

## **Bioderma Congress Reports**

### **EWMA 2023**

Reports written by

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### **Compression therapy**

#### **Compression therapy – why still underused?**

Giovanni Mosti

Compression therapy has been proven beneficial for venous ulcer treatment and is the standard of care (Evidence level A). Compression in venous leg ulcers (even if it not the recommended 40 mmHg) is better than no compression.

Among the causes for the low use of compression therapy are factors associated with the health professional (fear of doing harm with excessive pressure, loss of time, lack of knowledge), but also with the patient (fear due to previous negative experiences). For this reason, education of professionals and patients is so important.

The following tips can help improve confidence and increase the use of compressive therapy:

- Bandages with pressure indicator markings can help to reduce the difference in pressure exerted and the mode of application between different practitioners (both experts and non- experts).
- Training in bandaging with the use of a pressure measure device helps practitioners to know what pressure they can apply and to feel more confident when applying it in clinical practice.
- The application of padding may prevent the occurrence of hyperpressure injuries in at-risk areas.
- Tell the patients that if the bandage bothers them, they can remove it and return the next day to reposition it to suit their needs.

#### **Benefits of compression therapy in practice**

Sylvie Meaume

Compression therapy is the best antiinflammatory treatment for venous leg ulcers. It not only reduces edema, but also sloughy tissue, bacteria load and, consequently, promotes wound healing. Padding with foamy material helps to homogenize leg diameters and increase effectiveness of the bandage.

The treatment to reduce the heat, pain and erythema of swollen legs due to phlebolympoedema is not antibiotics but compression therapy. It is an inflammatory pathology, not an infectious one.

If the compression device is not comfortable, pressure should be reduced, padding could be considered or other compression device should be used.

Efficacy, tolerance and compliance are the pillars for a successful compression therapy.

The compression device should maintain ankle mobility and promote shoe wearing. Self-adjustable compression wraps are a good option to preserve ankle mobility. Compression is also essential to stop recurrence with self-adjustable compression wraps and hosiery. Overlapped stockings may help donning and doffing and help to exert the necessary pressure (30-40 mmHg). For instance, instead of using a class 3 stocking, which is difficult to apply, a class 1 (with toe cap)+2 (without toe cap) can be used.

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## **Oncological Wounds**

### **The concept of palliative wound care**

Georgina Gethin

Palliative care is critically important for the world's aging population and can change illness trajectories and promote advances in health care. However, misconceptions about which patients need to receive palliative care may be an obstacle to meeting patients' needs for palliative care. A review has been recently published including four concept analysis studies on palliative care. In this review palliative care was described as an approach to alleviating physical and psychological suffering and improving patients' and families' quality of life in the early stages of diagnosed illness. Terminal illnesses, acute or chronic diseases, and actual or potentially life-threatening illnesses were confirmed as the events preceding palliative care. Characteristics of palliative care include holistic care, interdisciplinary teamwork, and compassionate, patient- and family-centered care. Improved patient and family quality of life, enhanced human dignity, improved self-care, and strengthened coping abilities are outcomes of palliative care.

The new concept of considering palliative as an active holistic care can support resources and care provision, raise awareness and support research to improve care.

Including palliative care terms in nursing education and training and developing palliative care models in clinical practice are recommended to ensure nurses understand the services of the palliative care needs of patients and their families. Future reviews, including grounded qualitative studies on the concept of palliative care, are recommended.

### **Oncological wounds and their differential diagnostic**

Elena Conde Montero

Regarding malignant ulcers, 2 different clinical situations may be found in the clinical practice:

1. Ulcerated primary tumor (or metastasis)
2. Malignancy secondary to a long-lasting ulcer (Marjolin's ulcer)

Even if they may mimic typical wounds such as venous or pressure ulcer, they will not respond to treatment. As up to 10% of the ulcers managed as vascular wounds are tumors, it is recommended to perform a biopsy after 3 months of treatment of stagnant ulcers.

Considering ulcerated primary tumors, the most common are basal cell carcinoma and squamous cell carcinoma, which are the most frequent cutaneous tumors.

A Marjolin ulcer is the transformation into a secondary malignant ulcer (squamous cell carcinoma) that typically occurs on long lasting ulcers and burn scars, with a latency period over 10 years. The exact reason why Marjolin ulcers develop is unknown. Most theories suggest that injury and scar formation lead to destruction of the local blood and lymphatic vessels, making the area an immune-privileged site. This protects the scar from anti-tumour antibodies and permits the transformation and malignant degeneration of the skin. Chronic inflammation, irritation or trauma to the area are also thought to contribute to the process.

