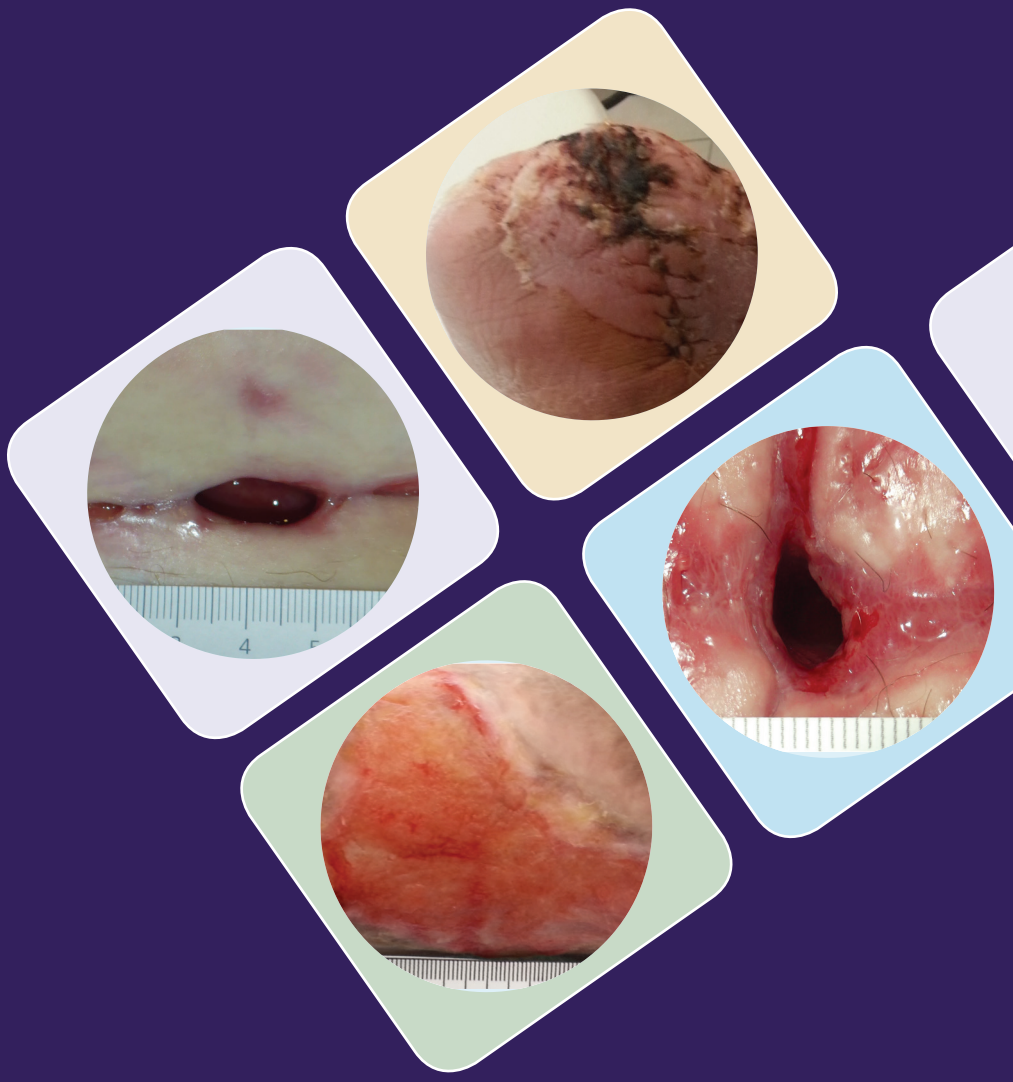
INTERNATIONAL
CASE STUDIES

Case studies evaluation:
TIELLE™ Foam Dressings in practice

CASE STUDIES SERIES 2018



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In these cases, the TIELLE™ Foam Dressings were used with other wound care products. As with any case studies, the results and outcomes should not be interpreted as a guarantee or warranty of similar results. Individual results may vary depending on the patient's circumstances and condition.

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Case studies evaluation: TIELLE™ Foam Dressings in practice

INTRODUCTION

Wound healing is a complex process. The normal healing of wounds proceeds through sequential phases that can overlap and vary in length. Patients living with chronic wounds are concerned with more than just the healing of the wound, because the "impact of living with a wound is complex and multifactorial"[1]. Although clinicians often focus on healing as a key outcome measure, it is just as important to help the patient manage the wound and associated symptoms in a way that allows them to live a 'normal' life, without pain, excess exudate or infection that interfere with everyday activities[1].

For patients with wounds of long duration, anxiety and depression can often develop[2-4], while poor symptom management can cause patients to become non-concordant with therapy[5-7]. Strong evidence indicates that actively involving patients in their wound management improves outcomes and helps patients feel more independent and in control of their care[8-11].

It is, therefore, important to consider ways to maximise quality of life — that is, patient 'wellbeing' — in the context of managing a complicated and/or chronic wound, while also making management choices that move the wound towards healing[1].

PAIN

Wound-related pain can be all-consuming and one of the most distressing aspects of having a wound. In a study of 2,018 patients, 40.3% found pain at dressing change to be the worst part of having a wound[12]. It is important to minimise pain at each stage of the healing process by reducing the effects of fragile and sensitive peri-wound skin, pain and trauma on dressing removal, and patient distress[13,14]. Silicone technology and non-adhesive dressings can be used to help mitigate pain at dressing change and protect peri-wound skin.

EXUDATE

Exudate production by open wounds is essential for moist wound healing and plays a central role in the healing process[13], however excess wound fluid may cause skin maceration and wound breakdown. It may also delay healing, leading to increased demands on resources[13-15]. Additionally, exudate leakage and soiling can affect patients' ability to wear their usual clothes and continue everyday activities, or may result in embarrassment. Removal and locking away of fluid from the wound bed and surrounding skin is essential to promote wound healing. Effective management of exudate can reduce healing time and exudate-related issues, including the risk of infection, while helping to improve patient quality of life[13,15].

INFECTION

An infected wound can be life-threatening if it is not managed effectively[16,17]. In addition to serious consequences for the patient, clinical infections can compound the overall cost of care[17]. An infected wound can cause pain, discomfort and wound malodour (and may be associated with excessive exudate), resulting in delayed healing, threat to limbs and chronicity, all of which affect patient outcomes and quality of life[16]. The use of topical antimicrobial dressings in association

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with systematic antibiotics can help deal with issues of infection and wounds at risk of infection[18]. *In vitro* testing has shown some antimicrobial foam dressings containing polyhexamethylene biguanide (PHMB) kill bacteria more effectively within 3 hours compared with others tested at 24 hours, including silver foams[19].

UNDERSTANDING THE TIELLE™ FOAM DRESSING RANGE

The TIELLE™ Foam Dressing range has been developed with the philosophy of 'right wound, right dressing, right time' in mind. The range is designed to provide comfort in wear (ESSENTIAL silicone), confidence that the dressings will not leak (LIQUALOCK™ Technology) and protection against infection (PHMB). The range helps provide an effective solution for a wide range of real challenges when using foam dressings. Different technologies are incorporated in this dressing range to meet the challenges that can reduce patient quality of life and delay healing:

- Pain — TIELLE ESSENTIAL™ Silicone Adhesive Foam Dressing range.
  Soft, conformable silicone is designed to help reduce pain and trauma during dressing changes[20] by allowing easy removal.
- Excess exudate — TIELLE™ Hydropolymer Dressings with LIQUALOCK™ Technology.
  The dressings are designed to lock fluid away[21] helping avoid skin maceration. The foam expands and conforms to the contours of the wound bed, helping avoid pooling of exudate and continually transferring fluid away from the wound bed. The polyurethane adhesive enables the dressings to stay securely in place whilst allowing skin-friendly removal. TIELLE LIQUALOCK™ Dressings can absorb fluid for up to 7 days without leakage[21,22]. Furthermore, in a clinical study, 84% of the patients reported that TIELLE Plus Dressing had improved their quality of life, primarily due to a reduction in pain and leakage, compared with previous treatments[22].
- Infection — TIELLE™ PHMB Antimicrobial Foam Dressings*.
  The dressings are designed to protect infected wounds or wounds at risk of infection through managing wound bioburden and exudate. TIELLE PHMB Dressings contain a fast-acting antimicrobial substance (PHMB), which kills and inhibits the growth of bacteria and is effective against a broad spectrum of microorganisms (*in vitro*), including MRSA and *Pseudomonas aeruginosa*[23]. The greater and faster the kill rate, the more effective the management of bacterial contamination is[24].

