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Managing chronic oedema and venous leg ulcers

A practical illustration to using compression garments

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Introduction

The case reports in this document show that by considering patient history and taking an individual approach, tailored to the patient's needs, goals of treatment can be achieved for patients with venous or lymphatic diseases.

Lymphoedema, a chronic, progressive, debilitating condition for which there is no cure, is estimated to affect 1.33 people per 1000 in the UK (Moffatt et al, 2003). If left untreated, the physical problems of pain, discomfort, heaviness and distortion of limb shape will gradually result in limited mobility and function and have a deleterious effect on patient quality of life. It is well-recognised in literature that lymphoedema can cause considerable psychosocial issues (Mason et al, 2008) and thus needs recognising early and treating appropriately.

Venous leg ulceration is another health issue that has a physical, psychological and psychosocial impact on the patient (Moffatt et al, 2009; Todd, 2011) and is estimated to have an annual incidence of at least 100,000 (Posnett and Franks, 2007). Todd (2011) maintained that community nurses spend a great deal of their time managing patients with venous leg ulcers, costing the NHS a great deal in terms of resources.

Compression garments are considered to be the cornerstone of therapy for both patient groups (Cullum et al, 2006). However, there are a vast array of garments on the market and so it is important that clinicians consider the patient's lifestyle, choice and goals of treatment when choosing compression therapy.

To achieve optimum outcomes, a treatment regimen that is both clinically effective and acceptable to the patient should be selected, as wearing compression garments is a lifelong commitment. However, they are frequently under-used, as the patient can neither manage nor tolerate wearing them (Day and Hayes, 2008; Rostron, 2011).

Involving patients in their care and educating them about the condition and its treatment can improve concordance (Moffatt, 2004; World Union of Wound Healing Societies [WUWHS], 2008). The cases presented in this document show that patients can gain control over their condition and improve their quality of life by being involved in their care, realising the importance of wearing compression garments and having garments that fit in with their lifestyles and are comfortable to wear.

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Contents

Flat-knit thigh high stockings for long-term management of lymphoedema

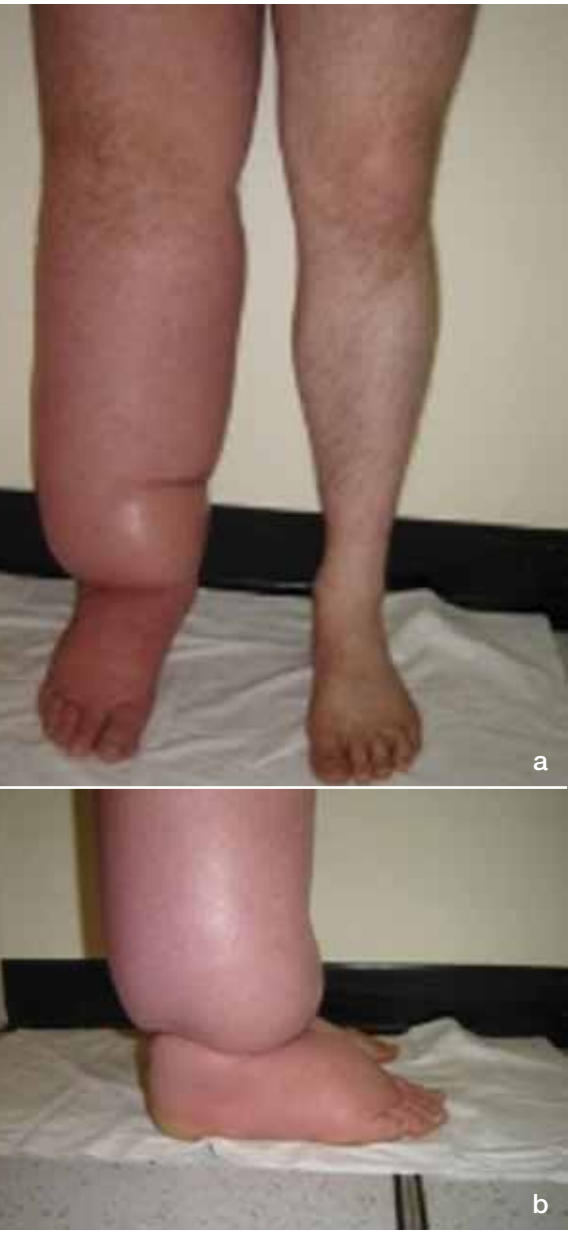

Figure 1. a) At initial presentation.
b) Foot and ankle at initial presentation.

Dawn Heal, Lymphoedema Nurse Specialist/MLD Therapist, The Hampshire Clinic, Old Basing, Basingstoke, Hampshire

This 28-year-old male patient presented with secondary lower limb lymphoedema to the right leg as a result of trauma and repeated episodes of cellulitis. As a teenager he had been a keen sportsman, but suffered a crush injury whilst playing rugby at the age of 19. He was trodden on and received the full weight of another player to his right groin. No skeletal injuries were sustained and he remains otherwise fit and healthy.

Mild lymphoedema developed almost immediately after this injury and gradually worsened over the years. This was never diagnosed and was complicated by 34 episodes of cellulitis, for which he was frequently admitted to hospital for several days of intravenous (IV) antibiotics. Over the years he had been referred to numerous 'experts' in an effort to obtain a diagnosis and recommended treatments included amputation. He had recently undergone surgery to remove a lymph node for biopsy in an attempt to understand his lymphoedema.

On occasions he had been supplied with 'off-the-shelf' circular-knit hosiery, but this did not improve his condition and was extremely uncomfortable to wear due to his limb volume and shape distortion. At no time was he given any advice on how to prevent the episodes of cellulitis, or prophylactic antibiotics.

The patient worked as a Civil Engineer and was constantly exposed to dirt and dust in an outdoor environment. He frequently sustained minor abrasions, which were the major cause of the recurrent episodes of cellulitis. It was only because he worked for his father that he was able to remain in employment, despite being frequently hospitalised.

After years of struggling with this condition, it was eventually suggested by a Nurse administering IV antibiotics, that he be referred to a Clinical Nurse Specialist (CNS) in lymphoedema. The CNS recommended a treatment plan that included prophylactic antibiotics and referral to the author for decongestive lymphatic therapy (DLT), due to the extreme and severe nature of his lymphoedema.

Initial presentation

At the initial presentation on 14 September 2009, the volume of his right leg was 19,765ml (*Figure 1*). Although there was no cellulitis at this time, the skin was dry and cracked with multiple small open areas from scratching. The right leg

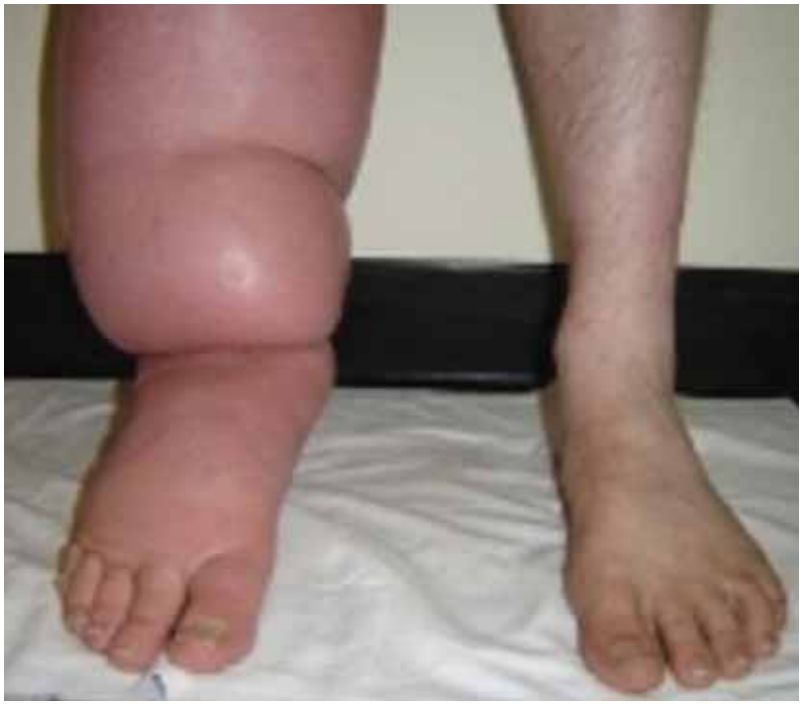

Figure 2. Right leg was extremely swollen around the ankle, making it difficult to walk.

was heavy as a result of the long-standing nature of his condition and he was unable to flex his foot at the ankle joint *(Figure 2).* The tissue had also hardened in his limbs (i.e. had become fibrotic), as a result of the accumulating fluid. He had problems bending his knee so tended to walk with a limp. This made him very frustrated and he was angry about how it affected his quality of life, with strangers constantly asking what was wrong with his leg. He had to wear a size 13 boot on the lymphoedematous limb and a size 11 on the other. He also had to wear oversized trousers to accommodate the shape and size of the limb.

He was noticeably distressed about his condition and felt that it had a negative impact on his life as a young active man. The repeated episodes of cellulitis resulted in loss of earnings, which was now an increased worry as he was married with a young son.

After discussion and due to the patient's work commitments, it was agreed to follow two to three courses of DLT, each of three to four weeks duration, as his work commitments would allow.

DLT involves two phases of treatment, the first being the intensive phase (reduction and reshaping), which includes four components of:

- Manual lymphatic drainage (MLD)
- Skin and nail care
- Multi-layer lymphoedema bandaging (MLLB)
- Exercise/movement.

This phase aims to reduce the swelling as much as possible and to break down fibrotic tissue in readiness for a graduated compression garment. The patient is also taught self-management of his condition, e.g. good skin care, exercise, etc.

The second phase of treatment is the long-term management phase, which aims to maintain and improve the outcome of phase 1 through daily wearing of compression garments, exercise, skin and nail care and regular MLD.

The patient was extremely enthusiastic about this treatment regimen and willing to follow instructions and advice. His goals of treatment were to reduce the volume in his right leg to improve his mobility. He also hoped that this would help to prevent episodes of cellulitis and keep him out of hospital.