A wound biopsy for histological analysis is needed for the diagnosis of malignant wounds. A narrow and deep wedge-shaped excision or a 5-6 punch biopsy are recommended. In order to avoid false negative single biopsies, 2 or more biopsies should be taken from different areas.

Depending on the tumor, radiologic imagery and other staging examinations may be needed

As a malignant wound may mimic other causes, the presence of these signs will raise suspicion: raised edges, atypical location, irregular wound edges, overgranulation, pain, malodor, bleeding fragile tissue. However, these signs are nonspecific features.

In addition to malignancy, overgranulation tissue should make us discard infection (including abscesses and osteomyelitis, occlusion, excessive exudate, foreign body or sustained friction).

As with any wound, after etiological treatment, usually surgical excision, tumor ulcers will benefit from the same local treatment as other chronic wounds.

## **Clinical assessment and new systemic treatments of oncological wounds**

Agata Janowska

With the aim of optimising the local management and dressings of malignant fungating wounds, a standardized 4- step approach based on Pain, Exudate, Bleeding and Odor management was designed. Its usefulness was assessed in a 24 patient series and it was called the "PEBO" approach. Ulcers were assessed at baseline, after two weeks and after one month. In the study most patients showed an improvement in the QoL using PEBO approach, although some experienced a deterioration in their general clinical conditions. Non-aggressive cleansing, atraumatic dressings were applied to allow pain relief. Non-adherent dressings were combined with a secondary dressing in the case of exudate. Achieving hemostasis with dressing or medication (collagen, alginate, tranexamic acid) is a priority in the management of these ulcers. Antibacterial dressings and odor absorbent dressings were used for odor absorption. Surgical debridement, adherent dressing and occlusive dressings were avoided. Dressing changes were programmed twice a week for four weeks. PEBO simplified the complex aspects of this type of ulcer, and could help physicians, nurses, and also the rest of the team, including the patients themselves and their family, in the multidisciplinary palliative care.

## **Overview of the management and treatment of oncological wounds**

Sebastian Probst

Multidisciplinary view of oncological wound treatment is essential.

Regarding dressings used for malignant fungating wounds, there is a huge variability, but the most used are super absorbents.

This presentation shared several practical pearls to deal with the most common challenges when dealing with malignant wounds.

Considering pain (the most frequent symptom in these patients), two topical strategies have been suggested:

- Cannabis oil 0,5-1 ml twice a day covered with a non-adhesive dressing
- Morphine in hydrogel (10 mg per 8 g of hydrogel)
- Capsaicin 0.025 to 0.075%, especially for neuropathic pain

For bleeding, topical tranexamic acid or adrenaline (gauze soaked in adrenaline 1:1000) may be helpful.

Regarding malodor, in addition to well-known topical application of metronidazole, silver, polyhexanide and honey may help. Moreover, strategies as putting in the room cat litter, coffee, aromatherapy oils or a glass with shaving foam are commonly used and may be effective.

Negative pressure therapy may increase patient comfort in some cases, so it can be used in palliative care.

In malignant facial wounds, stoma bags have been described to be helpful to control exudate.

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## Wound care and frailty

### Identification, management and impact of Frailty on wound healing

Bijan Najafi

Frailty is highly prevalent among people with diabetes and is associated with poor outcomes including delay in wound granulation in people with deep diabetic foot ulcer. Remote frailty assessment may help smart referral of patients with diabetic foot ulcers to multidisciplinary wound clinic. Frail individuals are likely to have higher stage of wound severity.

Exhaustion (poor endurance) is associated with poor skin perfusion, lower tissue oxygen saturation and higher risk of malnutrition and consequently wound complexity. Thus, these are good candidates for smart referral to wound multidisciplinary centers.

### Frailty and wound care—facts from the clinical practice

Catherine Ludwig

Frailty represents a state of extreme vulnerability where minimal stress may cause functional impairment.

There are 3 models of frailty: phenotype (loss of physical resources), accumulation of deficits (senescence) and the integral model (loss of biopsychosocial resources).

