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POSITION DOCUMENT

SKIN GRAFT DONOR SITE MANAGEMENT IN THE TREATMENT OF BURNS AND HARD-TO-HEAL WOUNDS

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FOREWORD

Patients undergoing skin grafting procedures will require wound management of both the actual skin graft and the donor site from where it has been removed – these two wounds require specific management and present very different challenges in practice.

The management of donor site wounds is of particular importance, as the process involves the creation of a new wound that is likely to cause additional pain and/or scarring to the patient, and may have a knock-on psychosocial impact. With the emphasis placed on the success of the skin graft, the donor site can be all too easily forgotten, yet the prevalence of complication and potential effect on patient wellbeing should demand a more rigorous and holistic approach.

Selecting a suitable dressing for donor site wounds has been identified as a key area of management that required further development and discussion.

As such, a group of global experts met in Seoul, South Korea, in March 2018 to:

- Discuss what we currently know about donor site management
- Collate experience of strategies and treatments used in the management of donor site wounds
- Identify the key properties of an ideal dressing for use in donor site wounds
- Devise a treatment pathway for use in practice.

The discussions at the meeting resulted in this document, which aims to provide clinicians with all the information and resources they need to manage donor site wounds in practice.

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Introduction to donor site healing

A skin graft is a section of epidermis and dermis that has been completely separated from its blood supply in one part of the body – the donor site – before being transplanted to another area of the body – the recipient site (Grabb and Smith, 1991).

The most commonly used type of skin graft is the autograft, which means that both the donor and recipient of the skin graft are the same person – e.g. a patient has a skin graft taken from, for example, their thigh and applied to a wound elsewhere on their body.

The process of skin grafting involves the creation of another wound at the donor site that will also need management in clinical practice. There tends to be great emphasis placed on the success of the skin graft; however, a second wound is created in order to gain a skin graft — the donor site wound. It should be noted that donor site wounds may be more painful and distressing to the patient than the skin graft wound; therefore, it is vital that the patient is aware that in order to heal the original wound, a second wound must be created, which will also produce a scar and may be painful. As such, these wounds must be given appropriate consideration in management.

CLASSIFICATION OF SKIN GRAFTS

Depending on how much of the dermis is harvested by the surgeon, skin grafts may be classified as either full or partial thickness.

A partial-thickness skin graft involves excision of the epidermis and part of the dermis, but leaves behind sufficient reticular (deep) dermis in the wound bed to enable the skin to regenerate itself. The most common donor site areas for partial-skin grafts include the thigh, buttock, back, upper arm, forearm, abdominal wall and scalp (Beldon, 2007).

A full-thickness skin graft involves excision of the epidermis and the full thickness of the dermis. Since none of the reticular dermis remains to allow spontaneous regeneration of skin, the wound must be directly closed to heal by primary intention. Common donor site areas for full-thickness skin grafts include the pre- and post-auricular (ear), supraclavicular and antecubital (inner elbow) areas, the upper eyelid, scalp, groin and areola. Full-thickness skin grafts do not contract as much as partial-skin grafts, so are used to cover exposed areas of the body, usually the face or neck (Beldon, 2007).

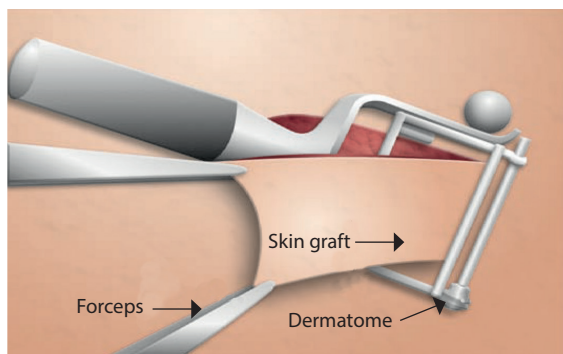
The thicker the dermal component, the more the characteristics of normal skin are maintained following grafting. This is because of the greater collagen content and the larger number of dermal vascular plexuses and epithelial appendages contained within thicker grafts (Wood et al, 2015). Full-thickness grafts will also undergo less contraction while healing, and – in skin grafts on children – are more likely to grow with the individual patient.

