Meeting report: stepping up to customised wound care

A one-hour symposium was held by Urgo Medical on Thursday 15th May 2014 at the annual European Wound Management Association (EWMA) Conference in Madrid, entitled ‘Stepping up to customised wound care.’ The objective of the session was to highlight the benefits of a sequential treatment in chronic wounds. This is an important concept that creates an individualised approach to wound management and dressing choice, recognising the need to tailor treatment to the different phases of healing. Chaired by Dr Karl-Christian Münter, Germany, four eminent speakers focused on the evidence in the form of randomised controlled trials (RCTs) — including double-blind — clinical studies and clinical experience of using both UrgoClean® and UrgoStart® dressings for managing wounds at the inflammation, proliferation (granulation) and maturation (epithelialisation) stages of the healing process.

The first fact emphasised in the symposium was, therefore, that debridement is essential; there are many methods available, including dressings that provide moist wound healing.

Second session — Results of the European RCT ‘Earth study’: Sylvie Meaume, MD, Gerontologist-Dermatologist, Head of the Clinical Gerontology Department, Wound Care Unit, Hospital Rothschild APHP, University of Paris, UPMC, France

The second session focused on the role of dressings in wound desloughing. The availability of nutrients and oxygen, and the presence of ischaemic tissue combine to ensure this is an ideal environment in which both aerobic and anaerobic bacteria can multiply[1], increasing the risk of infection. Debridement of sloughy/necrotic tissue is vital when reducing the bacterial burden within the wound[2,3].

According to Luc Téot, debridement is essential and a range of debridement techniques are used at present, including autolytic, biosurgical (maggot therapy), hydrosurgical, mechanical, sharp, surgical and ultrasonic. Each of these methods requires varying levels of clinical expertise and have their advantages and drawbacks in terms of patient acceptability and ease of use[4]. To achieve successful debridement a combination of techniques may be required.

The first session involved the state of the art in desloughing: Luc Téot, MD, Plastic Surgeon, Wound Healing Unit, Lapeyronie Hospital, Montpellier University, France

Debridement is an integral part of wound management and involves removing all non-viable tissue from a wound, which can act as a nidus of infection and can delay the formation of granulation tissue in the wound bed.

Chronic wounds often contain necrotic or sloughy tissue that can enhance the growth of bacteria, delaying wound healing. The availability of nutrients and oxygen, and the presence of ischaemic tissue combine to ensure this is an ideal environment in which both aerobic and anaerobic bacteria can multiply[1], increasing the risk of infection. Debridement of sloughy/necrotic tissue is vital when reducing the bacterial burden within the wound[2,3].

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What are UrgoClean® and UrgoStart®?

UrgoClean is a dressing made up of hydro-desloughing fibres and soft-adherent TLC (Technology Lipido-Colloid) healing matrix [Box 1], indicated for effective removal of slough.

UrgoStart is a foam dressing with soft-adherent TLC-NOSF healing matrix [Box 1] to accelerate healing of chronic wounds.

The speakers at the symposium were (clockwise from top left): Luc Téot, Sylvie Meaume, Serge Bohbot and Alexandra Whalley.
Box 1. Understanding TLC and NOSF technology

TLC stands for Technology Lipido-Colloid and was developed by Laboratoires Urgo. TLC is a healing matrix that includes a hydrocolloid (carboxymethyl-cellulose) with fatty particles. When in contact with the wound exudate, it forms a gel to create a moist wound environment, allowing exudate to pass through to an absorbent pad or secondary dressing. The TLC healing matrix is atraumatic to newly formed tissue, allows pain-free removal and, has been shown to promote fibroblast proliferation at the cellular level.

TLC is compatible with different materials and compounds and is used in a wide range of dressings. It has been combined with NOSF, which is a new compound derived from the chemical oligosaccharide family to inhibit proteases. TLC-NOSF enhances healing in chronic wounds.

Figure 1. Percentage of debrided wounds, UrgoClean versus Aquacel.

reduction, the percentage of debrided wounds after 6 weeks of treatment, and the acceptability and safety of the tested dressings.

After the 6-week treatment period, the mean percentage of wound reduction was 36.95% in the UrgoClean group and 35.42% in the Aquacel group, results that validated the non-inferiority hypothesis.

In terms of sloughy tissue reduction, UrgoClean showed a 65.3% reduction, higher than the 42.6% seen in the Aquacel group (p=0.013), while the percentage of debrided wounds was also higher in the UrgoClean group (52.5%) compared to the Aquacel group (35.1%; p=0.033) [Figure 1]. A Global Performance Score (GPS) between 0 and 36 was given for each dressing at the end of the treatment. This GPS was calculated on the basis of nine questions (including efficacy, safety, pain and comfort) using a qualitative scale of five points (‘very poor’, ‘poor’, ‘fair’, ‘good’, ‘very good’). The trial investigators considered the performance of UrgoClean to be superior to that of Aquacel (scores 30.1±3.9 versus 27.4±5.8, respectively; p=0.002).

