A big hello to you all! This is the last edition for 2012 and I am sure, like me you are wondering where the year has gone!

Firstly let me introduce Paula Massey, Paula is my colleague in New Zealand and will be joining me as co – editor. This is wonderful news and never has it been more important to share practice from both countries with the 2012 launch of the Pan Pacific Clinical Practice Guideline for the Prevention and Management of Pressure Injury and the Australian and New Zealand Clinical Practice Guideline for Prevention and Management of Venous Leg Ulcers.

The previous newsletter focused on adhesive trauma and this issue continues on by the discussing the challenges of periwound management, and in particular the consequences of maceration or as you will hear in one of the articles, “periwound moisture associated dermatitis.”

Viable or healthy wound edges are essential for the process of wound healing to proceed efficiently, however this can be delayed when the wound edge is compromised. We are sure you have all seen maceration in your practice, the classic example is when the skin around the wound appears white in colour and has that “pruned” or wrinkled wet look. Maceration is typically associated with wounds that produce larger levels of exudate such as the venous leg ulcer or the infected wound but it needs to be a consideration for all types of acute and chronic wounds.

Other causes of periwound breakdown need to be considered too, such as the use hydrating wound fillers, such as hydrogels which can cause maceration if not adequately contained within the wound margins. Adverse skin changes can also occur when the dressings are unable to manage the volumes of exudate.

Once established, maceration may be difficult to resolve and delay wound healing, especially if exposure has been prolonged and skin changes are severe. There are also implications for treatment costs including nursing time and consumable expenditure. For those reasons, we are sure you will agree that prevention is the key.

We would like to thank all our contributing authors to this issue – they often put together these articles in their own time which is a true reflection of their passion to improve practice and share and learn with their fellow clinicians.

We wish you all a happy and safe holiday season and look forward to bringing you the first newsletter for 2013!

Until next year, happy reading!

Victoria Moss & Paula Massey

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Case Study: Managing Skin Integrity in the treatment of chronic Venous Leg Ulcers

Patient History
A 75 year old female was referred to our hyperbaric facility with two chronic ulcers to the right and left lower legs. The ulcers had been present for approximately 8 years. The referred client had a complex history of systemic Sclerosis with Scleroderma and Raynaud’s Disease. She also had a history of hypertension which was well controlled on medications and she had no known allergies. At the hyperbaric facility rigorous wound care is undertaken in conjunction with the hyperbaric treatment to maximise the effectiveness of wound care in the short period that the patient is undergoing hyperbaric treatment.

Patient Assessment and the Management of Care
On initial assessment both chronic wounds were highly exudating and painful. The size of each wound was measured as well as swabbed showing growth of Pseudomonas Aeruginosa and was treated with oral antibiotics and antimicrobial topical dressings. A doppler was performed to assess the vascular flow with an Ankle Brachial Pressure Index (ABPI), the assessment findings were 1.12mmHg and compression therapy was commenced and initially changed daily due to high exudate. The outer wound areas were macerated, painful and the periwound area was consistently breaking down resulting in the ulcers increasing in size. A key management strategy was to protect the periwound from any further breakdown with the use of a protective barrier film wipe. 3M™ Cavilon™ No Sting Barrier Film was introduced and applied to the surrounding skin. The barrier is completely alcohol free and can be applied without causing any pain to the patient. Due to the exudate levels the barrier film and compression were reapplied daily and as improvement in wound condition occurred reaplication could be done every three days.

Conclusion
Within days of using Cavilon™ the size of wound edges stopped breaking down and inflammation was reducing.

3M™ Cavilon™ No Sting Barrier Film has proved to be a vital product at our facility. The continued use of this product is very beneficial to the prevention of wound breakdown and excoriation.

Note: Consent for the use of the photographs in this case study have been given with kind permission of the patient.
Protection of Peri-wound Skin: What’s the Big Deal?

When caring for those with acute or chronic wounds, one important consideration for Health Care Professionals is the maintenance and protection of the general health of periwound skin.

A recent series of consensus documents (Gray et al 2011; Black et al 2011; Colwell et al 2011) have proposed the term ‘Moisture Associated Skin Damage’ (MASD) which they defined as ‘Inflammation and erosion of skin caused by prolonged exposure to various sources of moisture, including urine or stool, perspiration, wound exudate, mucous, saliva & contents.’

Skin damage from moisture can present in a variety of forms and the group has proposed the following terms to describe this type of skin related injury:

- Incontinence-associated dermatitis (IAD)
- Peristomal moisture-associated dermatitis
- Intertriginous dermatitis (ITD)
- Periwound moisture-associated dermatitis

The aetiology and pathophysiology of periwound moisture-associated dermatitis (tissue within 4 cm of the edge of the wound) are not well understood, (Colwell et al 2011). What we do know is that excess exudate (from a variety of causes), can overhydrate skin as the stratum corneum absorbs the fluid and swells. As the lower layers of the epidermis become saturated, the protective epidermal function (as a barrier to water, organisms and irritant) is compromised, which increases the likelihood of maceration, ‘weakness’ of skin to external forces, loss of skin integrity and potential inflammation / infection from pathogenic organisms / irritants.