However, thicker grafts require more favourable conditions for survival, due to the greater amount of tissue requiring revascularisation. The choice between full and partial-thickness skin grafting depends on factors including wound condition, location, and size, as well as aesthetic considerations (Wood et al, 2015).

UNDERSTANDING SKIN GRAFTING TECHNIQUES

Suitable areas for partial-thickness skin grafting include the gluteal region, anterior, lateral, or posterior thigh, medial thigh, abdomen, and on occasion the upper limbs (Andreassi et al, 2005). The most common donor site used tends to be the anterior or lateral aspect of the thigh. The scalp may also

FIGURE 1 | The harvesting of a skin graft



be used: which has the advantage of no donor site mark after the hair has grown back, but the disadvantage that hair needs to be shaved. The scalp may be a better colour match for face and neck burns than the thigh, but hair growth at the recipient site may also be an issue. Graft donor sites are usually selected to match the tissue requiring replacement and to provide the best cosmetic or functional outcome. Other site selection factors are vascularity, skin colour, texture, thickness, ease of access, ability to manage the resulting wound/scar, and healing capacity (Ogawa, 2007).

The donor site is checked and prepared in a sterile fashion, using an antibacterial solution (e.g. povidone iodine) and rinsed using saline. The donor site is dried and a sterile lubricant applied (e.g. mineral oil). The recipient site is measured and the donor site can be marked to ensure that the appropriately sized skin graft is harvested. A local anaesthetic may be used where appropriate.

The method of harvesting depends primarily on the size and thickness needed – for instance, smaller grafts can be taken using a ‘pinch graft’ technique. The group agreed that a dermatome is the most commonly used tool in skin grafting (Figure 1), which produces thin and well preserved skin from the donor site, and has a rapidly oscillating blade that can be set at an adjustable depth and width for appropriate coverage. However, it should be noted that these are not always available.

Powered dermatomes (which include manual, electric, or air-powered models) are more commonly used because they offer greater uniformity in harvesting. Dermatome use requires proper orientation of the blade, placement of the width guard, and proper depth setting before skin harvesting (Wood et al, 2015).

In recent years, there have been some developments in epidermal grafting techniques, which are playing an increasing role in practice. An automated epidermal harvesting system may be used, involving a tool that applies both heat and suction concurrently to normal skin to induce epidermal micrograft formation. This allows quick harvest and transfer of the epidermal micrografts at the bedside without anesthesia, with minimal donor site healing time and patient discomfort (Serena, 2015).

The skin graft may be meshed to increase its surface, with expansion ratios generally ranging from 1:1 to 6:1 (Wood et al, 2015). This means that the skin graft is passed through a meshing device made from two metal rollers, which inserts multiple fenestrations (holes) into the skin graft, allowing the surface area to be dramatically increased. This avoids the need to harvest large areas of skin and spares the patient a larger donor site wound (Beldon, 2007). However, the mesh technique may



FIGURE 2 | A donor site wound



FIGURE 3 | Healed donor site wound

result in more scarring to the recipient site, creating a 'meshed' appearance to the skin upon healing, which may not be ideal for patients (Wood et al, 2015). Alternatively, the 'Meek System' can expand skin to 9:1 by cutting the graft into small squares and expanding the material that the graft is placed on (Lari and Gang, 2001).

A sheet, or 'unmeshed', skin graft provides a continuous surface that may be more aesthetically acceptable but does not allow drainage of fluid and requires a greater surface area of harvested graft (Wood et al, 2015). Fenestrations may be used in sheet or full-thickness grafts, as the creation of small incisions in the graft can allow for drainage without compromising the cosmetic appearance of the healed graft.

The skin graft is applied to the recipient site, which must also be properly prepared, clean and free from slough or necrotic tissue, in order for the graft to adhere successfully to the site. Wound bed preparation is key, which should be conducted as per a structured system such as the TIME principles: Tissue, Infection/Inflammation, Moisture, Edge of wound (Dowsett and Newton, 2005). Once the grafting procedure has taken place, as well as care of the recipient site, it is vital that consideration is given to the management of the donor site wound created by this process.

