

Coloplast Case Report Challenge Booklet

2020



Introduction

What makes Coloplast special is our willingness to listen to the people who use our products, and act on what we learn. By listening, we gain a better understanding of the challenges healthcare professionals face when caring for wounds, and of new ways to improve quality of life for patients living with wounds.

We recognise that caring for wounds and skin can be a complex and uncertain process. Through the Coloplast Case Report Challenge, we want to acknowledge the important work of healthcare professionals working with wounds. The Case Report Challenge is a global call to healthcare professionals to submit challenging wound care cases and to share their dedication to wound care with fellow healthcare professionals and experts within in the field. This initiative is part of our ongoing dedication to share deeper knowledge and guidance to support the continuous professional development of healthcare professionals working within woundcare.

In this case report booklet, you will find selected case reports submitted as part of the Coloplast Case Report Challenge 2018. The products used in this booklet are not limited to the specific wound types and can be used in a broad range of wound types according to the Instructions for use. The intention of this booklet is to share best practices and to inspire the continuous work of healthcare professionals working with wounds.

Together, we are united by a shared purpose and passion to achieve ***Fewer days with wounds.***

Table of contents

Page	Name of healthcare professionals	Wound type treated	Products used
04	<i>Ella Luttrell</i>	Traumatic Wound	Biatain® Silicone
06	<i>Giovanni Romboli</i>	Intertrigo	InterDry®
08	<i>Jingnan Wang</i>	Deep Tissue Pressure Injury	Biatain® Alginate Ag and Biatain® Foam
10	<i>Judith Harford</i>	Venous Leg Ulcer	Biatain® Silicone
12	<i>Lucy Palmer</i>	Skin Tear	Biatain® Silicone Lite
14	<i>Lucy Palmer</i>	Chronic Toe Ulcer	Biatain® Silicone Ag
16	<i>Mariana Takahashi</i>	Pressure Ulcer	Biatain® Silicone
18	<i>Mariana Takahashi</i>	Surgical Wound	Biatain® Silicone
20	<i>Melanie Bohn</i>	Lower Leg Ulcer	Biatain® Silicone and Biatain® Silicone Lite
22	<i>Sue Durrant</i>	Venous Leg Ulcer	Biatain® Ibu Soft Hold
24	<i>Tshidi Mbonani</i>	Burn Injury	Biatain® Silicone Ag
26	<i>Yu Qian</i>	Venous Leg Ulcer	Biatain® Alginate Ag

Managing and treating a high risk traumatic wound with Biatain® Silicone

Ella Luttrell, Tissue Viability Nurse/Registered Nurse,
Canberra Hospital and Health Services, Australia

Introduction

Compound fractures with concomitant wounds have a yearly incident rate of 30.7 per 100,000 adult persons.¹ The traumatic disruption of soft tissue structures are categorised using the Gustilo-Anderson classification system which guides intervention and management processes.¹ Surgical intervention during the initial stages of injury is prioritised to minimise infection risk and increase healing opportunities and outcomes.²

Post surgical intervention, the typical challenges in managing these types of wounds include managing the patients comorbidities and the potential risk of infection at the wound site. At Canberra Hospital, best practice in managing orthopaedic surgical wounds, is to apply primary surgical dressings in the operating theatre and they are generally not removed for the first 14 days to minimise contamination risk. If a wound is highly exuding, a pressure dressing is applied over the primary dressing. When healing is evident, sutures/staples are removed day 14 post surgery.

Patient

The patient is a 64 year old female who was admitted to the hospital after falling at home. Medical history includes chronic bilateral lower limb lymphedema, chronic bilateral heel pressure injuries, anaemia, type two diabetes mellitus, chronic kidney disease, ischaemic heart disease, right Charcot foot, peripheral neuropathy, left 2nd toe and right 5th toe amputations, high BMI, hypertension, hyperlipidaemia and MRSA from infected intravenous cannular. Patient is an ex smoker with modest intake of alcohol. The patient has had multiple long-stay rehabilitation admissions with previous attendance to ophthalmology, endocrinology, vascular and podiatry outpatient clinics. The patient receives medication for comorbidities stated above.

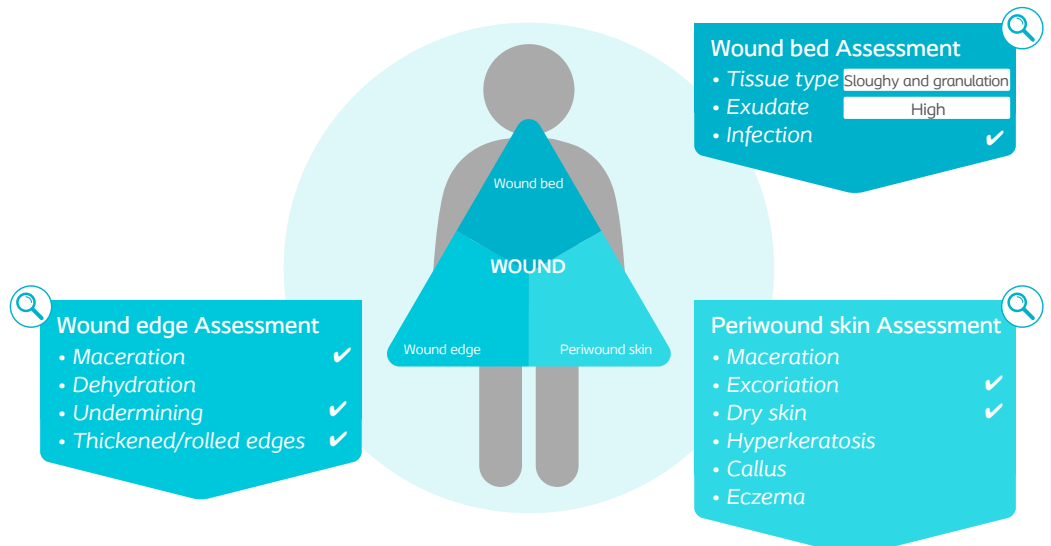
As a result of the fall, the patient sustained a left open bimalleolar fracture with an open wound located proximal to the medial malleolus. The patient went to the operating theatre for the application of external fixation, wound debridement, irrigation and surgical closure to heal by primary intent. The closed linear wound measured 11cm in length with an additional 1.7cm closure located distally at the left lateral aspect of the wound.

Compression dressings could not be applied due to the presence of external fixation. The patient disliked having daily dressing changes as increased pain occurred with dressing changes. The previously used dressings reacted with the periwound skin and caused epidermal stripping at removal.

Initial wound assessment - Day 0



Size of wound
Length **110** mm
Width **17** mm
Depth **0** mm



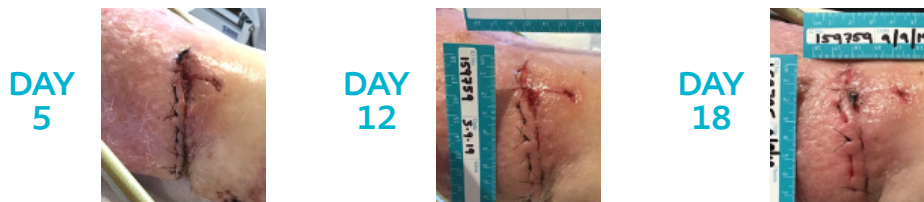
References
1. Gumbel, D., Matthes, G., Napp, M., Lange, J., Hinz, P., Spitzmüller, R., & Ekernkamp, A. (2016). Current management of open fractures: Results from an online survey. Archives of Orthopaedic and Trauma Surgery, 136(12), 1663-1672. doi:10.1007/s00402-016-2566-x 2. Mangala, A., Arthi, K., & Deepa, R. (2018). Comparison of pre debridement and debridement cultures in predicting postoperative infections in compound fractures. Journal of Clinical and Diagnostic Research, 12(7), 6-9. doi:10.7860/JCDR/2018/36011.11735 3. Meinberg, E. G., Clark, D., Mclau, K. R., Marcucio, R. & Mclau, T. (2019). Fracture repair in the elderly: clinical and experimental conditions. Injury, 50(1), 62-65. https://doi.org/10.1016/j.injury.2019.05.005

Treatment

The acute wound was initially assessed six days post surgical closure and the previous dressing was a gelling fiber and a post operative film combination with daily dressing changes to manage high exudate levels and minimise wound edge maceration. The primary post operative dressing used was Biatain® Silicone (12.5 x 12.5 cm). This product size was selected as it provided complete coverage over the 11cm x 1.7cm wound and optimised the wound healing environment. As compression could not be applied in the presence of external fixators the wound continuously produced medium levels of serous exudate. Biatain Silicone was therefore selected as the optimal solution. Additionally, the periwound skin was excoriated due to previous reaction to a glue based product and had an extensive amount of erythema and oedema present. Biatain Silicone was selected as the silicone adhesive layer minimises epidermal stripping on removal and provides a flexible and secure fit, minimising frequency of dressing changes and risk of periwound deterioration. Prior to reapplication of the dressing, the wound was cleansed with an antimicrobial cleansing solution for 15 to minimise potential bacterial burden. Moisturiser cream was applied to the peri wound skin and lower limb twice daily to assist with rehydration of the skin.

Results

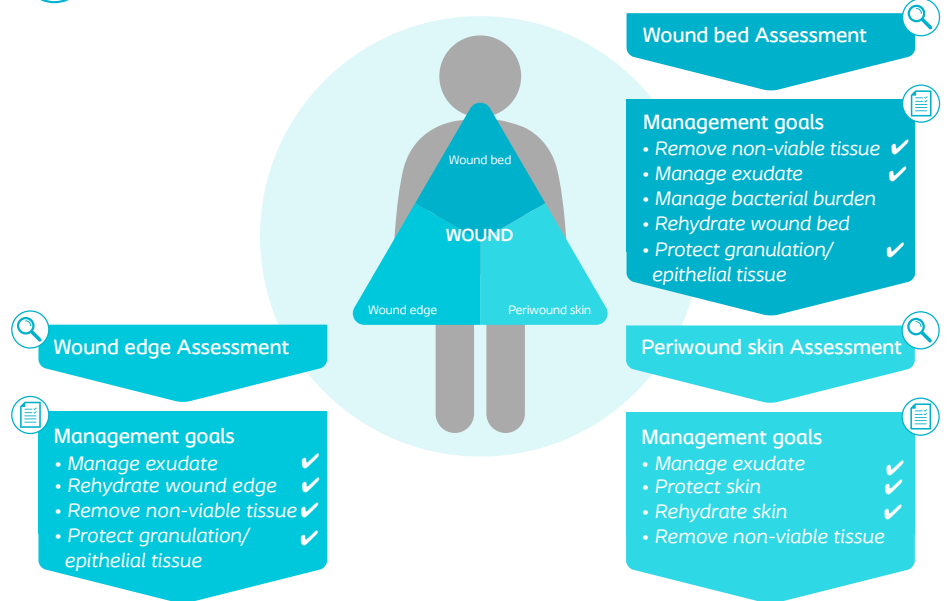
Following 18 days of treatment with the Biatain Silicone, findings concluded significant improvement of the wound bed, wound edge and periwound skin. The opening measured 3cm x 1cm on day 5 and improved to 1cm x 0.5cm by day 18. The wound depth was notably reduced, from 2mm initially to 0mm on the final assessment. A significant reduction in wound bed size was noted with evidence of epithelialisation tissue to the lateral aspects. On day 18, 50% of the wound bed noted to be 100% granulation tissue, whilst a superficial haemoserous crust covered the remaining 50%. Prior to dressing removal on day 5, the Biatain foam dressing was observed at approximately 75% full of serous exudate. In comparison, the dressing was approximately 25% full prior to removal on day 18. Therefore, healing was apparent as serous exudate levels had decreased and nil signs of infection were present on final review. The viability of wound edges had significantly improved during treatment. By day 5, the excess exudate had been locked away into the dressing and removed from the wound edge. Maceration was no longer present, while wound healing and controlled moisture levels encouraged growth of epithelial tissue to the wound edge. Additionally, multiple areas of the wound edge unionisation was observed at the right lateral aspect of the surgical closure on day 18. Due to this, partial removal of sutures was possible. Improvement of the periwound skin was evident and no signs of skin injury were observed. Excoriation and epidermal stripping had resolved and surrounding erythema minimised on day 18.



