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Day-to-day experience of healing venous leg ulcers using a premoistened debridement cloth and adjustable wraps with measurable compression

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Managing director
Nicola Rusling
nicola@woundcarepeople.co.uk

Publisher
Binkie Mais
binkie@woundcarepeople.co.uk

Editor
Jason Beckford-Ball
jason@jcn.co.uk

Business director
Alec O'Dare
alec@woundcarepeople.co.uk
07535 282827

Sales manager
Sam Ciotkowski
sam@jcn.co.uk

First Floor, Unit G, Wixford Park, George's Elm Lane, Bidford on Avon, Alcester B50 4JS
ISSN 0263 4465
e: binkie@jcn.co.uk
http://www.jcn.co.uk

Leg ulcer treatment requires the right tools

Within community healthcare services there is an ongoing drive to improve clinical efficiency and cost-effectiveness, while providing high quality care (NHS England, 2014). Patients with leg ulcers are a significant part of this drive and compression therapy is required to aid the healing of venous leg ulceration. However, compression is regularly underutilised (Harding et al, 2015), and even experienced clinicians can find it hard to achieve correct compression levels in bandage systems (Protz et al, 2014).

When graduated multilayer bandaging was the only routine compression system available it was widely accepted as the gold standard. However, patients can find it bulky and uncomfortable A new tool in the treatment of venous leg ulcers is the juxta wrap range, which is easy to apply and has a built-in pressure system to ensure correct compression is applied. Effective compression can be maintained throughout 24 hours and the instantly adjustable device allows patients to self-care and return to leading normal active daily lives. juxtacures™ recently won the 'most innovative product' category at the World Union of World Healing Societies' conference in Florence.

Following ulcer healing, preventing recurrence is another challenge for patients, who have to understand that wearing compression is a lifelong commitment. Compression is the mainstay of treatment here and is required to prevent ulcer recurrence and skin breakdown. For those patients who are unable to apply conventional compression garments, juxtalite™ is an easy alternative, with the safety of a built-in pressure system.

Similarly, any community nurse understands that effective wound healing requires wound bed preparation. Dead and contaminated tissue harbours bacteria and is a barrier to healing. While there are a number of debridement techniques available, one easy and effective method of physical debridement, which is simple to use without specialist training, is a premoistened debridement cloth, such as UCS™, which can also be used by patients themselves between nurse visits. These cloths offer simple cleansing and debridement of wounds and the surrounding skin without the need for water, extra surfactant or buckets.

Overall, treating leg ulcers plays a large part in the daily life of community and district nurses and I am sure you will find some innovative products in this supplement to help you and your patient along their journey to healing and remaining healed.

Sue Elvin, consultant district nurse, Queen's Nurse, CNWL, Camden

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This feature asks experts in their particular field to take a look at a therapy area and examine some of the challenges that general practice nurses (GPNs) may face. Here, we look at wound cleansing and ask how...

Effective debridement can be achieved in a busy clinic environment

THE PROBLEM

General practice nurses (GPNs) see patients with a wide variety of healthcare problems including chronic wounds, such as leg ulcers. Effective wound management requires a holistic approach, including wound bed preparation, which is essential to the wound healing process. Dead and contaminated tissue harbours bacteria and is a barrier to healing. Wound bed preparation involves the removal of dead and contaminated tissue by debridement, creating a wound environment that is less favourable to bacteria and supports healing.

THE ANSWER

In a clinic environment, limbs are traditionally cleansed by placing them in a bucket of water with added emollients. However, this practice poses manual handling risks to healthcare professionals, is time-consuming, and while cleansing is important for skin care, it does not address the need for debridement.

Audrey Gillies works as part of the wound care team in medi UK, offering clinical support. She has a 15-year history of working in wound care

Indeed, the European Wound Management Association (EWMA) referred to debridement as the deep removal of adherent, dead or contaminated tissue from a wound and highlighted that this procedure should be separated from the act of cleansing, which it defined as the removal of dirt (lose metabolic waste and foreign materials) from the wound (EWMA, 2013).

Debriding is also an important component of wound bed preparation, as it:

- Allows greater visibility of the wound if all debris has been removed, thereby aiding assessment
- Improves skin integrity, enabling it to be an effective barrier against environmental elements, toxins and bacteria
- Gives general practice nurses (GPNs) the opportunity to identify other symptoms, e.g. hyperkeratosis, dermatitis, etc

- Helps patients to feel cleaner, particularly if they have been unable to wash due to dressings/compression bandaging.

There are a number of debridement techniques available, which healthcare professionals should be aware of so that they choose the most appropriate method for the patient and their wound (Vowden and Vowden, 2011). One easy and effective method is the use of debridement cloths, which can also be used by patients themselves between nurse visits.

WHAT IS UCS™?

UCS™ (medi UK) is a sterile, pre-moistened debridement

and cleansing cloth which offers atraumatic cleansing and debridement of a wound and the surrounding skin, without the use of water, any extra surfactant or buckets (Downe, 2014).

It effectively prepares the wound bed for healing by gently removing barriers to healing such as slough, debris and biofilms.

Dead and contaminated tissue provide the perfect environment for bacteria to grow, therefore their removal reduces the risk of infection, and facilitates accurate wound assessment as the wound bed is more easily visible.

UCS can be used on acute and chronic wounds, postoperative wounds, and wounds healing by secondary intention, leg and diabetic foot ulcers, peristomal skin, burns, ports of entry for catheters, and percutaneous endoscopic gastrostomy (PEG)/ percutaneous endoscopic jejunostomy (PEJ) tubes. It can be used on all types of skin conditions, including dry, hyperkeratotic skin (see below), and is safe for use on fragile skin and thus is suitable both for the elderly and very young.

Active ingredients in UCS

Unlike other debridement pads or cloths, the UCS cloth is pre-moistened with active ingredients, containing a surfactant, a mild keratolytic and aloe vera.

Surfactants are cleansers that penetrate the surface of a wound, providing deep and effective cleansing in just a few minutes. The surfactants used in UCS are gentle, non-allergenic cleansers which are non-cytotoxic, and so cause no harm to healthy tissue or cells.

The mild keratolytic helps to soften any hardened skin on the surface (horny layer of the epidermis), allowing it to shed. Typically in hyperkeratosis, the skin is so dry and dehydrated that it cannot naturally shed — leading to a brown discoloured appearance to the skin — and so removal of this dehydrated layer requires rehydration. The combined action of UCS cleans, softens and allows better penetration

FIGURE 1.
Before using UCS.

FIGURE 2.
After using UCS for less than three minutes.

of the moisturiser, the final ingredient in UCS — *aloe vera barbadensis*. This provides a degree of moisture to improve the skin's integrity and has anti-inflammatory and antimicrobial properties (Rajeswari et al, 2012).

The UCS cloth is soft and pliable, making it easy to get into those difficult-to-reach places such as between the toes, under skinfolds (Downe, 2014), as well as cleaning around the wound margins, which is particularly important for cell migration during epithelisation. The cloth can also be cut, which allows one cloth to be used safely for multiple wounds, without the risk of cross-contamination, and providing a safe and more cost-effective treatment option. The construction of the UCS cloth also means that clinicians have closer contact with the wound bed while using the cloth, making navigation more effective.

Accessing UCS on prescription

UCS can be found in the 'Physical debridement' category of the drug tariff. The debridement cloths are available in boxes of 10 individually packaged sterile pouches and are simple for patients to use between surgery appointments if appropriate. UCS is the least expensive option available in the physical debridement category and the only pre-moistened debridement cloth.

SUMMARY

In the author's clinical experience, providing holistic and optimal patient care in a busy clinic can be challenging. Allocated time slots are short and patients are many and varied. Effective management of patients with wounds depends on taking a systematic, holistic approach to assessment. Focusing on the whole of the patient and not just the 'hole' in the patient is essential to ensure that the underlying cause of the wound is known (Hampton and Collins, 2004).

Using UCS for cleansing and debriding is a quick, safe and cost-effective alternative to washing legs in buckets. It facilitates assessment and healing, reduces time and risk of injury to the nurse, while still offering the patient the experience of having their legs washed and cleaned. JCN

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This feature asks experts in their particular field to take a look at a therapy area and examine some of the challenges that general practice nurses (GPNs) may face. Here, we look at how...