DLT course one

This involved daily treatments

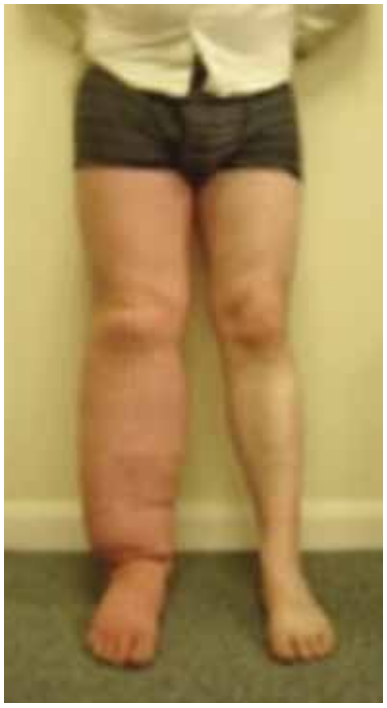

Figure 3. During bandaging in November 2009.

Figure 4. Ankle softening, foot reducing.

(five days a week) for the first three weeks, followed by three times for the fourth week, whilst awaiting delivery of compression hosiery. The treatment consisted of MLD, combined MLLB (using Comprilan® short-stretch compression bandage), skin care and exercise.

At the end of the first three weeks, the fibrosis began to soften and the limb volume reduced to 15,262ml, a loss of 4,503ml. However, unfortunately, the patient developed cellulitis and had to be hospitalised for IV antibiotics. The patient had still been working during the treatment and had therefore been exposed to dust and dirt. He was frustrated as he felt that the cellulitis halted his progress. However, he was now beginning to understand the importance of good skin care in cellulitis prevention.

After he was discharged, he was treated at the clinic for a further week to stabilise his leg oedema before he was prescribed a JOBST® Elvarex® Custom-Fit thigh high stocking in RAL compression class 4 (CCL 4, 49–70mmHg), with a JOBST Elvarex Custom-Fit foot cap in RAL compression class 2 (CCL 2, 23–32mmHg). He was advised to wear these garments throughout the day and remove them at night.

DLT course two

At the patient's review in November 2009, despite being advised to wear the graduated compression hosiery on a daily basis, the volume in his right leg had increased to 17,759ml (*Figures 3* and *4*). After discussion, the patient admitted to not wearing his hosiery as directed. Therefore, this resulted in what is known as 'rebound oedema'.

However, the condition of his skin had dramatically improved and the patient was concordant with thorough daily cleansing, drying and moisturising. Thus, it was decided to continue with another course of DLT as before. After a further four weeks, the volume in his entire leg again reduced to 14,153ml, with the distal volume (toe to knee) reducing from 9,262ml to 6,352ml.

The patient was once more prescribed the same style of compression hosiery along with a foot cap and instructed to continue to follow the methods of self-care.

DLT course three

On 19 January 2010, the patient returned to clinic. At this stage the volume in his right leg was 16,242ml, with a distal volume of 7,250ml.

After a further two-week course of daily DLT, these volumes reduced by 4,181ml and 2,507ml respectively (*Figures 5* and *6*).

The patient was delighted with the outcome, as it was something he:

> *'... never thought possible.'*

He had previously been resigned to thinking that he:

> *'... was destined to live with an enormous ugly leg.'*

The patient was finding the compression hosiery easy to put on and take off and felt that it supported his leg well, making walking far easier. Indeed, he said that it had:

> *'... changed his life* [and that the garment was] *excellent — the only thing ever to control my lymphoedema.'*

On a scale of 1–5 (where 1 is poor and 5 excellent), he rated ease of donning, colour, appearance during wear and comfort all as 5.

The patient was thrilled that he now had a long-term management plan in place to control his condition. He also felt that he wanted his case to be published in an effort to highlight lymphoedema so that others would not have to suffer as he had.

Conclusion

After years of struggling with a debilitating condition, which had caused physical, pyschological and pyschosocial difficulties, this patient now had a positive outlook on how to manage his lymphoedema and maintain limb volume reduction and self-care.

He continues to take prophylactic antibiotics (as per British Lymphology Society guidelines) and has not had another severe cellulitis attack resulting in hospitalisation. This not only reduces the financial cost for the patient, but also for the NHS.

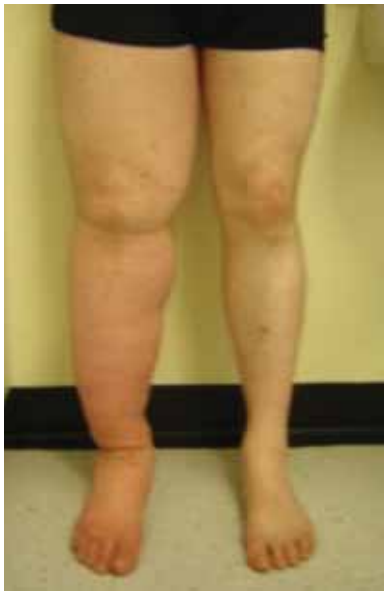

Figure 5. Leg at completion of DLT: the volume had reduced, tissues were soft and the skin was in good condition.

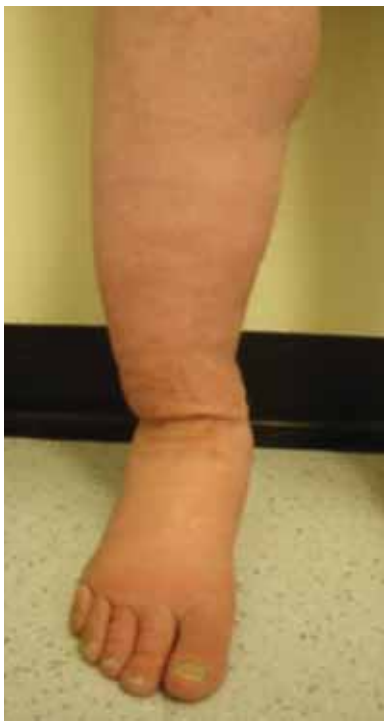

Figure 6. Foot and ankle at completion of DLT, fibrosis had resolved and the ankle's flexibility had returned.

A custom-fit armsleeve reduces and maintains arm lymphoedema

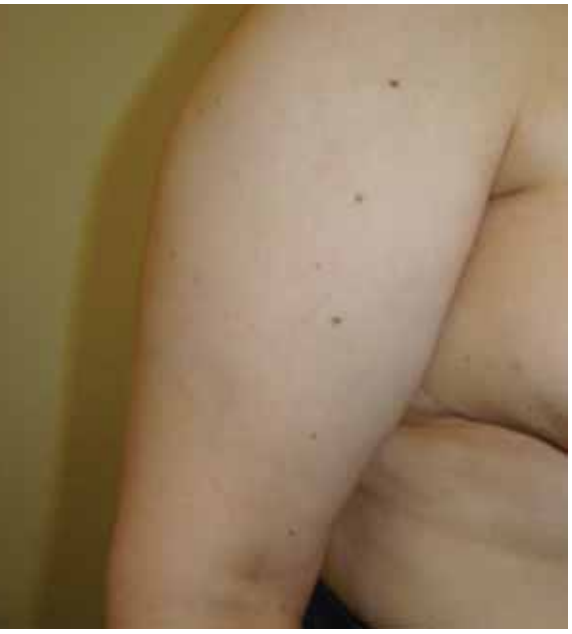

Figure 1. Right arm and breast oedema at initial presentation.

Dawn Heal, Lymphoedema Nurse Specialist/MLD Therapist, The Hampshire Clinic, Old Basing, Basingstoke, Hampshire

This 55-year-old female patient presented with breast cancer-related lymphoedema (BCRL) to her right arm and breast, which had been present for 12 months post surgery.

This developed after she underwent wide local excision (WLE) and breast reconstruction for grade 3 breast cancer in February 2007, followed by chemotherapy and radiotherapy. The patient was initially treated with manual lymphatic drainage (MLD) supported by a circular-knit armsleeve and glove. This weekly treatment regimen reduced the 10% (2,895ml) lymphoedema to her arm down to 5% (2,736ml) over a period of one month. She also had lymphoedema to the breast, which had been totally resolved by MLD, elastic taping and a compression bra. She was concordant, as she trusted her therapist and had been doing daily simple lymphatic drainage (SLD), swimming regularly and attending a weekly Pilates class.

However, she returned to clinic six months later having recently been diagnosed with multiple metastases. The lymphoedema in her right arm had increased from 5–15% (3,015ml).

Initial presentation

At presentation, circumferential measurements of the patient's arm taken at 4cm intervals, established a limb volume of 15% (*Figure 1*). The limb shape was not distorted, but firm with non-pitting oedema. Due to her diligence in following a good skin care regimen, her skin was intact and well moisturised.

However, the patient complained that she felt a constant dull ache in her arm, which extended into her chest and became very painful by the end of the day. This resulted in her frequently having to rest her arm, which meant that she was unable to carry out household chores as often as she would have liked. Her family were supportive and helped with lifting and any heavy household tasks, but she was conscious that this was an additional burden for them.

As the patient had found the circular-knit armsleeve previously worn uncomfortable, it was decided to progress to a flat-knit custom-fit armsleeve to help reduce, then maintain, the volume in her right arm. The patient was happy with this decision and agreed to continue her current exercise regimen and skin care with regular moisturising. The armsleeve was to be worn throughout the day but removed at bedtime. A black, JOBST® Elvarex® Custom-Fit armsleeve with gauntlet in RAL

Figure 2. JOBST Elvarex Custom-Fit flat-knit armsleeve to help reduce, then maintain, volume in her right arm.

compression class 2 (CCL 2, 23–32mmHg) was chosen *(Figure 2).* The patient was delighted at having the option of a black armsleeve, as she felt that this was stylish.

The goals of treatment were to reduce and maintain the volume in her right arm.