Conclusion

Using a Biatain Silicone dressing in this case successfully protected against the side effects of lymphedema as it controlled levels of exudate. The dressing was beneficial and safe to use on already fragile and excoriated periwound skin as it did not aggravate these conditions or cause medical adhesive related skin injuries. The patient provided consistent feedback, stating that the dressing was highly comfortable, secure and did not irritate the skin throughout the length of wear. Overall, the patient expressed her appreciation for less frequent dressing changes, increased comfort on application and removal. On final review, the patient was shown a comparison of photographs and stated, 'This is incredible, I never imagined that my leg would heal this quickly'. Using the Triangle of Wound Assessment and assessing all three areas of the wound enabled a holistic and thorough approach to managing and healing the acute wound. Regular re-assessment provided continuity of care and an opportunity to change treatment if appropriate. This framework helped to identify the most appropriate product for the patient and wound. This product significantly improved the overall outcome, ultimately preventing skin breakdown and development of a chronic wound, whilst optimising patient well being.

Management goals



Treatment & management of intertrigo using InterDry®

Author: Giovanni Romboli, Nurse with Master's Degree in Wound Care, Livorno Hospital, Italy

Patient

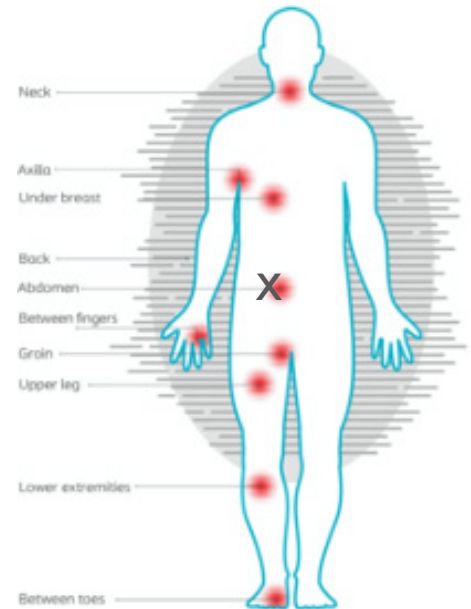
The patient is a 54-year-old male with a weight of 150 kg and a BMI of 46. Related pathologies: diabetes mellitus type II, limited mobility
Status: diabetic, right lower leg was amputated 5 years ago (2014) and now uses a leg prosthesis.

Intertrigo is very frequent in overweight and people with diabetes, especially in the summertime due to the high temperatures and humidity. In this case the affected area was the right abdominal fold. The inflammatory process increased due to the rubbing between the two skin folds, injuring the epidermis and creating a fertile ground for microbial infections. These are almost always the consequence of, but not the cause of the intertrigo.

Pain experienced:

Mark level of pain on the numeric pain rating scale below:

0-10 Numeric Pain Rating Scale



Initial skin assessment



Note what is observed on assessment of the skin, such as:

Erythema	<input type="checkbox"/> Clear of redness	<input type="checkbox"/> Slight pink
	<input type="checkbox"/> Moderate redness	<input checked="" type="checkbox"/> Severe ("Fire engine red")
Maceration	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Itching/burning	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Denudement	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Satellite lesions	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Odour	<input type="checkbox"/> No unpleasant smell	<input type="checkbox"/> Minimal (barely noticeable)
	<input type="checkbox"/> Strong (intolerable)	<input checked="" type="checkbox"/> Moderate (noticeable, but tolerable)



Management goals

Skin damage with erythema and redness was observed. Burning and itching was constantly present. In addition to the pain, a bad odour was noted at the beginning of skin management, which could indicate colonisation of bacteria or yeast.

The excess moisture led to cutaneous maceration and therefore the management goal was to eliminate excess moisture and reduce skin to skin friction.

Treatment

The treatment choice was to use InterDry®. Fabric changes were carried out every 5 days. Cleansing the affected area between fabric changes was done with sodium hypochlorite and a saline solution.

The InterDry roll was cut to the following size: 16 cm x 25 cm and was shaped to fit into the skin fold while leaving 5 cm outside of the affected area to help facilitate moisture wicking away from the affected area.

Results

Erythema	<input type="checkbox"/> Clear of redness	<input checked="" type="checkbox"/> Slight pink	<input type="checkbox"/> Moderate redness	<input type="checkbox"/> Severe ("Fire engine red")		
Maceration	<input checked="" type="checkbox"/> Clear of maceration	<input type="checkbox"/> Much better	<input type="checkbox"/> Better	<input type="checkbox"/> Same	<input type="checkbox"/> Worse	<input type="checkbox"/> Much worse
Itching/burning	<input checked="" type="checkbox"/> Clear of itching/burning	<input type="checkbox"/> Much better	<input type="checkbox"/> Better	<input type="checkbox"/> Same	<input type="checkbox"/> Worse	<input type="checkbox"/> Much worse
Denudement	<input type="checkbox"/> Clear of denudement	<input checked="" type="checkbox"/> Much better	<input type="checkbox"/> Better	<input type="checkbox"/> Same	<input type="checkbox"/> Worse	<input type="checkbox"/> Much worse
Satellite lesions	<input type="checkbox"/> Clear of satellite lesions	<input type="checkbox"/> Much better	<input type="checkbox"/> Better	<input type="checkbox"/> Same	<input type="checkbox"/> Worse	<input type="checkbox"/> Much worse
Odour	<input checked="" type="checkbox"/> No unpleasant smell	<input type="checkbox"/> Minimal (barely noticeable)	<input type="checkbox"/> Strong (intolerable)	<input type="checkbox"/> Moderate (noticeable, but tolerable)		

InterDry was easy to apply increasing the well-being and independence of the patient. InterDry was applied by the nurse for the first 4 applications; thereafter the patient was able to apply InterDry himself at home.

DAY
1



DAY
5



DAY
10



DAY
15



DAY
20



DAY
25



Conclusion

In this case, InterDry showed very good results. In a very short period of time InterDry helped to manage a difficult to treat skin area where intertrigo was present. Before using InterDry, intertrigo treatment (and related complications) had always been an extremely difficult task, almost unsolvable. InterDry helped to inhibit the growth of bacteria and yeast by wicking away moisture from the affected area and reducing skin to skin friction. As the patient was able to apply InterDry at home, self-care also became possible. As this case has shown, using InterDry can help manage intertrigo in a quick and simple way.

Thrombopenia patient with Deep Tissue Pressure Injury treated with Biatain® Alginate Ag and Biatain® Foam

Jingnan Wang , HwaMei Hospital, University of Chinese Academy of Sciences, Ningbo, China

Introduction

A multi-center study showed that the prevalence of in-patient pressure injury is 1.58%, and the incidence rate is 0.63% in China.¹ Deep Tissue Pressure Injury (DTPI) is intact or non-intact skin with localized area of persistent non-blanchable deep red, maroon, purple discoloration or epidermal separation revealing a dark wound bed or blood-filled blister.

In this case the injury is the result of intense and or prolonged pressure and shear forces at the bone-muscle interface. The wound may evolve rapidly to reveal the actual extent of tissue injury or may resolve without tissue loss. Unstageable Full-Thickness Pressure Injury is obscured full-thickness skin and tissue loss, in which the extent of tissue damage within the ulcer cannot be confirmed. If slough or eschar is removed, a Stage 3 or Stage 4 pressure injury will be revealed.²

Patient

The patient is a 66-year-old female farmer with a primary school level education.

Present History: the patient had low levels of consciousness for 7 days and had noted yellow skin discoloration for approximately 11 days. A sacral pressure injury developed due to the patient being completely bed-bound and unable to move. The patient was then admitted to hospital.

(Hepatopathy Dept. on 22/1. Blood test: BPC: $57 \times 10^9/L$). Medical history: Schizophrenia for years. Medication: Olanzapine, Lorazepam
Diagnosis: 1. Hepatic encephalopathy 2. Cirrhosis decompensation period 3. Thrombocytopenia 4. Pressure Injury, multi-stage.

Initial wound assessment




Size of wound

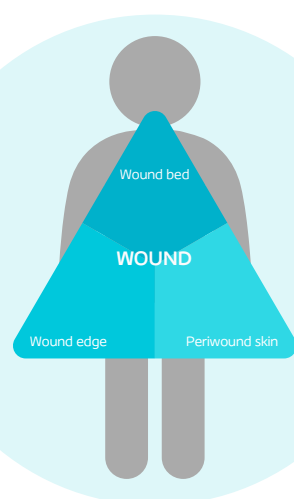
Length **111 mm**
Width **130 mm**
Depth **0 mm**


Multi-stage Pressure Injury:

- Unstageable Full-Thickness Pressure Injury
- Stage 2, multi-sites
- Deep pressure tissue injury


 Wound edge Assessment

- Maceration
- Dehydration
- Undermining
- Thickened/rolled edges



 Wound bed Assessment

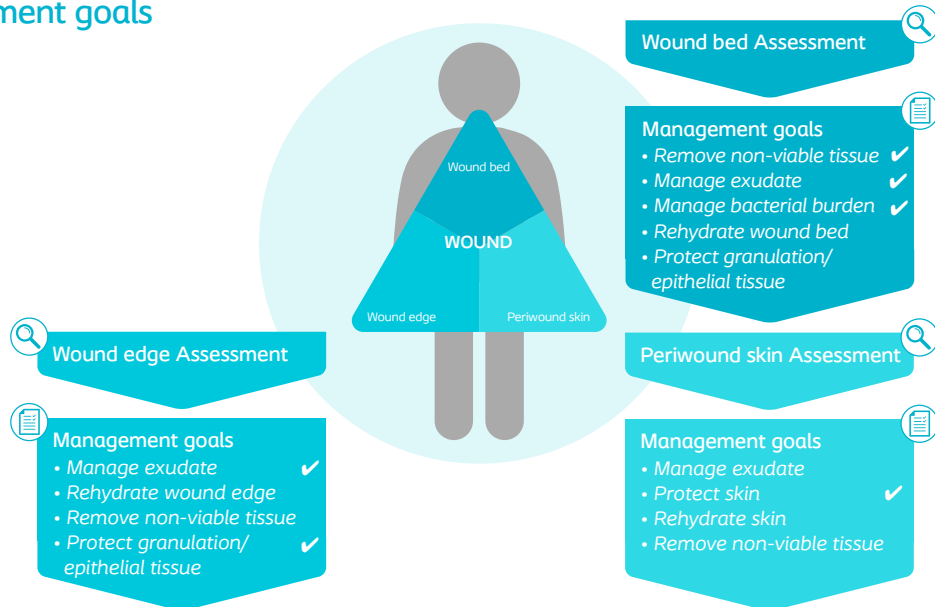
- Tissue type
- Exudate
- Infection

 Periwound skin Assessment

- Maceration
- Excoriation
- Dry skin
- Hyperkeratosis
- Callus
- Eczema



Management goals



Treatment

The overall management of the wound included infection prevention, moisture balance, maceration avoidance and control of active bleeding. Secondary interventions included promoting epithelialisation, increasing nutrition intake, blood plasma transfusion and albumin injection, as well as supporting surfaces and repositioning. The treatment of the wound included surgical debridement in the first 2 weeks after hospitalisation, and then autolysis debridement with Purilon® was used in the following 2 weeks.