Innovative compression therapy systems can improve practice

THE PROBLEM

Treating leg ulcers makes up a large part of a nurse's caseload. While compression therapy with graduated multilayer bandaging has been widely accepted as recommended treatment, patients can find it bulky and uncomfortable and clinicians need to be trained and competent in its application. Thus, it is important that clinicians keep up to date with new methods of compression that can promote concordance, improve healing rates and achieve cost savings — all vital elements in leg ulcer management. juxtacures™ (medi UK), an adjustable compression system, is one such innovation that helps to alleviate some of the challenges associated with multilayer bandaging.

THE ANSWER

Compression therapy has long been accepted as the most effective way to reduce venous hypertension and aid healing of venous leg ulceration. This began with the work of Professor Moffatt and a clinical group at Charing Cross Hospital, who developed the first compression bandaging system in 1992 (Mears and Moffatt, 2002; Moffatt, 2004).

Gill Wicks, consultant nurse and tissue viability lead, Great Western Hospitals NHS Foundation Trust

Since 1992 other bandaging systems have been devised and there are now multiple compression therapy choices available to achieve 40mmHg at the ankle and 20mmHg below the knee to activate effective venous return. But, how can we most effectively, consistently and safely accomplish this?

The early work of Professor Moffatt constituted a four-layer bandaging system that led on to the development of four-layer systems. Safe application of these bandages posed challenges as they needed to be applied with skill and consistency to ensure that they were put on with the same bandage tension from ankle to below the knee, and with an accurate 50% overlap to achieve the correct sub-bandage pressure. The risk of inaccurate bandage application, which may be due to knowledge or skill, can result in variable sub-bandage pressures, potentially leading to either pressure damage to the lower limb if too tight, or ineffective venous return if too loose. Therefore, patients may not receive the full benefit of the treatment (Wounds International, 2013).

From the patient's perspective, the layered bandaging systems have an impact on quality of life, as they can be bulky and hot and result in problems such as odour and difficulty in putting on shoes, thus making patients reluctant to concord (Lay-Flurrie, 2005; Wicks, 2015).

Two-layer bandaging systems were introduced to address the issues of safety and to reduce the risk of incorrect sub-bandage pressures, while offering effective healing rates (Benigni et al, 2007). However, these bandage systems, although less bulky, still created similar challenges for patients as with the four-layer systems.

However, there is now an innovative compression garment called juxtacures™ (medi UK), which offers an effective alternative to traditional compression bandaging.

WHAT IS JUXTACURES?

This innovative, instantly adjustable system is applied to the lower limb, from the ankle to below the knee, and can be easily adjusted to deliver the

desired sub-bandage pressure to the lower limb from 20 to 50mmHg.

A pilot study to test juxtacures with 16 patients was carried out in Wiltshire and after four weeks the average saving for wound dressings and compression therapy was £60.88 per patient per week. The total number of nursing visits also reduced by an average of 87 minutes per patient per week (Wicks, 2015). Following this, juxtacures was considered for every patient with a venous leg ulcer and 56 patients had their treatment converted from compression bandaging to the adjustable compression system.

During the first week of the 'conversion programme', a quality-of-life questionnaire was given to 18 patients and this was repeated at week four. The results indicated that the perception of pain was reduced in 70% of patients, sleep pattern improved in 62%, and overall, 80% of patients stated that this change in treatment improved their quality of life. They cited being able to wear normal footwear, better balance, and improved gait and stability leading to greater mobility. Being able to get socks and trousers on was also seen as an advantage, with one patient saying that he could get dressed and have lunch with his friends for the first time in two years. The option to check and adjust pressure by the patient also increased self-care, which improved feelings of being in control'.

In the six months following this conversion programme, the healing rate, as a percentage of the number of patients on the caseload with a venous leg ulcer within the community nursing teams, increased from 19 to 39%, and the length of time to healing reduced from an average of 22 to 18 weeks. Fourteen of the 56 patients, who had a chronic long-term leg ulcer for 12 months or more, despite being in compression bandaging, healed within six months.

The following should be considered when introducing juxtacures:

- Patient choice (some patients are used to having compression bandaging and may not wish to change)

FIGURE 1.
juxtacures in situ.

- juxtacures will last for six months, thus, if an ulcer is relatively small and likely to heal quickly, it may be appropriate to use alternative methods of compression (e.g. compression bandages, leg ulcer kits)
- juxtacures is simple to use and training can be given to carers, or patients may wish to self-manage after the initial fit and follow-up
- The product can be laundered easily
- A recent randomised controlled trial (RCT) found that adjustable Velcro compression systems were effective for patients with venous oedema (Mosti et al, 2015), however juxtafit™ is more suitable, being designed specifically to manage oedema/lymphoedema.

With regard to the financial impact of using juxtacures, the cost of the bandage and dressing regimens for six patients was scrutinised for six months before the conversion to juxtacures and there was a total cost of £4,323.28 for wound dressings and compression bandaging. This reduced to £1,928.16 for the six months following, i.e. a total saving of £2,395.12 for six patients. This included juxtacures and the primary and secondary dressings used. The significant reduction in exudate volume in these patients also led to fewer dressings and dressing changes.

CONCLUSION

Various compression systems are now available for the treatment of venous leg ulcers, each having their own advantages and disadvantages, however, the choice for each patient should be an individual one.

Many general practice nurses (GPNs) are overstretched, with challenging workloads. Thus, innovations that can save nursing time and money and improve patient quality of life, to the extent that some people take an active self-care role with treatment, are a welcome progression in the treatment of venous leg ulcers.

Whole system changes or developments bring challenges and change takes time to become embedded in workforces, but effective, consistent and safe choices for patients with venous leg ulcers are now readily available. JCN

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This feature asks experts in their particular field to take a look at a therapy area and examine some of the challenges that general practice nurses (GPNs) may face. Here, we look at how...

Appropriate compression is necessary to prevent recurrence in venous leg ulceration

THE PROBLEM

While multilayer compression bandaging has traditionally been seen as gold standard therapy for venous leg ulcers, success of treatment depends on the competency of the nurse applying the bandages and patient concordance (Scottish Intercollegiate Guidelines Network [SIGN], 2010). Furthermore, wearing compression is a lifelong commitment as, following healing, it is still needed to prevent ulcer recurrence and skin breakdown. During this maintenance phase, compression hosiery is usually prescribed (Nelson and Bell-Syer, 2012). However, some patients also find it difficult to concord with compression hosiery (Jull et al, 2004). juxtalite™ (medi UK) is an alternative maintenance system for those patients who cannot tolerate or apply compression garments.

THE ANSWER

The success and feeling of relief after healing a venous leg ulcer (VLU) may be shortlived if adequate compression therapy cannot be maintained thereafter. Recurrence rates of venous leg ulcers are high (Shenoy, 2014; Harding et al, 2015), which not only contributes a cost burden to the over-stretched NHS budget, but also has a financial and social impact on the patient (Adderley and Thompson, 2014).

Monica Smith, clinical trainer, medi UK

The National Institute for Health and Care Excellence clinical knowledge summaries (CKS) state that following the healing of a VLU, education and lifestyle changes are important to prevent recurring breakdown (NICE, 2016).

NON-CONCORDANCE?

In the author's experience, a label of 'non-concordance' is usually given to patients who are physically unable to carry out the care advised, or who find the prescribed treatment too painful.

Education plays a prominent role in helping patients and their families/caregivers understand the importance of treating the underlying condition to prevent further breakdown, with compression therapy being key to maintaining a healed VLU.

COMPRESSION HOSIERY

The level of compression that hosiery delivers is indicated by its class, ranging from 1–3. However, there are variations in the level of mmHg depending on the type of hosiery being used, i.e. British (BS), RAL (German Standard) or French Standard. So, just asking for a class 1 garment will not allow for accurate compression (or 'dosage' of compression required).

The class of hosiery chosen should always be in line with the severity of symptoms to treat the underlying disease, i.e. the more severe, the higher the class of compression.

If a VLU has healed using 40mmHg compression at the ankle (i.e. if the patient's ankle brachial pressure index [ABPI] was within normal limits, the compression required is 40mmHg; SIGN, 2010), and a class 1 BS compression garment is applied (offering 14–17mmHg at the ankle), the patient's skin is likely to breakdown relatively quickly as there is not enough external pressure to correct the internal (underlying) condition.