First review

At the patient's first review she said that she was delighted with the armsleeve. Compared with the circular-knit garment that she had previously worn, which used to pinch at the elbow crease by the end of the day, she could wear the JOBST Elvarex graduated compression armsleeve all day without any discomfort. After a month of wearing the armsleeve, the volume in her right arm had reduced by 5% to only 10%. She was also finding this armsleeve far easier to donn, which she rated 4 on a scale of 1–5 (where 1 is poor and 5 is excellent).

She was very impressed by the colour, finding the black stylish to wear and said that she now received many compliments on her armsleeve, rather than strange looks.

Final review

At the second and final review after three months of treatment, the volume in the patient's arm had again reduced and was now only 5% (*Figure 3*).The patient was pleased with this outcome and felt that the armsleeve was wearing well and proving easy to put on and take off, with the help of a household rubber glove. It had also helped to relieve the heaviness and pain in her arm and she was better able to carry out activities of daily living, which had a positive impact on her quality of life.

Conclusion

Breast cancer-related lymphoedema (BCRL) can be a difficult diagnosis to cope with, as having undergone treatment for cancer, patients are faced with a lifelong condition that can worsen over time (Towers et al, 2008). As seen in this case, the pain and functional limitations associated with BCRL were having a negative impact on the patient's daily life. An increase in lymphoedema which was previously stable potentially indicated a possible recurrence, which was confirmed by computer tomography (CT) and magnetic resonance imaging (MRI) scans. The worsening lymphoedema was a symptom with which the patient felt she could not cope. By finding an armsleeve that was comfortable to wear, cosmetically acceptable and therapeutically effective, the patient was able to deal with her diagnosis with a more positive attitude.

Figure 3. Taken at final review after wearing the armsleeve for a period of three months.

Reference

Towers A, Carnevale FA, Baker ME (2008) The psychosocial effects of cancer-related lymphoedema. *J Palliat Care* **24**: 134–43

Chronic oedema and quality of life improved by wearing custom-fit RAL hosiery

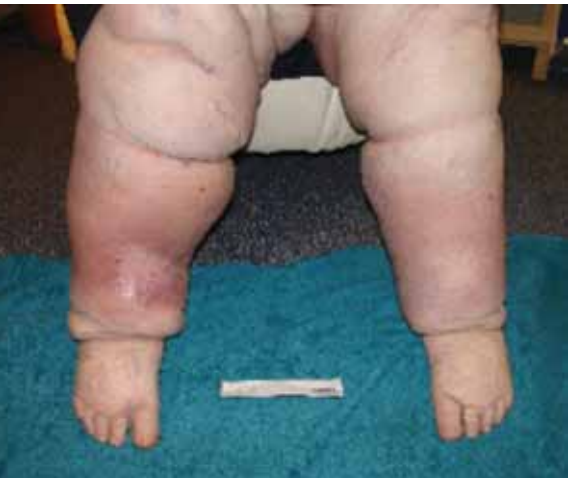

Figure 1. Wound and leg shape and size before decongestive lymphatic therapy (DLT).

Rachel Warth, Lymphoedema Practitioner, Kendal Lymphology Centre, Kendal, Cumbria

Miss H, a 52-year old female patient initially presented with chronic oedema and a leaky leg. This was diagnosed as stage III bilateral lower limb lymphoedema, in accordance with the International Society of Lymphology (ISL) classification system (ISL, 2009). She had previously had carcinoma of the ovary and suffered from leg oedema and leg ulceration, with frequent episodes of cellulitis. She had been referred to a leg ulcer clinic, but for the past three years had resorted to managing the wound herself, as no progress had been achieved. She was also obese with poor mobility.

Initial presentation

At initial presentation on 18 January 2012, her limb volume measurements taken circumferentially with a tape and after calculation were:

- Right leg = 10,308ml
- Left leg = 8,512ml.

The limb measured:

- Right ankle = 50cm
  left ankle = 48.4cm
- Right calf = 65.6cm
  left calf = 59cm.

Miss H's limbs were eczematous and discoloured, due to the venous element of her oedema, with both hyperkeratosis and papillomatosis. It was not possible to perform a Doppler ultrasound due to the size of the limbs and thickness of the skin *(Figure 1).*

Her right leg also had a leg ulcer that was 6.5x13cm in size, with 90% sloughy tissue and macerated periwound skin. It was red and inflamed, with malodour as a result of infection. The wound was producing a high level of exudate, which was being controlled with daily dressing changes.

The weight and pain in her lower limbs caused her considerable discomfort and together with their size, this limited tasks that she could perform on a daily basis. On a visual analogue scale (VAS) to measure her mobility (where 5 is excellent and 1 poor), she rated it as 1.

Her goals of treatment were to heal the wound and reduce the weight and size in her limbs, which she hoped would improve mobility. She was not averse to wearing compression garments, but was worried about putting them on as she had limited dexterity.

After discussion with the patient, it was decided to treat the wound with a topical steroid, apply a non-adhesive dressing and to undertake three weeks of intensive treatment

of decongestive lymphatic therapy (DLT), including skin care, exercise, manual lymphatic drainage (MLD) and multi-layer lymphoedema bandaging (MLLB). At the end of the three weeks, Miss H was measured for a JOBST® Elvarex® Custom-Fit knee high garment, with closed-toe, in RAL compression class 3 (CCL 3, 34–46mmHg), which she was advised to wear for 24 hours a day until the wound healed. Thereafter, the patient was to wear the garment during the day and remove at bedtime. A garment applicator was to be supplied to help with donning of the garments.

The patient was also educated about exercise and weight loss to help improve the limb shape and size and referred to the local exercise and long-term conditions programme in her area to ensure that she got the right support and advice to maintain progress.

First review

At the first review on 20 February 2012, after three weeks of DLT, limb volume measurements, again taken circumferentially with a tape and after calculation, were:

- Right leg = 11,543ml
- Left leg = 8,890ml (an increase from the initial presentation).

Her right ankle and calf measured 47.4 and 65.5cm, and the left ankle and calf 42.5 and 58cm, respectively. There was still no possibility of taking a Doppler ultrasound due to the size of her lymphoedematous limbs, but other tests were performed to rule out the possibility of any arterial insufficiency. These included capillary refill, temperature of the limb, any pain/aching present in her legs (for example, when the legs were elevated or intermittent pain when walking), palpable pulses, discolouration around the calf, any further swelling in limb shape and size, or regression in the shape or size of the wound. Had there been anything untoward, the patient would have been referred to a vascular team for assessment.

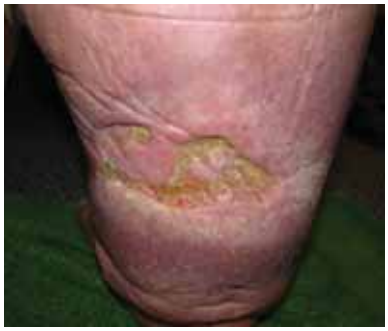

Figure 2. At second month follow-up.

The condition of the skin was still dry and discoloured. The wound had slightly reduced in size and measured 6x12cm, with 90% sloughy and 10% granulation tissue (*Figure 2*). The volume of exudate being produced was still heavy and there were signs of infection with the periwound skin being inflamed and red. She was started on a two-week course of antibiotics followed by a prophylactic course of antibiotics to resolve the problem.

Despite self-caring for her wound for the past three years, the patient was concerned about applying the compression garments herself after DLT and was worried about how they would feel, as she had noticed that they were rubbing her toes. The pain and heaviness in her limbs was still causing her considerable discomfort and limiting her mobility.

Second review

At the following review on 19 March 2012, the patient's limb volume had reduced to:

- Right leg: 10,087ml
- Left leg: 8,837ml.

Her ankle and calf now measured:

- Right ankle and calf: 45.5cm, 63.8cm respectively
- Left ankle and calf: 42.5cm, 58cm respectively.

Her leg ulcer showed signs of improvement in that it had reduced in size to 5x9cm, with 80% sloughy and 20%

granulation tissue. The level of exudate being produced was now moderate and the periwound skin was less inflamed and a pink colour.

The patient was pleased with the garments, loving the grey colour and feel of the material (*Figure 3*). She felt that they were supporting her legs well and she was no longer troubled by any rubbing against her toes. Despite her earlier concerns, she was finding it easy to donn the garments, rating this 5 on a scale of 1–5 (where 1 is very difficult and 5 is very easy).

The wound had reduced in size and the pain had almost completely gone. Her legs also felt less heavy, which had a positive effect on her quality of life and activities of daily living.

It was decided to continue the same treatment regimen and for Miss H to try and lose more weight and follow her exercise programme.

Third review

A month later on 23 April 2012, the patient's condition in her right limb continued to improve, although her left had deteriorated slightly. Her limb volume was:

- Right leg: 10,060ml
- Left leg: 8,897ml.

The size of her right limb had shown a slight decrease, with her right ankle and calf measuring 44.4 and 63.9cm, but the left had increased marginally to 46 and 59cm, respectively.

Her skin was no longer dry but far more supple and the wound was healing quickly. It had decreased significantly in size (4.5x0.5cm) and now had 60% sloughy tissue (30% granulating and 10% epithelial tissue).

The patient was satisfied with the garments, which she found extremely comfortable and was having no problems in putting them on or taking them off with the help of the applicator. She felt that they had improved her limb shape and she was more mobile, giving her the confidence to go out more.

Figure 3. Patient wearing JOBST Elvarex Custom-Fit garments.

Final review

In line with earlier reviews, the patient's leg shape and size had continued to improve. The volume of her legs was:

- Right leg: 9,881ml
- Left leg: 8,168ml.