The TIELLE Foam Dressing range can be used on a variety of partial- or full-thickness, low-to-highly exuding wounds, including lower-extremity ulcers (venous, arterial, mixed aetiology), pressure ulcers, donor sites, and traumatic and post-surgical wounds. They can also be used as a secondary dressing in combination with other primary dressings, such as bioresorbable products (e.g PROMOGRAN™ PRISMA Wound Balancing Matrix), antimicrobials, or under compression. Depending on the needs of the patient and wound determined by holistic assessment, the clinician can match the right TIELLE Foam Dressing features to the right wound at the right time in the healing process (Table 1).

*In the event of clinical infection, PHMB does not replace the need for systemic therapy or other adequate infection treatment, consult the relevant healthcare professional.

Table 1. Rationale for TIELLE™ Dressings.

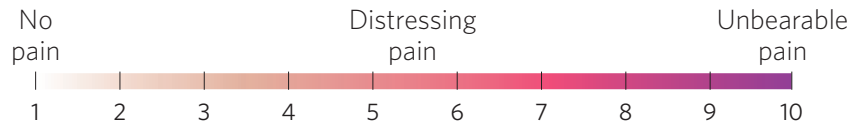
Issue	Dressing	Dressing technology	Corresponding cases in series
Pain — delicate skin or painful wound type	TIELLE ESSENTIAL™ Silicone Dressings	PU Foam with a silicone perforated layer: non-bordered and bordered	Case 2: Dehisced surgical wound Case 6: Dehisced abdominal wound Case 8: Leg ulcer post trauma
Exudate	TIELLE™ Hydropolymer Dressings with the LIQUALOCK™ Advanced Absorption Technology	Hydropolymer foam dressing with LIQUALOCK™ Technology and a skin-friendly Polyurathane adhesive	Case 3: Venous leg ulcer Case 5: Dehisced surgical wound Case 7: Amputation wound Case 10: Surgical wound close to colostomy
Infected or at risk of infection	TIELLE™ PHMB Border Antimicrobial Adhesive Foam Dressing and TIELLE™ PHMB Non Adhesive Antimicrobial Foam Dressing	PHMB-impregnated PU foam: non adhesive and adhesive	Case 1: Category 3 heel pressure ulcer Case 4: Venous leg ulcer Case 9: Mixed aetiology leg ulcer

CASE STUDIES: TIELLE FOAM DRESSING RANGE IN PRACTICE

This document presents a series of case studies describing use of the TIELLE Foam Dressings in practice. Patients with wounds with complicating factors were thoroughly and holistically assessed and using clinical judgement, an appropriate dressing from the TIELLE Foam Dressing range was selected.

Reviews took place on a weekly basis unless stated otherwise, at which point clinicians and patients were able to provide feedback on wound progression and various aspects of the dressing's performance, including wound size, condition of the wound bed, patient comfort, exudate management and pain management. Photographs were taken weekly in the majority of cases to document wound progression. Any relevant additional advice or treatments were reported, such as compression therapy.

Feedback was also provided on whether the dressings caused the patient pain during wear time and dressing change. Pain measurements were provided each week on a Visual Analogue Scale (VAS) between 1 and 10.



SUMMARY

This International Case Study Evaluation presents ten case studies from Germany, Holland, Republic of Ireland and South Africa, which illustrate use of the TIELLE Foam Dressings range in practice in different aetiologies, including ulcerations, traumatic wounds and post-surgical wounds, in a variety of settings and across various disciplines.

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CASE 1: TIELLE™ PHMB Non Adhesive Antimicrobial Foam Dressing used for a slow-healing pressure ulcer with potential infection

Author: Alita Jaspar, MSc in Wound Healing & Tissue Repair, RN Expertise Centrum Woundzorg, The Netherlands

INTRODUCTION

An 81-year-old female presented with a category 3 pressure ulcer on her right heel that had been present for 4 months. A silver sulfadiazine cream had been used with an appropriate secondary absorbent dressing, but as the wound had stalled and was odourous, TIELLE™ PHMB Non Adhesive Antimicrobial Foam Dressing was selected due to its broad-spectrum antimicrobial properties.

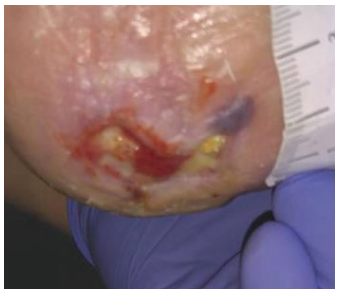


Figure 1: Baseline

Baseline:

- The pressure ulcer measured 23mm (length) x 17mm (width); with the wound bed consisting of 80% slough and 20% granulation tissue (Figure 1).
- The wound was wet; however, the surrounding skin was intact and healthy.
- The exudate produced was noted to be yellow/brown in colour.
- The patient reported no pain.
- The wound was cleansed according to local protocol, and a TIELLE PHMB Non Adhesive Dressing 7.5cm x 7.5cm was used, and a wraparound retention bandage was applied. Dressing changes were planned for twice a week and pillows were used to offload the heels while the patient was in bed.

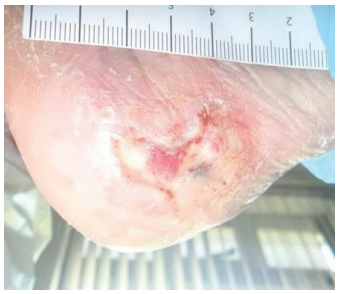


Figure 2: Review 1

Review 1 (+7 days):

- The wound had visibly improved; looking cleaner and smaller (Figure 2).
- Granulation tissue on the wound bed surface had increased from 20% to 66.6%
- The exudate was now clear and amber in colour.
- The patient reported she was highly satisfied with this new treatment plan.

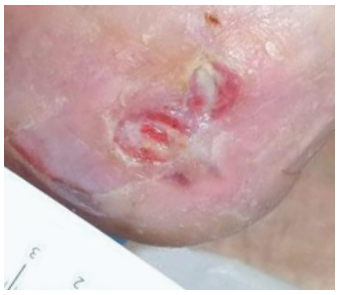


Figure 3: Review 4

Review 2 (+14 days):

- Wound measurements indicated further improvement with measurements reducing further 19mm (length) x 12mm (width).
- The wound bed displayed a greater amount of granulation tissue; with a further reduction in slough.
- The surrounding skin remained healthy.

Review 3 (+21 days):

- There was a further reduction in wound size.
- The wound bed had no slough and there was visible epithelialisation to the middle of the wound.

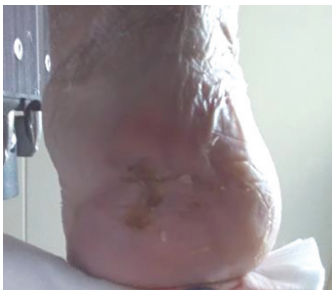


Figure 4: 52 days from baseline

Review 4 (+28 days):

- The wound had reduced to 13mm (length) x 11mm (width) (Figure 3).
- The wound bed had no slough and there was increased epithelialisation to the middle of the wound.

FINAL COMMENTS

TIELLE PHMB Non Adhesive Dressing was used for 4 weeks and then an appropriate non-adherent dressing was applied until wound closure (Figure 4). The clinician noted the that the wound quickly had less slough present and started to epithelialise. The clinician found TIELLE PHMB Non Adhesive Dressing easy to apply and remove, with no pain caused during wear time or at dressing change. Successful exudate management ensured no leakage or breakthrough occurred. The patient and clinician were highly satisfied with the treatment.