Biatain® Foam was used as a secondary dressing during treatment, with Biatain® Alginate Ag applied as the primary dressing to prevent infection, followed by a Biatain Alginate dressing to control exudate and promote the growth of granulation once no indications of infection were present. Patient was discharged on 50 days and wound healed on the 60th day.

Results

Day 9: the black necrotic tissue was removed. DTPI area adjusted to stage 2 pressure injury and wound bed was exposed completely and with heavy levels of exudate.

Day 16: the border between the necrotic tissue and surrounding tissue was clear. So, a surgical debridement was conducted. Unstageable area changed to Stage 3 pressure injury.

Wound bed: 10 cm x 8 cm x 0.5 cm, 100% yellow sloughy tissue; exudate: moderate and serous; Wound edge is under epithelialisation and periwound skin is normal. Biatain Alginate Ag and Biatain Foam were applied.

Day 31: wound bed: 10 cm x 4 cm x 0.4 cm, 75% red granulation and 25% yellow sloughy tissue. Wound edge and periwound skin is normal. Biatain Alginate Ag was changed to Biatain Alginate.

Day 44: the size of wound bed was significantly reduced and only Biatain Foam was used to promote wound healing.

Day 60: the patient was discharged and followed up for 2 weeks where the wound had healed. There were a total of 38 dressing changes performed.



Day 9



Day 16, before debridement



Day 16, after debridement



Day 31



Day 44



Day 60

Conclusion

Multi-stage Pressure Injury is very common clinically, with early stage pressure injuries developing further into Stage 2-4 inevitably in most of cases. When and how to debride are the key points in this case initially, surgical debridement can remove the necrotic tissue and may minimise pain. Autolytic debridement may also minimise pain and unnecessary tissue damage. Exudate management and infection prevention and or management are always very important no matter in which stage the wound is. In this case, the Biatain Alginate Ag dressing and Biatain Foam dressings combined were a good solution for these two clinical challenges.

While managing the wound, we must implement measures to prevent pressure injuries in other positions. Therefore, offloading is very important. The blood platelet count was extremely low, so bleeding should be avoided when debridement was performed, and alginate seems to support haemostasis. Nutrition should be prioritized, which will also aid in wound healing.

Treatment of a leg ulcer using Biatain® Silicone

Judith Harford, Practice Nurse, Adam Practice

Introduction

This Case report is about a patient who suffered from a venous leg ulcer. The wound was initially infected and treated with antibiotics, but the wound was not healing with the current treatment she was receiving at home. Due to high pain levels, the patient did not want to be treated with compression therapy.

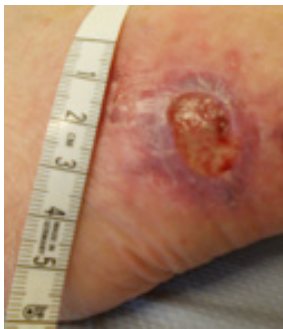


Patient

The patient is a 65 year old female with good mobility but has a history of COPD and heart disease. No previous surgery or significant injuries to the leg were noted. She is an ex-smoker and rarely drinks alcohol. The patient follows a poor diet which includes minimal intake of fruit and vegetables. She has a normal BP and healthy weight.

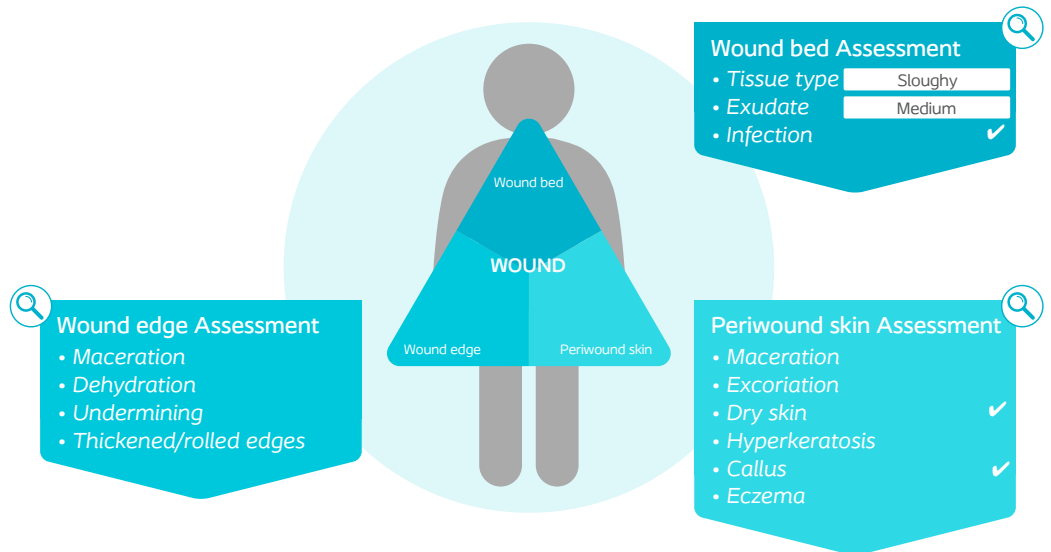


Initial wound assessment - Day 0



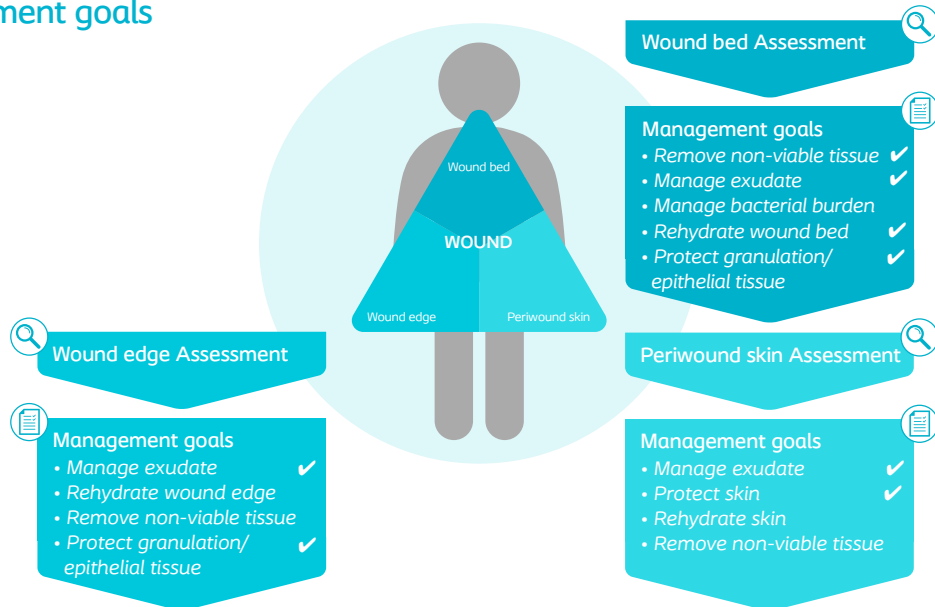
Size of wound

Length **20 mm**
Width **10 mm**
Depth **2 mm**





Management goals



Treatment

At the start of treatment the patient underwent a doppler test and 2A assessment to identify any venous insufficiency. She was found to have good venous flow and was suitable for compression, however she was reluctant to commence treatment due to pain from the wound. It was therefore decided to treat her with dressings alone, using tubular bandaging to provide a small degree of compression and to help protect the dressing. The patient was also encouraged to rest and elevate her legs as much as possible. To clean the wound a wound cleanser was used along with a gel to support debridement. A barrier cream was used to protect the periwound skin and Biatain silicone was the primary dressing. Treatment was provided over an 8 week period.

Results

The wound significantly reduced in size during treatment with the initial wound size being 20mmx10mm. After 3 weeks of consistent treatment the wound decreased to 8mmx5mm, and after week 7 the wound was fully healed. The wound bed was 80% sloughy at the start of treatment, which reduced to 40% at week 3 and 90% granulation at week 5. Initial pain levels in the wound were very high (pain score 9 out of 10) reducing to 0 by week 7. Exudate levels also reduced throughout the treatment period and the wound edge and periwound skin was protected showing no signs of distress. Encouragement was also provided to the patient advising her to apply emollient to her legs at home, aiding the periwound skin in becoming better hydrated. The patient found the dressing comfortable to wear and removal did not cause distress or pain.

DAY
7



DAY
21



DAY
42



Conclusion

The patient found the Biatain® silicone dressing comfortable to wear and that it was useful in the treatment of her venous leg ulcer. As the dressing conformed to the wound bed I observed that it also supported autolytic debridement and the removal of non-viable tissue from the wound bed. The dressing was also easy to apply and enabled a 'non-touch' approach. The silicone edges of the dressing provided easy dressing removal. Treatment duration may have been reduced by use of compression, but this was deemed not acceptable to the patient.

Managing a type 3 Skin Tear using Biatain® Silicone Lite

Lucy Palmer, Tissue Viability Nurse, Canberra Health Services, Australia

Introduction

Within Canberra Health Services we aim to prevent and manage skin tears in accordance with the International Skin Tear Advisory Panel (ISTAP) guidelines. We define the aetiology and conduct a full assessment of the wound and then correctly classify the skin tear. Management for skin tears is in accordance to best practice guidelines and best outcomes for patients and their wellbeing. Typical challenges of skin tears are ensuring no further flap loss occurs whilst monitoring wound edges, managing sanguineous exudate, infection prevention and prevention of further skin tears.

Dressing selection can be diverse however practice for skin tears within our health organisation is a silicone foam, or alternatively a silicone contact layer with an absorbent non adherent dressing. However if high levels of sanguineous exudate is evident then a primary dressing of calcium alginate is applied then a secondary dressing of silicone foam.¹

Patient

The patient is a 68 year old male admitted to acute tertiary hospital with decompensated liver failure, secondary to hemochromatosis. Past Medical History of T2DM, B-thalassaemia minor, ischemic heart disease, obstructive sleep apnoea, hypertension, hepatocellular carcinoma resected, psoriasis, and hemochromatosis. Known allergy to Elastoplast® tape. Medications: Toujeo, Apidra, Tamsulosin, Aspirin, Clopidogrel, Frusemide, Omeprazole, Spironolactone, Magnesium Aspartate. Social History: Patient is a non-smoker with minimal alcohol intake. Patient is self-caring with active daily living and mobilises independently and has good nutritional intake.