Whilst the size of her ankles, calves and leg ulcer had only minimally decreased, the patient was pleased with the

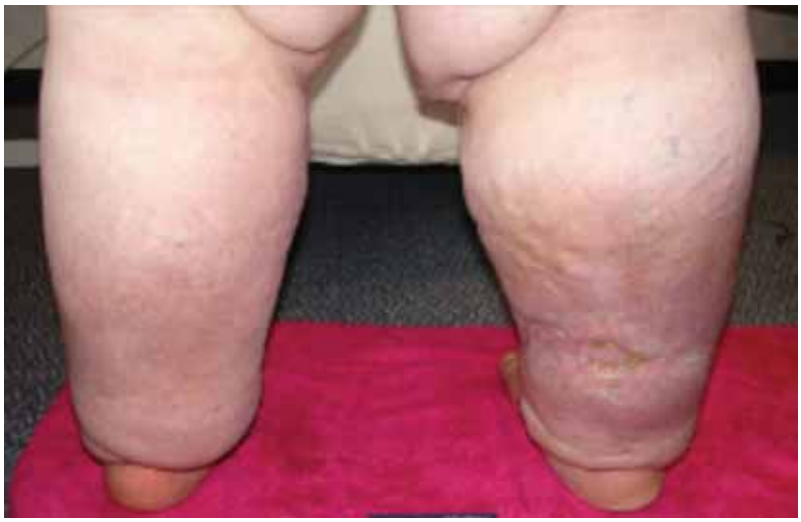

Figure 4. Final month follow-up.

outcome (*Figure 4*). She said that she found:

> *'... the garments comfortable, to the point that* [she] *almost forgot that she was wearing them.'*

In terms of donning, she had established a routine that made this easy.

Although the reduction in limb volume and size was minimal, the shape had improved dramatically since wearing the garments and the leg ulcer was continuing to heal. She said that she felt more confident as a result of the wound healing, which was enabling her to go out and socialise and get her independence back.

Conclusion

Chronic oedema and wet leaking wounds have a huge physical and psychological impact on patients (Wingfield, 2009; Creedon, 2011). By using a holistic approach, Miss H became less anxious, more mobile, her weight reduced steadily and her leg ulcer almost healed. During her treatment, she became an 'expert patient' and embraced her own care. With the right advice and care she became pro-active, which made her feel more in control of her life which helped with concordance.

Wearing JOBST Elvarex gave this patient back her life.

> *'... it has changed my life completely because I am able to go out regularly and due to this, I am now in a relationship... I'm so happy.'*

She no longer had to worry about the dressing slipping from under a stockinette, as it was now held *in situ* with the JOBST Elvarex graduated compression garment. The embarrassment that she previously felt about wearing a stockinette in public was no longer an issue, due to the perfect fit of the compression garments (*Figure 5*).

Figure 5. JOBST Elvarex Custom-Fit compression garments fitting perfectly.

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Maternity tights relieve lower limb discomfort

Figure 1. Knee high compression hosiery provided by GP.

Sarah Jones, Lymphoedema Practitioner, Kendal Lymphology Centre, Kendal, Cumbria

This patient was 39 years old and pregnant with her second baby when she presented. In 2010 she had varicose veins in her legs, which also developed in her vulva, labia and vagina. Her previous pregnancy was delivered normally but she had a prolapsed pelvic floor in 2011. Her GP prescribed below knee, compression class 2 stockings *(Figure 1),* but these were ineffective as they did not fit properly and kept falling down. Thus, they had failed to provide the correct levels of sustained compression to the affected areas.

The patient had also not been given any advice about donning or doffing the garments, or for how long to wear them. Due to the weight gain from her pregnancy and the varicose veins, she found that they gave no relief or benefit to the pain and discomfort that she was now feeling.

Initial presentation

At presentation on 11 May 2012, the patient's legs had a normal limb shape but the varicosities were visible. These were aching, hot, itchy and swollen and extended from the ankle up both legs into the vulva, labia and vagina. This made her limbs feel extremely heavy *(Figure 2).*

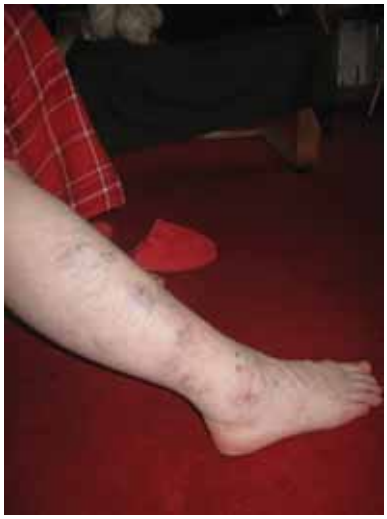

Figure 2. Patient's leg at initial presentation.

The patient was finding that she needed to rest regularly throughout the day in order to elevate her legs and ease the pain and heaviness. This was proving difficult as she was working part-time and had a young child at home. Her family life was being considerably disrupted and she was finding it increasingly hard to carry out normal activities of daily living, such as going shopping, which involved walking around and pushing a heavy trolley. She was becoming gradually more and more isolated, as she felt confined either to her work or home.

The goals of treatment were to support the affected areas and reduce the heavy, painful feeling in her lower limbs. The patient was eager to wear a garment

Figure 3. JOBST Opaque Ready-to-Wear maternity tights.

that would help to alleviate her symptoms and enable her to return to a normal routine, without having to rest and elevate her legs throughout the day.

When the subject of wearing compression garments was introduced, the patient was slightly negative as a result of her previous experience. However, those garments had been incorrectly measured and after discussion with the patient, she agreed to wearing JOBST® Opaque Ready-to-Wear maternity tights, with closed toe, in RAL compression class 2 (CCL 2, 23–32mmHg) throughout the day, and to remove them at night *(Figure 3).*

The patient was also instructed to keep her skin supple and to moisturise with a non-perfumed cream. The importance of taking gentle exercise, such as aquanatal classes was stressed, as the muscle movement would help to promote lymphatic function. The patient was shown how to perform foot and leg exercises to improve mobility and circulation and encouraged to eat healthily.

The patient was happy and prepared to concord with this treatment regimen.

First review

At the patient's first review a month later on 26 June 2012, her condition had improved. The heaviness and aching had disappeared and she found that her 'bump' was being supported by the tights, which lessened any backache that she might be feeling *(Figure 4)*. She had been using household rubber gloves to help put on the tights, which she had not found difficult.

> *'Tights are great, lovely to wear and very supportive.'*

The patient was delighted with the maternity tights, which were supporting both her legs and

Figure 4. JOBST Opaque Ready-to-Wear maternity tights providing perfect support.

abdomen effectively. She had been having problems with her trousers slipping down due to the shiny material of the tights covering her abdomen, but she had got around this by tucking them into the tight's waistband.

Due to the progress in the patient's condition, it was decided to continue with this treatment regimen, with rest and elevation of the legs as needed.

Second review

Up until the last week before the final review on 18 July 2012, the patient continued to wear maternity tights, which had stretched comfortably across her abdomen. However, after

discussion with the patient, she now decided to move on to wearing JOBST Opaque Ready-to-Wear thigh high stockings, with open-toe and lace silicone top band in RAL CCL 2 (23–32mmHg) throughout the day and to remove them at night, as she thought they would be more comfortable in the third trimester.

She was particularly pleased with the thigh high stockings, as the lace silicone top band made her feel attractive and boosted her morale and confidence *(Figure 5).*

The patient's legs were still aching generally, but she attributed this to her pregnancy rather than the varicose veins, which were no longer troubling her at all, despite being nine months pregnant.

Due to the improvements that occurred in her condition, the patient planned to include compression tights in her birth plan, so that her midwife and care team were aware that she wanted to wear them again as soon as possible after the birth.

Conclusion

As a pregnant lady's waistline grows, the cardiovascular system also expands with the body carrying up to 50% more blood than usual. All blood vessels enlarge and often lead to varicose veins in the legs and/or vulva, labia and vagina, as occurred in this case.

Although the patient did not see any change in her leg shape throughout this evaluation, she found that the pain and heaviness that the varicose veins had been causing were greatly improved. The JOBST Opaque Ready-to-Wear garments provided compression with a comfortable panel over the growing abdomen which, together with the reduction of pain and heaviness in her lower limbs, improved her quality of life, enabling her to look after her young child without any additional discomforts to those that come with being heavily pregnant.

The patient continues to wear the JOBST Opaque Ready-to-Wear thigh high stockings postnatally and has expressed an interest in wearing them all the time, as she feels 'unsupported' without them.

Figure 5. JOBST Opaque thigh high stockings with lace silicone top band.

Long-term commitment to treatment helped by wearing ready-to-wear RAL thigh high stockings

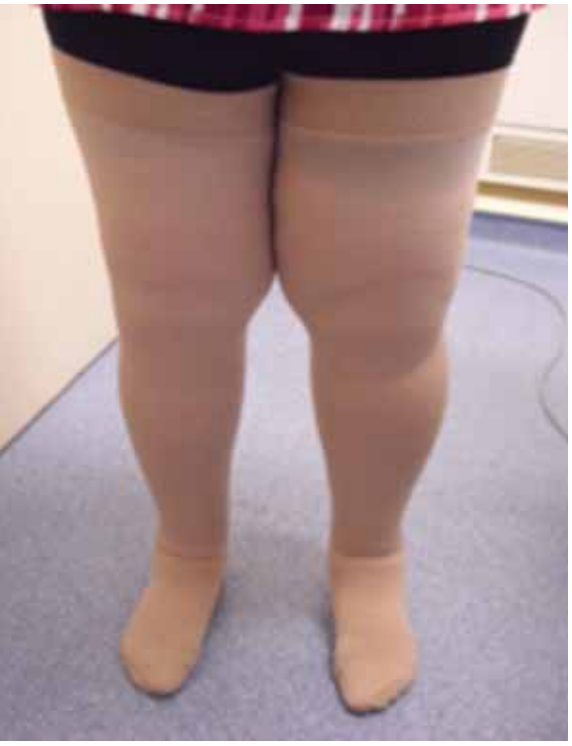

Figure 1. Fitting of garments after assessment.

Cheryl Pike, Lymphoedema Specialist Physiotherapist Team Lead and Ria Lewis, Macmillan Lymphoedema Rehabilitation Physiotherapist, Abertawe Bro-Morgannwg University Health board, Lymphoedema Clinic, Swansea

Miss X, a 53-year-old female who two months earlier had undergone wide local excision of her vulva, due to vulval cancer, with block dissection of the bilateral inguinal lymph nodes, was referred to clinic as part of the Gynae Prevention of Lymphoedema scheme. She presented with bilateral grade II lymphoedema (in accordance with the International Society of Lymphology [ISL] classification, 2009) and surgical wounds that were being managed by the Practice Nurse. Preoperatively, lymphoedema had been present, but this was secondary to dependency and obesity and was exacerbated by the surgery.