The second fact highlighted during the symposium was that UrgoClean is a hydro-desloughing dressing that has proven its superiority in the desloughing stage.

Third session — Overview of UrgoStart clinical evidence: Serge Bohbot MD, Medical Director, Laboratoires Urgo, France

The third speaker at the symposium was Serge Bohbot, who described in detail the physical properties of UrgoStart based on laboratory data to illustrate the mode of action of TLC (Technology Lipido-Colloid) technology and NOSF (Nano-Oligosaccharide-Factor). While the TLC healing matrix has been shown to enhance fibroblast activation and proliferation, NOSF inhibits levels of matrix metalloproteinases (MMPs) in the wound to accelerate healing of chronic wounds. Based on RCT evidence, there is strong support for using UrgoStart to stimulate granulation tissue formation in venous leg ulcers\(^{10}\). The size and duration of the wound was found to have no impact on the performance of UrgoStart.

Serge Bohbot sought to establish the answers to three specific questions:
1. Is there an extrapolation of efficacy from venous leg ulcers to other wounds when using UrgoStart?
2. Can UrgoStart be used as a first-line dressing?
3. What is the correlation between UrgoStart and complete wound closure?

Three cohort surveys were conducted to answer these three questions: Starter, Speed and Opus studies revealed the following:

- The Starter survey involved 1,185 wounds, including venous leg ulcers, pressure ulcers, and diabetic foot ulcers and gave a positive indication that UrgoStart can also be used to promote granulation tissue in diabetic foot ulcers and pressure ulcers with similar efficacy.
- Based on the Speed survey results involving 968 wounds, the suggestion is that UrgoStart should be used as a first-line dressing as results were even better when it was used as such.
- There was an 84% healing rate at 20 weeks in the Opus study, involving 1,405 venous leg ulcers, which shows that UrgoStart can be used right up until healing.

The EXPLORER trial will be the next step; it is a double-blind, multicentre, two-arm European RCT that is ongoing at the time of writing and will involve more than 200 patients with neuro-ischaemic diabetic foot ulcers.

The third fact highlighted in the symposium was that UrgoStart combines TLC with NOSF technology and has proven efficacy, as demonstrated in a double-blind RCT.

Fourth session — Clinical cases using sequential treatments: Alexandra Whalley, Advanced Podiatrist, UK

Although the efficacy of UrgoClean and UrgoStart have already been demonstrated through randomised controlled trials (including a double-blind RCT), observational studies and non-comparative clinical studies, case studies, are also important in that they reflect real-life practice in various wound types.

Alexandra Whalley focused on a range of case studies where a sequential treatment using UrgoClean (for desloughing) then UrgoStart (for accelerated wound healing) was initiated. These included patients with diabetic foot ulcers, leg ulcers, pressure ulcers and trauma wounds [Figure 2]. One case described a 63-year-old male patient who presented with type 2 diabetes, hypertension, high cholesterol, obesity, retinopathy, neuropathy and a previous cerebrovascular accident. He had bilateral Charcot feet. The patient was non-concordant with treatment and ignored his wounds. The wound on the left foot remained static.
Both dressings make use of Urgo's lipido-colloid technology (TLC). A wide range of considerations determine dressing selection, including the removal of slough and the promotion of granulation tissue formulation to stimulate wound healing. Clinicians must look to the literature as a guide when making their decisions in this regard.

The symposium showed that there is a wealth of robust evidence in support of the sequential treatment model and UrgoClean and UrgoStart represent effective wound care options tailored for specific stages of the healing process.

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References

Treatment with UrgoClean was initiated to prepare the wound bed, reducing exudate levels and removing all slough. It was then decided to use UrgoStart and the wound continued to reduce in size dramatically. There was no adherence of the dressing to the wound or the surrounding skin due to TLC healing matrix and the dressings were easy to remove. The sequential treatment in this case had a positive impact both on the patient’s wound healing and his quality of life.

The fourth and final fact of the symposium was that sequential treatment with UrgoClean and UrgoStart can optimise the healing process of chronic wounds.

Conclusion
Sequential treatment is an important approach in wound management. While UrgoClean has been specifically developed for use at the desloughing stage of the healing process, UrgoStart can be introduced at the proliferation stage to stimulate granulation and promote faster healing.

Four key facts from the symposium
1. Debridement is essential; there are many methods available, including dressings that provide moist wound healing.
2. UrgoClean is a hydro-desloughing dressing that has proven its superiority in the desloughing stage.
3. UrgoStart combines TLC with NOSF technology to accelerate healing of chronic wounds and has proven efficacy, including in a double-blind RCT.
4. Sequential treatment with UrgoClean and UrgoStart can optimise the healing process of chronic wounds.

Figure 2. Photographs showing progress (before and after) using sequential treatment with UrgoClean and UrgoStart on a diabetic foot ulcer (a) before (b) after 8 months; a pressure ulcer (c) before (d) after 80 days; and a venous leg ulcer (e) before (f) after 3 weeks.
SLOUGHY CHRONIC WOUNDS

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Healing speed = 10.83 mm²/day versus 5.15 mm²/day - p = 0.0056.