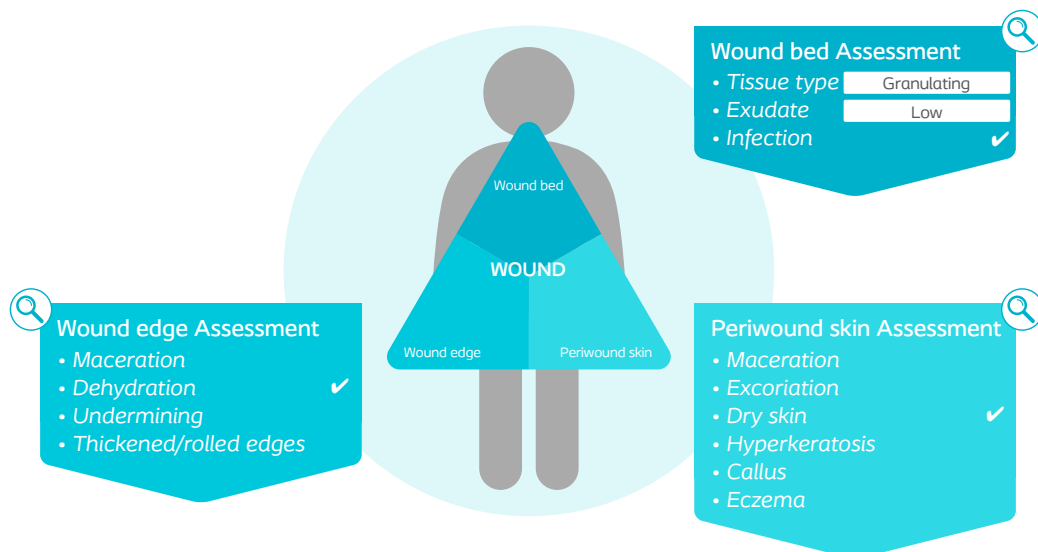
Patient acquired a Type 3 skin tear, proximal of wrist, dorsal aspect. Skin tear reviewed 2 days post initial injury. Wound bed 100% granulation with minimal sanguineous exudate. Periwound skin dry, fragile, thin with dried sanguineous exudate. Noted senile purpura to further surrounding skin along the arm. Previous dressing was silicone based foam dressing. No complaints of pain on review.

Initial wound assessment - Day 0



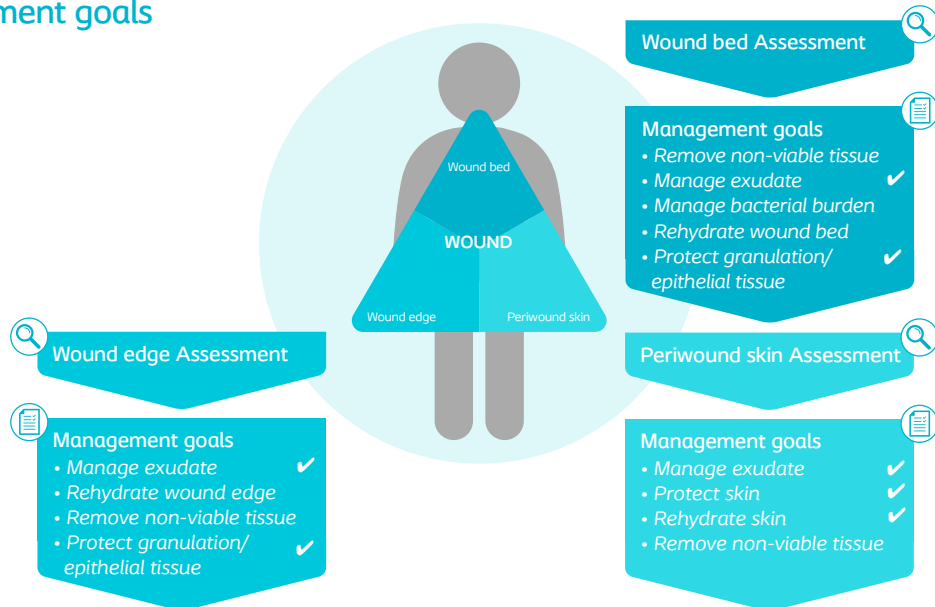
Size of wound

Length **10** mm
Width **15** mm
Depth **0** mm





Management goals



Treatment

A Biatain® Silicone Lite was chosen for this skin tear. This dressing was chosen due to its ability to conform to the wound bed and absorption capabilities - retaining the low levels of exudate away from the wound rather than onto periwound skin. The dressing also ensures a secure fit to provide protection. As the patient has a history of psoriasis and is allergic to Elastoplast® tape, a silicone based dressing was optimal for protecting the wound edge and periwound skin. The Biatain Silicone Lite was the preference as it is very thin and flexible which did not limit patient's active daily living. The bacteria and waterproof top film enabled the patient to shower without having to apply a cover to protect the dressing.

A moisturiser was used to the surrounding skin to re-hydrate and control psoriasis. Therefore a barrier wipe was also used to help secure Biatain Silicone Lite to skin.

Results

On day 5 review of skin tear we noted significant reduction in size. Wound bed remained 100% granulating tissue with minimal haemoserous exudate. Wound edges has 100% epithelializing tissue and surrounding skin appeared hydrated on review. Skin tear reduced in size to 10x5mm. Exudate level had reduced and changed from sanguineous exudate to haemoserous exudate. Visible healthy epithelializing tissue to wound edges. No signs of infection or pain on review. Patient noted the Biatain Silicon Lite to be comfortable and reported no issue with showering with dressing as it remained intact.

Patient transferred to interstate hospital prior to final review, however skin tear showed good signs of healing on day 5 review.

DAY
1



DAY
5



DAY
5



Conclusion

In applying a comprehensive wound assessment that took into account the wound bed, wound edge and periwound skin as well as the location of the wound, Biatain silicone lite was selected as the optimal dressing. As the Biatain Silicon Lite dressing has a gentle adhesive silicone wound contact layer it ensured minimal pain or disruption to the wound bed and periwound skin both while on and during changes.

As the patient had dry, fragile thin skin with a history of psoriasis and an allergy to Elastoplast tape, Biatain Silicone Lite was optimal for protecting the wound edge and periwound skin. In addition, moisturiser was applied to the patients surrounding skin.

In this case it was paramount for wound healing to ensure healthy periwound skin. The Biatain Silicone Lite dressing had the ability to absorb and retain exudate away from the wound bed and periwound skin into the dressing, ensuring healthy periwound skin.

Chronic Great Toe Ulceration treated with Biatain® Silicone Ag

Lucy Palmer, Tissue Viability Nurse, Canberra Health Services, Australia

Introduction

This case report is about a patient who suffers from a chronic toe ulceration with positive E.faecalis bacteraemia. The aetiology is unknown as the patient does not recall trauma and has no history of surgical procedure to this site. The toe ulceration has been present for a duration of over 10 months.

Toe ulcerations are common within the diabetic community and those suffering from peripheral vascular disease. Best practice around diabetic foot ulcers are and not limited to, tissue debridement, inflammation and infection control, moisture balance and epithelial edge advancement.¹

In completing a wound assessment you are able to extract information regarding the type, duration and location of the wound as well as tissue loss, clinical appearance, dimensions, exudate, wound edges and the surrounding skin, pain and infection.² This then leads to appropriate dressing selection and optimises wound healing. Conducting a holistic and thorough wound assessment ensures best possible outcomes for patients and their wounds.

Patient

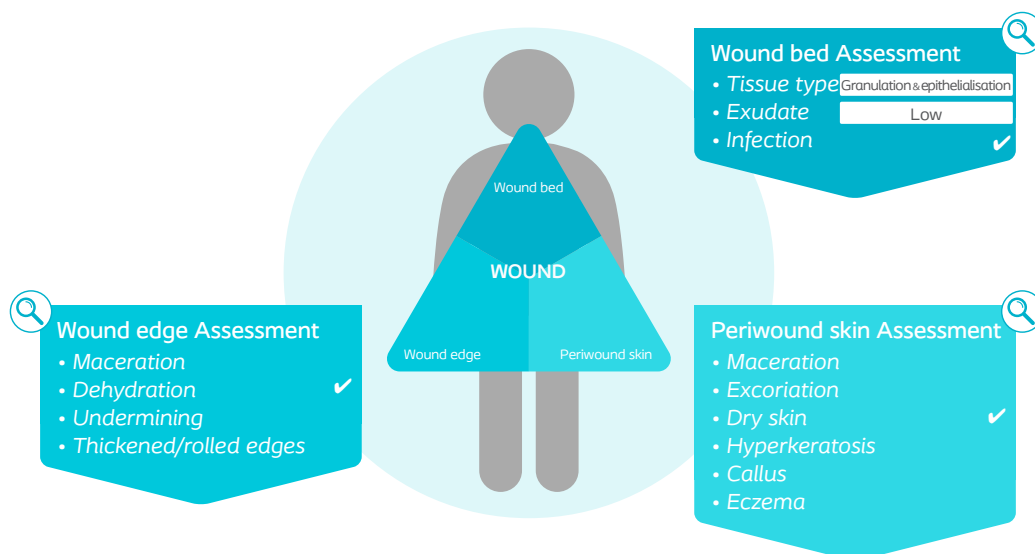
The patient is an 82 year old male admitted for a CT guided biopsy of L1, L2 disc. Recent history of worsening back pain over the last few months, with previous admission for L1, L2 vertebral discitis on background of E.Faecalis bacteraemia with suspected Endocarditis. Congestive cardiac failure, ischemic heart disease, atrial fibrillation transient ischemic account, Right renal exophytic mass. Nil known Allergies. Patient is a non-smoker, recreational consumption of alcohol. Patient's mobility has declined due to ongoing back pain, previously independent now uses a "wheelie walker" on mobilisation. No issues with appetite, eating regular nutritional meals. Patient has a chronic toe ulcer extending to the toe nail of unknown aetiology. Initial skin breakdown occurred greater than 10 months ago as per patient account. Wound was biopsied 7 months after initial injury and was positive for E.faecalis. Patient stated many previous dressing changes by General Practice. Patient explained previous progression of healing and then subsequent breakdown. Patient reports ongoing pain to site throughout duration of the wound
Toe ulcer located on right foot. Wound covering 2x1cm area. Periwound blanching erythema including pain. Toe nail displays yellow-brown discoloration.

Initial wound assessment - Day 0



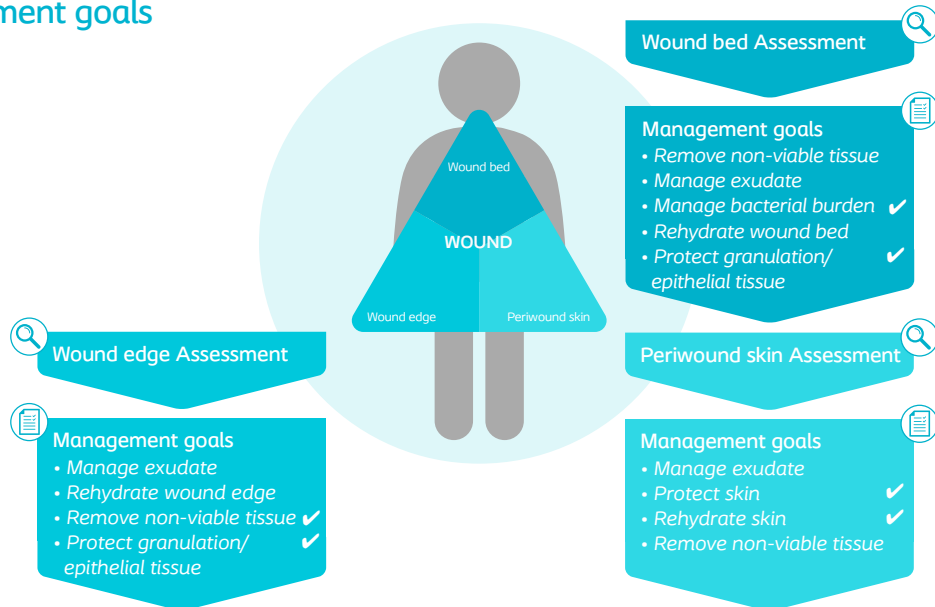
Size of wound

Length 20 mm
Width 10 mm
Depth 0 mm





Management goals



Treatment

Biatain® Silicone Ag was selected for this patient's toe ulceration as this wound was a chronic wound presenting bacterial growth and an irregular shape. The Biatain Silicone Ag dressings antimicrobial properties make it the ideal solution. Normal saline was used to cleanse the wound. Mechanical debridement was performed with dry gauze. Barrier wipes were used on the periwound skin before applying Biatain silicone Ag. The dressing was changed every 2nd day. A podiatrist was asked to see the patient on day three for nail treatment. The podiatrist performed nail clippings and cleared nail sulci. New dressing was then applied.

