assess the depth of the ulcer. Possibility that it extends into the fascia.

Stage V (Unstageable)

- Consult your Wound Advisory Nurse or a Specialist Nurse
 - o Plastics CNC
 - o Vascular CNC
 - o Stomal Therapist CNC
 - o Orthopaedic CNC
 - o Educator #20666

3M

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Tegaderm™ Absorbent
 Long-Wear Clear Acrylic Dressing