Another specific contributing factor to the influence of wound exudate on periwound skin comes in the form of chronic wound exudate found to be high in inflammatory cytokines and MMPs, the latter having a corrosive influence on periwound tissue. Thus, moisture plus chemical / irritant, mechanical forces of friction or shear, and pH changes (encouraging micro-organism imbalance) can all contribute to periwound skin risk of injury (Colwell et al 2011; Lawton 2009).

Clinical decisions in practice will need to be guided by identification of the underlying cause and contributing factors leading to the moisture imbalance, and influence product or device selection (size and frequency of care),

Did you know?

The World Union of Wound Healing Societies (WUWHS) consensus document, Principles of best practice: Wound exudate and the role of dressings suggest the following principles of management of exudate related problems for the periwound:

- Take action to prevent wound expansion
- Is the cause contact with exudate, dressing sensitivity / allergy or a dermatological condition?
- Treat any inflammation as appropriate
- Minimise skin contact with exudate and protect periwound skin with a suitable barrier
- Increase fluid handling capacity of dressings
- Consider autotraumatic dressings and methods of fixation

aiming to prevent leakage, maceration, allergy or sensitivity and minimise trauma to skin and wound bed on any product/device removal.

In a recent review aimed to summarise the clinical and economic literature relating to the effect of 3M™ Cavilon™ No Sting Barrier Film on the incidence of exudate-related periwound skin damage, (Guest et al 2011) the authors concluded it was as effective in periwound skin protection as petroleum ointments and zinc oxide formulations, but more cost-effective. This is an important consideration when selecting a skin and wound formulary of products and devices in today’s health care environment.

I firmly believe in the importance of skin care in wound management – and to periwound skin assessment, protection and management being considered ‘routine’ and essential elements of care. It is our responsibility to see the risk, and/or the injury, act quickly with appropriate interventions, and ensure that in our endeavours to manage one’s wound, we actively contribute to harm minimisation, as we care for the skin surrounding that wound.

References


Guest J. Greener, M. Vowden, P. Vowden, K. (2011). Clinical and economic evidence supporting a transparent barrier film dressing in incontinence associated dermatitis and periwound skin protection. Journal of Wound Care;20 (2)


Note: Consent has been given for use of the photographs in this article

Practice points for skin and wound hygiene from the new Pan Pacific Clinical Practice Guideline for the Prevention and Management of Pressure Injury include:

• Cleanse peri-wound skin with a pH neutral appropriate skin cleanser.
• To obtain optimal ulcer and wound pH avoid the use of alkaline soaps and cleansers.
• Applying a moisturiser contributes to the maintenance of the healthy skin.
• Consider applying a topical barrier preparation to the peri-wound skin to protect it from exudate.1

In the recent Flow Chart for the Management of Venous Leg Ulcers, it identifies the need to:

• Prepare the surrounding skin:
• Cleanse the leg at dressing changes
• Maintain Skin integrity of surrounding leg skin
• Control venous Eczema 2


2. Australian and New Zealand Clinical Practice Guideline for Prevention and Management of Venous Leg Ulcers. 2011

Did you know?

Did you know?
The Challenges of Maintaining Skin Integrity
- A Practical Example

Skin

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Jan has been nursing since
the early 70’s. Her passion
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joined LaTrobe University
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mostly in Victoria but also other
locations within Australia and
seas. She has her own
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which she is mostly working in
aged care and she also took
the initiative to set up a wound
clinic in a busy Metropolitan
General Practice.

Jan is the Nursing
Representative for AWMA,
currently Chairs the Education
& Professionals Development
Committee with AWMA and is
on the Venous Leg Ulcer
and Pressure Injury Development
Guidelines Committee.

Approach to rectify the problems/management plan:

1. Wash the limb well in the shower with a pH balanced skin cleanser
   known to have some antimicrobial effect.
2. Rinse all cleansing agent off and pat the skin dry.
3. Remove any dead dry skin and other debris.
4. Apply a protective barrier film to the periwound area.
5. Apply an antimicrobial agent that will manage the exudate and
   bacterial load, and if possible also protect the tissue. (There are
   a number of products on the market that can do all these functions or
   a number of products individually can meet each of these aims).
6. Preferably do not use any adhesive agent at this stage as the
   periwound skin is so fragile. Hold the dressing in place with tubular
   retention bandage or light bandage, however if needing use tape to
   secure the bandage, a silicone tape may be used (in small amounts
   only).
7. Provided there are no contraindications, application of a support sock