HOW COMPRESSION WORKS

Compression works by delivering the highest level of compression at the ankle (where most internal pressure is found in chronic venous insufficiency [CVI]),

and gradually reducing higher up the leg (i.e. 100% of compression is at the ankle, reducing to 70% at the knee and 40% at the top of the thigh). The walls of the compression garment improve the function of the venous system (*Figure 1*).

COMPRESSION FOR PREVENTION

There is a wide range of compression hosiery for patients with healed VLUs. For example, mediven® RAL (medi UK) range is available in different sizes, both open- and closed-toe. It is readily available on prescription (FP10/GP10), reducing the need for made-to-measure hosiery for many patients. mediven active® has a soft fleecy sole making it comfortable to walk in, while mediven plus® offers a range of sizes that can help improve the lipodermatosclerosed limb shape often found in CVI.

AN ALTERNATIVE TO BANDAGING WHERE HOSIERY IS UNSUITABLE

There are patients who have to be maintained long term in bandaging because they simply cannot apply or tolerate compression hosiery. This could be due to musculoskeletal conditions hindering dexterity, or other comorbidities that prevent them from applying or removing compression garments. Therefore, it is important that general practice nurses (GPNs) are aware of alternative systems that might be more effective in helping patients to prevent any ulcer recurrence and keep their skin intact.

An example of such a device is juxtalite™ (medi UK). This is an inelastic wraparound compression system. It is easy to apply and adjust and allows an immediate return to conventional footwear. The device has a Built-in Pressure System (BPS™), a method by which the pressure applied can be measured (at initial fit) and monitored during the day. The calibrated card is held against two lines on each strap and the scale shows the mmHg applied. This makes application a simple and safe routine, and ensures that the wearer has the optimal compression to deal with the underlying disease and prevent ulcers recurring.

FIGURE 2.
juxtalite in situ.

juxtalite provides high working and low resting pressure, ensuring comfort for the wearer. The garment straps can be instantly readjusted while on the limb. With its latex-free properties, anti-odour and antimicrobial fabric, it is patient-friendly and gives sustained and specifically defined compression for up to 24 hours a day. It is available in eight off-the-shelf sizes and two lengths.

It is comfortable and light to wear and can be easily applied and removed by the patient. It is also washable, and can be dried in a tumble drier and is guaranteed for six months' wear.

Converting from compression bandaging to juxtalite can also help to improve quality of life, as patients are able to wear their own shoes again, and, in the author's clinical experience, feel more independent as they are no longer restricted by having to wait in for nurse visits to have their bandages changed, or to don/doff hosiery. Anecdotal evidence shows that skin condition improves — with juxtalite being easy to apply and remove, cleansing regimens can become regular again with frequent applications of emollients to improve skin hydration.

juxtalite not only offers an affordable and acceptable choice, but also allows sustained and measurable compression to be worn to prevent VLU recurrence and enables patients to be involved in their own care. JCN

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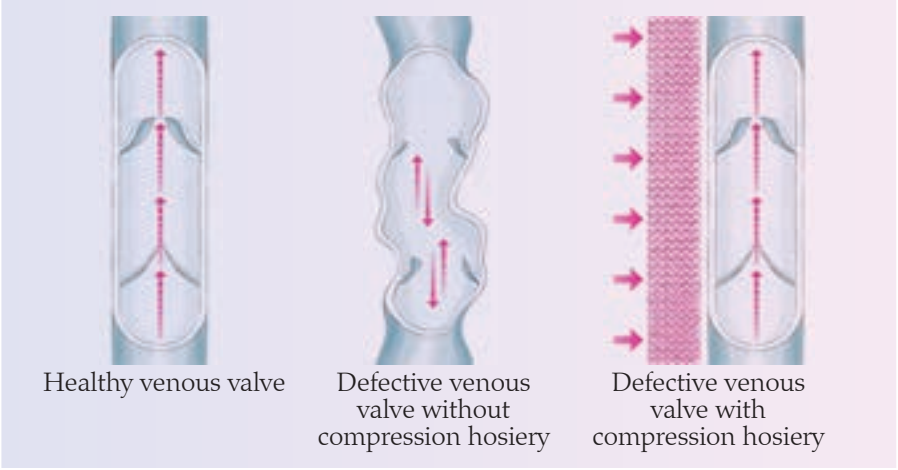

Figure 1.
Venous system.

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Demystifying debridement and wound cleansing

Annette Downe, Salma Khatun

In the community setting, leg ulcer management involves both care of the wound itself and the skin of the lower limb. Cleansing is vital to enure that infection does not develop in the wound itself and that the integrity of the periwound skin is maintained. Maintaining the skin's barrier function is also vital, as, without this, fluid loss, inflammation, dryness and infection can develop. Wound exudate can also act as an irritant to healthy skin, particularly when permitted to accumulate under wound dressings. Keeping the skin clean and free of debris, alongside more frequent dressing changes can help in the treatment of irritated skin. This article highlights the use of an innovative cleansing product (UCS™; medi UK), which is designed as a premoistened cloth that safely and efficiently cleanses the wound of slough and debris, while rehydrating periwound skin.

KEYWORDS:
■ Leg ulcers ■ Skin cleansing ■ Rehydration ■ Periwound skin

Any effective leg ulcer management model involves care of the wound and the skin of the lower limb (Harding and expert working group, 2015). Effective skin management and wound cleansing is a key component of managing bacterial bioburden and ensuring that the periwound margins are in an optimum condition to promote healing at the wound edges and maintain overall skin integrity. Where ulceration is erosive and edges unclear, it can be difficult to know how extensive the actual ulcer is.

Annette Downe, epidermolysis bullosa clinical nurse specialist, St Thomas' Hospital, London; Salma Khatun, student nurse, King's College London

Skin changes are commonly seen around venous leg ulcers as a result of venous changes. In addition to the thickening of the subcutaneous tissue (lipodermatosclerosis) it is common to see redness, scaling, weeping and crusting around a wound; these are all features of dermatitis or eczema (interchangeable terms). In some patients the top layers of the skin become very thickened with scale or covered with adherent old keratin (hyperkeratosis).

BACKGROUND

Skin barrier function

Maintaining skin barrier function is an important part of skin care. The skin has many functions, importantly as a barrier and an immunosurveillance organ (Ryan, 2013). Loss of the barrier function results in an inability to control transepidermal fluid loss, leading to inflammation, dryness and potentially infection.

Wound fluid

Wound fluid (exudate) can also be very irritant to healthy skin especially under some dressings. Effective skin cleansing regimens, together with more frequent dressing changes can be helpful in treating very irritated skin.

Clinicians may often concentrate upon the dressing change at the expense of effective skin hygiene. There may be a number of historic reasons for this, such as the time and effort required for a traditional wash with bucket and water.

Debridement

On occasions the objective may be to debride the tissue. Debridement is different to cleansing, which is simply the removal of dirt from a wound (Kamolz and Wild, 2016). Debridement can be defined as the removal of devitalised tissue, infected tissue, hyperkeratosis, slough, pus, debris or any other type of bioburden from a wound to promote healing (Strohal et al, 2013).

Chronic wounds such as leg ulcers or pressure ulcers often contain dead tissue and bacteria. This can be either dry and 'leathery' in appearance, which is known as eschar; or soft and coloured brown, grey or yellow, which is known as slough. Slough is made up of white blood cells, bacteria and debris, as well as dead tissue, and is easily confused with pus, which is often present in an infected wound.

Chronic wounds are likely to need repeated debridement as part of ongoing wound care to remove slough, a gel-like mass of dead or living bacteria, fibrin and tissue-destroying enzymes at the base of a chronic wound. Slough prevents normal healing (Mooney, 2009).