CASE 2: Surgical wound dehiscence managed with TIELLE ESSENTIAL™ Silicone Border Silicone Adhesive Foam Dressing in a patient with a newborn baby

Author: Astrid Probst, Nurse in Wound Management, Kreiskliniken Reutlingen GmbH, Reutlingen, Germany

INTRODUCTION

A young female patient underwent an emergency caesarean section. Following this surgery, a small area of the wound failed to heal effectively. NPWT (negative pressure wound therapy) had previously been used and although, wound closure was achieved for 5 days, the wound broke down again, resulting in an open area to a surgical wound. The wound was highly exuding, and a film dressing with gauze had been used to cover the wound, with daily dressing changes. Pain at both dressing wear time and dressing removal was scored at 3 on the VAS.

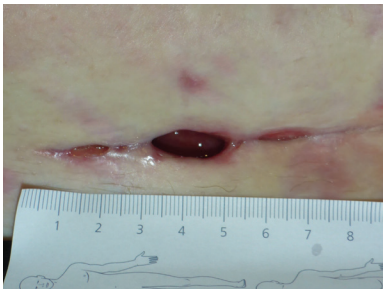


Figure 1: Baseline

TIELLE ESSENTIAL™ Silicone Border Silicone Adhesive Foam Dressing was applied by the clinician to reduce patient pain during dressing change and removal, and provide undisturbed healing through a longer wear time 2–3 days (rather than daily). In addition, this dressing would allow the patient to shower. It was important for the patient to feel confident that the dressing used would protect her newborn baby from coming into contact with the leaking wound exudate. BIOSORB™ Gelling Fibre Dressing was used in conjunction with TIELLE ESSENTIAL Silicone Border Dressing to support exudate management.

Baseline:

- The area of surgical wound dehiscence measured 2cm (length) x 0.5cm (width) x 2cm (depth) (Figure 1), and the wound bed consisted of 95% granulation tissue and 5% slough.
- High levels of thin, clear serous exudate left the patient feeling unclean, which was particularly challenging when caring for a newborn baby.
- The wound itself was odourless, with no signs of infection present.
- BIOSORB Dressing and TIELLE ESSENTIAL Silicone Border Dressing 10cm x 20cm was initiated by the clinician, and dressing changes were prescribed for two to three times a week.
- The patient's initial thoughts were that the dressing looked soft and clean.

Review 1 (+7 days):

- The patient experienced no pain during wear time of TIELLE ESSENTIAL Silicone Border, and experienced no pain during dressing removal.
- This new dressing regimen successfully supported effective exudate management with no strikethrough or leakage reported. Exudate levels reduced from high to medium, remaining of thin, clear serous consistency.
- The wound bed remained at 95% granulation tissue and 5% slough.
- Treatment regimen was continued with the dressing plan as before with pain reduced and exudate managed effectively. The use of a skin protectant was included for additional protection.

Review 2 (+16 days):

- No pain was experienced during dressing wear time or upon removal.
- The wound demonstrated positive signs of healing and reduced to 1.5cm (length) x 0.5cm (width) x 1.5cm (depth) (Figure 2). The wound bed composed 95% granulation tissue and 5% epithelial tissue.
- Low exudate levels were reported, and the surrounding skin improved and was reported to be healthy, and BIOSORB Dressing with TIELLE ESSENTIAL Silicone Border Dressing was continued.

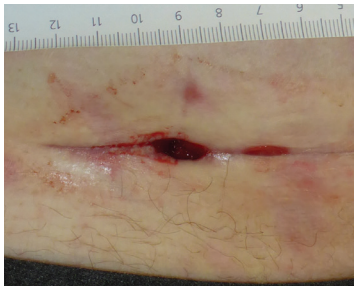


Figure 2: Review 2

Review 3 (+26 days):

- The wound bed composed 95% granulation tissue and 5% epithelial tissue.
- Low amounts of thin, clear consistency exudate continued to exude from the wound.

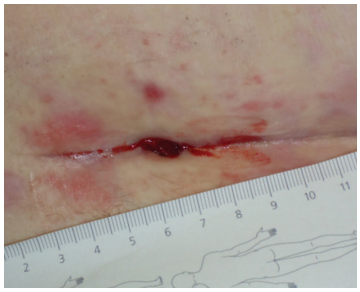


Figure 3: Review 3

Review 4 (+33 days):

- Wound measured 1cm (length) x 0.5cm (width).
- Dressing changes were performed two to three times a week, taking 10 minutes.
- Exudate levels continued to be low.

FINAL COMMENTS

The wound demonstrated positive healing during the 4-week period, with visible and recorded measurements supporting the move towards wound closure. The dressing was easy to use during removal and application, and absorbed exudate without leakage or maceration to the surrounding skin.

The patient was happy with the comfort of both BIOSORB Dressing and TIELLE ESSENTIAL Silicone Border Dressing (during wear time and removal and application) and that there was no exudate leakage. Having a pain-free dressing regimen that also allowed her to shower ensured she felt safe and clean to look after a newborn baby.

CASE 3: TIELLE™ Plus Hydropolymer Adhesive Dressing with LIQUALOCK™ Technology used for a highly exuding venous leg ulcer

Author: Liezl Naude, Independent Wound Management Consultant, Eloquent Health and Wellness, Pretoria, South Africa

INTRODUCTION

A 71-year-old male presented with a venous leg ulcer affecting the lateral (outer) aspect of his left lower leg, which had been present for over 4 months. He had an extensive medical history, and had previously undergone surgery for spinal fusion and joint replacements. He had kidney failure, which was being investigated. The patient's BMI was within normal range, and he lived a healthy lifestyle.

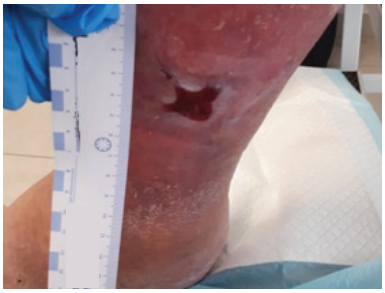


Figure 1: Baseline

The current dressing regimen for the venous leg ulcer was a wound cleansing soak, followed by a foam dressing with a permeable film dressing under compression. This regimen did not effectively handle exudate, resulting in strikethrough. The skin edges were painful and macerated. Wear time pain was scored at 5 on the VAS; and a higher pain score of 6 was experienced during dressing change. The average dressing time was 35–40 minutes, which was undertaken two to three times a week. The dressings did not remain *in situ*, which negatively impacted on the patient's lifestyle.

TIELLE™ Plus Hydropolymer Adhesive Dressing with LIQUALOCK™ Technology was selected for its high-fluid absorption capabilities to support positive healing outcomes. Additionally, the clinician hoped that effective exudate management would prevent further skin irritation.

Baseline:

- The venous leg ulcer measured 42mm (length) x 34mm (width) x 1mm (depth), and the wound bed consisted of 90% dark red granulation tissue and 10% epithelial tissue (Figure 1).
- High levels of thin odourous, yellow/brown haemopurulent exudate were present, which impacted on the patient's quality of life. The skin surrounding the wound was macerated, discoloured and inflamed.
- The leg was washed with soap and water and then soaked in a skin cleanser. An INADINE™ PVP-I Non-Adherent Dressing 5cm x 5cm dressing (iodine contact layer) was applied to the wound bed, followed by a TIELLE Plus Dressing 11cm x 11cm. Compression therapy was used to help address the underlying cause of venous leg ulceration. The new regimen was expected to have a wear time of 1 week.

Review 1 (+6 days):

- The wound had reduced in size to 35mm (length) x 28mm (width) (Figure 2), and the wound bed comprised 80% granulation tissue and 20% epithelial tissue.
- High exudate levels remained, with the same colour and consistency recorded. However, the odour had gone.
- The surrounding skin looked healthy and less macerated, as it was more protected with fluid locked away within the dressing.
- Removal of the dressing was pain-free, and dressing time had reduced to 30 minutes. There was also a reduction in pain during wear time (score of 4) compared to the previous dressing regimen.