EXPECTED HEALING TRAJECTORY FOR DONOR SITE WOUNDS

The donor sites for full-thickness skin grafts are directly closed and are managed in the same way as any other surgical wound healing by primary intention; partial-thickness skin graft donor sites heal by secondary intention (Holden, 2015).

Therefore, the more of the dermis that is removed, the longer the healing time. The expected healing trajectory will range from 7 to 21 days, depending on the thickness of the graft taken (Mathes, 2006) and patient factors that impact on healing, together with how the wound is managed (McGregor and McGregor, 2000). The group agreed that all donor site wounds should ideally heal within 2 weeks. However, in some patients – e.g. in patients with comorbidities such as diabetes – healing within 3 weeks may be a more realistic goal.

RISK FACTORS FOR HEALING PROBLEMS

A number of potential risk factors may delay or complicate healing in donor site wounds. These include:

- Age
- Comorbidities (e.g. diabetes, cardiovascular issues or renal insufficiency) and associated polypharmacy issues
- Smoking
- Nutritional status.

Sufficient vascularity is a key requirement, and transcutaneous oximetry (TcPO₂) testing may be used to aid patient selection and ensure that both the recipient site is suitable and that the donor site will not be at increased risk of delayed healing.

In patients with particular comorbidities, mobilisation is an issue that must be considered. For example, in the case of diabetic foot ulcers, offloading is a key consideration. In all donor site wounds, avoiding trauma is of paramount importance.

Potential risk factors for delayed or compromised healing should be considered in all patients, and appropriate measures taken if necessary. At-risk patients should be identified as early as possible via thorough and comprehensive assessment, in order to avoid delayed or compromised healing, and associated potential complications.

See Appendix 1 for a checklist of factors to be considered in patient selection and assessing risk.

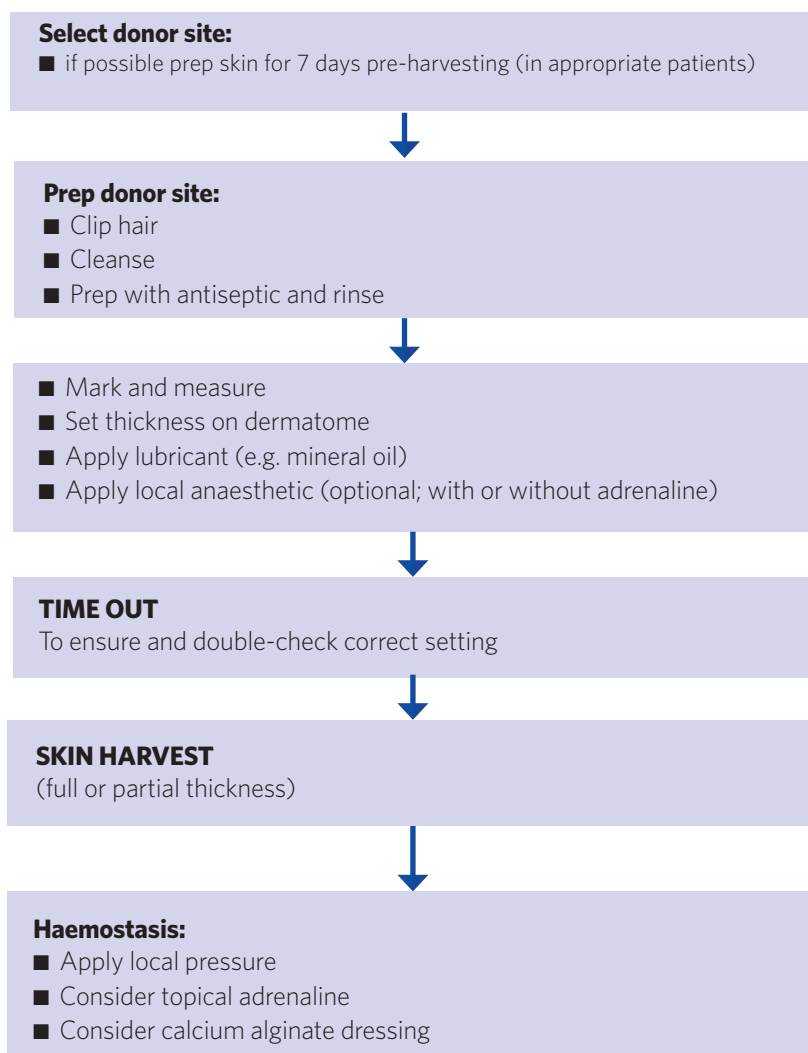
Management pathways

The expert group devised a series of management pathways, to guide best practice in dealing with donor site wounds. The treatment pathways cover the steps that should be taken before, during and after skin harvesting, to optimise patient care at every stage of the process.