Previously, her lymphoedema had been managed using thigh high garments in RAL compression class 1 (CCL 1, 18–21mmHg), compression shorts/cycling shorts, manual lymphatic drainage (MLD) with deep oscillation therapy, skin care, exercise and simple lymphatic drainage (SLD).

Initial presentation

At initial presentation on 29 May 2012, the patient's limb volumes were calculated using circumferential measurement of the limb (with the first measurement being 10cm from the base of the heel and then every 4cm to the top of the thigh). Using the Lymcalc™ programme, volumes were:

- Right leg: 9,327ml
- Left leg: 10,328ml.

On examination, Miss X's limbs were a normal shape and her skin was in good condition. However, she said that she found it difficult to kneel and was having discomfort throughout the day, including feelings of tightness in her legs and occasional heaviness. Miss X stated that she was keen to prevent her legs from becoming more swollen.

Her lymphoedema was currently being managed using circular-knit RAL compression thigh high stockings, but she reported that the stockings slipped and gathered at the ankle during the day. Miss X also found the stockings difficult to donn/doff. She adhered to treatment as far as she could, but some days she had to remove the garments as they were too uncomfortable, especially around the ankle.

After assessment and discussion with the patient, it was decided that the goals of treatment were to maintain or reduce limb volume. Miss X was prescribed JOBST® Opaque Ready-to-Wear thigh high stockings, size 5,

in RAL compression class 2 (CCL 2, 23–32mmHg) and recommended to wear them for 16 hours per day. It was decided to start her on RAL CCL 2, as the RAL CCL 1 garments previously worn had not controlled her swelling. The stockings were to be used in conjunction with a skin care routine, including daily washing, drying and moisturising, daily walking and SLD carried out by the patient.

First review

After two weeks of treatment (14 June 2012), the right leg measured 9,934ml and the left 9,608ml (*Figure 2*).

The patient reported that the garments fitted well, and that the fabric and colours were acceptable. She had been ordered both a black and beige pair, both with a dotted silicone top band. She was also finding the graduated compression comfortable. However, she had been finding the higher class compression garments slightly more difficult to donn than the previous RAL CCL 1. Miss X also said that her skin still felt tight and that her legs were like 'dead weight' when going upstairs. Overall though, the patient found the garments acceptable.

Second review

On 12 July 2012, after six weeks of treatment, Miss X's right leg measured 8,466ml and her left 8,544ml. She reported that the garments fitted well and had become more comfortable and she was finding donning and doffing manageable. The sensation of tightness had also reduced and so she was far happier with the garments. She had, in fact, switched about three weeks into the evaluation into shorter length garments as the original ones had proved too long.

She was also wearing a body shaper due to genital oedema as part of her underwear, but this had no impact on the garments.

Final review

After 12 weeks of treatment on 23 August 2012, Miss X's right leg measured 8,747ml and the left 9,862ml. However, this increase in limb volume was due to the patient leaving off her garments for a few days at a time, as she had various functions to attend such as weddings. She was finding the garments easy to put on and take off now. Although she still had a tingling sensation in her left leg in the morning, this was symptom rather than garment-related.

Conclusion

Miss X found the JOBST Opaque thigh high stockings more comfortable than the ones she had previously worn. They were also easy to donn independently once she had become used to the stiffer fabric. As a result, the patient was more concordant and during most of the 3-month

Figure 2. Second review 6 weeks post-fitting (12 July 2012): front and back views.

Figure 3. Final review 12 weeks post-fitting (23 August 2012): wearing garment with body shaper (front and back views).

period of the evaluation, maintained good control of her limb volume, apart from in the last six weeks when she admitted to not wearing the garments daily.

The durability of the garment was good, but the top band laddered in the final six weeks of use, as it was found that the patient was pulling on the grip top for the final pull up her thigh. She was thus given advice about the correct technique for donning.

This case report demonstrates the necessity of selecting a compression garment with which the patient is happy, both cosmetically and from a comfort viewpoint. A variety of garments are available and it may be that patients will need to try a few before finding a suitable product. Style and colour are important, in that wearing compression garments is a long-term commitment.

It is also vital that healthcare professionals ensure that patients are confident and competent in how to care for their garments and the best techniques for application and removal, as this will maintain their durability.

Reference

International Society of Lymphology (2009) ISL diagnosis and treatment of peripheral lymphoedema. 2009 Consensus Document of the International Society of Lymphology. *Lymphology* 42(2): 51–60

Ready-to-Wear RAL tights improve self-esteem in a patient with lipoedema

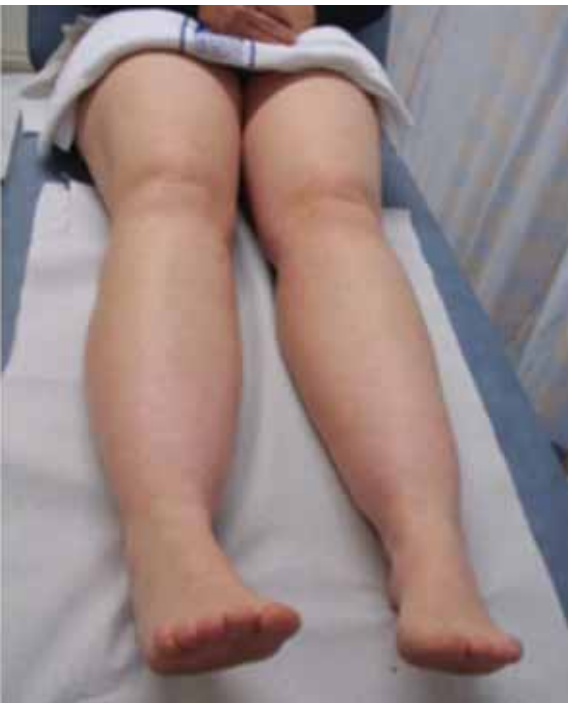

Figure 1. Initial assessment on 2 May 2012. Lipoedema with normal limb shape with leg elevation.

Cheryl Pike, Lymphoedema Specialist Physiotherapist Team Lead, Abertawe Bro-Morgannwg University Health board, Lymphoedema Clinic, Swansea

Mrs K, a 33-year-old female, presented with bilateral lipoedema but with no co-morbidities or relevant medical history. She stated a desire to:

> *'Make them* [her legs] *look like legs again and not like the tree trunks they are.'*

She was referred after she had read about lymphoedema on the internet and subsequently insisted that her GP refer her for further assessment/ investigation. She had previously been prescribed circular-knit, thigh high garments in British Standard compression classification by her GP, which she had worn for about six months. While Mrs K had tried to wear them, she found them uncomfortable, cosmetically unacceptable and they kept falling down as they did not have a grip top. Thus, due to the discomfort, she neither wore them daily, nor for a full day.

Initial presentation

At initial presentation on 2 May 2012, the patient's limb volumes were calculated using circumferential measurement (with the first measurement being 10cm from the base of the heel, and then every 4cm to the top of the thigh) and were found to be:

- Right leg: 12,171ml
- Left leg: 12,693ml.

The patient's thighs and lower limbs were large (ankle to knee), with mild skin folds developing over the ankles (*Figures 1* and *2*). Her feet and toes were a normal size and non-oedematous, a classic presentation of lipoedema (Todd, 2010). The patient weighed 77.1kg, indicative of a pre-obese body mass index (BMI). Mrs K reported that her legs became heavier as the day progressed and that her skin occasionally turned purple around the lower shins. The size of her limbs caused her great embarrassment and she was too ashamed to show her legs

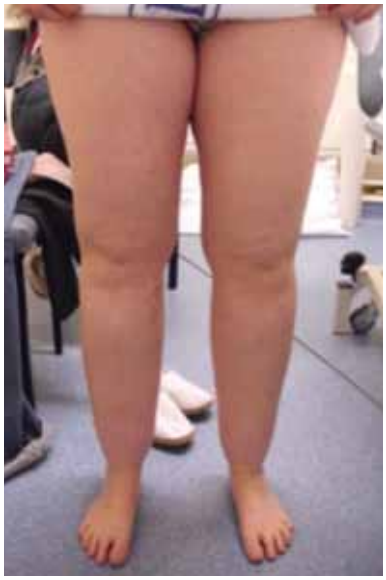

Figure 2. Initial presentation on 2 May 2012: lipoedema with shape distortion at the ankle when standing.

Figure 3. Fitting date for JOBST Opaque Ready-to-Wear tights: 29 May 2012.

in public. This caused particular problems on holiday, as not wanting to expose her legs she could not wear shorts, even in hot weather. Mrs K reported that the previous garments from her GP had not helped much, in that they were uncomfortable and neither reduced volume nor controlled the swelling during the day. They also kept falling down, resulting in her having to continually pull them up causing holes.

After discussion with Mrs K, it was decided to prescribe JOBST® Opaque Ready-to-Wear tights, size 3, in RAL compression class 1 (CCL 1, 18–21mmHg), with the recommendation that they should be worn for a minimum of 16 hours per day (*Figure 3*). As she was new to wearing compression tights, she asked if she could try both open and closed-toe as she was not sure which would be the most comfortable, particularly during the summer months.

A skin care regimen was also introduced, which involved washing with soap (as she had no sensitivity she could use normal soap), drying thoroughly, especially between the toes, and daily moisturising with a cream emollient. Walking and continuing use of a power plate (vibration therapy), which the patient had done in a gym in the past and found helpful, were encouraged, together with following a healthy, low carbohydrate diet.

First review

After 14 days of wearing the JOBST Opaque Ready-to-Wear compression tights (14 June 2012), Mrs K's limb volume had reduced to 11,890ml (right leg) and 12,123ml (left leg) and her ankle shape had improved with her skin remaining in excellent condition (*Figures 4* and *5*). Mrs K's weight had also reduced to 74.7kg, as a result of the combination of diet, exercise and the JOBST Opaque Ready-to-Wear tights (open-toe) worn at this time.