Review 2 (+15 days):

- The wound bed measured 20mm (length) x 12mm (width), with 40% granulation tissue and 60% epithelial tissue in the wound bed (Figure 3).
- Exudate levels were moderate, and there was no leakage or strikethrough on the dressing.
- There were no signs of maceration to the surrounding skin
- Pain during wear time had further decreased (level 2), with no pain during dressing changes experienced.
- The clinician reduced the dressing size from 11cm x 11cm to a 7cm x 9cm dressing, and INADINE Dressing was continued in an infection-preventative capacity. Compression hosiery was also used. Dressing change was prescribed for one week.

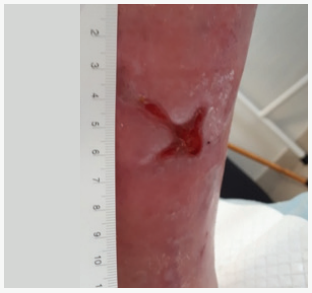


Figure 2: Review 1

Review 3 (+19 days):

- The wound bed comprised 30% granulation tissue and 70% epithelial tissue (Figure 4), and exudate levels were low.
- The surrounding skin remained healthy.
- Pain during wear time and at dressing change had resolved.

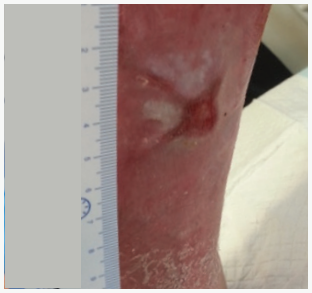


Figure 3: Review 2

Review 4 (+29 days):

- The wound size had reduced significantly to 3mm (length) x 2mm (width), with healthy surrounding skin. The wound bed itself comprised 2% granulation tissue and 98% epithelial tissue (Figure 5).
- Low levels of thin, clear serous exudate were present.
- TIELLE Plus Dressing was discontinued at the end of week 4 as positive and effective wound healing had been achieved.

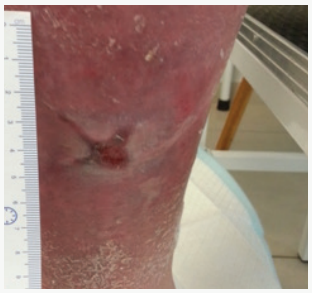


Figure 4: Review 3

FINAL COMMENTS

Healing was achieved on a chronic venous leg ulcer of over 4 months' duration within 4 weeks. Throughout the study, TIELLE Plus Dressing absorbed and locked away exudate without strikethrough or leakage, ensuring that maceration to the surrounding skin was prevented. Additionally, the positive fluid handling enabled dressing changes to occur only once a week (from two to three times a week), and the timing required to perform dressing changes reduced by approximately 30 minutes, from 35–40 minutes to 10 minutes.

The treatment regimen had also helped to reduce the pain the patient experienced during dressing changes compared to the previous dressing regimen.

The clinician was highly satisfied with the dressing as it was easy to use and remained *in situ*. The patient was extremely happy with both the comfort of the dressing and the fact there was no leakage under compression. The low profile of the dressing also supported the wearing of 'normal' work footwear.

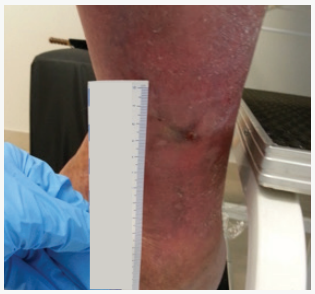


Figure 5: Review 4

CASE 4: TIELLE™ PHMB Non Adhesive Antimicrobial Foam Dressing used for a painful, poorly vascularised leg ulcer

Author: Alita Jaspar, MSc in Wound Healing & Tissue Repair, RN Expertise Centrum Woundzorg, The Netherlands

INTRODUCTION

A 74-year-old female presented with a venous leg ulcer to her right tibia that had been present for 7 years, for which she used to treat with a steroid cream only. No ankle brachial pulse index was available as the patient received home care and refused further hospital examination. The patient was also wheelchair bound.

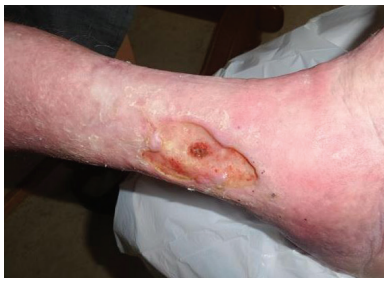


Figure 1: Baseline

Previous wound treatment comprised a silver sulfadiazine cream with a secondary absorbent dressing. Pain at both dressing wear time and during dressing changes was scored at 4, and, in view of pain and exudate levels, there were concerns about raised bioburden.

Because of the lack of progress with the previous regimen, the need to protect the vulnerable periwound area and the high-risk of infection, TIELLE™ PHMB Non Adhesive Antimicrobial Foam Dressing was selected as an alternative antimicrobial dressing. The atraumatic dressing was hoped to reduce trauma to vulnerable surrounding skin.

Baseline:

- The open ulcerated area was pale, not optimally vascularised and measured 5.3cm (length) x 3cm (width) (Figure 1). Varicose eczema surrounded the ulcerated area; which was treated with a steroid cream at each dressing change.
- The wound produced moderate levels of thin, yellow/brown exudate.
- The planned dressing regimen included cleansing of the wound according to local protocol, and the application of TIELLE PHMB Non Adhesive Dressing 10cm x 10cm and a light compression bandage. Dressing changes were planned for twice weekly.

Review 1 (+7 days):

- The wound size itself was slightly larger 7.7cm (length) x 3.5cm (width), and the granulation tissue was pale in colour (Figure 2).
- The moderate amounts of runny exudate were successfully managed with TIELLE PHMB Non Adhesive Dressing, with no strikethrough or leakage occurring through the dressing or bandage.
- The patient reported a dramatic reduction in pain; with no pain experienced during wear time of TIELLE PHMB Non Adhesive Dressing since the application of the previous dressing. The patient was also highly satisfied that wound pain at dressing change had also decreased to a score of 2 (from 4 at baseline).

Review 2 (+14 days):

- The wound had reduced in size slightly — 6.6cm (length) x 3.4cm (width) — and the wound continued to be less painful; the patient reported no pain since the application of the last dressing and a score of 2 at dressing change.
- The patient stated the new dressing regimen had led to improvements to her quality of life due to reduced leg pain.

Review 3 (+21 days):

- The wound remained a similar size, with the wound bed condition still reported as poorly vascularised. Exudate levels remained moderate.
- The patient reported to be pleased that the wound dressing did not adhere to the wound bed, which contributed to the low pain scores at dressing changes.

Review 4 (+28 days):

- The wound area remained unchanged (Figure 3), but the patient's pain levels had reduced significantly after 4 weeks' use, and so had the time of dressing changes (from 15 to 10 minutes).
- The surrounding skin was visibly improved, and the varicose eczema that surrounded the ulcerated area continued to be treated with steroid cream.

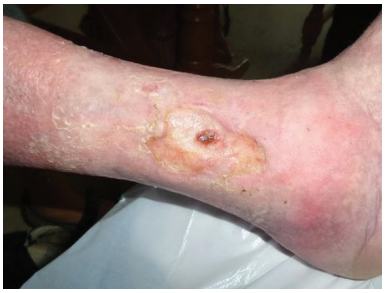


Figure 2: Review 1

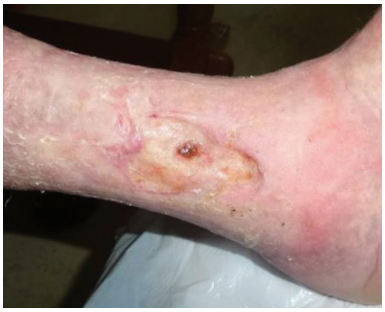


Figure 3: Review 4

FINAL COMMENTS

TIELLE PHMB Non Adhesive Dressing provided positive outcomes to this patient, namely a reduction in pain and the cessation of exudate leakage that improved her quality of life. TIELLE PHMB Non Adhesive Dressing did not adhere to the wound edges, ensuring dressing change was a pain-free experience, and neither did it cause trauma to the newly developing skin edges. The dressing was conformable to the wound, and was rated as excellent for fluid handling in this moderately exuding wound.