While debridement is a process that occurs naturally in

KEY POINTS

- In the community setting, leg ulcer management involves both care of the wound itself and the skin of the lower limb.
- Cleansing is vital to enure that infection does not develop in the wound itself and that the integrity of the periwound skin is maintained.
- Maintaining the skin's barrier function is also vital, as, without this, fluid loss, inflammation, dryness and infection can develop.
- Wound exudate can also act as an irritant to healthy skin, particularly when permitted to accumulate under wound dressings.
- Keeping the skin clean and free of debris, alongside more frequent dressing changes can help in the treatment of irritated skin.
- This article highlights the use of an innovative cleansing product (UCS; medi UK), which is designed as a pre-moistened cloth that safely and efficiently cleanses the wound of slough and debris, while rehydrating periwound skin.

some wounds, others may need intervention. Establishing a good dermal bed is crucial to wound healing.

Identifying and removing any factors that will prevent or slow the healing process such as damaged and dead tissue, debris, and bacteria is an important goal and will help to minimise infection risk and encourage healthy granulation tissue to form, thereby aiding healing.

The acronym TIME is a useful tool that can be used to determine objectives and plan appropriate care. A summary of the four main components is (Dowsett and Newton, 2005):

- **T**issue management
- Control of **I**nfection and inflammation
- **M**oisture balance
- Advancement of the epithelial **E**dge of the wound.

There are a number of debridement techniques available from surgical to physical/mechanical methods (Foot in Diabetes UK [FDUK] expert working group, 2014), and clinicians should be aware of the options available.

It is not necessary for all community nurses to be able to perform all types of debridement, however, they should have sufficient understanding to recognise which treatment is the most appropriate for the individual person and their wound (Vowden and Vowden, 2011).

WOUND ASSESSMENT

The decision whether to debride a patient's wound must be based on a comprehensive wound assessment performed by a competent and trained practitioner (Ousey and Cook, 2012). The assessment must be fully documented. Effective debridement of the wound allows the clinician to make a detailed assessment of the wound bed and surrounding area.

Traditional practice

The treatment of leg ulcers has traditionally involved debridement and cleansing with a bucket wash or similar, often incorporating a bath oil or emollient. This allows the gentle removal of hyperkeratosis and can be soothing for many patients. However, some patients such as those with diabetes-associated neuropathy for example may experience increased pain and thus refuse this cleansing regimen.

This practice is also physically demanding for the clinician or healthcare assistant as each bucket of water is likely to contain approximately four litres of water (weighing 4kg) and is therefore heavy to carry from the tap to the patient and back again. The whole process of filling and moving buckets of water is time-consuming and physically demanding, in some cases leading to musculoskeletal issues for clinicians who have to repeat the task regularly.

CLEANSING AND DEBRIDING WITH A PRE-MOISTENED CLOTH

UCS™ (medi UK) is a premoistened debridement device — the fluid used to premoisten the cloth helps to soften unwanted tissue in preparation for gentle and effective removal by the UCS cloth.

UCS is a class IIb medical device and is therefore safe for use in deep wounds where there may be exposed tissue and bone etc. UCS was approved for registration on the Drug Tariff in England, Scotland and Wales in May 2014.

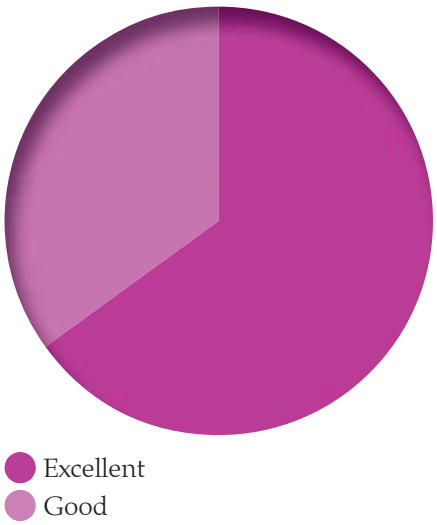

Figure 1.
UCS softness and durability.

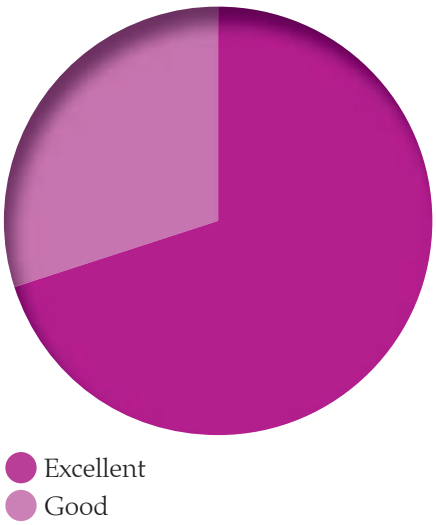

Figure 2.
UCS ease of use.

CASE STUDY

Annette Downe, epidermolysis bullosa clinical nurse specialist, St Thomas' Hospital, London

Mr M was a 89-year-old man with dominant dystrophic epidermolysis bullosa (EB) who had a chronic wound on his left lower leg. The wound bed was partially occluded by a large scab which made it difficult to fully assess (*Figure a*).

A UCS wipe was applied gently over the area to help soften the scab. After five minutes the UCS wipe was removed. The scab had softened enough for it to be removed without trauma or pain for the patient (*Figure b*). This enabled the wound to be assessed more effectively.

Biopsies were later taken and the scab was found to be due to squamous cell carcinoma. The photos show the benefits of UCS for wound assessment, as well as improvement of the surrounding skin.

The ingredients contained in the debridement cloth are:

- Poloxamer 188: a surfactant. Surfactants are able to provide a 'deep clean' of tissues and wounds by breaking down the interface between water and oils and/or bacteria. They 'hold' the oil/bacteria in suspension, allowing them to be removed more easily. This action allows for deeper cleaning than that provided by water
- Allantoin: a moisturising and mild keratolytic, which causes the skin's keratin layer to soften. This property helps skin to heal quickly and to bind moisture effectively, benefitting dry skin and helping to heal wounds, burns and scars
- *Aloe vera barbadensis* leaf extract: this comprises ingredients derived from the various species of aloe vera for a soothing and moisturising effect. It has no known side-effects.

A study of the efficacy and tolerability of UCS in Finland in 2010 showed that all of the 60 patients in the evaluation rated 'ease of use' and 'softness and durability' as either 'excellent' (67%) or 'good' (33%) (*Figures 1* and *2*).

Alternative uses

The moisture contained within the UCS sachet helps to soften necrotic tissue, slough and exudate in the wound. The same fluid has been successfully used as an eye wash and to treat acute mouth ulcers by removing biofilm and therefore aiding rapid healing.

EASE OF USE AND PATIENT PERSPECTIVE

Hughes (2015) ran a qualitative study to evaluate the UCS debridement cloths, and feedback allowed evaluation of the effectiveness of UCS in practice from both a patient and a nurse point of view:

- One-hundred percent of staff found UCS easy to use
- Ninety-four percent said UCS made a visible improvement to the wound
- Six percent saw no noticeable difference

- Ninety-one percent of patients said it was comfortable treatment
- Nine percent experienced some discomfort
- Ninety-six percent said they would use UCS again; 4% said they would not use it again, but no rationale for this was recorded at the time.

Hughes' (2015) evaluation concluded that patients and staff were happy to use UCS, which demonstrated visible improvements in the skin condition of patients, so much so that local clinical leaders changed the practice and policies for washing limbs to include UCS following the evaluation period.

UCS has also been found to be effective in the treatment of hyperkeratosis as well as cleansing and hydrating the surrounding skin (Downe, 2014; Hughes, 2015). After debridement and cleansing with UCS the skin will dry naturally; there is no need for mechanical towel drying.

A COMMUNITY PERSPECTIVE

In the authors' experience, UCS wipes can be successfully used as part of lower limb ulcer management within a clinic and home environment where bucket usage can be reduced. Some of the considerations of using UCS are:

- Productive clinical environment: nurses spending time on direct clinical care instead of bucket management. Cleansing time is also reduced. This can benefit both patients and staff
- Pain management facilitated: the UCS wipes provide a good cleansing alternative where pain was experienced. This is especially useful where patients have neuropathic pain that increases on wound exposure or exposure to water
- Ease of skin cleansing: the wipes are easy to use and the oils enable gentle clearance of dry and hyperkeratotic skin. Patients report that their limbs feel rehydrated and supple
- Wound cleansing enhanced: cleansing the wound with the wipe targets bacterial burden so removal of slough and debris is enhanced
- Infection control: wipes are individually wrapped so are specific to a single patient (single-patient use), while being easy to dispose of. Bucket spillage and cross-infection is negated

'UCS has also been found to be effective in the treatment of hyperkeratosis as well as cleansing and hydrating the surrounding skin (Downe, 2014; Hughes, 2015). After debridement and cleansing with UCS the skin will dry naturally; there is no need for mechanical towel drying.'