Results

Just over one week of using Biatain Silicone Ag with every 2nd day, the wound showed stable progression.

On day 10, at final assessment, we noted the wound bed had reduced in size to 1.5x1cm. Wound bed now shows 100% epithelialising tissue. The erythema on the periwound skin was reduced. Low serous exudate amount was observed. Toe nail has yellow-pink colouring. Patient reported no further pain and was very pleased with the outcome of wound progression after just one week.

On first assessment the wound presented low levels of exudate and the periwound skin was dehydrated. On final assessment the wound bed was moist with hydrated periwound skin. Biatain Silicone Ag supported moist wound healing.

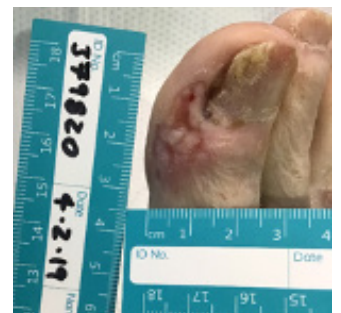
DAY
5



DAY
8



DAY
10



Conclusion

Biatain Silicone Ag with its antimicrobial properties supported wound healing in this case. Due to the patient reporting pain at the site and had visibly dry, fragile, flaky periwound skin this dressing was optimal for protection of the wound bed and wound edge. In addition of applying a moisturiser, the patients periwound skin was rehydrated.

Positive feedback was obtained from both the patient and patient's wife stating "this is the best the wound has ever looked!" and "it was one less thing to worry about during this hospital stay".

When performing a comprehensive wound assessment of the wound, wound edge and periwound skin, it also pays attention to the patient and their medical history. From assessment to management goals, the most optimal dressing was chosen to achieve the best outcome. Understanding this wound was a chronic non-healing wound that presented with local bacterial growth, supported my management plan to use a dressing with antimicrobial properties.

1. International Best Practice Guidelines: Wound Management in Diabetic Foot Ulcers. Wounds International, 2013.

2. Carville, K. (2017), Wound Care Manual 7th Edition, Silver Chain Nursing Association WA

3. Christiansen et al. In vitro evaluation of a silver foam dressing with and without silicone adhesive against biofilms and a broad range of microorganisms. Poster EWMA 2018

Successful treatment of Stage 4 Pressure Injury with Biatain[®] silicone

Mariana Takahashi Ferreira Costa, Dermatology Nurse Specialist.
Emilio Ribas Infectology Institute, Brazil

Introduction

Pressure injuries are significant health issues, being a quality of assistance indicator and one of the biggest challenge's organizations face on a day to day basis. This issue involves a high cost of treatment and also has a great impact on patients' lives and on the provider's ability to render appropriate care to patients. Critical care patients, elderly, and those who are very ill compose the high-risk populations.

Herein we present treatment of a Stage 4 Pressure Injury on a 41-year-old man using the Triangle of Wound Assessment.

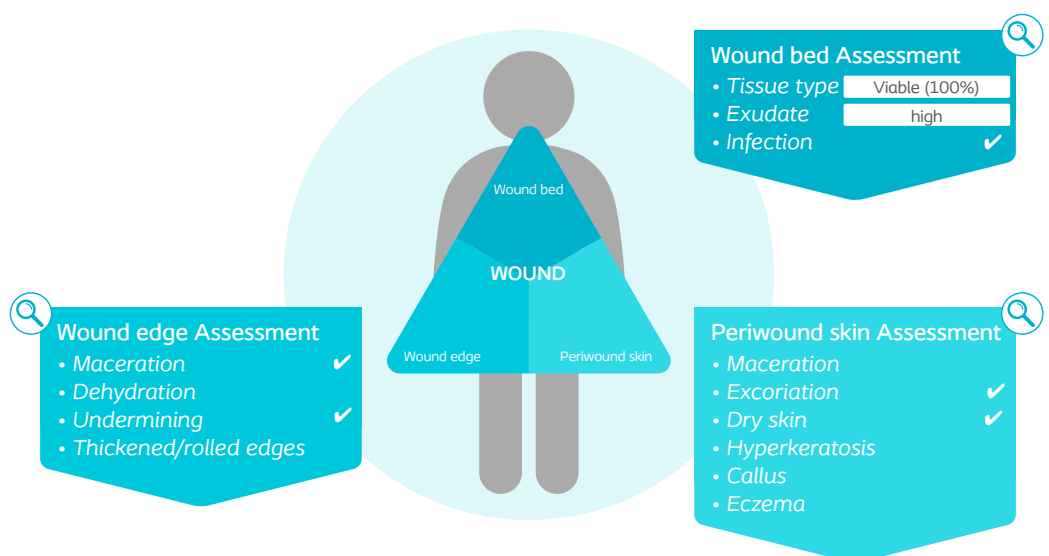
Patient

The patient is a 41-year-old male with a Pressure Injury on his sacral area. The Injury developed during hospitalization, where he was hospitalized for cachexia, drug addiction and AIDS. Upon hospital discharge the patient was referred to the wound treatment ambulatory. At first assessment, the team decided to use a hydro fiber with silver dressing. The wound evolved with size reduction; however the exudate management was poor, resulting in accumulation of a yellowish slough in the wound bed. On August 8th, the specialist team reassessed the wound, identifying a Stage 4 pressure injury at the sacral region in a severely thin patient with Grade 3 motor strength, partially dependent on care. The wound presented granulation tissue (100%) covered by a yellowish slough, high levels of exudate, pocketing at proximal edge and characteristic odor. No pain was reported. Margins were irregular, asymmetrical and macerated. Periwound skin presented with scar tissue.

Initial wound assessment - Day 0

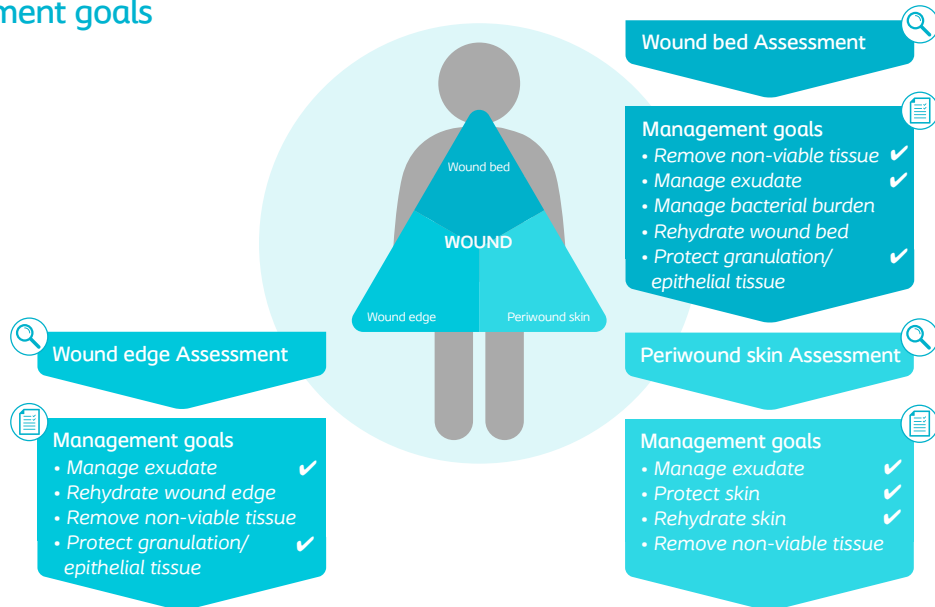


Size of wound
Length 70 mm
Width 40 mm
Depth 0 mm





Management goals



Treatment

After using a hydro fiber with silver dressing for 2 weeks, reassessment showed periwound skin scar tissue along with skin fragility associated with the use of adhesives. The family advised it was difficult to keep the dressing in place. No pain was voiced. Family advised the dressing became rapidly saturated and it was necessary to change at a high frequency. At this point without resolution of maceration, the specialist team decided to initiate the use of Biatain® Silicone to help manage the high levels of exudate and fragility of periwound skin. Family was oriented to proceed with dressing changes every 96h, or before only if dressing was saturated. After two weeks the wound evolved with important contraction resulting in size reduction, resolution of excoriation related to adhesives, pocketing was resolved, and the dressing remained in place. At this point, the Biatain Silicone dressing started to be changed once a week with the aim to continue managing exudate, preserve and stimulate granulation tissue deposition and wound contraction. Wound measures: 5.5x2.5cm. The wound closure was at 100% 75 days after beginning use of Biatain Silicone.

Results

Biatain Silicone provided exudate management, conformability to the wound bed and protected the wound edge and periwound skin from maceration through vertical absorption. New granulation tissue was observed, yellowish slough did not reform, the wound bed was visibly more regular, and the wound size was dramatically reduced. The silicone layer kept the periwound skin moist and didn't cause added irritation. Biatain Silicone managed the wound microclimate maintaining ideal wound moisture to epithelialization. The size of the wound decreased from 9.89 cm³ at start of Biatain Silicone to 1.5 cm³ on 17.10.2019 to complete re-epithelialization on 24.10.2019.

DAY 0



DAY 14



DAY 75



Conclusion

Biatain Silicone efficiently managed exudate and the periwound skin, protecting it from maceration and improving both moisture and resistance. Biatain Silicone showed superior performance when compared to the previous dressing in exudate management and vertical absorption, leading to the growth of granulation tissue improvement and contraction of the wound. Biatain Silicone kept the wound protected, maintained ideal environmental conditions and regulated moisture, optimizing wound re-epithelialization. In conclusion, the combined use of the Triangle of Wound Assessment to regularly re-assess the wound, modify treatment according to changes in the status of the wound, and the Biatain family of products led to optimal wound healing for this hard to heal wound.

Biatain® silicone for treatment of impaired surgical site wound after squamous cell carcinoma excision

Mariana Takahashi Ferreira Costa, Dermatology Nurse Specialist.
Emilio Ribas Infectology Institute, Brazil

Introduction

Squamous-cell carcinoma is the second most common cancer among Caucasian people. Cutaneous squamous-cell carcinomas are associated with a substantial risk of developing metastasis. Although it is known that this neoplasm contributes substantially to morbidity and mortality among elderly persons, its incidence and the associated mortality rate cannot be determined precisely. Risk factors for the development of squamous-cell carcinoma are exposure to ultraviolet radiation, human papillomavirus infection, and chemical agents. Each of these have historically been linked to developing squamous-cell carcinoma. Herein we present treatment of a hard to heal ulcer due to squamous-cell carcinoma excision using the Triangle of Wound Assessment.