Even with poor vascularisation to the ulcer, no infection was noted over this 4-week period. TIELLE PHMB Non Adhesive Dressing provided an effective wound environment during wear time that supported pain-free management of a chronic 7-year-old venous leg ulcer, which had previously caused constant pain to the patient.

CASE 5: Surgical wound dehiscence managed with TIELLE™ Plus Hydropolymer Adhesive Dressing with LIQUALOCK™ with the aim to protect surrounding skin

Author: Helen Strapp, Tissue Viability Clinical Nurse Specialist, Tallaght Hospitals, Tallaght, Dublin, Republic of Ireland

INTRODUCTION

A 60-year-old woman had a surgical wound dehiscence, which developed a day after clips were removed following a cholecystectomy.

Initially, a gelling hydrofiber ribbon dressing was used as the primary dressing, which was secured with gauze and non-woven synthetic tape. However, this combination did not manage or absorb exudate efficiently, and the patient worried about leakage. The dressing was being changed every other day taking on average 10 minutes each time.

A week later, TIELLE™ Plus Hydropolymer Adhesive Dressing with LIQUALOCK™ was selected as the secondary dressing with the aim of effective exudate management. The hope was that this would allow the patient to shower and continue day-to-day activities.

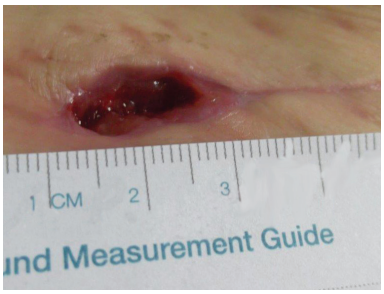


Figure 1: Review 2

Baseline:

- The area of surgical wound dehiscence measured 20mm (length) x 20mm (width) x 20mm (depth), and comprised 100% granulation tissue.
- High levels of thin, exudate were present, but the surrounding skin appeared healthy.
- The planned dressing regimen included wound irrigation using saline, packing as before with the ribbon cavity dressing, and the application of a TIELLE Plus Dressing 11cm x 11cm to the surrounding, dried skin. Dressing application continued to take 10 minutes.
- Initial thoughts from the patient and clinician were positive. The dressing was soft to the touch and easy to apply. Dressing changes were planned for two to three times a week.

Review 1 (+7 days):

- The wound had decreased in size and measured 10mm (length) x 15mm (width) x 10mm (depth), and there was undermining of 45mm.
- A moderate level of thin, serous exudate with no leakage was reported.
- The dressing stayed securely in place during wear and during showering, and was easy to remove using the water removal technique recommended by the manufacturer. Pain levels during both wear time and dressing change were reported to be low.
- The regimen was continued as above.

Review 2 (+14 days):

- The wound had reduced in size to 20mm (length) x 10mm (width) (Figure 1), and undermining had reduced by 5 mm. The wound bed still comprised 100% granulation.
- The surrounding skin was healthy, and the patient reported no pain and remained satisfied with the comfort of the dressing regimen during wear and removal.

- The dressing continued to be changed every 2–3 days due to increased exudate levels. The dressing remained *in situ* and there was no leakage or strikethrough despite increased exudate.

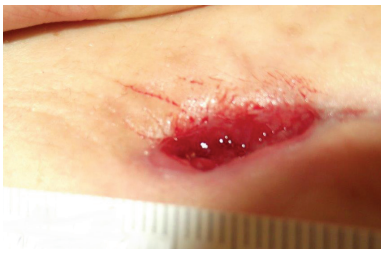


Figure 2: Review 4

Review 3 (+21 days):

- The wound size decreased further. The wound bed had a narrow granulating cavity, and wound bed tissue comprised 15% epithelial tissue and 85% granulation tissue. Exudate levels had decreased to moderate.
- TIELLE Plus Dressing had been comfortable to wear and remained securely *in situ*. Though the wound was slightly painful during dressing removal, there was no trauma, and there was no reported pain since the last change.

Review 4 (+30 days):

- The wound continued to heal and reduce in size, measuring 10mm (length) x 3mm (width), with 30mm undermining. The wound bed condition could not be identified due to the narrowing cavity but the wound appeared to be slowly filling up from the base, comprising 20% epithelial tissue and 80% granulation tissue.
- Thin, serous exudate levels remained moderate, but dressing changes reduced in frequency to twice a week.
- The patient reported a slight increase in pain since the last dressing change, likely due to the reduced size which was now harder to pack, but the patient's satisfaction with the overall treatment remained high.
- At dressing reapplication, a smaller TIELLE Plus Dressing was applied.

FINAL COMMENTS

By the end of the 4-week period, the slow-healing wound was improving and believed to be on a healing trajectory. Throughout the study, TIELLE Plus Dressing had provided excellent comfort to the patient and remained easy to apply and remove. It absorbed and handled the high exudate levels extremely well, preventing strikethrough and leakage, and maceration to the sensitive surrounding skin. Both clinician and patient were satisfied with the treatment regimen, and TIELLE Plus Dressing was continued.

CASE 6: TIELLE ESSENTIAL™ Silicone Border Silicone Adhesive Foam Dressing used on a surgical dehisced abdominal wound

Author: Liezl Naude, Independent Wound Management Consultant, Eloquent Health and Wellness, Pretoria, South Africa

INTRODUCTION

A 37-year-old female patient presented with a post-op suture line wound to the abdomen, with the umbilical area showing signs of dehiscence and possible necrosis. She had an emergency caesarean section in 2007, followed by another two caesareans in 2009 and 2012. At initial assessment, the wound had been present for 7 days since an incisional hernia repair and sterilisation, and a post-op occlusive dressing applied, which had been changed twice. The patient experienced an allergic reaction to this dressing, which also failed to remain securely attached due to exudate leakage.

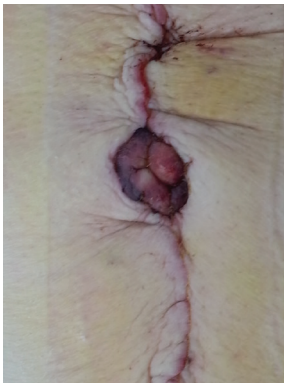


Figure 1. Baseline

A TIELLE ESSENTIAL™ Silicone Border Silicone Adhesive Foam Dressing was selected to help protect surrounding skin and prevent further tissue breakdown and dehiscence around the umbilicus. The gentle adhesive on the dressing was hoped to help reduce pain and trauma during dressing change.

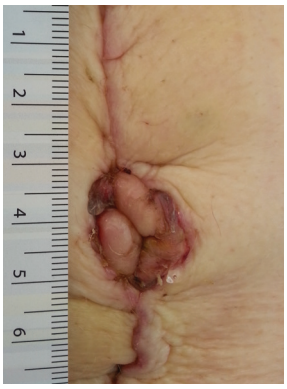


Figure 2. Review 2

Baseline:

- The wound measured 1.6cm (length) x 1.8cm (width) x 0.3cm (depth). It comprised 70% epithelial tissue, 25% necrotic tissue and 5% granulation tissue (Figure 1). There was a moderate level of haemopurulent exudate, with inflammation of the surrounding skin. The patient reported the wound was painful (score of 6).
- The wound site was cleaned according to local protocol, and TIELLE ESSENTIAL Silicone Border Dressing 10cm x 20cm was applied. The patient was advised to continue wearing a hernia support belt, and dressing changes were planned for twice a week.

Review 1 (+2 days):

- The wound measured 1.6cm (length) x 1.5cm (width) x 0.2cm (depth), comprising 90% epithelial tissue, 5% granulation tissue and 5% necrotic tissue. There was improved epithelial and granulation tissue, with small areas of necrosis. Purulent exudate levels remained moderate.
- There had been substantial improvement to the surrounding skin, which was no longer inflamed.
- Treatment with TIELLE ESSENTIAL Silicone Border Dressing continued as before in order to protect compromised tissue and promote healing. The patient was advised to continue wearing a hernia support belt.

Review 2 (+ 7 days):

- The wound measured 1.2cm (length) x 1.3cm (width), and depth had resolved (Figure 2). The wound comprised 98% epithelial tissue and 2% granulation tissue, with low levels of serous exudate and no signs of infection.