- Reduction in manual handling: risk relating to manual-handling issues, especially within the home, are addressed
- Cost-effective alternative: where the wipes are used appropriately the cost of leg ulcer management can be impacted as less nursing time is required for providing care leading to greater productivity
- For patients who may miss having their limbs washed with a bucket, a compromise can be reached where both techniques are used so that they feel clean and refreshed.

It is important with any product to consult the manufacturer's instructions and to consider the needs of the individual patient. As with all topical applications, some patients may experience skin sensitivity following the use of UCS and unmonitored use may be costly if practitioners do not use the wipes appropriately.

CONCLUSION

Skin care and ulcer bed management is critical in lower limb ulcer management. Within a framework of value-based care and productive working, UCS wipes are an effective addition to the management regimen for patients with lower limb ulceration especially within a busy clinic or community team. JCN

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Using an adjustable compression system to treat community leg ulcers

Natalie Freeman, Ray Norris

Community nurses often work in isolation and are not always able to attend best practice updates in venous leg ulcer treatment. As a result, they do not always possess the up-to-date knowledge and skills to manage these patients. This project reached out to local community nurses to offer training and education in alternative ways of delivering compression therapy; in this case an adjustable Velcro compression device, juxtacures (juxtacures™; medi UK). The juxtacures range is designed to be simple to apply with a built-in pressure system that allows the nurse to accurately monitor the level of compression being applied to the limb. This ensures a therapeutic level of compression is maintained. The authors felt that the juxtacures range offered a solution to the problems of time and skill level in compression bandaging. The aims of the project were to reduce the amount and duration of community nursing visits to patients with venous leg ulcers while ensuring that safe, effective and accurate compression therapy was delivered. Overall, the project demonstrated a significant time saving in terms of nurse visits to patients with lower limb problems, with some patients successfully discharged to self-manage their lower limbs.

KEYWORDS:
■ Leg ulcers ■ Compression bandaging ■ Nurse time
■ Adjustable Velcro compression device ■ Patient comfort

Within community healthcare services there is an ongoing drive to improve clinical efficiency and cost-effectiveness while simultaneously providing high quality evidence-based care (NHS England, 2014).

Ensuring this strategy is delivered is at times problematic, particularly as community services are currently faced with rising registered nurse vacancies with trusts becoming increasingly dependent on agency and temporary staffing to fill these posts (Royal College of Nursing [RCN], 2015). This brings challenges around training and levels of competency among these nurses.

Compression bandaging is one of the nursing skills that requires additional training and competency assessment, however, agency nurses in particular — being a transient workforce — do not usually attend trust leg ulcer courses and often do not remain in areas long enough to complete the required training and competency assessment.

THE PROJECT

Research has repeatedly shown that nurses' compression bandaging skills can be poor. These skills can be improved with training but this tends to be a short-term gain with little evidence to suggest it leads to a long-term improvement in compression bandaging competence (Nelson et al, 1995; Taylor et al, 1998; Reynolds, 1999; Partsch and Mortimer, 2015).

With this in mind, the tissue viability team in the authors' locality wanted to develop a safer and more manageable approach to treating venous leg ulcers than traditional compression bandaging. The decision was taken to trial the use of the juxtacures™ (medi UK) product range, partly as it offers a cost-effective solution to managing venous leg ulceration and chronic oedema (Elvin, 2015) (see box on opposite page for details of the range).

Aims

The aims of the project were to reduce the amount and duration of community nursing visits spent dealing with venous leg ulcer patients while still ensuring that safe, effective and accurate compression therapy was delivered. It was also hoped that the project would enable patients who wanted to self-care to do so safely with reduced nursing support and regular wound reviews.

The team also wanted the project to improve shared care in the locality, with mobile patients more able to access practice nursing services, hopefully resulting in improved patient outcomes and a reduction in treatment costs and nursing time. At the time of writing, not all practice nurses in the authors' locality provided compression therapy due to competency issues and time restraints, therefore non-

Natalie Freeman, tissue viability nurse; Ray Norris, clinical nurse specialist, North East London Foundation Trust

housebound patients were often referred to the community nursing team for treatment.

Implementation

In April 2015 the authors' tissue viability service introduced juxtacures for the treatment of venous leg ulcers; juxtalite™ (medi UK) for the maintenance and prevention of reoccurrence of ulceration; and juxtafit™ (medi UK) for the management of chronic oedema (Freeman, 2015). This system was chosen for an initial pilot project after reading of the success of Elvin's (2015) work on lower limb problems using the same system.

This project required the development of a new treatment pathway for leg ulcer management (*Figure 1*). The community nursing teams were struggling with high nurse vacancies and a heavy reliance on agency nurses, which meant that permanent nurses were often too busy with day-to-day caseload management to attend leg ulcer training courses. As a result, there were a limited number of nurses with adequate compression bandaging skills leading to an increase in reports of bandage trauma from poorly applied compression bandages.

Following on from the success of the initial project in April 2015, which used patient case studies to show that the introduction of juxtacures could reduce nursing appointments and product spend, the tissue viability service introduced the new treatment pathway to the local community nursing teams. The patients seen were those who had been referred to the tissue viability complex wound clinic.

Table 1: Inclusion criteria for the study

Currently on caseload with ankle brachial pressure index [ABPI] of above 0.8 and less than 1.3 and who have received a full lower limb assessment
Ability to self-care or has carers
Mobile and/or desires to wear own footwear
Absence of gross dorsum oedema
Relatively well-shaped lower limb
Mobile and able to attend GP surgery for shared care with practice nurse
Well-controlled exudate volumes
No oedema or mild-to-moderate oedema

The community nursing team caseload consisted of 490 patients, with 22% of these requiring visits for lower limb management, including venous leg ulcers, chronic oedema or wounds without a current differential diagnosis (for example, lower limb wounds incorrectly labelled as skin tears or trauma wounds where the patient had not received a holistic assessment to identify the underlying aetiology).

The community nursing caseload holder reviewed and identified appropriate patients for the project using the inclusion criteria (*Table 1*). The patients received a full holistic assessment and those who met the criteria were fitted with an adjustable Velcro compression device.

During the seven-week project, a total of 16 patients were fitted with a device from the juxtacures product range. After the initial fitting and assessment, the patients were referred back to their local community nursing team for ongoing management. All of the community nursing teams received training on how to measure, fit and apply the adjustable Velcro compression devices before the start of the project. This training incorporated three training

THE SCIENCE — WHAT IS JUXTACURES?

juxtacures™ (medi UK) compression garments are easy to apply and can be mastered by any individual with minimal training. They have a built-in pressure system so that the level of compression can be measured to ensure accurate application and consistent pressures (Lawrence, 2014). Adjustable Velcro compression devices such as juxtacures have been proven to be more effective than inelastic bandages at reducing venous oedema and maintaining a precise and consistent measurable therapeutic level of compression (Mosti et al, 2015).

juxtafit Lower Legging™

The juxtafit Lower Legging is an inelastic, adjustable compression garment for the management of lymphoedema and is available in two lengths — petite (28cm) and standard (36cm) — and five sizes, ranging from small to XXL. It is made from a special breathable fabric for a flexible and comfortable fit and is also latex-free.

juxtalite™

juxtalite is an instantly adjustable Velcro device suitable for maintenance of all venous conditions and specifically for patients who have healed leg ulcers or venous disease; cannot tolerate or apply compression garments; have fragile skin; musculoskeletal disorders or other comorbidities; or who experience problems with elastic compression. Using a built-in pressure system, the system is safe and it is easy to apply the individual's recommended level of compression (from 20–50 mmHg) as prescribed.