Figure 4. Review 14 days post garment fitting (14 June 2012): front view.

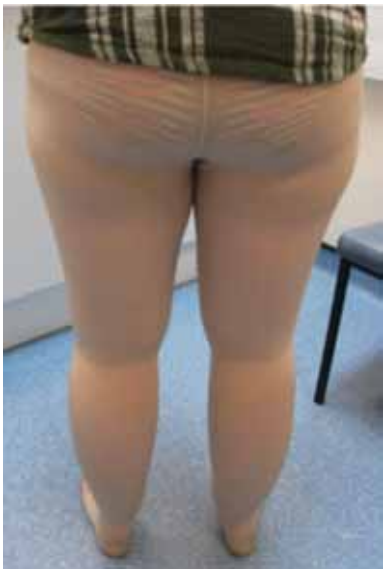

Figure 5. Review 14 days post garment fitting (14 June 2012): back view.

The patient was positive about the garment's performance over the previous two weeks,

rating it as 4 for ease of donning (on a score of 1–5, where 1 is poor and 5 excellent). She did mention that she had found the garment difficult to put on at first, but that quickly it became second nature. She was also happy with the colour and appearance of the tights.

Final review

The patient was unable to attend the second, six-week review due to work commitments, but after 12 weeks (15 August 2012) the right limb had reduced to 11,503ml, and the left to 11,688ml. The ankle crease had also reduced further and her skin condition was still excellent. Mrs K now weighed 71.4kg, again an improvement and a normal BMI for her height.

She reported feeling positive about the treatment regimen and felt that her legs had gained shape and were better than at the start of treatment. Although she now rated ease of donning as 3, the author felt that this was more due to it interfering with her daily life as, on observation, she appeared to get the garments on easily. She was also less happy with the appearance (i.e. colour) of the tights. However, this was because she was now confident to show off her legs as they had improved so much.

Overall, the patient felt that the garments improved her limbs a great deal and that they felt supportive and:

'...make me feel slimmer. '

It was felt that the patient's concordance with wearing the garments and following the diet, skin care and exercise recommendations led to optimal results.

Conclusion

Patients with lipoedema tend to have problems with their weight, as while they may lose weight, this will be in other areas of the body rather than their legs. Lipoedema can significantly impact on a patient's self-esteem, to a degree that they may become anxious or depressed (Todd, 2010) and as seen with this patient during the summer months, try to hide their legs under clothes or go to lengths to avoid exposing them, such as when swimming. The lack of definition to the ankle, characteristic of lipoedema, can also cause patients difficulties in wearing fashionable footwear. Thus, the psychosocial impact of this condition plays an important part in any treatment regimen. Healthcare professionals should bear this in mind when deciding on the choice of treatment and adopt an empathetic approach to encourage concordance.

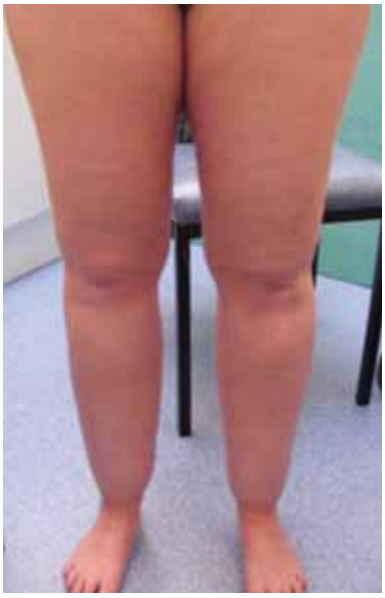

Figure 6. Final review (15 August 2012): skin condition improved and limb shape improving.

Figure 7. Final review (15 August 2012): patient reports 'the garments make me feel slimmer'.

Reference

Todd M (2010) Lipoedema: presentation and management. *Br J Community Nurs* **15(4 Suppl):** S10–S16

Treating multiple leg ulceration in a drug abusing patient with a two-layer compression stocking system

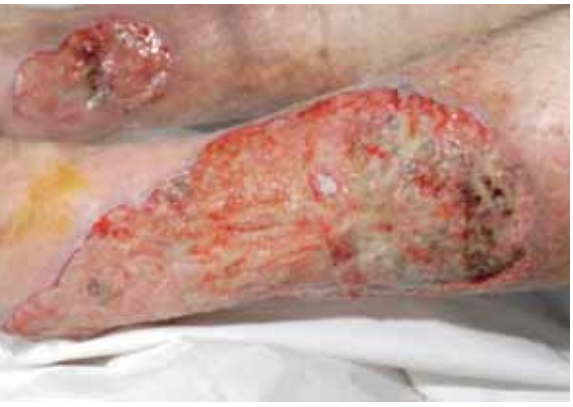

Figure 1. Leg ulcers at presentation.

Leanne Cook, Vascular Specialist, Huddersfield; and Lecturer Practitioner, University of Huddersfield, West Yorkshire

A 36-year-old male patient presented with multiple ulcers to both his legs of 14 months' duration (*Figures 1* and *2*). He had a previous history of intravenous (IV) drug abuse and deep vein thrombosis (DVT) to both his legs. He tried 4-layer compression bandaging but, due to his chaotic lifestyle, had failed to attend follow-up appointments consistently and maintain compression therapy. Wound management for this patient group can be complex as, despite having the same problems with their wounds as the non drug-taking public, such as pain, exudate, odour and infection, fears of discrimination may delay their seeking treatment, which can lead to slower recovery and chronicity (Finnie and Nicolson, 2002; Roden, 2009).

Initial presentation

At initial presentation on 2 May 2012, the ulcers measured:

- Right medial aspect: 10x7cm *(Figure 3)*
- Left medial aspect: 9x9cm *(Figure 4)*
- Right lateral aspect: 15x12cm *(Figure 5)*
- Left lateral aspect: 27x18cm *(Figure 6).*

The wounds were all malodorous and there were signs of severe colonisation, indicating the presence of infection.

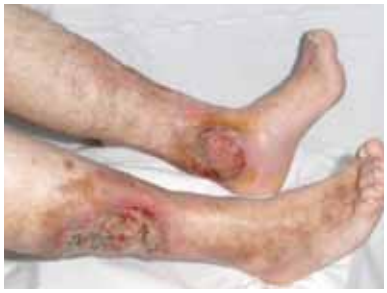

Figure 2. Left medial and right lateral aspects at presentation.

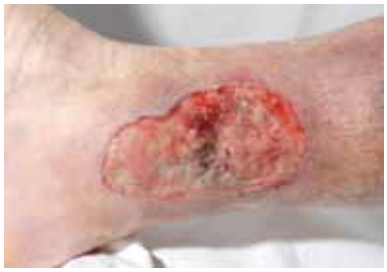

Figure 3. Right medial aspect at presentation.

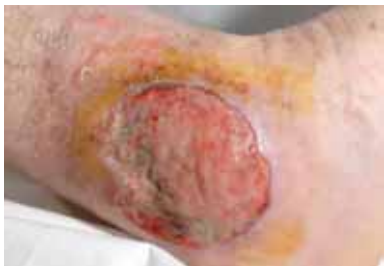

Figure 4. Left medial aspect at presentation.

Both the right and left wounds to the medial aspect had superficial sloughy tissue present and were colonised, leaking copious amounts of exudate, which necessitated daily dressing changes *(Figures 3* and *4)*.

The ulcers to the right and left lateral aspects were again malodorous (*Figures 5* and *6*).

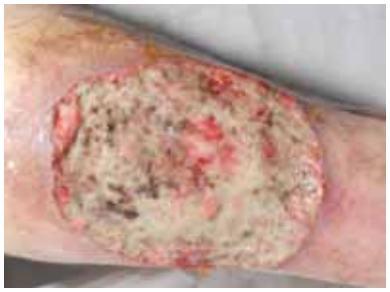

Figure 5. Right lateral aspect at presentation.

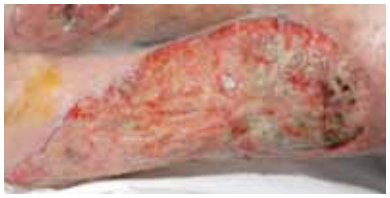

Figure 6. Left lateral aspect at presentation.

The one on the right leg had 98% sloughy tissues and was very leaky *(Figure 5).*

The odour and leakage from the ulcers were affecting the patient's quality of life, especially his relationship with his partner.

> *'They stank, I was so embarrassed.'*

In view of this, the goals of treatment were to reduce the volume of exudate and promote healing.

After discussion with the patient, it was agreed to dress the wounds with an antimicrobial hydrofiber dressing, plus an adhesive-bordered foam dressing and a hosiery kit. JOBST® UlcerCARE Ready-to-Wear 2 in 1 Compression System was chosen. This consists of two components, a medical stocking and a compression liner (*Figures 7* and *8*), which provide a gradient compression of 40mmHg at the ankle, as well as holding the dressings in place. Both garments were recommended to be worn throughout the day, and only the liner at night. The patient was happy with this treatment regimen, as he felt optimistic about the outcome and had not had any previous difficulties when wearing compression garments.

First review

At the first review on 13 June 2012, the wound bed of the ulcer on the right medial aspect had reduced in size to 8x2.5cm and there was evidence of surrounding epithelialisation *(Figure 9).* The level of exudate was minimal and there was no malodour. There had already been a general reduction in oedema of the limb and so a non-adherent foam dressing was applied with JOBST UlcerCARE.

The ulcer on the left medial aspect had also reduced in size to 8x6cm. Although the superficial sloughy tissue was still present, exudate levels had decreased and there was no odour *(Figure 10).* The hydrofiber and foam dressings were continued.