- The dressing remained *in situ* and was not painful to the patient on removal. Patient comfort and ability to handle exudate were both excellent. TIELLE ESSENTIAL Silicone Border Dressing was reapplied as before to protect fragile tissue and promote final closure with minimal scarring. The patient was advised to wear the hernia support belt and change the dressing at home as required.

Review 3 (+21 days):

- The wound had healed, comprising 100% healthy epithelialised tissue with no evidence of exudate (Figure 3).
- The reconstructive surgeon was very pleased with the healed wound and wished to use the dressing as standard post-op protocol. Using TIELLE ESSENTIAL Silicone Border Dressing prevented further wound dehiscence and significantly decreased the level of pain.

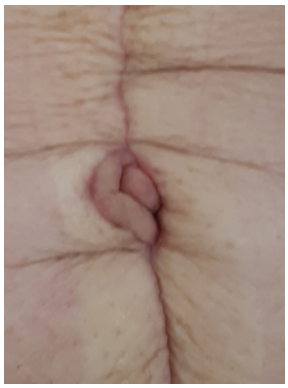


Figure 3: Review 3

FINAL COMMENTS

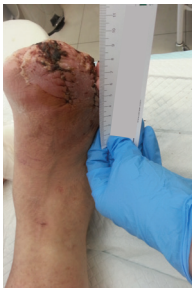
The wound healed completely in 4 weeks. The clinician reported that TIELLE ESSENTIAL Silicone Border Dressing provided a gentle adhesive dressing that was 'excellent' at protecting surrounding skin, promoting healing and preventing any further tissue breakdown. The dressing absorbed exudate, stopping leakage or strikethrough to occur. The dressing remained *in situ* and attached to the skin during use. The patient reported TIELLE ESSENTIAL Silicone Border Dressing was comfortable to wear, and easy and pain free to remove, as she could do it at home herself. The patient recommended the dressing to her surgeon and GP.

CASE 7: TIELLE™ Plus Heel Hydropolymer Adhesive Dressing with LIQUALOCK™ Technology used for a highly exuding post-amputation wound

Author: Liezl Naude, Independent Wound Management Consultant, Eloquent Health and Wellness, Pretoria, South Africa

INTRODUCTION

A 60-year-old female patient had a diabetic foot ulcer on her forefoot that had been present for 3 years before amputation. She had type 1 diabetes and related comorbidities and had a history of previous amputations with recurrent infections.



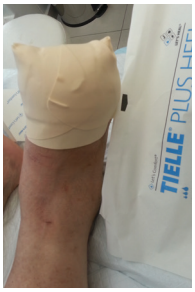


Figure 1: Baseline

One week after amputation, the wound had some necrotic tissue. Due to her previous history, there was a high risk of further infection. The previous dressing regimen failed to remain attached during wear, was painful on removal and did not manage exudate effectively as there was often leakage and strikethrough on the dressing. An antimicrobial dressing (INADINE™ PVP-I Non-Adherent Dressing) was selected as the primary dressing, and TIELLE™ Plus Heel Hydropolymer Adhesive Dressing with LIQUALOCK™ Technology was chosen to manage the high exudate levels, prevent dressing adherence and progress the wound to healing.

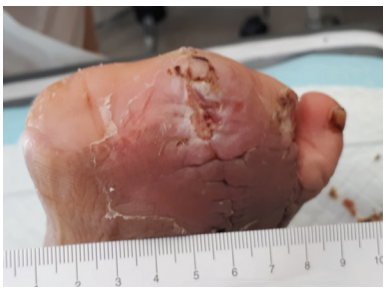


Figure 2: Review 1

Baseline:

- The wound measured 72mm (length) x 25mm (width) x 3mm (depth) (Figure 1). It comprised 60% necrotic tissue, 30% granulation tissue and 10% slough. The wound was painful (score of 7), and the surrounding skin was inflamed and there was a high risk of infection.
- The wound was cleansed according to local protocol and prepared using sharp debridement. INADINE Dressing was selected as the primary dressing and TIELLE Plus Dressing was applied as a secondary dressing. Dressing changes were planned for twice a week and the patient was advised to elevate their limb when seated and keep the dressing in place until the next visit.

Review 1 (+3 days):

- The wound measured 40mm (length) x 13mm (width) x 3mm (depth), comprising 50% epithelial tissue, 30% granulation tissue and 20% slough (Figure 2). There was increased healthy granulation tissue and the necrotic tissue was easy to debride.
- TIELLE Plus Dressing was easily removed using the water removal technique as recommended by the manufacturer, and INADINE Dressing and TIELLE Plus Dressing were continued in order to absorb exudate and prevent dressing adherence. The patient was provided with a post-op shoe.

Review 2 (+7 days) :

- The wound had reduced in size to 22mm (length) x 6mm (width) x 1mm (depth), and the wound bed now comprised 90% epithelial tissue and 10% granulation tissue, with low levels of haemopurulent exudate. The signs of infection (inflammation, pain) had resolved.
- The dressing conformed well to the wound bed, and was well-shaped to cover the anatomical shape of the amputated foot.
- The water removal technique was used for removal of TIELLE Plus Dressing, which made it easier to remove and less painful for the patient. The wound was cleansed according to local protocol and sharp debridement was no longer necessary.

- The patient reported they were able to start wearing their own shoes, which was a sign of progress. The dressing regimen as described above was continued to protect the amputation site and provide the patient with comfort.

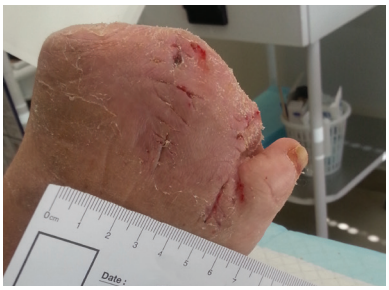


Figure 3: Review 3

Review 3 (+17 days):

- The wound had dramatically reduced in size — 5mm (length) x 3mm (width) — and was 95% epithelial tissue and 5% granulation tissue. The surrounding skin was healthy with no more signs of inflammation or oedema (Figure 3). Serosanguinous exudate levels were low, with no strikethrough or leakage from the dressing.
- TIELLE Plus Dressing was continued at the patient's request to safeguard the amputation site. The wound bed was prepared using sharp debridement to remove all senescent cells, and a barrier cream applied to dry skin.

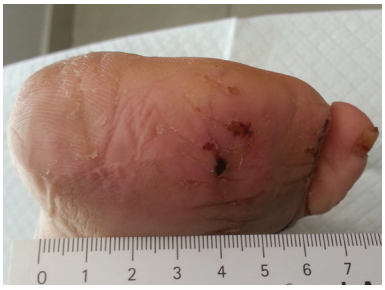


Figure 4: Review 4

Review 4 (+22 days):

- Wound size had reduced to 3mm (length) x 2mm (width), and the wound comprised 100% epithelial tissue, with a small superficial scab covering the wound. The patient no longer had any pain and the surrounding skin was healthy (Figure 4).
- The dressing continued to conform well to the wound bed and remained attached even when showering. The patient was provided with new orthotics and shoes and advised to inspect both feet daily.

FINAL COMMENTS

The clinician commented that the overall progress of the wound during the study period was much faster than anticipated, especially with regards to the patient's medical history. Both the patient and clinician reported that TIELLE Plus Heel Dressing was excellent at handling exudate, conformed well to the wound bed and could be easily removed using the water removal technique, reducing the amount of pain the patient experienced during dressing changes.

The patient found TIELLE Plus Dressing to be very comfortable during wear time and was pleased that she was able to shower and wear shoes, allowing her to carry out her usual day-to-day activity. TIELLE Plus Dressing was an excellent choice for the anatomical shape of the foot, and the INADINE Dressing was effective in managing the bacterial load and reducing signs of infection.

CASE 8: TIELLE ESSENTIAL™ Silicone Border Silicone Adhesive Foam Dressing used for an extensive, high exuding painful leg ulcer

Author: Alita Jaspar, MSc in Wound Healing & Tissue Repair, RN Expertise Centrum Woundzorg, The Netherlands

INTRODUCTION

A 94-year-old female patient presented in the outpatients clinic with a leg ulcer following trauma and bruising to the area. As a result, a heamotoma developed under the skin as the patient was using anticoagulants. The patient had venous insufficiency and heart failure, and as such had a pacemaker.