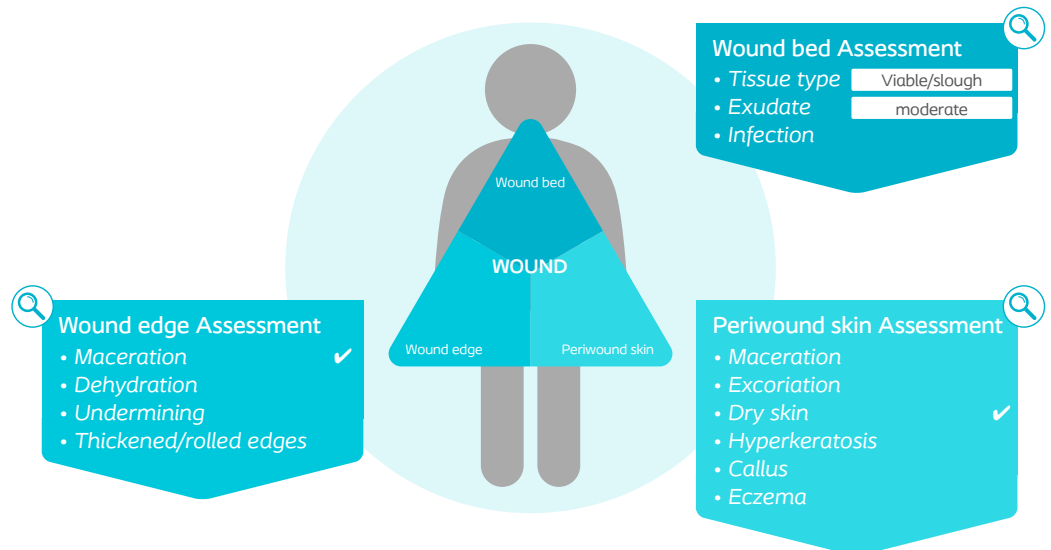
Patient

An 85-year-old female patient with hypertension, mild cardiac insufficiency, squamous cell carcinoma and a wound on her right medial malleolus. In June 2018, the patient underwent plastic surgery for a squamous cell carcinoma excision and subsequent graft. However, the graft has evolved to necrosis resulting in a wound, which gradually increased in size over a 3-month period, despite local treatment at the plastic surgery clinic. Patient was then referred to the wound specialist on August 2018. The patient used collagen dressings in a 4/5 day change routine. The wound had slough (60%) and viable tissue (40%) all covered by a yellowish slough, the presence of 3 surgical stitches, moderate levels of exudate and no odor. Margins were irregular and asymmetrical. Periwound skin showed discrete signs of inflammation.

Initial wound assessment - Day 0

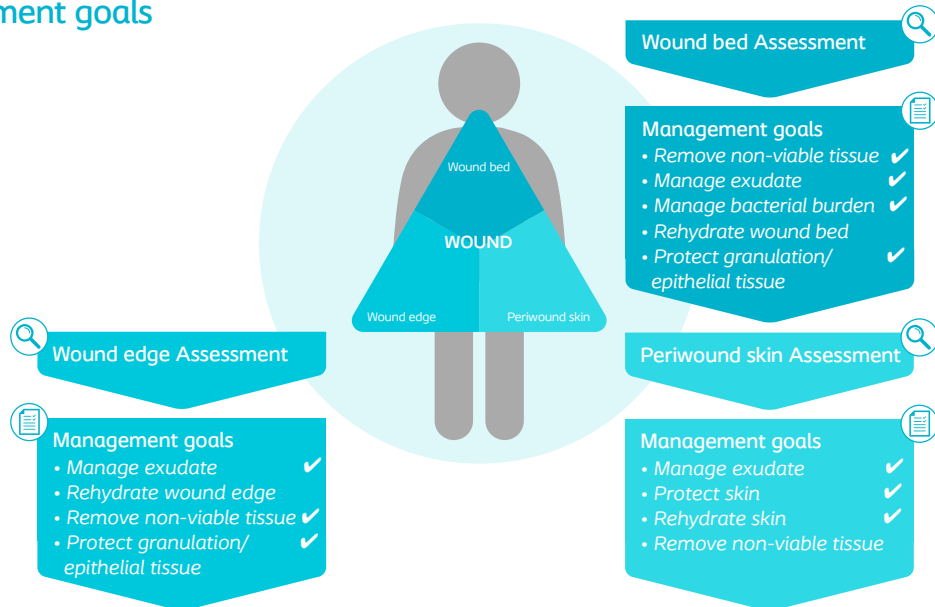


Size of wound
Length 44 mm
Width 45 mm
Depth 2 mm





Management goals



Treatment

On first assessment, due to the presence of yellowish slough mechanical debridement and cleansing was initiated. Periwound skin presented hyperemia, swelling 2/4+, skin fragility and showed varicous veins. Pedal pulses were non-palpable. Pain was described as moderate. Biatain® Alginate Ag was chosen to manage the bioburden and exudate. Barrier cream was used to manage the maceration and dehydration of the periwound skin. Nutritional guidance and education about adherence of compression hosiery were provided. Dressings were changed every 96h for 2 weeks. At this point swelling, maceration, bioburden and pain were controlled. Alginate Ag dressing was then substituted by PU foam with silicone contact layer dressing (Allevyn®) changed every 72h, aiming to manage microclimate, exudate, preserve and stimulate granulation tissue deposition. Unfortunately, the foam did not manage the exudate, resulting in maceration and leakage. Biatain® Silicone was then selected as an alternative in a 96h change routine. Wound measures: 3,7x4,2cm. After 1-month Biatain Silicone was replaced for the Lite version. While using a Biatain Silicone dressing the wound was completely healed within 2 months.

Results

In this case Biatain Alginate Ag provided good exudate management, bioburden control and protected the wound edge and periwound skin from maceration. yellowish slough did not form again. The barrier cream managed periwound maceration and improved the condition of the easily fragile skin. Biatain Silicone provided very good exudate management and conformability to the wound bed. The dressing also protected the wound edge and periwound skin from further maceration. New granulation tissue was observed, and the wound size was dramatically reduced. The use of compression hosiery helped to reduce edema. Biatain® Silicone Lite maintained a moist wound environment and supported epithelialization. The size of the wound decreased from 39,6 cm³ at admission to 15,5 cm³ on 21.09.2018 to complete re-epithelialization on 28.11.2018.

DAY 0



DAY 27



DAY 95



Conclusion

Biatain Alginate Ag managed the bioburden and the exudate. The Barrier cream protected periwound skin from maceration and improved moisture and resistance of fragile skin. Biatain Silicone showed very good performance when compared to previous dressing in regard to exudate management and vertical absorption. Biatain Silicone Lite kept the wound protected, maintained a moist wound environment which is an ideal environment for wound healing. In conclusion, the combined use of the Triangle of Wound Assessment to regularly re-assess the wound along with the Biatain portfolio of products, enabled us to modify treatment accordingly and led to successful healing of this hard to heal ulcer.

Treatment of a lower leg ulcer with Biatain[®] Silicone and Biatain[®] Silicone Lite

Melanie Bohn, Wound Specialist Nurse, Spitex Zürichsee, Switzerland

Introduction

This case report is about a patient with a chronic, non-healing wound on her the right lower leg caused by a traumatic injury. The patient injured herself in her wheelchair whilst transferring to the bed. The patient has a previous trauma caused by polio during her childhood, which caused degeneration of the right leg, as she lost arterial and venous support of the lower limb. From her childhood on she has had mobility concerns with her right leg.

There is a leg ulcer related to the injury. Venous leg ulcers are the most common wound type on the lower extremities. The patient received compression therapy on both legs which had to be improved during the wound therapy. The patient's doctor wanted to operate on her, he planned to do a surgical operation with skin grafting. The nursing staff asked me to try a different treatment as neither the patient nor her family wanted her to have a second operation.

Patient

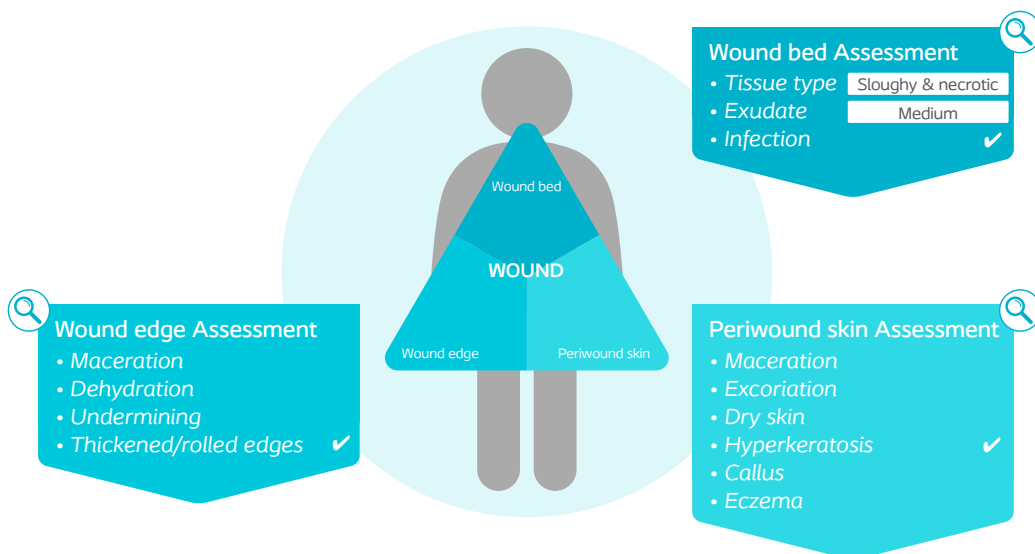
The patient is a 96-year-old female who lived in a nursing home. The patient had numerous comorbidities, which included heart disease and malnutrition. After her injury the wound size increased daily. As a result she could no longer participate in social activities, while also losing her daily structure and routines. Subsequently, she told the nurses that she felt depressed and wanted to die.

The wound duration was 6-8 Weeks before starting treatment with Biatain[®] Silicone.

Initial wound assessment - Day 0

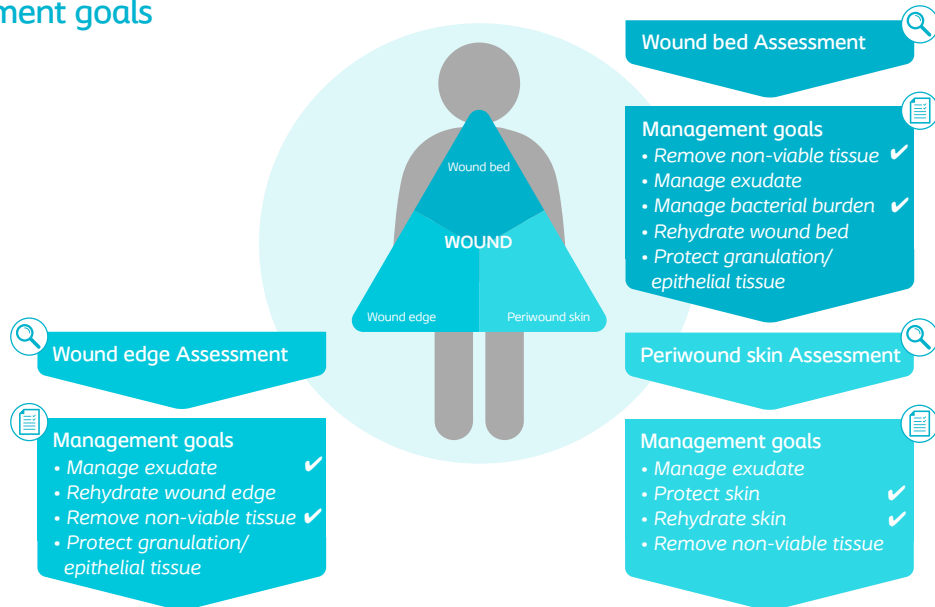


Size of wound
Length **100 mm**
Width **80 mm**
Depth **20 mm**





Management goals



Treatment

At start of treatment a wound cleansing solution was used to cleanse the wound. Biatain® Silicone was then applied on day 0. At day 50 the dressing was changed to Biatain® Silicone Lite.

At the beginning of the treatment when the dressing was changed we used Biatain Silicone, which we changed every 2nd day. After 2 Weeks we could reduce the dressing change to twice a week and after 6 weeks we reduced to once a week changes. Compression therapy was used throughout treatment and we performed debridement on a regular basis.

The patient suffered from a high pain score of NRS 10/10, so an appropriate analgesic was discussed with the physician and before wound treatment started she received Morphine drops. After 20 days the wound pain was scored at NRS 0/10.