TIPS IN PRACTICE FOR DONOR SITE SELECTION AND HARVESTING

- Where possible, select a relatively flat surface for the donor site.
- If possible, in patients where this is deemed necessary, encourage a moisturising/emollient routine for 1 week prior to harvesting (see 'Strategies to prevent healing complications', p10, for further information).
- Anecdotally, it was suggested that it can be helpful to warm the skin at the time of harvesting, to raise the epidermis, by applying a warm washcloth.
- It can be helpful to use local anaesthetic mixed with vasoconstrictor to reduce bleeding immediately after skin harvesting.
- Before harvesting, it is important to double-check the setting on the dermatome (if it is being used), to ensure no error is made.

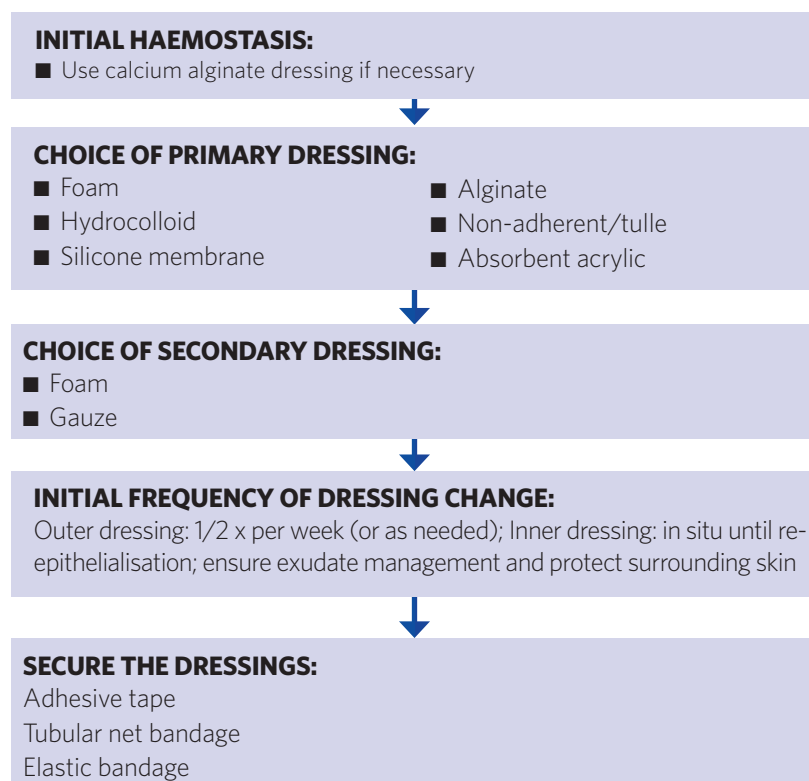
FIGURE 4 | Donor site selection and harvesting



TIPS FOR DRESSING SELECTION IN PRACTICE

- See section 'Focus on ideal dressing selection' (p7) for further information on selecting the ideal dressing for donor site wounds.
- Consider using a skin protectant to preserve the surrounding skin where necessary.
- Consider pain management throughout the process.

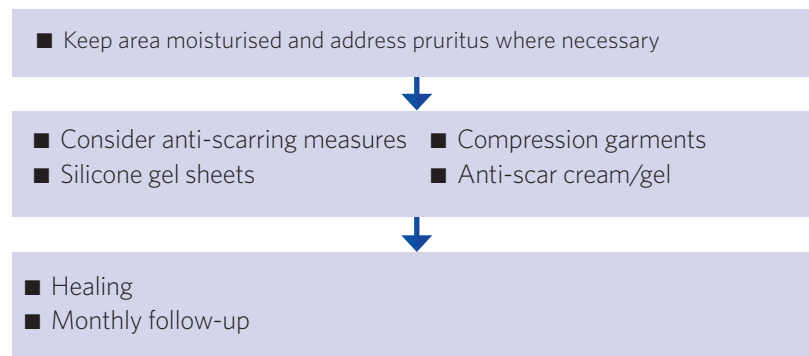
FIGURE 5 | Dressing selection



TIPS IN PRACTICE FOR ONGOING CARE

- See section 'Strategies to prevent healing complications' (p10) for further information
- Bear in mind patient quality of life and psychosocial factors
- See 'Ongoing monitoring' section for further information on healing and follow-up care.