The patient had an extensive leg ulcer at the back of her leg, which had developed 4 weeks prior to the initial clinic review. The wound had been dressed with an alginate dressing and an absorbent dressing. Light bandaging was used to secure the primary dressings, as the patient could not tolerate high compression due to pain (score of 8). In addition, poor exudate management and leakage from the previous dressing regimen was causing irritation to the vulnerable surrounding skin, which appeared macerated.

The patient required a dressing that would promote comfort to the patient, particularly at dressing changes and prevent further damage to the surrounding skin. TIELLE ESSENTIAL™ Silicone Border Silicone Adhesive Foam Dressing was selected to reduce patient distress and protect the fragile and sensitive skin.

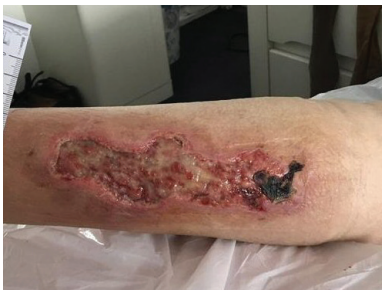


Figure 1: Baseline

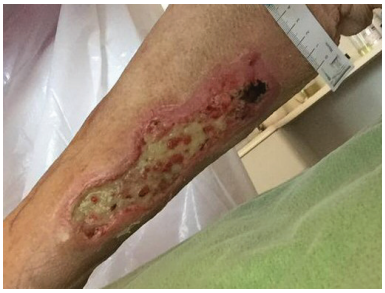


Figure 2: Review 1

Baseline:

- The wound measured 14.4cm (length) x 3.5cm (width) x 0.5cm (depth), and the wound bed comprised 60% slough, 20% necrotic tissue and 20% granulating tissue (Figure 1).
- Wound exudate was of thin, yellow/brown purulent consistency and was causing irritation to the surrounding skin. An odour was noted.
- The patient experienced high levels of pain, both during dressing change (score of 8) and during wear time of the dressing (score of 5).
- The clinician noted no infection appeared to be present but felt it prudent to use an antimicrobial cleansing agent according to local protocol prior to dressing application. TIELLE ESSENTIAL Silicone Border Dressing 15cm x 15cm was applied and secured with very low compression therapy with a tubular bandage. Dressing changes were planned for every three days.

Review 1 (+2 days):

- The wound had reduced slightly in size — 14.2cm (length) x 3.4cm (width) x 0.5cm (depth). The wound bed was less necrotic (10%), and composed more granulation tissue (30%). The level of slough remained the same (Figure 2).
- Thin, yellow/brown, fibrinous exudate was of a moderate level and the malodour had resolved. There was a small amount of leakage at the base of the dressing.
- The surrounding skin was still macerated; however, pain at dressing change and pain during wear time had both reduced to a score of 4.
- The wound care plan remained unchanged due to positive wound progression so far observed and the reduction in dressing changes, pain and exudate leakage.

Review 2 (+5 days):

- The wound measured 13.5cm (length) x 3.5cm (width) x 0.3cm (depth). The wound bed had an increase in granulation tissue (40%) and there was now no necrotic tissue (Figure 3).
- No leakage or strikethrough occurred; with the wound remaining free from odour.
- Surrounding skin was no longer macerated. There was no pain at dressing change, and pain was recorded at 3 out of 10 during wear time.

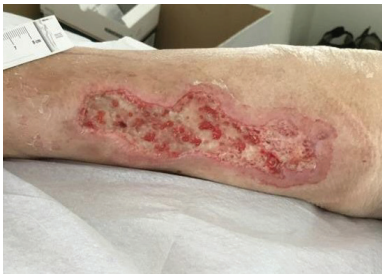


Figure 3: Review 2

Review 3 (+11 days):

- Progress continued with wound reducing in size — 13.1cm (length) x 3.2cm (width) x 0.3cm (depth) (Figure 4) and comprised 70% granulation tissue and 30% slough.
- Pain remained low during wear time (score of 3), and dressing changes were easy to do and pain free.

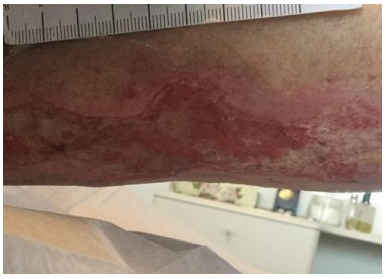


Figure 4: Review 3

Review 4 (+15 days):

- The wound had further reduced in size — 12.8cm (length) x 2.7cm (width) x 0.3cm (depth) (Figure 5). The wound bed comprised 90% granulation tissue and 10% slough, and the wound edges had begun to epithelialise.
- The effective fluid handling capacity of TIELLE ESSENTIAL Silicone Border Dressing continued to ensure no recorded leakage or strikethrough occurred.
- The dressing had not required changing since the last review 4 days ago. Dressing change was painless and atraumatic. Pain during wear time was now recorded as a score of 2.

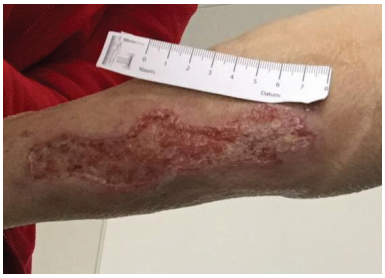


Figure 5: Review 4

FINAL COMMENTS

Both the patient and the clinician were highly satisfied with TIELLE ESSENTIAL Silicone Border Dressing. Wear time, ease of application and removal and pain and comfort were consistently rated as very good. These positive outcomes were summarised by the patient, who stated the reduction in pain, reduction in dressing leakage and fewer dressing changes resulted in an improvement to her quality of life.

Pain management is essential to support positive healing outcomes from both a physical and psychological aspect. The ease of removal of the dressing ensured no further damage occurred to the wound bed or surrounding skin, promoting a healthier periwound area.

CASE 9: TIELLE™ PHMB Border Antimicrobial Adhesive Foam Dressing used for a highly exuding ulcer on the the right lower leg displaying signs of infection

Author: Liezl Naude, Independent Wound Management Consultant, Eloquent Health and Wellness, Pretoria, South Africa

INTRODUCTION

A 67-year-old female patient presented with a right lower leg ulcer of mixed aetiology that had been present for the past 3 years. An ankle brachial pulse index (ABPI) of 0.7 indicated that compression therapy was contraindicated, making a mixed aetiology ulcer a challenge to treat. The wound was also suspected to be infected or at risk of infection.

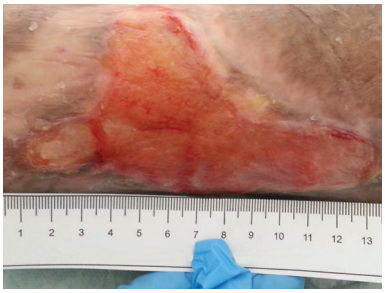


Figure 1: Baseline

The treatment plan prior had involved wound cleansing and mechanical debridement with a pad. A honey dressing was applied and a highly absorbent, secondary dressing used under moderate compression bandaging. The dressing was changed once or twice a week and took 45–60 minutes to perform.

The wound had stalled and was odourous, so TIELLE™ PHMB Border Antimicrobial Adhesive Foam Dressing was selected with the aim to reduce the signs and symptoms of infection, and therefore reduce pain and exudate levels.

Baseline:

- The mixed aetiology leg ulcer measured 125mm (length) x 82mm (width) x 3mm (depth) (Figure 1). The wound bed comprised 20% epithelial tissue, 50% pale granulation tissue and 20% slough. There was a layer of fibrin covering the wound bed.
- The leg ulcer produced high levels of exudate with an unpleasant offensive odour, indicative of infection. Exudate was thin, purulent and yellow/brown in colour, and often leaked through the dressing and the securing bandages. The wound was painful during dressing change and between dressing changes (4 on the VAS scale for both).
- The planned dressing regimen was to cleanse and irrigate the wound according to local protocol, and TIELLE PHMB Border Dressing 15cm x 15cm was applied and covered with a bandage. The dressing regimen was to be used for 2 weeks as part of a 2-week antimicrobial challenge. Dressings were changed twice a week by the patient.