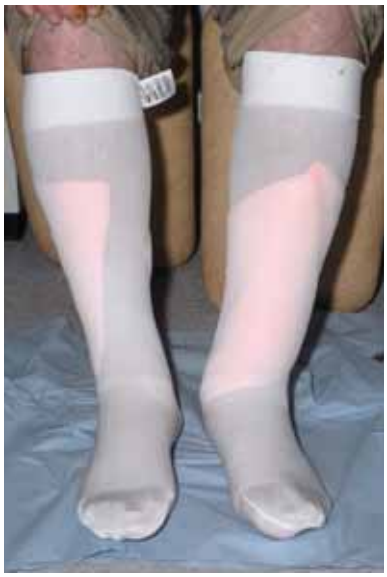

Figure 7. JOBST UlcerCARE compression liner to hold dressings in place and provide mild compression.

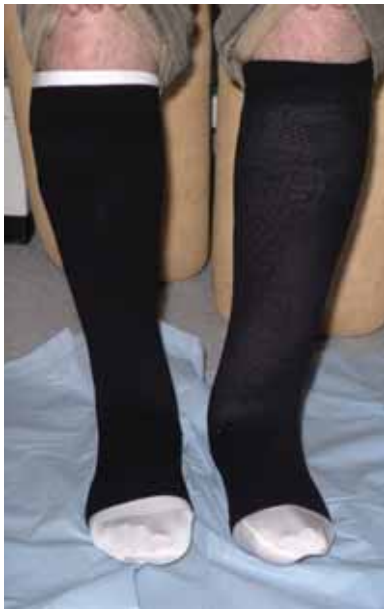

Figure 8. JOBST UlcerCARE knee high outer stocking.

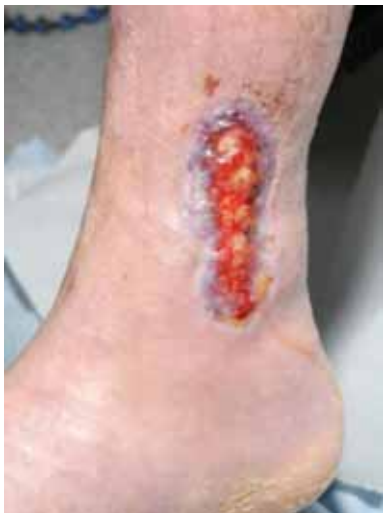

Figure 9. Right medial aspect after one month of treatment.

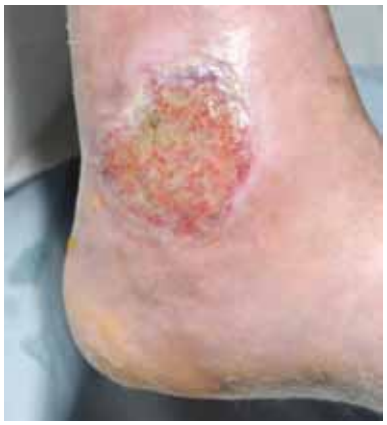

Figure 10. Left medial aspect after one month of treatment.

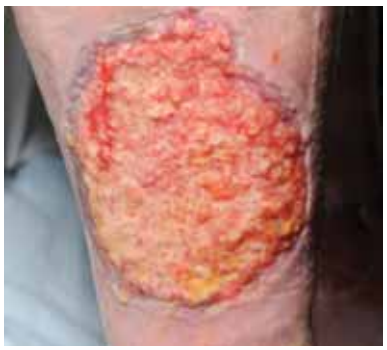

Figure 11. Right lateral aspect after one month of treatment.

The ulcer on the right lateral aspect still continued to have high levels of exudate, although improvement had been made as granulating tissue was now regenerated to surface level and the bacterial load had reduced *(Figure 11).* Again, the same treatment regimen was continued with the dressings and compression.

Similarly, the ulcer on the left lateral aspect had evidence that the percentage of sloughy tissue was reducing, as there were granulation buds to the wound edges *(Figure 12).* Although colonisation was still present, exudate levels and malodour were reducing.

'I am now able to go out with my partner without the pain and embarrassment of odour.'

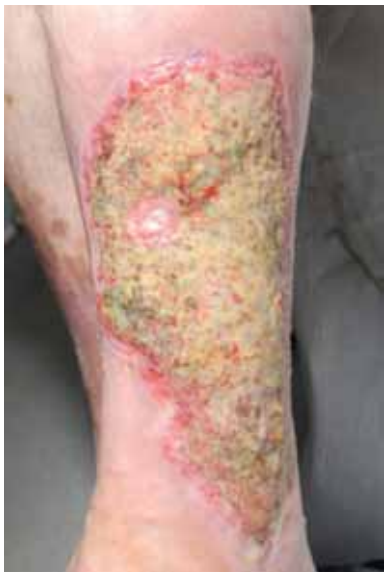

Figure 12. Left lateral aspect after one month of treatment.

Second review

At the second review on 4 July 2012, both the ulcers on the right and left medial aspects had continued to reduce in size, with epithelialisation present *(Figures 13* and *14).* The right

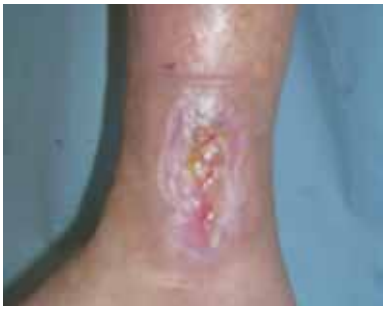

Figure 13. Right medial aspect after two months of treatment.

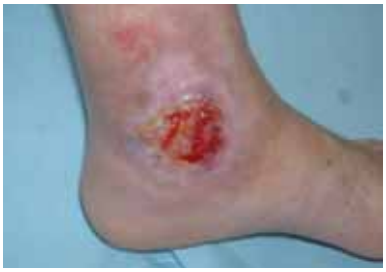

Figure 14. Left medial aspect after two months of treatment.

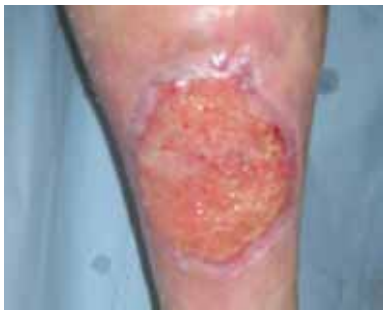

Figure 15. Right lateral aspect after two months of treatment.

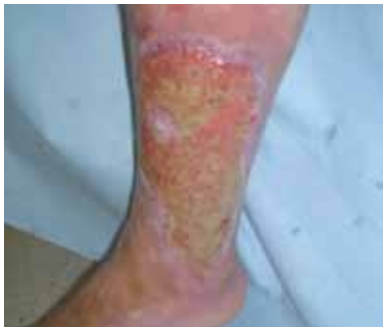

Figure 16. Left lateral aspect after two months of treatment.

ulcer continued to be treated with just a non-adherent dressing and JOBST UlcerCARE Ready-to-Wear 2 in 1 Compression System. The left medial ulcer now measured 6x6cm and had 60% granulation and 40% sloughy tissue, with surrounding epithelialisation. The same treatment regimen as before was continued (hydrofiber and foam dressings).

The ulcers to the lateral aspects of the legs also improved, with epithelialisation evident around the wound edges *(Figures 15* and *16)*. The problems with exudate that the ulcer on the right aspect had been experiencing were resolving and the wound measured 13x10cm. The same treatment regimen was continued with dressings and JOBST UlcerCARE Ready-to-Wear 2 in 1 Compression System.

Third review

At the third and final review on 8 August 2012, the ulcer to the right medial aspect had completely healed *(Figure 17),* whilst the others were continuing along the healing trajectory.

The wound to the left medial aspect was still reducing in size (measuring 2x1.5cm) and so treatment was continued with the non-adherent dressing and JOBST UlcerCARE (*Figure 18*).

Likewise, both wounds to the lateral aspects of the leg had improved dramatically with a marked reduction in exudate levels and pain from the outset of treatment *(Figures 19 and 20).*

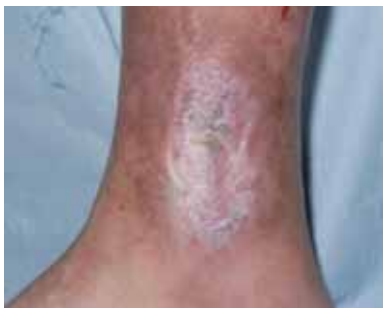

Figure 17. After three months of treatment the ulcer to the right medial aspect had completely healed.

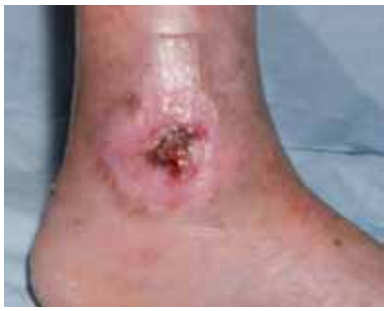

Figure 18. Left medial aspect after three months of treatment.

The wound to the right leg had minimal levels, while that to the left had moderate levels of exudate.

However, there was evidence of active debridement and peri-ulcer epithelialisation to the latter, with both wound beds continuing to reduce in size.

'Best improvement! Now they just simply don't hurt.'

'IV drug use reduced to nil, I was previously having to top up my methadone with injecting amphetamines as the pain was so bad and

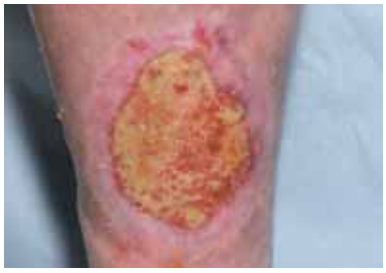

Figure 19. Right lateral aspect after three months of treatment.

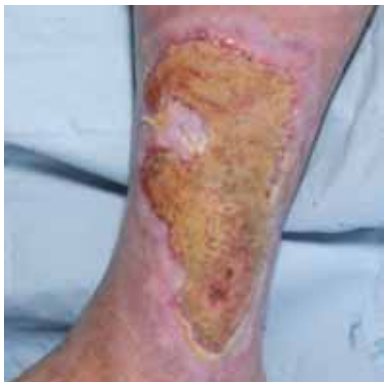

Figure 20. Left lateral aspect after three months of treatment.

because of my habit the GP would not prescribe me any more pain killers. Since I have been wearing the stockings, the pain has reduced so much that I no longer need to use amphetamines only needing my prescribed methadone.'