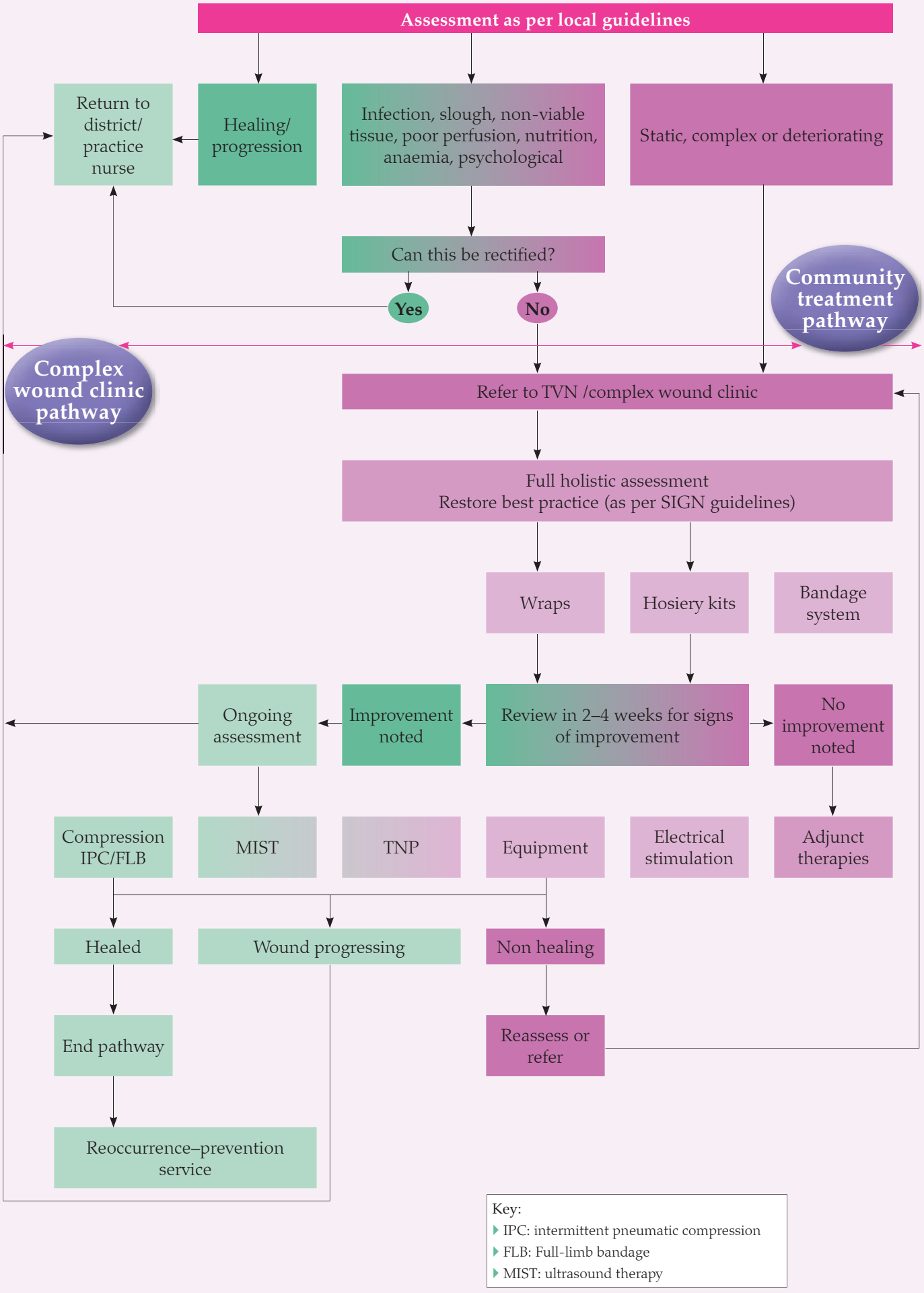

Figure 1.
The new treatment pathway.

sessions including patient selection, measuring, fitting and troubleshooting. The tissue viability team delivered these sessions with support from a member of the medi clinical team.

Nursing skills

The juxtacures product range is a relatively new innovation and the concept is very different to traditional methods of managing venous leg ulcers. The community nurses had never used these devices before and initially struggled to change their practice, for instance some would simply revert back to using bandages if they encountered any difficulties rather than reviewing the new system. In the first few days after application, the devices often needed to be adjusted to fit the changing limb size as the patient's oedema reduced.

This kind of resistance to change is not uncommon, however, and it was important to understand the nurses' anxieties and explain how these could be resolved to move forward with the project (Wright, 2010).

Curtis and White (2002) recommended that ownership and inclusion are one of the best methods to overcome resistance to change and a solution was arrived at whereby instead of the tissue viability nurses in the complex wound clinic measuring and fitting the adjustable Velcro compression devices initially, this task would be given to the community nurses. It was hoped that involving the community nurses in the early stages of the project would help them recognise the need for change and lead them to accept the project. It was also decided to focus on one community nursing team at a time — once one team was familiar with the techniques involved, the project would move on to another team.

The tissue viability nurses were charged with acting as change agents and given the task of guiding the community nursing teams through the project, as well as providing support and advice (Jones, 2007). The tissue viability service developed a more in-depth training schedule and worked alongside the medi clinical team to train and support the nurses in using the product range throughout the project.

Launch

Once the project launched, the community nurses were each accompanied by a member of the medi clinical team for their initial visit to measure and fit the device, as well as on their first follow-up appointment. After these initial appointments, the community nurses continued to manage the patients independently. During the project, the nurses were asked to collect simple information regarding visit schedules (nurses collected data on how often they visited patients, how many times patients called in for extra visits and how long the face-to-face contact time was) and patient comfort. This data was collected on the initial visit, at week four, and either upon discharge or on completion of the treatment. Patients were asked the following comfort-related questions:

- Whether the garment was comfortable
- Whether the device was more comfortable than previous systems
- Whether the patient's mobility had improved.

Results

Of the 16 patients fitted with juxtacures, only nine sets of data were returned and available for analysis. Two of the nine patients were subsequently discharged from the project and the district nursing caseload completely, as they were able to manage the adjustable Velcro compression devices independently. Before the project, these patients had been unable to manage compression hosiery to prevent reccurrence of venous leg ulcers and as a result had been managed in bandages with weekly visits from the community nursing team.

However, despite the limited amount of data, the results that were collected during the project were very positive. Six of the nine patients found the devices comfortable and were keen to continue with the treatment. Of the remaining three patients, one returned to using bandages as they were not able to wash and care for the adjustable Velcro compression device when it became soiled, while two others asked to be returned to their previous regimens. One of these was wearing compression hosiery before using the adjustable Velcro compression devices and was able to manage this independently; the second was a patient with dorsum oedema who was unable to adjust the device and had no carer to assist and therefore did not fit the inclusion criteria set out in *Table 1*. These patients should not have been included in the project from the beginning — the caseload holders at the time were under enormous pressure and at times the inclusion criteria were not strictly followed.

During the project there was an overall reduction in nursing visits by seven per week across all nine patients. The average visit time for a patient with an adjustable Velcro compression device was also reduced to 19 minutes from the average of 40 minutes that visits had previously taken with bandages (as documented in patients' electronic medical records). By converting even a small group of patients from traditional bandaging methods, an estimated four hours and 40 minutes of nursing time was saved per week.

Overall, with the assistance of carers, patients were able to adjust the devices independently and remain in the devices for long-term management.

DISCUSSION

Issues encountered during the project

This project was set up to discover if a therapeutic level of compression could be applied accurately and safely by a trained community nurse using a new system of adjustable Velcro compression devices. During the project a number of obstacles were identified. High workload and reduced nursing staff meant

that even the task of identifying patients for the project was a strain on the caseload manager. This led to poor patient selection and the temptation to quickly switch patients back to compression bandages. Furthermore, the nurse tasked with leading the project left during the data collection period, resulting in difficulty in obtaining all the information.

Also, although this project was introduced to reduce the time community nurses were spending treating venous leg ulcers, it was set-up during a period of heightened staffing and resource pressures, which made the process harder to manage.

Project findings

Despite these issues and albeit with a small sample, the project demonstrated a significant time saving in nurse visits, with two patients (of the six who completed the project) successfully discharged to self-manage their condition. The remaining four patients continued to be treated by the community nursing team with the adjustable Velcro compression device as their primary compression therapy system. Using the juxtacures product range, nurses were able to empower patients to take control of their treatment while improving patient outcomes and reducing costs (Elvin, 2015).