FIGURE 6 | Ongoing care



Focus on ideal dressing selection

Symptom management and patient comfort are the key factors to consider in selecting the appropriate dressing for use in donor site wounds. It is important to remember that the donor site wound may be more uncomfortable for the patient than the original graft site wound, due to the exposure of sensory nerve endings (Beldon, 2007), so patient comfort and quality of life should be considered paramount.

Healing of donor site wounds occurs through re-epithelialisation, so it is vital to consider this process when selecting an appropriate dressing, and to use a product that encourages the optimum wound healing environment.

IDENTIFYING KEY PROPERTIES

The group agreed that the 'ideal' dressing for use in all donor site wounds for the duration of healing has not yet been identified. In practice, a variety of dressing combinations may be used.

However, the group identified key properties that should be considered in donor site wound management. These include:

- Wear time
- Absorbency, exudate management
- Non-stick (non-adhesive contact layer)
- Haemostasis
- Infection control where necessary (while remaining non-toxic)
- Patient comfort – flexibility, conformability
- Avoiding pain/trauma on dressing change
- Maintenance of optimum wound healing environment
- Odour control (which may be a particular problem in geographical areas with hot climates)
- Cost-effectiveness.

ADDRESSING IMMEDIATE PHYSIOLOGICAL FACTORS

In donor site wounds, bleeding is a key immediate concern. Initially, local pressure should be used and topical adrenaline plus local anaesthetic may be useful. In some cases a calcium alginate dressing may be used if bleeding is an ongoing issue.

In the first 3–4 days post-surgery, the donor site wound is likely to produce moderate to heavy amounts of exudate, depending on the size of the wound area; after this period, exudate levels will diminish as re-epithelialisation progresses (Beldon, 2007). In this initial period, exudate management is a key dressing consideration.

Dressings need to be firmly secured to avoid slippage and trauma to the wound in the early stages of healing (Holden, 2015).

WEAR TIME AND SYMPTOM MANAGEMENT

The group agreed that wear time is a consideration of paramount importance in dressing selection for donor site wounds. It is key that the wound remains undisturbed as much as possible in the early stages of healing.

It is in the patient's best interests that one dressing is applied and remains in situ until healing is achieved (Beldon, 2007). Therefore the ideal donor site dressing should have as long a wear time as possible. This may also have additional benefit in terms of cost-effectiveness and clinician time.

This means that dressing selection in donor site wounds is a complex process, which requires consideration of a variety of factors in practice.

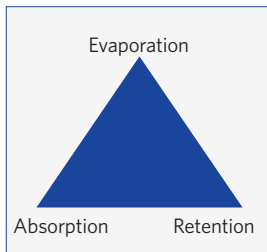


FIGURE 7 | The ideal dressing properties for moisture management

The healing of donor site wounds can be divided into two main phases (Beldon, 2007). The initial wet phase is when larger amounts of exudate are produced. The subsequent dry phase as healing progresses is when the exudate levels significantly reduce and the wound bed becomes dry.

It is important to ensure that an optimum healing environment is maintained throughout both of these phases. A suitable dressing should encourage balanced moisture levels (Figure 7): as well as managing exudate levels, the dressing should also prevent the wound from drying out too much. It is also key to consider the surrounding skin, in order to prevent maceration and preserve skin integrity, minimising risk for further complications and delayed healing. In highly exuding wounds, a skin protectant (e.g. polyacrylate skin barrier film) may be considered if necessary.