A multidimensional complexity assessment instrument for home nursing practice was published (COMID). Currently, nurses are using the COMID as a complement to the routine comprehensive health assessment. Specifically, the COMID consists of a 30-item checklist coding for the presence or absence of characteristics of “case complexity” (medical circumstances, socioeconomic circumstances, aggravating mental circumstances and aggravating behaviour), “care complexity” (circumstances of care delivery) and “instability.” Home care nurses who intervene regularly at patients' homes are in the primary position to assess the whole situation of the patients and their needs with regard to the context to plan and coordinate the care. Given the amount of information the nurse has to consider when establishing an intervention plan, some instruments were developed in clinical practice to assess the needs of the patient and to support clinical reasoning. One of these standardized instruments is the Resident Assessment Instrument-Home Care (interRAI-HC), widely used to evaluate the needs of the patients requiring care at home in various domains of health (e.g. pain and behaviour). The interRAI Home Care (HC) Assessment System is designed to be a user-friendly, reliable, person-centered system that informs and guides comprehensive planning of care and services for elderly and disabled persons in community-based settings around the world. It focuses on the person's functioning and quality of life by assessing needs, strengths, and preferences. It also facilitates referrals when appropriate. When used on multiple occasions, it provides the basis for an outcome-based assessment of the person's response to care or services. The interRAI HC Assessment System can be used to assess persons with chronic needs for care, as well as with post-acute care needs (e.g., after hospitalization or in a hospital-at-home situation). An observational retrospective descriptive study was performed in Geneva, conducted by homecare nurses in routine practice using interRAI- HC comprehensive assessments+ clinical indices. The sample was n=5152. People with wound care needs have significantly higher score of frailty, complexity and risks of pressure ulcer. The conclusion of this study is that interRAI-HC is useful to identify people with altered skin conditions (sensitivity) yet not specific to wound types, so it requires specific additional assessment by nurses. This means that interRAI-HC assessment is interesting

providing a global vision in understanding the patient situation, but it is not accurate to assess a wound.

### **Frailty: the view of a Geriatrician**

Sylvie Meaume

The geriatric concept includes different aging trajectories, so just a percentage of old people may be considered frail. 50% of people over 80 years old have at least one fall in a year and 25% have repeated falls. To assess this risk, the following tools may be used: monopodal support test, time up and go test on 3 meters.

Autonomy assessment should be performed so that technical aids may be established if needed. Mini IADL is a helpful and rapid test to assess it (Instrumental Activities of daily living).

Cognitive assessment may be done with the clock test, 5 Dubois words, MMSE (Mini Mental State Examination). The patient can be included in a geriatric network, with reinforcement of home help, secure treatment (nurse, housekeeper), enrolment in social activities, guardianship, orthophonist. Another important assessment is depression. In people >70 years old, 14% signs of mild depression. Mini GDS is a simple screening tool. The GDS 15 (Geriatric Depression scale) is the diagnostic tool. Sensory assessment is also important as vision and hearing problems contribute to patient isolation. Regarding nutrition, undernutrition is most often multifactorial in the elderly, so a full etiological assessment is needed and corrective actions should be implemented (food supplements, dental appliances if necessary, meal delivery...)

It is essential to take into account that polymedication is associated with drug interaction and non-necessary drugs should be stopped.

To prevent pain during dressing changes, premedicate, be quick and use distraction techniques (show old photos and ask questions, give the patient a piece of bread) or use virtual reality.

The key message is that people should stay at home as long as possible.

Reports written by

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## **Pressure ulcers (free oral presentations)**

### **Management of pressure ulcers in outpatients**

The session started with a presentation on the management of pressure ulcers in outpatients.

The speaker reiterated that pressure ulcers have a well-described prevalence rate in hospitalised patients

with standardised prevention and management in this context. However, there are fewer data on pressure ulcers outside the hospital setting. The aims of this study were to estimate the proportion of patients with pressure ulcers among patients managed by health professionals and also describe the management of these pressure ulcers. Healthcare professionals (doctors and nurses) from three European countries (the UK, France, and Germany) participated in a two-part online survey. The first part looked at the number of patients managed by these professionals and the second collected the clinical data of the last four patients over the age of 75 with Stage 2 and 3 pressure ulcers treated by these professionals. Three hundred and forty professionals took part, monitoring an average of 39 patients (14.7% of their patient base) with pressure ulcers every month. Clinical data were reported

for 1,043 patients over the age of 75 with Stage 2 or 3 pressure ulcers. These patients had an average age of 83 years, 68% had major to complete dependence according to the ADL score, 46% were incontinent, and 40% were classified as malnourished by the professional. Concerning the management approach, the most surprising results were that only 37% of these patients were prescribed a cushion to prevent pressure ulcers and only 26% were prescribed an appropriate diet. The study also asked the professionals about their training and knowledge relating to pressure ulcers, which the vast majority felt were insufficient. This study illustrated that it is becoming increasingly necessary to train healthcare professionals to improve the management of these wounds.