Results

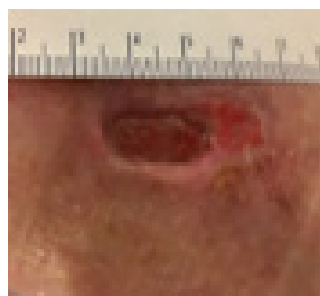
On day 14 clear wound progression was observed. The two existing wounds became one wound. The size of the wound was 6x4cm. Initially the wound depth was approximately 1-2cm with a small amount of pocketing noted on the cranial edge of the wound. The wound bed showed approximately 50% sloughy tissue and 50% granulation tissue. From day 14 and onwards, morphine drops were stopped because there was no more pain.

On day 40 the wound had decreased in size and there was no sloughy tissue present. On day 75 the wound was closed.

DAY
14



DAY
40



DAY
75



Conclusion

The wound showed progressive healing each week, and by week 3 the patient had no further complaints of pain. The dressing change was easy to do and no pain was voiced during dressing removal. The patient's doctor was surprised that the wound had healed so quickly.

The Triangle of Wound Assessment helped me to properly manage her wound. We used the framework as a tool to describe wound assessment and progression to the other nurses involved.

The patient describes being happy and can now participate in social activities again. We all had a very positive experience using the Biatain Silicone products to manage her wound.

The use of Biatain® Ibu Soft Hold in venous leg ulcer management

Sue Durrant, Tissue Viability Nurse, The Royal Wolverhampton NHS Trust

Introduction

This case study sets out to demonstrate how Biatain® Ibu Soft Hold had a significant impact on the levels of wound pain experienced by a patient suffering from a venous leg ulcer. The patient, who was taking oral morphine with little effect, was extremely distressed due to pain which he described as excruciating and also having an affect on his appetite.



Patient

The patient is an 82-year-old gentleman with a past medical history of type 2 diabetes, high blood pressure, gout and diverticulitis. He developed a venous leg ulcer 4 months prior to assessment by the Tissue Viability Nurse. He does not smoke or drink any alcohol. Oral morphine along with Amitriptyline had little or no effect on the wound pain, which was distressing for both him and for his family. On conducting a pain assessment score on a scale of 0-10, although he said his pain scored 10, he felt it to be "off the scale".

Wound bed – 75% slough, 25% granulation

Wound edge – some maceration

Periwound skin – signs of inflammation



Initial wound assessment - Day 0



Size of wound

Length 60 mm

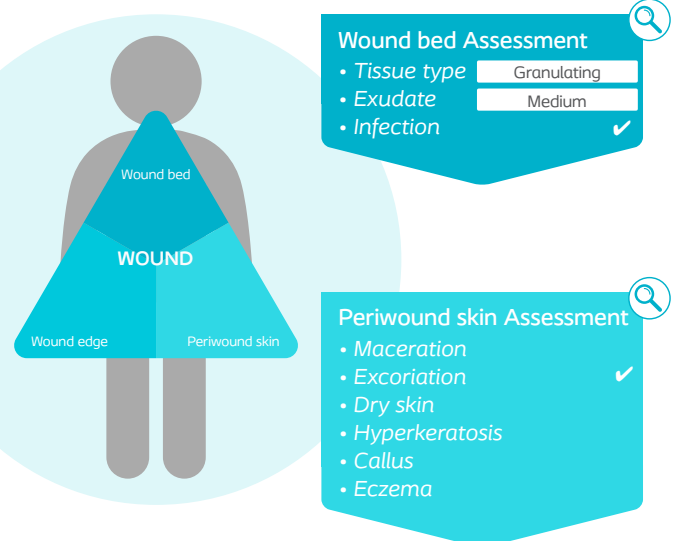
Width 60 mm

Depth 0 mm



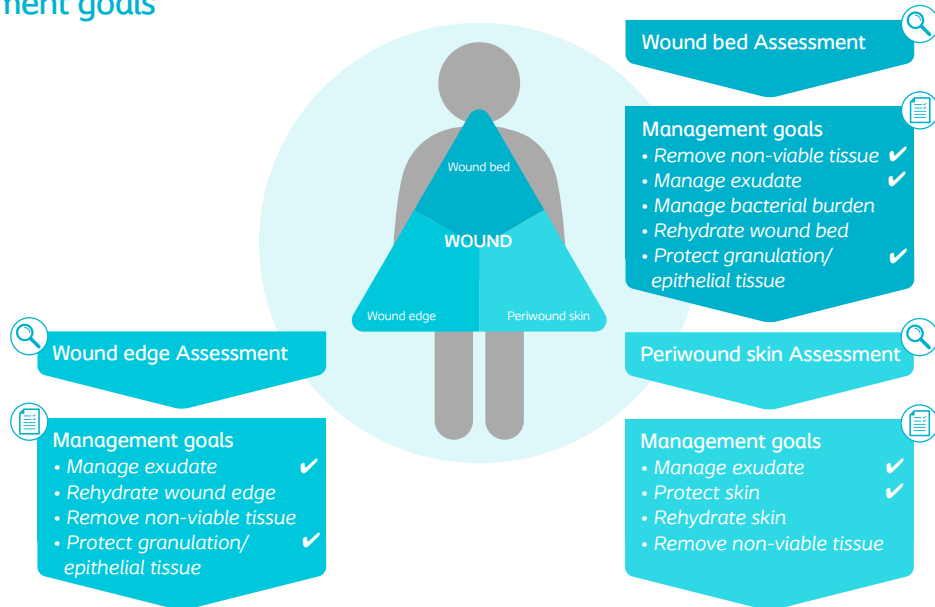
Wound edge Assessment

- Maceration ✓
- Dehydration
- Undermining
- Thickened/rolled edges





Management goals



Treatment

Although diagnosed with a venous leg ulcer requiring 40 mmHg compression, due to the pain he experienced he was only able to tolerate 10 mmHg via a hosiery kit liner. Various types of primary dressings were also attempted with no success.

Following referral to the Tissue Viability Nurse, the patient commenced on a Biatain® Ibu Soft Hold dressing in combination with a leg wrap to manage his wound due to his underlying venous disease.

Within a short period of time the patient's pain levels were reduced allowing the appropriate amount of therapeutic compression of 40 mmHg to be used.

Results

Within 5 weeks of using the Biatain Ibu Soft Hold dressing, the patient's pain score decreased to 2, having previously been reported as "off the scale". Currently reports no wound pain.

Not only did Biatain Ibu Soft Hold have a significantly positive impact on the patient's pain and quality of life, but when used in combination with compression therapy it also helped to reduce the dimensions of the wound and manage the exudate effectively. This aided in protecting the wound bed, wound edge and periwound skin from the detrimental effects chronic exudate can have in wound healing.

Since the last photograph below was taken, the patient's leg ulcer has fully healed.

**DAY
35**



**DAY
70**



**DAY
90**



Conclusion

Biatain Ibu Soft Hold managed the wound exudate effectively and its use in this case not only had a positive outcome in terms of healing but also had a positive analgesic effect lowering the patients pain score from 10 to 2.

Patients who suffer with venous disease resulting in ulceration require a therapeutic level of compression to manage their underlying condition.

This case has shown that when pain is a contributing factor, the use of topical ibuprofen from a Biatain Ibu Soft Hold dressing in combination with therapeutical compression should be considered as an optimal wound management treatment.

The management of a burn wound in a rheumatic patient using Biatain® Silicone Ag

Tshidi Mbonani, Senior Podiatrist, Chris Hani Baragwanath Hospital, South Africa

Introduction

This case is about a 56-year-old female patient who spilled a hot cup of tea on her lap causing burns to her right inner thigh. Previous treatment method has been to apply a contact layer such as paraffin gauze or drying out the wound with iodine solutions. Wound management is usually carried out at home.

The challenge in this case was the location of the affected area, as the dressing needed to stay in place even during mobility. A day-to-day challenge was the friction caused by the clothing and activities that caused increased discomfort and pain.

Patient

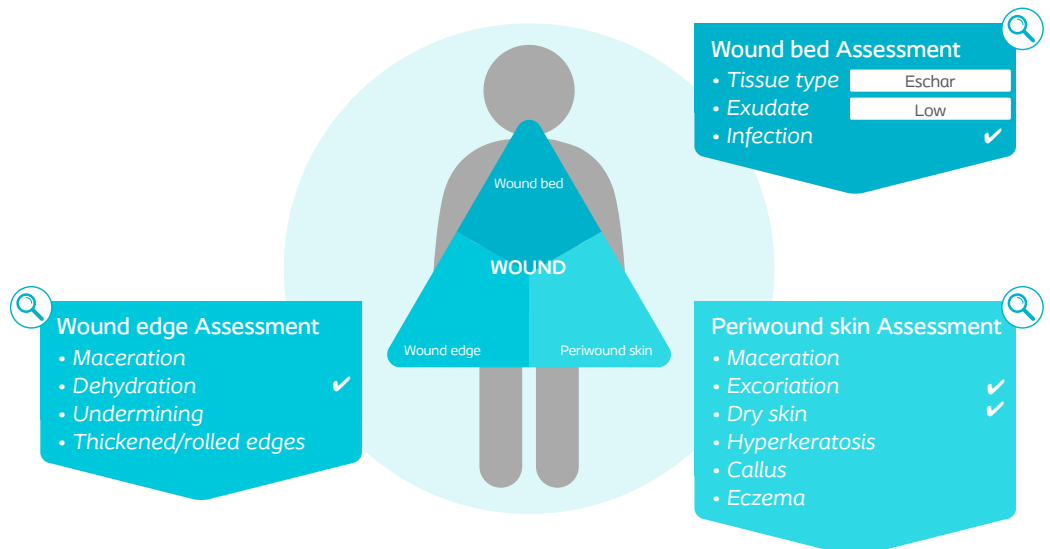
The 56-year-old female patient was diagnosed and managed for systemic Lupus Erythematosus for 3 months. Patient is married and lives with her husband and has no children. Patient was on prednisone for 3 months which were discontinued recently. Due to her declining health status she is struggling to take care of both her husband and herself.

The burn wound located on the right inner thigh was extending towards the popliteal fossa (back of the knee) as well as a satellite burn wound below the popliteal fossa. At this time her wound was approximately 7 days old. The patient applied mercurochrome and a dry dressing.

Initial wound assessment - Day 0

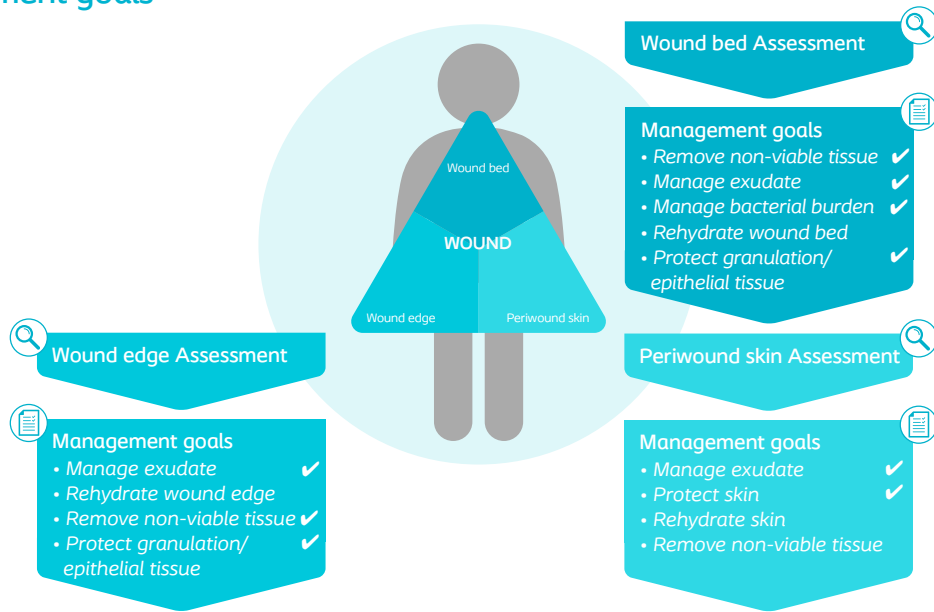


Size of wound
 Length 17 mm
 Width 2 mm
 Depth Superficial





Management goals



Treatment

Due to the high risk of infection Biatain® Silicone Ag was chosen as the primary dressing. Prior to dressing application, the wound was irrigated with a saline solution. In this case the selected dressing helped provide a moist wound healing environment, helped lower the risk of infection, as well as minimizing any risk of maceration. The dressing also managed the low levels of exudate that were present on day 0 at first dressing application. The dressing was changed once a week.