Spreading infection in donor site wounds is not common. However, it is important to observe for signs and symptoms of elevated biofilm or local wound infection such as friable, dark red, hypergranulation and increased exudate (International Wound Infection Institute, 2016). Failure to treat this promptly will potentially result in spreading infection and an extended inflammatory phase in a non-healing donor site (Holden, 2015). In order for dressings to stay in place as recommended, an antimicrobial dressing may be considered.

However, it is importance to balance the need for sustained antimicrobial action against the risk of cytotoxicity, which may cause delayed healing or further complication.

Additionally, although it may be considered a minor point, bear in mind that iodine or silver dressings may cause staining/discolouration that the patient should be made aware of and reassured.

Some donor sites may remain fragile even when newly healed, and will require ongoing protection for an extended period, using a suitable dressing.

OPTIMISING HEALING

When managing donor site wounds, it is vital that re-epithelialisation is encouraged without adhesion or trauma to the wound that could be detrimental to its healing. Reducing trauma to the wound bed is key to successful healing.

There is some evidence to suggest that a dressing utilising micro pore size technology (reduced pore size) in the wound contact layer, in order to prevent ingrowth of new tissue, may assist with wound healing in donor sites. A randomised, controlled study was carried out comparing a micro pore dressing to alternative dressings used in partial-thickness skin graft donor sites (Pak et al, 2017). The patients in the group using micro pore dressings achieved complete epithelialisation in a significantly shorter time than the patients using alternative dressings. Significantly more patients using the micro pore dressings achieved complete reepithelialisation within 14 days of donor site harvesting.

PATIENT COMFORT AND QUALITY OF LIFE

Pain is a key factor in donor site wounds, so patient comfort is an important consideration in dressing choice. Patient quality of life, bearing in mind psychosocial factors, is key.

It is important to select a dressing that does not cause further pain or trauma on change or removal. Evidence has suggested that micro pore dressings (as in 'Optimising healing' section above) may help to reduce pain at dressing change. As the micro pore size helps to prevent tissue ingrowth, this also minimises the risk of associated pain. Several studies have found that pain is reduced

compared to other dressings used, which may improve patient experience and enhance their comfort and quality of life (Kim et al, 2002; Park et al, 2002; Imran et al, 2016; Tongson, 2017).

The creation of a donor site wound is complex for the patient and it is beneficial for them to be educated and empowered in their ongoing care.

Box 1: Educating and preparing patients about their donor site wound

- Initially make the patient aware that the wound may be painful and explain why the process is necessary
- Reassure the patient that once their wound has healed it is appropriate for them to take over their own aftercare
- When it is newly healed, the wound will appear dry, very pink and will possibly be itchy
- Patients should be educated that it is best not to scratch as the healed skin will be fragile: regular application of emollients may help to deal with itch
- Donor sites should be washed using a non-perfumed, pH-balanced soap, or emollient soap substitute, and the skin gently patted dry rather than rubbed
- Patients should avoid sunbathing and apply total sunblock to the site for the first year to avoid burning the healed skin.

PRACTICAL CLINICIAN CONSIDERATIONS

Product availability and economic considerations may have an impact on management decisions and dressing choice.

Reducing hospital stay and outpatient visits, and corresponding clinician time, is a priority in practice. It is important to consider the long-term outcomes, as well as ensuring that patient care is the primary aim. In the long-term, it is more cost-effective to invest in appropriate dressings that encourage healing and avoid potential complications and the risk of the wound non-healing and becoming chronic. When all resources and clinician time are considered, dressings do not constitute a major proportion of the cost, and as such, focusing on individual dressing cost is a false economy and may in fact be counterproductive (Guest et al, 2015; Fletcher et al, 2017).

However, it is important to bear in mind that all products and dressings may not be available in different geographic areas, so considerations may vary.

Box 2: Tips for dressing application and change techniques

Avoiding pain and trauma to the patient at dressing change is of key importance, particularly in fragile donor site wounds. As well as appropriate product selection, using correct techniques to minimise impact when applying and changing dressings may be useful in practice.

- Apply dressings and any tapes or fixatives without stretching or tension, while avoiding any gaps or wrinkles
- Remove dressings using the 'low and slow' technique, removing in the direction of hair growth and remaining close to and parallel to the skin
- Consider use of adhesive remover or moisturiser where necessary
- Observe the surrounding skin and protect using a skin protectant or barrier cream if necessary

Prevention of complications

Management of donor site wounds is complex. Throughout the process of healing (and, where possible, prior to grafting: see section below), healing should be optimised and all potential factors considered in order to reduce the risk of delayed healing and further complications.