This project also offered local practice nurses training and education in alternative ways of delivering compression therapy. Due to the lack of practice nurses who were competent in compression bandages, as well as introducing the devices into the community wound care service, it was also thought prudent to include practice nurses in the roll-out. Practice nurses often work in isolation and are not always able to attend venous leg ulcer treatment updates. As a result, they do not always possess the up-to-date knowledge and skills to manage these patients (Weller and Evans, 2012). The authors felt that the juxtacures range offered a solution to this, being simple to apply with the built-in pressure system allowing the nurse to accurately monitor the level of compression being applied to the limb to ensure a therapeutic level was maintained (Elvin, 2015).

CONCLUSION

The success of this project has led to further plans to introduce the juxtacures product range to another large community nursing team. This team has fewer nursing vacancies and any agency nurses are employed on a semi-permanent basis, hopefully meaning that there will be more continuity in the project and that the pressures of patient selection and nurse training will be reduced.

In the future, the task of training the service's nurses — in particular agency staff — and assessing their competency to apply compression therapy will continue. The authors' team always try to look for ways to provide education and training, not only to improve patient outcomes and ensure local guidelines are adhered to, but also to invest in agency nurses to demonstrate that the service values its staff. It is hoped that investing in agency nurses in this way may lead to them becoming permanent members of the community nursing team at some point.

Following this project, it is hoped that the service will see improved healing rates and concordance with compression therapy at the same time as empowering those patients and their carers who want to self-manage their compression therapy. This should result in cost savings as well as freeing-up nurse time. If these outcomes are achieved, as they were in this project, the tissue viability service can make a business case to introduce the juxtacures range as a first-line treatment for venous leg ulcers and chronic oedema. JCN

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A simple and effective solution to preventing recurrent venous leg ulcers

Kirsty Mahoney

When trying to prevent the recurrence of leg ulcers, many community nurses find it hard to get patients to concord with compression devices and techniques, particularly over the long term. This article looks at a new adjustable Velcro compression device, juxtalite™ (part of the juxta™ range; medi UK), which is designed to be simple to apply. It has a built-in pressure system (BPS™) that allows the nurse to accurately monitor the level of compression being applied to the limb, ensuring a therapeutic level of compression is maintained. Here, the author relates her own experience of using the juxta system (in particular the juxtalite version) through a series of case studies that show how the system aids patient concordance with treatment over an extended period of time.

KEYWORDS:
■ Leg ulcers ■ Compression bandaging ■ Healing
■ Adjustable Velcro compression device ■ Patient concordance

It is widely accepted that good compression therapy is required to aid the healing of venous leg ulceration. However, recurrence is a common problem with 26–69% of ulcers recurring within 12 months (Harding et al, 2015), which obviously has cost implications for the NHS and, more importantly, an effect on patients' quality of life. Consistent compression is required after healing to prevent recurrence of venous leg ulcers and the principles of this and how it can be delivered should be discussed with the patient during the treatment phase.

A recent Cochrane review indicated that the use of adequate compression post-healing will prevent recurrence (Nelson and Bell-Syer, 2014). The Scottish Intercollegiate Guidelines Network (SIGN) (2010) also recommended below-knee compression hosiery to prevent ulcer recurrence; this compression should be applied at the strongest class that the patient can tolerate.

Concordance or compliance with compression post-healing can be an issue for community nurses, as there are a wide range of garments and compression classes available and it can be difficult to know which ones to choose and why. Non-concordance, on the other hand, has a significant cost implication for the NHS, as people with recurrent ulcers return for further treatment (Anderson, 2012).

However, it is important for community nurses to consider why a patient may be non-concordant with compression — there may be a range of valid reasons and these should be explored with the patient (Moffatt et al, 2009). Reasons for non-compliance with compression may include:

- Pain on application
- Difficulty with application and removal of dressings or hosiery
- Lack of understanding of why compression is important (Moffatt et al, 2009).

It is important to empathise with the patient and understand their concerns regarding compression, rather than labelling them as 'difficult' (Gray, 2013). Community nurses should be prepared to question their own practice, i.e. 'Have I found the most appropriate solution for the patient?' or, 'Does the patient fully understand the significance of continuing to use compression after their ulcer is healed?'

It is important that nurses work jointly with patients in this way to find a treatment that is acceptable, achievable and clinically effective.

However, even when nurses do employ these techniques, concordance with treatment in some patients can still be a difficult and challenging task. The case studies below highlight the benefits of an alternative compression system (juxtalite™; medi UK), that is simple to apply, measure and adjust (see 'science' box below for a guide to the full juxta range). The system is effective in preventing recurrence of venous leg ulcers in previously non-concordant patients.

WHAT IS JUXTALITE?

juxtalite forms part of the juxta range of compression devices. It is an instantly readjustable compression device with measurable compression. This ensures that it is safe for patients, carers and allied healthcare professionals to apply while simultaneously monitoring the compression being applied.

juxtalite is available in eight sizes and two lengths to cater for a wide range of leg shapes. The extra wide calf sizes accommodate patients with lipodermatosclerosis whose legs have developed the associated inverted

Kirsty Mahoney, clinical nurse specialist, wound healing, Cardiff and Vale University Health Board

'champagne bottle' shape, along with more usual lower limb shapes associated with venous disease.

juxtalite is useful for patients who are unable to use conventional compression garments due to:

- Musculoskeletal disorders or other comorbidities
- Intolerance or inability to use compression hosiery
- Fragile skin.

juxtalite is available on prescription and the pack contains:

- juxtalite
- Calibrated built-in pressure system (BPS) card (*Figure 1*). This is used to ensure the prescribed level of compression is applied and maintained
- Two liners (one to wash and another to wear)
- Two anklets (one to wash and another to wear), which provide effective compression for the foot. These are closed-toe, but the toe-piece can be cut off, allowing for an open-toe garment if the patient prefers.

The anklets allow patients to return to conventional footwear, improving the gait, which may have been restricted by conventional bandages and bandage slippers. Dorsiflexion (backward flexion or 'bending' of the foot) and plantarflexion (extension of the ankle, pointing of the foot and toes) are immediately improved; this allows the calf muscle pump to function better, which aids venous return.

CASE STUDIES

Case 1

Nadia was a 44-year-old woman who had been attending the author's leg ulcer clinic sporadically over a two-year period. She had experienced frequent bouts of lower limb cellulitis (infection of the deeper layers of the skin and the underlying tissue) and recurrence of leg ulceration. Her past medical history included type 2 diabetes and epilepsy. She was also morbidly obese and had lower limb lymphoedema with a lipodermatosclerotic leg; commonly referred to as the inverted champagne bottle shape mentioned above. Nadia worked in a shop, which involved standing for long periods of time and had further strained her venous system.

Figure 1.
The calibrated BPS card that comes with the juxtalite system.

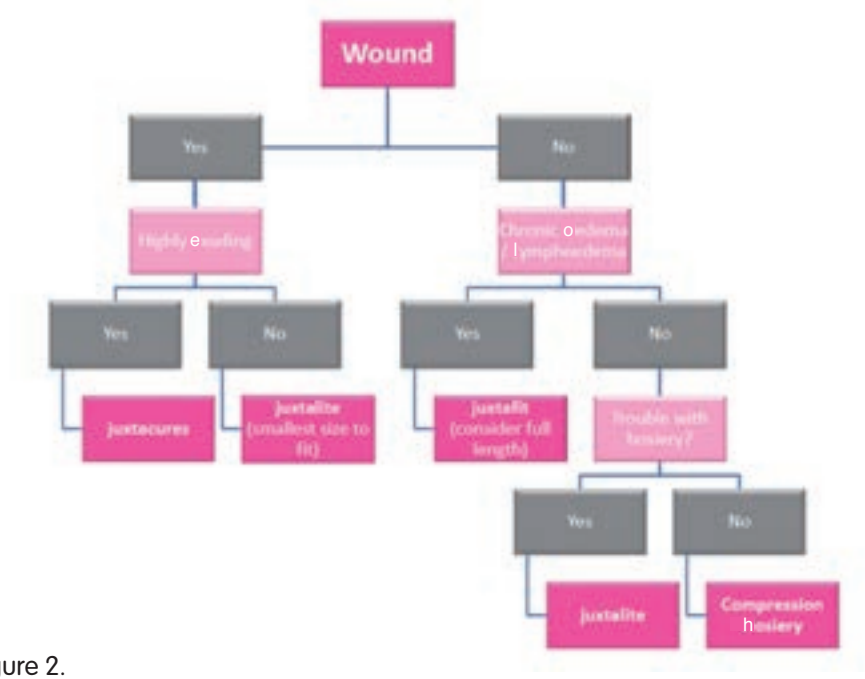

Figure 2.
Flow chart showing which juxta product to use in different clinical situations.