Results

With the moist wound healing the eschar loosened and fell off allowing the tissue underneath an optimal healing environment. The erythema was reduced and underlying epithelial tissue was present. Low levels of exudate were noted and minimal odor present. The periwound skin was intact and during application or removal of the dressing the patient did not vocalise any pain or discomfort.

**DAY
7**



Conclusion

For this wound the use of Biatain Silicone Ag was beneficial. The silicone foam allowed optimal exudate management while the soft silicone border assisted in eliminating discomfort upon dressing removal.

By using the Biatain silicone Ag risk of infection was decreased. Inflammation was reduced. The dressing was able to provide a moist wound healing environment therefore facilitating an easier detachment of the eschar from the wound bed without causing further trauma to the wound bed. Unlike previous treatments which had dried the wound out and stained the wound, Biatain Silicone Ag provided a favourable environment for the body to complete the healing process.

Management of a Bilateral Venous Leg Ulcer Patient using Biatain® Alginate Ag

Yu, Qian (ET) Associate Professor

The Second Hospital Of Dalian Medical University Wound Management Centre, China

Introduction

It is estimated that 10%~35% of the world's population suffers from venous diseases. 1%~22% of people over age 60 suffer from lower extremity ulcers. Most patients with leg ulcers were caused by some type of peripheral vascular disease. Chronic venous disease, the 7th most common chronic disease, accounts for 95% of the causes of leg ulcers.¹ In China, the overall incidence of lower limb venous ulcer is 0.4%~1.3%, and the duration of venous leg ulcers in about 45% of patients is more than 10 years. This case describes a patient with multiple venous leg ulcers bilaterally. A general assessment of the patient was completed initially. After local assessment using the Triangle of Wound Assessment, the management goals and treatment plans were developed. According to the different needs of the wound at different stages a suitable moist wound healing dressing combined with compression therapy was deemed ideal.

Patient

Patient is a 51-year-old male, H:197 cm, W:125 kg, BMI: 32.3, non-smoker who does not drink alcohol. The patient has had reoccurring incidence of bilateral leg ulcers for the past 10 years without seeking medical treatment and has been managing the wounds at home. The patient is non-compliant with therapeutic compression.

Patient has diabetes mellitus type 2 which he manages with medication but is not following protocols appropriately. He works 15+ hours a day, standing for long periods of time and lifting heavy objects. Six months ago his lower legs became swollen and the ulcers became more prominent. The wounds deteriorated over a period of 3 weeks until finally being admitted to hospital for diagnosis and treatment. While in hospital the patient refused surgery.

No deformities present on lower limbs, but multiple superficial vasospasm bulges and dilatation was observed. Edema noted bilaterally and multiple ulcers observed. An obvious odour was also noted. The dorsal artery of the foot had a strong pulse with no temperature anomalies.

Relevant test results:

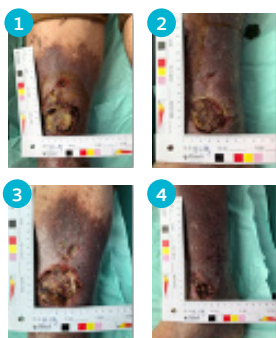
Ultrasonic examination: both femoral veins were normal.

ABI Index: Right lower limb 1.24; Left lower limb 1.20

Pseudomonas aeruginosa and Staphylococcus aureus present in the wound

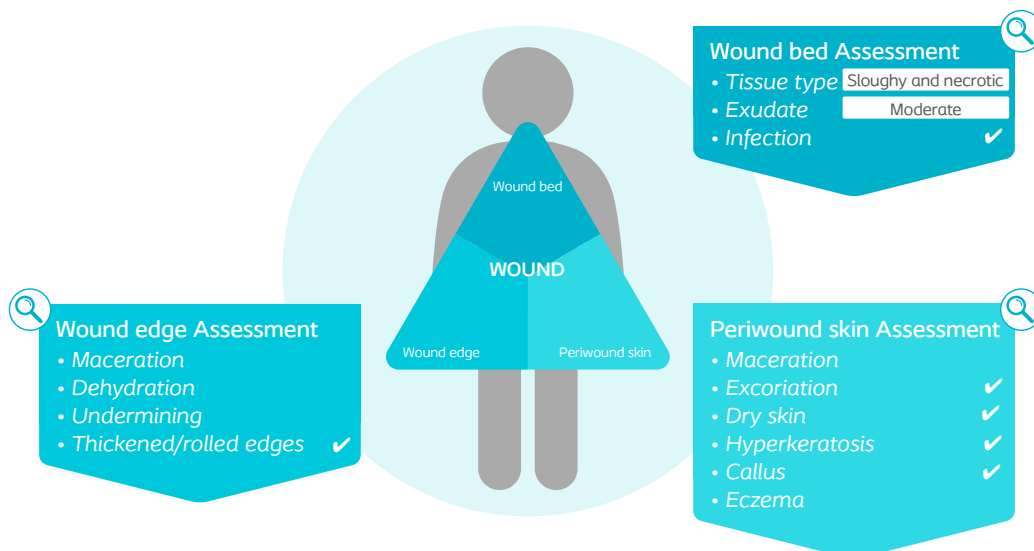
Fasting blood glucose 9.35mmol/L and Hba1c 7.5%

Initial wound assessment - Day 0



Size of wound

- No. 1 **9cm×6cm**
- No. 2 **4.5cm ×4.5cm**
- No. 3 **6cm×6cm**
- No. 4 **4.5cm×4cm**

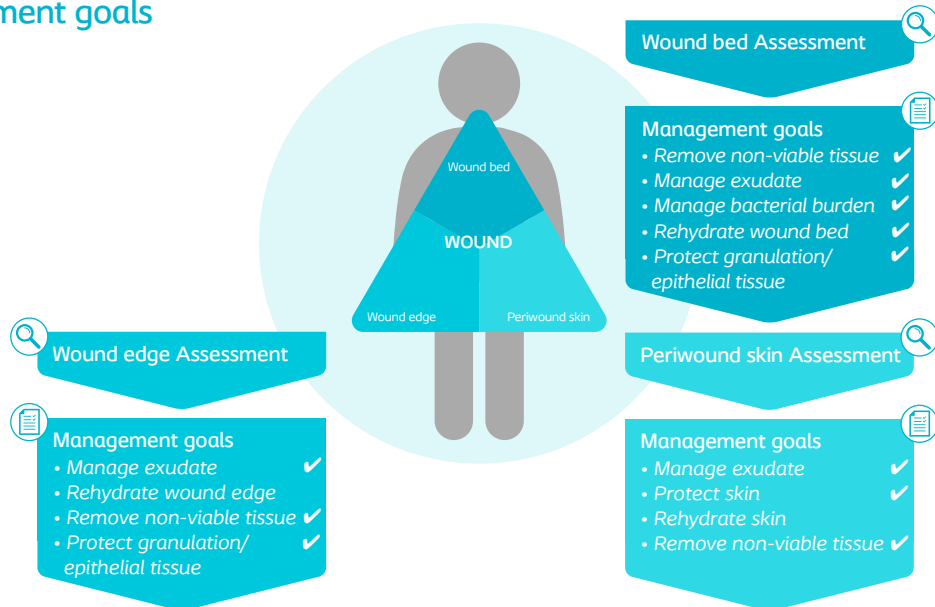


Reference literature:

[1] Sharon Baranoski, Elizabeth A. Aello. Practice principle for wound care 3rd edition [M]. Beijing: People's Medical Publishing House, 2017. [2] Ding Yanming. Wound Nursing [M]. Beijing: People's Medical Publishing House, 2017. [3] Fu Xiaobing. Treatment of diabetic foot and its related chronic difficult to heal wounds [M]. Beijing: People's Military Medical Press, 2011. [4] IANG Qixia, Theory and practice of wound therapy by negative pressure closure [M]. Beijing: People's Medical Publishing House, 2018



Management goals



Treatment

A multidisciplinary approach was conducted involving endocrinology. The vascular surgeon recommended that pressure treatment be made under non-surgical conditions. Conservative sharp debridement to remove sloughy and necrotic tissue was used in accordance with patient tolerance. Local infection present. Prontosan was used to cleanse the wounds due to its biofilm inhibitory effects, and the wound area was completely dry prior to dressing application.

The primary dressing chosen was Biatain® Alginate Ag to manage the bacterial load and to support autolytic debridement. This dressing was used at the beginning of the treatment and changed to Biatain Alginate once infection was no longer suspected. The secondary dressing chosen was Biatain® Silicone to absorb and retain exudate and to protect the wound edge and periwound skin. Moisturising cream was used to maintain hydration on the periwound skin. Multi-layer short stretch bandage was used for the compression therapy.

Results

After 54 days of wound treatment, the observed changes were:

Wound size: No. 1 3cm×1.8cm No. 2 2.5cm×3cm **Initial size:** No. 1 8cm×6cm No. 2 4.5cm×5cm
 No. 3 3.5cm×2cm No. 4 3.5cm×2.5cm No. 3 6cm×6.5cm No. 4 4.5cm×4cm

Wound bed: Tissue type changes from yellow black tough necrotic tissue to red granulation tissue. No signs of Infection.

Wound edge: Wound edge was regular, no necrotic tissue and epithelialisation in progress.

Periwound skin: Eczema still present.

Psychological state: The patient had changed from mild anxiety (SAS 53 points) to (SAS less than 50 points).

Pain index: The pain index score was rated 3/10 during dressing changes.

2019.04.10



2019.05.06



2019.05.20



Conclusion

Biatain Alginate Ag dressing was used at the beginning of treatment to help manage the bacterial load. The Biatain silicone foam conformed to the wound bed and provided effective exudate management and protection of the periwound skin.

Today compression therapy is the gold standard, however, prior to the application of pressure therapy, it is important to evaluate vessel and measure ankle brachial index. Under ABI guidance, this case adopts multi-layer compression to suppress dilation of skin superficial vein, decrease vessel volume, compensate insufficiency of venous valve, collaborate with function of crus gastrocnemius muscle pump, decrease venous tension, fasten blood flow velocity, and increase transportation of nutrients and oxygen.

1. Comprehensive therapy: systematic evaluation in 2015 showed that most common therapies for venous leg ulcer management combines different therapies, silver dressing for antimicrobial effect, moist wound healing dressings, compression therapy and NPWT therapy that can shorten healing time and improve healing rates.⁴
2. Health Education: To increase patient's adherence to treatment, effective communication during wound healing process and promotion of relevant prevention activities is key.

Coloplast develops products and services that make life easier for people with very personal and private medical conditions. Working closely with the people who use our products, we create solutions that are sensitive to their special needs. We call this intimate healthcare.

Our business includes Ostomy Care, Continence Care, Wound and Skin Care and Interventional Urology. We operate globally and employ about 12,000 employees.