Review 1 (+7 days):

- The dressing change took 30 minutes for the patient to complete and was easy to do and pain free. Wound pain while wearing the dressing decreased to a score of 2 (from 4).
- As the patient did the dressings herself, no wound measurements were recorded; however, exudate levels reduced slightly while exudate type and consistency remained unchanged.
- The signs of infection had also reduced as no slough was visible in the wound bed, and odour had also reduced.
- Due to positive outcomes achieved in the first week, the same treatment regimen was planned for the next week.

Review 2 (+14 days):

- The wound measured 110mm (length) x 62mm (width) x 2mm (depth), and the wound bed comprised 35% epithelial tissue, 60% healthy granulation tissue and 5% slough (Figure 2).
- Clinical signs of infection had resolved, yet haemoserous exudate levels remained high. The condition of the surrounding skin had greatly improved and was now described as healthy by the clinician.
- The patient was highly satisfied with the treatment, reporting an improvement to her quality of life by reducing wound pain and odour, and allowing her to feel more comfortable while out with friends and family.
- Following positive improvements to the wound after 2 weeks of TIELLE PHMB Border Dressing use, the patient was moved onto standard care. TIELLE™ Plus Hydropolymer Adhesive Dressing with LIQUALOCK™ Technology was selected to ensure exudate was absorbed and locked away from the skin and wound.

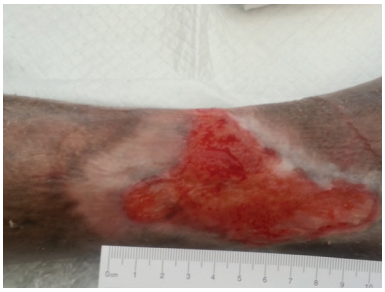


Figure 2: Review 2

FINAL COMMENTS

The wound continued to reduce in size following use of TIELLE Plus Dressing, demonstrating a safe and effective wound environment to support moist wound healing. This wound had been odourous, highly exuding and painful, and the use of TIELLE PHMB Border Dressing appeared to resolve the clinical signs of infection. The patient found both dressings very comfortable to wear, easy to use and pain free at dressing changes. The clinician reported that both TIELLE PHMB Border Dressing and TIELLE Plus Dressing managed exudate very well and conformed to the wound.

CASE 10: TIELLE™ Plus Hydropolymer Adhesive Dressing with LIQUALOCK™ Technology provides effective management of a heavily exuding wound close to a colostomy

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INTRODUCTION

A 45-year-old male patient with ulcerative colitis underwent major abdominal surgery (perineal protectomy and laparoscopic colectomy with open protectomy and closure of open fistula), resulting in the formation of a colostomy. He presented with two surgical dehiscence open wounds along the suture line, requiring dressing. The patient also has ankylosing spondylitis, a long-term, chronic condition where the spine and other areas of the body become inflamed.

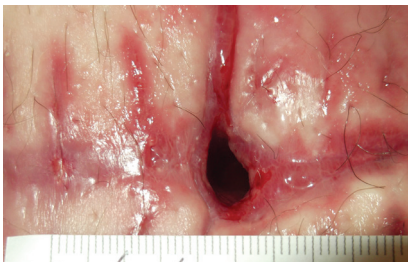

Figure 1: Review 1

The previous dressing regimen had involved daily use of an absorbent ribbon dressing to pack the wound, secured with gauze and an adhesive dressing, but exudate leakage was occurring. The copious exudate levels were staining clothes and bed linen and the patient was fearful of going out in case the wound leaked, restricting his daily activities. A barrier film was used to protect the surrounding skin, which was red and intact but irritated. Achieving good wound dressing adherence was difficult due to the close proximity of the wound to the patient's colostomy bag.

TIELLE™ Plus Hydropolymer Adhesive Dressing with LIQUALOCK™ Technology was selected to support healing, manage exudate and provide a more secure dressing option that would cope with the additional stresses caused by the proximity of the colostomy bag.

Baseline:

- Both abdominal surgical wounds were noted to be healthy with 100% granulation tissue. The central wound dehiscence measured 10mm (length) x 10mm (width) x 50mm (depth), and was the focus of this case report.
- The wound produced high levels of thin, yellow/brown serous exudate. Exudate strikethrough occured daily, which impacted on the patient's quality of life. The wound was odour free, with no signs of infection.
- The skin surrounding the wound was inflamed. Pain at dressing wear time and dressing change were scored at 3.
- The wound was cleansed with saline and packed with an absorbent cavity dressing. The surrounding skin was treated with a skin barrier film and TIELLE Plus Dressing 15cm x 20cm was applied.

Review 1 (+5 days):

- The wound still had 100% granulation tissue (Figure 1), and the surrounding tissue appeared inflammed but healthy.
- TIELLE Plus Dressing remained securely attached during wear time, and removal was easy using the water removal technique (as per manufacturer's instructions).
- Wound pain at both dressing change and during wear decreased to a score of 2 (from 3).
- Though high levels of exudate remained, the new regimen using TIELLE Plus Dressing was more successful in the management of exudate compared to the previous regimen as no leakage, strikethrough or soiling of bed linen occurred. An improvement in the patient's quality of life was noted.

Review 2 (+12 days):

- Wound measurements remained unchanged but overall improvements to the wound was observed, with the surrounding skin looking healthy (Figure 2).
- There was a notable reduction in exudate levels, with no strikethrough or leakage. The patient felt happier that this dressing regimen was successfully managing exudate levels.
- The level of pain experienced remained constant (scored as 2) but an increase (from 2 to 3) was noted during one dressing change when the colostomy bag was also changed. The colostomy change may have added to the pain as the skin around the stoma was red and sensitive.

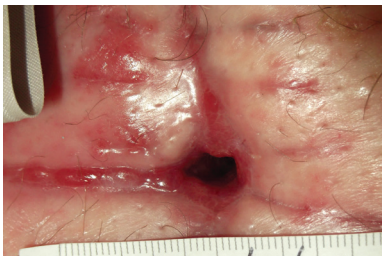

Figure 2: Review 2

Review 3 (+19 days):

- Positive signs of healing were observed from the wound base and edges, with the width now measuring 6mm and the depth of the wound also reducing. Epithelial tissue was now developing at the wound edges.
- Moderate amounts of thin, clear exudate continued, but the dressing absorbed the exudate with no strikethrough or leakage.
- The surrounding skin remained healthy and the patient reported excellent comfort.

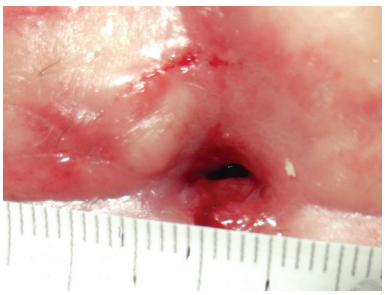

Figure 3: Review 4

Review 4 (+26 days):

- Wound size had further reduced now measuring 5mm (length) x 5mm (width) x 40mm (depth) (Figure 3). The cavity wound was difficult to observe due to effective healing, but the visible area of the wound bed was 50% epithelial tissue.
- Production of a moderate amount of clear serous exudate levels continued, but the patient reported being highly satisfied with the treatment and the dressing's fluid handling capabilities.
- Dressing time had reduced from 20 to 15 minutes per dressing, which was beneficial to the clinician and patient, providing comfort, encouraging moist wound healing and minimising risk of infection.

FINAL COMMENTS

The wound demonstrated positive healing over 4 weeks, closing by secondary intention with visible and recorded measurements supporting wound closure. The dressing was easy to apply and remove, and absorbed exudate without leakage or maceration to the surrounding skin. No irritation occurred to surrounding skin and the dressing stayed *in situ* despite moisture challenges and adherence challenges in view of the close proximity to a colostomy.

The patient was happy that the dressing was comfortable during wear time and removal and application, and that there was no exudate leakage. Successful and effective exudate management was crucial to the patient's quality of life to ensure day-to-day tasks, such as going out, could be undertaken without fear of leaking wound exudate.

NOTES

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