### **Diagnosis of pressure ulcers in patients with darker phototypes**

The second presentation focused on the diagnosis of pressure ulcers in patients with darker phototypes.

It was the result of work carried out by a Swedish team, who made an initial observation: no photos of pressure ulcers in patients with darker phototypes were included in the two leading educational books on dermatology in Sweden. In these patients, Stage 1 and 2 pressure ulcers are often not diagnosed, causing them to be at greater risk of developing Stage 3 and 4 pressure ulcers. This team therefore published an instructional article, with clinical photos making up for this lack of training, with the aim of compensating for this unequal management.

### **Subepidermal moisture measurement**

The third presentation addressed the concept of measuring subepidermal moisture (SEM). This measure is used to assess the functionality of an intact or damaged stratum corneum; according to some authors, it can help predict the occurrence of a pressure ulcer before it is clinically evident. It could therefore be a valuable screening tool. The study presented aimed to assess the effects on SEM of preventively applying a dressing to the sacral area. Three hundred and ninety-two patients were included and divided into two groups – one with and one without a sacral dressing to prevent the occurrence of pressure ulcers. SEM was measured on five consecutive days. Overall, the measurements were comparable between the two groups. These results again raise the issue of using hydrocellular dressings for the prevention of pressure ulcers. These preventive dressings are recommended by some learned societies, but it should be remembered that there have been no serious studies proving their real efficacy in preventing pressure ulcers.

The final presentation described a qualitative study on the quality of life of spinal cord patients with pressure ulcers. It provided feedback for 10 patients, describing their experience with their pressure ulcer and the treatments received. The accounts of the 10 patients showed many similarities, such as the great difficulty of combining optimum treatment for the pressure ulcer with maintaining good quality of life (particularly when strict bed rest was indicated), the difficulty of being perfectly compliant with the off-loading of the wound and, lastly, the fact that the treatment was often viewed by the patient as having more of a negative impact than the wound itself. These considerations should prompt reflection on the various treatment options available to patients and should encourage caregivers to focus on the patient's quality of life.

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## **New technologies in tissue replacement**

### **Introduction**

Alberto Piaggese

This session was moderated by Dr Alberto Piaggese and Dr Luc Teot.



Dr Piaggese began by citing an expert consensus on the topic that was published in the Journal of Wound Management in 2023 and is freely available (Piaggese et al, New Technologies for Tissue Replacement, Journal of Wound Management, 2023). These recommendations were produced by a group of 12 international experts (plastic, vascular surgeons, etc.) and include 120 pages, 60 figures and nearly 400 references.

In recent years, more and more tissue replacement techniques have been developed with new indications, particularly in the area of chronic wounds, and have thus changed the management of many wounds and their outlook.

### **Biomaterial-based technologies in wound healing**

Alexandra P. Marques

The session continued with a presentation by Dr Alexandra P. Marques, who discussed various types of tissue engineering used to promote wound healing. She explained that these matrices are dynamic and can contain many components essential for tissue regeneration. Some of these matrices have been designed, for example, to treat wounds with bone exposure, which means that they contain proteins that promote bone formation. They can lead to phenomena of re-epithelialisation, neo-vascularisation, etc. There are various types of tissue replacement matrices: acellular matrices, exclusively containing proteins (collagen, glycosaminoglycan, hyaluronic acid, etc.), and cellular matrices. Some are derived from animals and contain, for example, bovine collagen or shark chondroitin sulphate.

Recent studies have evaluated the effects of these replacement tissues compared with standard treatments. In particular, some randomised controlled studies have demonstrated the relevance of these tools for managing diabetic foot wounds.

These technologies can now be coupled with 3D printing, offering structures that are perfectly suited anatomically to the patient's wound. They can also be used in combination with negative pressure therapy.