<table>
<thead>
<tr>
<th>Questions to ask when assessing the wound and surrounding skin</th>
<th>Answers following assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>What is the origin of this wound?</td>
<td>A small trauma wound caused by a scratch on a twig whilst working in the garden.</td>
</tr>
<tr>
<td>Has infection been considered and / or being treated?</td>
<td>A wound swab has been performed and she is on antibiotics but it does not seem to be responding.</td>
</tr>
<tr>
<td>What was the dressing that has just been removed?</td>
<td>The dressing was a mesh dressing with a absorbent pad known to manage small amounts of fluid and then covered with a polyurethane film dressing.</td>
</tr>
<tr>
<td>What are the properties of the dressing that was removed?</td>
<td>The mesh was vaseline on gauze, used for superficial - partial thickness wounds but has no antimicrobial ability. It was observed that exudate beneath the dressing was trapped as the small holes tend to occlude with the exudate. The pad has very minimal fluid handling capacity. The film dressing is useful to waterproof and hold dressings in place.</td>
</tr>
<tr>
<td>Have you considered the indications for use of the current dressings?</td>
<td>The Vaseline mesh offers no antimicrobial function and usually requires frequent changing. The pad is for minimal draining wounds and again usually requires changing frequently. Film dressings may not be the optimal dressing especially for infected wounds.</td>
</tr>
<tr>
<td>How long had that dressing been on the wound?</td>
<td>One week.</td>
</tr>
<tr>
<td>What activities does the patient put the limb with the wound through?</td>
<td>The patient is not walking very much due to pain in her leg and she cannot elevate her leg because of hip pain. She sits around most of the day with her leg down and sitting very near the heater to keep herself warm.</td>
</tr>
</tbody>
</table>

Note: Consent has been given for use of the photographs in this article
Maintaining Skin Health in the Presence of Lymphorrhrea

Copious leakage of fluid from the skin is greatly distressing for patients. Added to any associated pain, limb swelling, odour and embarrassment are the co-existent realities of additional laundering, increased use of dressing products and greater expense. Put a wound into the mix and the anxiety stakes are raised even further. Why is it happening? What can be done about it?

The interstitial or tissue space is a hydrated, gel-like environment in which metabolic, immunologic, physiologic and reparative cellular events all take place. Its vasculature is comprised of minute arterial and venous capillaries, and the lymphatic system. These vessels maintain the fine balance between capillary filtration, reabsorption and skin drainage - vital for oxygenation, cellular nutrition, host defence and waste removal.

There are numerous reasons why the tissue space fluid equilibrium can become disturbed. Over hydration, renal and cardiac failure can result in a filtration/reabsorption imbalance causing too much fluid to accumulate in the interstitium. Trauma, deep vein thrombosis, obesity, radiotherapy, parasitic infestation and malignancy can cause drainage obstruction. Infections leading to cellulitis produce significant changes in the permeability of capillaries and reduce lymphatic function. Medications such as antihypertensives and steroids alter capillary pressures and modify electrolyte balances, producing a fluid shift into the skin. Malnutrition also disrupts oncotic pressures and tissue fluid status.

Lymph can leak out directly from a wound or from multiple, miniscule fissures along the skin surface – especially when a limb is swollen and inflamed. The lymph fluid has a high concentration of protein, fatty acids, inflammatory cells, metabolic waste, hormones, viruses, bacteria and cell fragments (including cancer cells). It is a perfect medium for causing pH change to the skin, allowing protease tissue stripping, fungal growth and secondary bacterial invasion. This produces discomfort, irritation, epithelial breakdown and malodour.

It makes sense that when confronted with a patient who has watery-like fluid seeping out of their skin, that the underlying pathology is identified and treated. Sometimes a number of domains have to be treated at the same time, like correcting the heart failure, using antibiotics to combat the cellulitis and instigating a careful compression regime to reduce the lower limb lymphorrhrea. In fact, the considered application of compression therapy is often an essential component in assisting the reparative process.

A multi-disciplinary team approach is necessary in order to identify and treat the instigating causes for the Lymphorrhrea. However, the nursing team are very much in charge of skin care - a vital activity in returning the patient to wellness. The skin needs regular, gentle washing to remove the devitalised skin debris, lymph fluid and any correlated deposits. Some practitioners prefer to use only tepid water for cleansing. Others advocate the use of tea-tree foam cleansers and/or polyhexanide washes in their protocols.

Once the skin is cleaned then appropriately dried, the priorities then revolve around the issues of protection, comfort and correct skin hydration. Barrier lotions, zinc pastes, paraffin-based emollients and oat-meal moisturisers have been used as skin treatments. 3MTM CavilonTM Durable Barrier Cream happily provides both a barrier and moisturising function. Should an anti-inflammatory action also be desired, then a medically prescribed topical product can be utilised prior to the creams application. The frequency of skin treatment will need to be determined for each patient and to be guided by the ongoing assessment of the response to systemic, local and topical interventions.