It is always important to remember that donor site wounds have a psychological aspect for the patient, which should be considered. This includes considering potential psychosocial issues and quality of life, as well as aesthetic aspects such as scarring.

STRATEGIES TO PREVENT HEALING COMPLICATIONS

In order to preserve skin integrity and thus reduce the risk of complications, pre-treatment of the donor site prior to graft harvesting may be beneficial. Anecdotally, the group agreed that, where possible, taking measures to improve the skin prior to harvesting may produce significantly better results in practice.

Where possible, patients should be encouraged to conduct their own moisturising/emollient routine for one week prior to skin grafting. Dry or fragile skin can be more prone to complications and should be prevented as much as possible. This is of particular importance in elderly patients with thin, fragile skin, or those with comorbidities that may cause compromised skin integrity.

Anecdotally, it has been suggested that Vitamin E may be a useful component, particularly in skin grafts involving facial areas or where cosmesis is of particular concern. Also, at the time of harvesting, it has been found that warming the skin is helpful as it raises the epidermis. This can be easily achieved by using a warm washcloth on the skin at the time of harvesting.

Blistering at the edges of donor site wounds is rare but can be a potential issue in some cases (although skin irritation adjacent to the donor site may be due to dressing suitability or colonisation). The risk of this is increased if a thick harvest is accidentally taken. In practice, it has been found that obtaining uniform thickness of skin grafts may be more difficult than anticipated. There can be unexpected variability of skin thickness between individuals, and medical error is relatively common. It is vital to double-check dermatome settings and ensure that uniformity is achieved as far as possible.

In some cases, adhesive products have been found to exacerbate issues relating to healing and skin integrity. MARSI (medical adhesive-related skin injury) is an area of concern and care should be taken in both selecting and using adhesive products correctly (Ousey et al, 2017).

PSYCHOSOCIAL FACTORS

The potential psychosocial factors of wounds such as donor site wounds should not be underestimated. This is particularly relevant when it concerns potential complications such as pain and scarring.

Using a structured measurement or scale system can be useful. The Brisbane Burn Scar Impact Profile (Tyack et al, 2015) was developed to assess health-related quality of life in patients with burn scars. There are separate versions available for adults, children and carers, which may be helpful for use in practice. Measurement of data from using this scale has highlighted elements that may be useful for clinicians to consider when dealing with the psychosocial aspects of scarring for patients. For instance, it has been found that psychosocial effects are unrelated to the size of the wound/scar, so this should not be used as an indicator of potential psychosocial impact.

SCARRING AND ITCH

Scarring is an issue in donor site wounds and it is important to reduce the risk of scarring. The deeper the donor site wound, the larger the risk of significant scarring, and optimising healing is key to reducing this risk. Larger skin grafts may also be at increased risk of scarring, both due to the healing elements involved and because choice of donor sites is more limited in larger grafts; products can also be expensive to use in larger areas.

Speed of re-epithelialisation is the most important factor in reducing scarring risk. Thus optimising healing via management and dressing selection will have an impact on the risk of scarring along with the skin healing trajectory. In some areas, anti-scar products may be used – e.g. anti-scar creams or gels. Silicone gel contact sheets may also be used, although this is an area that requires further evidence. It is important to note that, while allergy rates for silicone gel may be low, this can be a potential issue. Some patients will also need pressure garments over their donor sites, such as in cases of major burns.

General skin integrity is a consideration, as dry skin can exacerbate scarring and also increase the risk of itching, which has a knock-on effect on scarring. The patient may find that the donor site wound is particularly itchy at the point just before full re-epithelialisation, and thus should be educated about this in terms of expectations and prevention strategies.

Itching (pruritus) can be a major issue in donor site wounds and anti-itch products may be used where possible (e.g. oral antihistamine or oral gabapentin/pregabalin anti-itch cream or spray, emollients with added anti-itch factors). As well as increasing scarring risk, scratching may cause further complications and result in delayed healing and increased risk of infection. Adhesive products may exacerbate itching, and should be considered accordingly (see 'Strategies to prevent healing complications' section above).