### **New dermal bio interactive matrices classification**

Franco Bassetto

Prof Franco Bassetto, a plastic surgeon, continued this session by talking about dermal substitutes. These are divided into two categories: permanent and resorbable (degrading within one to two weeks, e.g. made of amniotic membranes). He illustrated their uses with clinical case studies. For example, in one case with extensive loss of substance in the knee, the use of Integra® coupled with a skin graft helped maintain good joint mobility after healing. Another example was given where, following the removal of a sarcoma from a leg, the loss of substance was filled with the Matridem® dermal substitute combined with a partial-coverage flap.

### **Vascular devices**

Jean Pierre Becquemin

Prof Becquemin, from Paris (Henri Mondor Hospital), ended this session by discussing new technologies in the context of vascular surgery. There are artificial tissues (containing Gore Tex®, among other materials) that allow for revascularisation, in particular when the saphenous vein cannot be used for bypass grafting. Other tools are also being developed. These include the Rotablator® system, enabling calcified vascular stenoses to literally be "drilled", as well as tools allowing intravascular lithotripsy to be performed. These tools can traverse previously impassable stenoses.

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# Holistic strategies to promote and maintain skin integrity

Samantha Holloway

Samantha Holloway started this session by reiterating that the skin is a barrier organ, which means it has to be able to withstand mechanical, chemical and infectious attacks. In some situations, this organ is fragile, especially in the case of certain elderly patients, patients with reduced mobility, overweight patients, and premature newborns. For all these patients, and for different reasons, skin integrity is threatened.

As the skin ages, it loses its elasticity, the hypodermis degenerates, and xerosis develops. In some extreme cases, the skin becomes extremely fragile, with the onset of senile purpura, stellate pseudoscars, and skin atrophy. When these signs are present, we speak of dermatoporosis, the main complications of which are skin tears and dissecting haematomas.

In newborns and in particular premature infants, the skin is excessively fragile because it is immature. These patients are at risk of developing wounds induced by medical devices, especially if they are hospitalised in neonatal intensive care: these skin lesions correspond to medical adhesive-related skin injury (MARS) and device-related pressure ulcers (DrPUs).

As for patients with reduced mobility, they are of course at risk of pressure ulcers. As the conditions leading to motor disorders can also be associated with incontinence, these patients are also at risk of incontinence-associated dermatitis which can, in the most advanced stages, cause skin integrity to become impaired. Regarding obese patients, they often have co-morbidities that can compromise skin integrity, such as venous insufficiency and artery disease potentially leading to leg ulcers, Verneuil's disease, etc.

Once these different situations were addressed, the notion of a holistic assessment of the patient was discussed. The aim of such an assessment is to target patients at risk of skin barrier impairment so that this can be better prevented. Lastly, the general rules for maintaining skin homeostasis in these at-risk patients were reiterated: emollient, sun protection, drying the skin by dabbing and not rubbing it, and optimisation of nutritional status and hydration.

The session continued with Steven Smet, a nurse, who spoke about the specific management of skin tears, which particularly affect the elderly. He reminded us that it is essential to train anyone working with the elderly in the basic management of these tears, which often occur during transfers from bed to chair, during washing and dressing, and in the presence of a care assistant or the patient's family, not nurses or doctors.

Recently, the International Skin Tear Advisory Panel (ISTAP) issued recommendations on the classification, management and prevention of skin tears (available at <https://www.skintears.org/resources>). The ISTAP classification is as follows:

- o Type 1: Skin tear without loss of substance where the flap can be repositioned to cover the wound bed;
- o Type 2: Partial loss of substance with a flap that cannot be repositioned to cover the wound bed;
- o Type 3: Total loss of substance exposing the entire wound bed

In all cases, the priority is to manage the bleeding, which can be significant in patients who are often on anticoagulants and/or antiplatelet drugs. Then, with Types 1 and 2, the flap should be repositioned as best as possible.

After re-approximation of the flap, a non-traumatic dressing, such as a silicone interface dressing, should be used on removal. The secondary dressing is usually a compress (wound with low exudate), held in place by a tubular bandage or simple tape. It is also advisable to draw an arrow on the dressings to indicate the direction in which they should be removed.

As these wounds tend to occur on the lower limbs, underlying venous and/or arterial insufficiency should be investigated, as these can cause the wound to become chronic if they are not treated.



Sutures should be avoided due to the skin's high level of fragility; simple repositioning of the flap is sufficient. In some situations, it can be maintained by a few steri-strips.

Mr Smet ended his presentation by reiterating that with all skin tears, it is important to investigate related traumatic lesions. Indeed, some skin tears occur as the result of a fall and may therefore be associated with fractures or dissecting haematomas.

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