Lymphorrhrea is alarming for a patient. However, once the underlying cause is identified and corrective steps are well targeted, then resolution of skin distress (or containment at least) should be forthcoming. Incorporating quality products in the skin care regime is contributory to a successful outcome.

References:
2. www.lymphedemapeople.com/thesis/lymphedema_lymphorrhrea.htm
RISE Programme

Reducing the Incidence of Skin breakdown through Education

The RISE Programme is an educational programme which 3M can offer to help your organisation to reduce the incidence of skin breakdown.

Not only can we provide clinically proven products from the 3M™ Cavilon™ Professional Skin Protection Range but we can also offer you with clinical protocols tailored to your organisations’ needs in order to ensure the most cost effective and best practice outcomes are provided for you. We also offer educational support for health care professionals, patients and residents through a wide variety of resources including information leaflets, online learning and educational workshops and webinars.

If you are interested in any of the elements of the RISE programme, please contact your local 3M Skin and Wound Care Representative.

RISE & Periwound Management

3M™ Cavilon™ No Sting Barrier Film is an ideal choice for providing periwound protection because it provides a breathable, transparent coating (which allows for continuous visualisation and monitoring of the skin) that repels moisture and irritants. In addition, it is non-cytotoxic and hypoallergenic and is easy to apply (see below) and does not require removal, minimising pain and discomfort to the patient and potentially saving time and money.

The film forms a protective interface between the epidermis and the adhesive coating of a dressing or the tape. When the dressing is removed, it removes 3M™ Cavilon™ No Sting Barrier Film instead of the skin cells further enhancing the skin integrity of the patient.

**Step 1:** Select the most appropriate delivery method of 3M™ Cavilon™ No Sting Barrier Film.
- Use the 1ml wipe or the 1ml wand applicator for small to medium wounds.
- Use the 3ml wand* applicator for large wounds.

**Step 2:** Cleanse the wound and peri-wound margins.

**Step 3:** Apply a uniform coating of 3M™ Cavilon™ No Sting Barrier Film around the wound to provide a protective film barrier over the skin exposed to drainage and where a dressing will be applied.
- **Note:** Begin at wound edge and work outwards over area of exposure.

**Step 4:** Allow the film to dry (about 30 seconds).

**Step 5:** If an area is missed allow the first coat to dry before applying more 3M™ Cavilon™ No Sting Barrier Film.

**Step 6:** Reapply with each dressing change

* The 3ml wand applicator is not available in NZ

Questions to ask yourself:
- Do you see periwound maceration in your practice?
- Are more wound types more prone to maceration in your clinical experience?
- Do you find that maceration is delaying healing or limiting treatment options?
- What do you currently use for periwound management?
- How does that work for you?

3M™ has over 60 pieces of clinical evidence supporting the efficacy and cost effectiveness of 3M™ Cavilon™ No Sting Barrier Film. As you can see, the 3M™ Cavilon™ No Sting Barrier Film Clinical Evidence Summaries brochure provides more than five pages of clinical summaries specifically relating to periwound management with a focus on venous leg ulcers, diabetic foot ulcers and negative pressure therapy.

A copy of the complete clinical evidence summaries for 3M™ Cavilon™ No Sting Barrier Film is available, for your personal copy or to find out how the RISE Programme can benefit your organisation, please contact your local 3M Skin and Wound Care Representative.
Beyond the Edge:
Skin Care Considerations for Lower Extremity Venous Disease

Evidence-based insights to improve your clinical practice

3M are delighted to offer the latest offering in our education program to you. It is a 45 minute webcast, hosted by your local 3M Skin and Wound Care Representative.

Target Audience
Health care professionals involved in managing venous leg ulcers and associated skin conditions.

Learning objectives
- Understand the impact of oedema on skin integrity
- Describe common skin integrity problems associated with lower extremity venous disease
- Describe three steps to maintaining or improving skin integrity

Duration: 45 minutes

To express interest in viewing this webcast, please contact your local 3M Skin and Wound Care Representative, or e-mail us at: Australia - 3Mhealthcareedu@mmm.com, New Zealand - Coban2nz@mmm.com

Faculty Presenter
Debra Thayer, MS, RN, CWOCN
3M Health Care
Skin and Wound Care Division

This programme has been endorsed by APEC number 120705422 as authorised by Royal College of Nursing, Australia according to approved criteria.

Attendance attracts 0.75 RCNA Continuing Nurses Education (CNE) points as part of RCN’s Life Long Learning Programme (LLP).

Reference herein to any specific commercial products, process or service by trade name, trademark, manufacturer or otherwise, does not necessarily constitute or imply its endorsement, recommendation, or favouring by RCNA.*

* RCNA endorsement only offered in Australia

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