The patient found JOBST UlcerCARE easy to put on and take off, comfortable to wear, and was happy with the appearance — all of which helped with concordance.

Conclusion

Wound management for patients who are IV drug abusers can be difficult because of their complex and extensive needs (Powell, 2011). Their ability to self-care can change from day to day, with their chaotic lifestyles making concordance a challenge (Cook and Jordan, 2010). However, this patient was able to take control of his own care and change dressings when they became saturated or odorous and wear the JOBST UlcerCARE Ready-to-Wear 2 in 1 Compression System.

'The ability to self-care has changed my life, as soon as they smell I can change the dressing not having to wait for an appointment to see the nurse.'

This had a considerable impact on his quality of life, as in only two weeks the hosiery had reduced limb volumes, and the lack of bulky bandages allowed him to wear normal clothes and footwear and carry out daily activities, including taking young children to school.

'I am now able to play rugby with (my) *son. When ulcers were bad, I could not even get off the sofa.'*

Self-care with hosiery also meant that the patient was not tied down to attending clinic appointments, and so treatment was not affected by the moments of chaos in his life.

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Use of a two-layer compression stocking system for a painful recurring venous leg ulcer

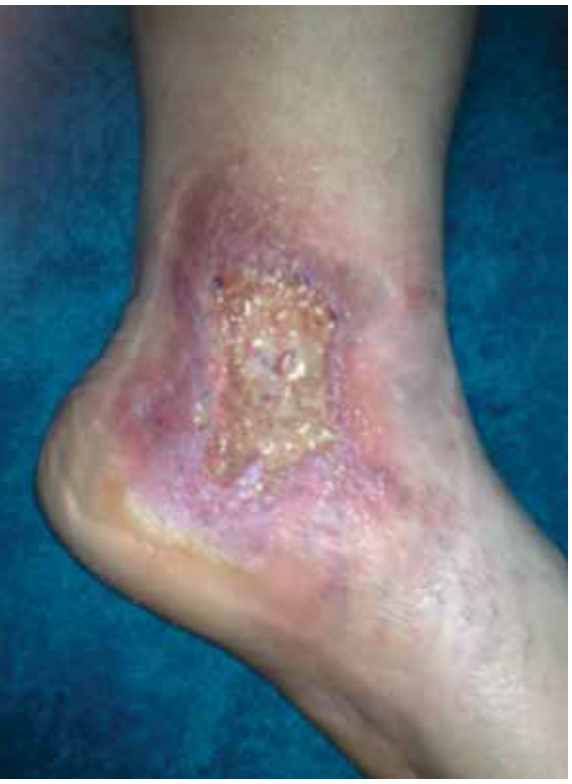

Figure 1. Painful venous leg ulcer at initial presentation.

Leanne Cook, Vascular Specialist, Huddersfield; and Lecturer Practitioner, University of Huddersfield, West Yorkshire

This 38-year-old lady presented with an extremely painful recurrence of a venous leg ulcer — her third in five years (*Figure 1*). She was married and a full-time mother to two children under the age of 10.

'I remember many nights where the pain was so horrendous that I was unable to sleep. This used to happen more after changing the dressing. I would always wait until the children were in bed so that they didn't have to see me in pain and then have a shower, wash my leg and re-dress the ulcer at about 10.00pm. At its worse, I would still be in agony at 4.00am.'

During both her pregnancies, she suffered from deep vein thrombosis (DVT). This resulted in deep venous damage, which was surgically corrected by venous bypass in 2010. She was on lifelong anticoagulants and had been prescribed RAL compression class 2 (CCL 2) hosiery, which she said she wore consistently. She suffered chronic pain in her lower leg for years, even during periods when the ulcer healed and was under a specialist pain team.

Initial presentation

The patient's venous leg ulcer had been present for four weeks and had recurred despite wearing compression hosiery. The main issue for the patient was the pain, which was causing her distress and restricting her day-to-day life.

'The ulcer stings and burns like mad, but the worst pain comes from my shin. It feels as if my veins are going to explode.'

At initial presentation, the ulcer measured 5x4cm and consisted of 100% sloughy tissue. The surrounding skin was inflamed and the patient was currently on a course of antibiotics that had been prescribed by her GP. She was using foam dressings and RAL CCL 2 stockings. However, she found the stockings very stiff and was having difficulty in putting them on and removing them. On examination, her ankle brachial pressure index (ABPI) was 1, and the dorsalis pedis and posterior tibial artery pulses were present.

To encourage autolytic debridement, it was decided to add a hydrofiber dressing under foam dressings, and a JOBST® UlcerCARE Ready-to-Wear 2 in 1 Compression System (total of 40mmHg). A venous duplex scan was also requested to ensure that the previous venous bypass surgery was still patent.

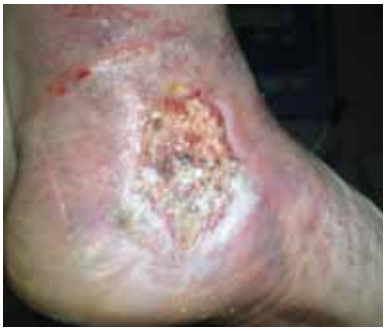

Figure 2. Venous leg ulcer at first review.

First review

At the first review six weeks later, the venous duplex scan showed that the bypass had remained patent. The ulcer had reduced in size to 4x3cm, and the percentage of slough had decreased to 95% and was more superficial in nature (*Figure 2*). The inflammation of the periwound skin had also resolved. Although the pain was still troubling the patient, she said during her review at the pain clinic that:

> *'I actually find the pain easier to deal with, knowing that the wound is getting better.'*

She was finding the 2 in 1 compression system far more comfortable than the compression stockings previously worn and much easier to apply.

> *'The main advantage is that I can apply them* [JOBST UlcerCARE] *myself at home... I used to go to the clinic on a Wednesday and even if my appointment was at 9.00am, I would still be in a huge amount of pain from the washing and re-dressing for the rest of the day. This was especially hard when my daughter was pre-school age. I used to have to pay for childcare as I couldn't have looked after her in that state. To be honest, I think most Wednesdays were spent in tears.'*

> *'Another advantage is the comfort. The bandages used to start slipping down my leg after a day or so, obviously with two kids and our own business, it was quite rare that I could sit with my legs elevated, and would leave large dents in my leg by the end of the week. They were also rather uncomfortable, especially in hot weather. While on the subject of comfort, another advantage of the compression system is that I have more freedom with which shoes I can wear.'*

second review

After a further six weeks, the patient was again reviewed. The ulcer had continued to improve, although there was some irritation just above the dressing (*Figure 3*). However, the patient admitted to scratching

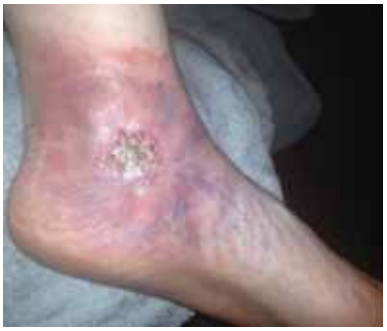

Figure 3. Venous leg ulcer at second review.

this area and provoking the sensitivity. A two-week course of hydrocortisone 1% was prescribed to relieve the irritation. As the patient was happy with the treatment regimen and the pain was continuing to lessen, she agreed to continue with the hydrofiber and foam dressings with the 2 in 1 compression system.

> *'The benefits of the new hosiery are the comfort and the fit. They are much softer and feel so much nicer on the leg as well as being easier to put on. They also have a much wider band at the top which means they roll down the leg a lot less which previously was causing some pain and discomfort.'*

Final review

At the final review six weeks later, whilst the ulcer had not completely healed it was still continuing to improve and had

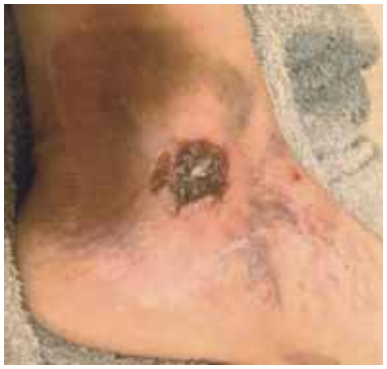

Figure 4. Venous leg ulcer at final review.

reduced in size to 2x2cm with a 90% clean granulating wound bed (*Figure 4*). The irritation that had been present at the previous review had now settled and the skin was intact.

The pain that had been having such a negative impact on the patient's quality of life had resolved, which lifted her mood to the point that she felt that she was getting back her life. She was now able to play with her children and carry out normal activities of daily living without the ulcer being constantly on her mind.

> *'... because I can change the stocking kit every 2–3 days, I don't have to put up with the odour from the ulcer anymore. It was always hard to feel attractive (as a woman in her 20s and early 30s should) when I had an awful smell following me around! The smell also used to linger in the house and 'Urgh, Mum, I can smell your leg' became a regular shout of disgust in our house! I am making a joke of it now, but at the time it was upsetting and demoralising.'*

Simple non-adherent dressings were applied and the JOBST UlcerCARE Ready-to-Wear 2 in 1 Compression System was continued. The patient was advised to continue with the compression system until complete healing occurred. Following this, the patient was to continue to wear RAL CCL 3 hosiery to lessen the risk of recurrence. As the patient was happy with the results achieved, it was hoped that she would concord with treatment in the future (Anderson, 2012).

Conclusion

This case shows how managing venous leg ulcers not only involves treating the wound, but also needs to address the negative impact that an ulcer might have on daily life. Pain has been seen to be the most frequently cited symptom of leg ulceration (Palfreyman, 2008), as was the case with this patient. Pain can have a significant impact on quality of life and a patient's sense of wellbeing (Charles, 1995; Gray et al, 2011; International Consensus, 2012), causing the patient great concern in that it has physical, psychological and social effects. By helping to reduce and manage pain, this patient regained her life and felt confident about the future.

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