Initial treatment

Nadia was treated initially with short-stretch bandages, which she often removed before her next appointment as she said they frequently slipped and caused discomfort. Her limb shape caused considerable issues and once the ulcers were healed, made-to-measure hosiery was prescribed.

However, Nadia did not like made-to-measure hosiery as she felt that it was too difficult for her to apply, frequently slipped and caused irritation to her skin. She was fully aware of the importance of compression to the healing of her ulcer, but a compression solution that suited her post-healing was very difficult to find. Nadia also had to take long periods of time off work for wound infections and she was worried that she would lose her job due to her poor sickness record.

Nadia's ulcer had previously healed, but had recurred two years before the author saw her, and at the time of writing measured 7x5.5cm with unhealthy granulation to the wound bed. It had previously been treated with a topical antimicrobial dressing, however, after discussion with Nadia it was decided to try a juxtacures garment (see *Figure 2* for guide as to which juxta product to use).

It was essential that Nadia was involved in every aspect of her treatment. She was measured for the device and shown how to apply and adjust it. The device's built-in BPS (*Figure 1*) allows the safe application of measurable compression (Smith, 2016). The author's team discussed the optimum compression level with Nadia and showed her how to check that it was being applied using the BPS card.

Nadia became very proactive in managing the device and would check and adjust it throughout the day. In fact, she became quite an expert and even developed a positive attitude towards the management of her venous leg ulcers. Overall, Nadia's ulcer healed within 10 weeks of starting treatment with juxtalite.

Looking at the future control of her condition, it was decided to maintain her limb in a juxtalite garment (see 'Science' box for explanation of different types of juxta products) and

she has remained healed using this device for the past two years.

Case 2

Andrew was a 72-year-old man with atrial fibrillation and chronic obstructive pulmonary disease (COPD). He presented to the author's leg ulcer service with oedema and superficial leg ulceration, although his ankle-brachial pressure index (ABPI) was within normal limits.

Once the superficial ulceration was healed, class 1 compression hosiery was prescribed. However, Andrew was unable to apply it due to his COPD and relied on his wife to help him. Unfortunately, his wife had arthritis and was finding it increasingly difficult to apply the hosiery due to lack of strength in her wrists; as a result, it was only applied sporadically.

Figure 3.
One of Andrew's legs before the application of the juxtalite system.

Figure 4.
Andrew's leg following application of juxtalite (before the comfort compression sock had been applied).

Due to a lack of consistent compression, Andrew experienced a recurrence of his leg ulceration. After discussion with Andrew and his wife, the author demonstrated the juxtalite garment, which Andrew's wife found much easier to apply and adjust. She was also confident that she would not harm Andrew by applying too much compression as the BPS allowed her to check the levels.

Andrew's oedema subsequently became very well controlled and he has remained healed for the past 18 months (*Figures 3* and *4*). As a testimony to the garment, he referred to it as his 'miracle treatment' and it has become an effective — and essential — part of his daily regimen.

Case 3

Amy was a 55-year-old woman who had become obese and developed chronic oedema in her legs. Because of this, she had experienced several episodes of leg ulcer recurrence over the past few years. Amy was very vocal regarding which treatments she would or would not accept and felt that her venous leg ulceration would never heal — as a result, she had lost faith in the healthcare system. She was horrified when she was shown a compression bandage and stated that someone of her age should not be made to look like 'Nora Batty'.

The option of compression hosiery was discussed with Amy, but she did not like the thought of wearing hosiery and felt the garments were no better than bandages. The author decided to demonstrate a juxtafit garment, however, which showed Amy how she could be actively involved in her own treatment

THE SCIENCE — THE FULL JUXTA RANGE?

juxta™ (medi UK) compression devices are easy to apply and can be mastered by any individual with minimal training. They all have a built-in pressure system (BPS) so that the level of compression can be measured to ensure accurate application and consistent pressures (Lawrence, 2014).

juxtafit Lower Legging™
The juxtafit Lower Legging is an inelastic, adjustable compression garment for the management of lymphoedema or chronic oedema and is available in two lengths — petite (28cm) and standard (36cm) — and five sizes, ranging from small to XXL. It is made from a special breathable fabric for a flexible and comfortable fit and is also latex-free. Evidence shows that using juxtafit can be more effective in reducing limb volume when compared to an inelastic multicomponent compression bandage (Damstra and Partsch, 2013).

juxtacures™
juxtacures is an instantly readjustable device for the healing of venous leg ulcers and is available in three lengths: short (28cm); standard (33cm); and long (38cm). It has a detachable 'spine' that enables the garment to be bespoke for each patient. Adjustable Velcro compression devices such as juxtacures have been proven to be more effective than inelastic bandages at reducing venous oedema and maintaining a precise and consistent measurable therapeutic level of compression (Mosti et al, 2015).

juxtalite™
juxtalite is an instantly adjustable Velcro device suitable for maintenance of all venous conditions and specifically for patients who have healed leg ulcers or venous disease; cannot tolerate or apply compression garments; have fragile skin; musculoskeletal disorders or other comorbidities; or who experience problems with elastic compression. juxtalite uses a built-in pressure system to apply the individual's recommended level of compression (from 20–50 mmHg) as prescribed.

regimen. After the demonstration, Amy decided that she was happy to try juxtafit.

The juxtafit is a stronger device than the juxtalite (see 'Science' box for a full explanation of the different juxta products), and is designed for patients with chronic oedema and lymphoedema. Amy felt that the device was aesthetically more acceptable than bandages or hosiery.

Amy's latest incidence of recurrent ulceration healed using the juxtalite system and she switched to the juxtalite permanently to prevent further recurrence of venous leg ulcers. She was extremely impressed with the outcome of the treatment and at the time of writing remains self-caring and healed.

EVIDENCE

Elvin (2015) showed that converting patients to juxta products resulted in improved quality of life scores when judged against the compression techniques used previously. Elvin (2015) stated that additional benefits to using juxta products include:

- Improved clinical and personal outcomes for patients
- Improved quality of life scores using a visual analogue scale (VAS), with 1 equalling 'very unhappy', and 5 indicating 'very happy'. Of the patients surveyed, 74% scored the maximum score of 5, indicating that they were very happy with the product
- Instant return to conventional footwear for patients
- Improved ability to self-care.

CONCLUSION

When a venous leg ulcer has healed it is important to maintain a level of compression to prevent recurrence. This is a challenge for the patient and nurse and in some cases leads to long-term bandaging as the only possible solution.

However, the recent introduction of wraparound devices that include a system for measuring the compression applied has resulted in an effective alternative for preventing recurrence.

The benefits of these systems is clearly demonstrated in the case studies above, where adoption of these new devices led to improved quality of life for patients who had become disillusioned with conventional compression therapy. Cost and time savings were also achieved (National Institute for Health and Care Excellence [NICE], 2015; Wicks, 2015).

Listening to patients and trying to understand the issues they face with compression garments are important factors to consider to ensure that patient concordance is achieved. In the case studies featured here, the juxta devices offered solutions that were safe and easy for patients to use and thereby encouraged concordance with compression therapy. JCN

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KEY POINTS

- When trying to prevent the recurrence of leg ulcers, many community nurses find it hard to get patients to concord with compression devices and techniques, particularly over the long term.
- This article looks at a new adjustable Velcro compression device, juxtalite (part of the juxta™ range; medi UK), which is designed to be simple to apply.
- The system has a built-in pressure system that allows the nurse to accurately monitor the level of compression being applied to the limb, ensuring a therapeutic level of compression is maintained.
- This article demonstrates a series of case studies that show how the system aids patient concordance with treatment over a period of time.

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