Box 3: Patient education on scarring

Attitudes towards scarring may vary, and it is important to ensure that patients are educated in terms of their expectations of healing and potential scarring, and in self-care strategies to minimise the risk of scarring.

- Darker skinned patients may be at higher risk of scarring than Caucasian patients
- Types of scarring may vary dependent on the clinical scenario and discolouration may also be an issue
- Where possible, self care should be encouraged: emollient therapy may encourage healing and aid overall skin integrity, and be undertaken by the patient
- Use of compression garments may also be encouraged where appropriate and possible
- The patient should be educated to use sunscreen post-treatment to avoid hyperpigmentation and inflammation

Ongoing monitoring

When managing donor site wounds, full reepithelialisation is key and constitutes healing. It was agreed that donor site wounds should be expected to heal within 2 weeks, although the presence of comorbidities that may affect healing (e.g. diabetes) may mean that 3 weeks is a more realistic healing aim.

In most clinical studies, it is widely accepted that the aim is considered to be 95% reepithelialisation, so this should be the standard management goal.

There are measuring devices available, such as 3D camera that measure wound area and volume, and calculate the percentage of reepithelialisation. However, simple visual monitoring using clinical judgement should suffice. The 'wrinkle test' (Falanga, 1993) can be used: this is a simple test to detect early epidermal resurfacing in a non-invasive way, whereby a sterile cotton-tipped applicator is gently pressed adjacent to the wound, and it can be observed whether wrinkles are visible on the surface (the wrinkles are not seen when only granulation tissue is present).

Once the skin has healed, it may still be fragile and require ongoing protection. Patients should be educated on the importance of ongoing maintenance measures to improve the skin integrity of their healed wound, such as emollient therapy and using sunscreen (see box: 'Patient education on scarring', pxx).

It is important to bear in mind that, prior to healing, patient education about what to expect is beneficial. As well as being prepared for the process – e.g. the associated healing time, scarring, pain – there is evidence that patient education and empowerment has a positive effect on outcomes for healing (Wounds International, 2011). Psychosocial factors such as anxiety and depression are associated with delayed wound healing (Cole-King and Harding, 2001; Solowiej et al, 2009) and should be considered accordingly. After full reepithelialisation is achieved, monthly follow-up is recommended (although this may vary according to the individual patient and clinical scenario).

Summary and conclusions

The creation of a donor site wound is a complex process that requires appropriate management in practice. The group agreed on the management pathway to be used as best practice, focused on identifying the ideal dressing for use in donor site wounds, and practical tips for management throughout the process.

KEY POINTS

- Correct harvesting techniques, double-checking devices and obtaining as much uniformity of thickness as possible are key to achieving subsequent donor site healing.
- A checklist of patient selection factors should be considered so that necessary measures can be taken to reduce the risk of complication or delayed healing.
- Patients undertaking skin integrity measures such as moisturising or emollient therapy for 1 week pre-harvesting may be beneficial to healing outcomes.
- Healing of donor site wounds should be achieved within 2 weeks, or in 3 weeks if comorbidities are present that may delay healing.
- Dressing selection should focus on symptom management and patient comfort, as well as optimising the healing environment.
- Reducing trauma at dressing change – through correct product selection and technique – is of paramount importance.
- Patient empowerment and education is key, and the psychosocial impact of a donor site wound must not be underestimated.
- Measures should be taken to avoid scarring and any further complication wherever possible.
- After full reepithelialisation is achieved, monthly follow-up is generally recommended unless otherwise specified.

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Appendix 1

GENERAL FACTORS:

- Age
- Overall skin quality
- Smoking status
- Nutritional status
 - Over/underweight
 - Hydration
- Comorbidities (e.g. diabetes, cardiovascular issues, renal insufficiency)
- Medications/polypharmacy issues
- Skin conditions and/or history of previous wounds

- Mobility
- Psychosocial factors
 - Mental health
 - Capacity for self-care
 - Lifestyle/environmental factors

LOCAL FACTORS:

- Blood flow
- Skin tension
- Anatomical location

WORLD UNION OF WOUND HEALING SOCIETIES

POSITION DOCUMENT