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Are we paying attention to the psychological issues of skin disease?

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Why skin care matters

Welcome to this issue of *Skin Care Today*. With skin diseases affecting a vast majority of people, our 'Practice matters' piece looks at the psychological impact that living with a skin condition can have. While the physical manifestations such as blistering, itch, rash and inflammation are easy to identify, the emotional damage can often be underestimated, or not even considered by healthcare professionals. Assessing patients holistically and not just focusing on the skin condition in front of you and taking time to listen to how a patient's skin is affecting them can go a long way to making a difference.

Alongside this psychological aspect of skin care, once again this issue is packed full of clinical articles with practical advice on a range of topics.

Sandra Lawton provides a comprehensive overview of factors to consider when caring for elderly people with skin problems (*pp. 12–19*), while the piece on atopic eczema in children highlights the crucial role that community nurses play in managing the disease and educating patients/carers about therapies and the importance of adhering to treatment (*pp. 20–25*). This issue also focuses on chronic plaque psoriasis (*pp. 26–33*) and venous eczema (*pp. 39–45*), offering practical guidance on assessment and treatment for these two commonly encountered skin complaints.

As revalidation is now underway for all nurses, we hope that this issue provides you with plenty of material to build your portfolio. Next time you care for someone with a skin problem, why not reflect on how the articles here have helped you to look after them and then upload them to your free JCN revalidation e-portfolio (www.jcn.co.uk/revalidation).

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In each issue of *Skin Care Today* we investigate a hot topic currently affecting our readers. In this issue we ask...

Are we paying attention to the psychological issues of skin disease?

According to one famous aphorism, beauty is only skin deep. Unfortunately, for those people affected by dermatological conditions, this quaint saying offers scant consolation. The damage wreaked by skin problems can have a hidden cost, with the psychological effects of conditions such as psoriasis, eczema and dermatitis often going unrecognised. While the physical manifestations such as blistering, itch, rash and inflammation are easy to identify, the emotional impact can often be underestimated, or not even considered by healthcare professionals.

According to the American Academy of Dermatology and other skin groups, skin problems cause a range of debilitating psychological symptoms ('The emotional impact of skin problems' — *www.psychologytoday.com*):

- Major depression
- Suicidal thoughts
- Social withdrawal
- Anger
- Lack of confidence
- A significant number of people with psoriasis change or stop participating in their normal daily activities
- People with acne face higher rates of unemployment than the general population, further contributing to social stigma.

There are also a range of psychological factors that can interact with dermatological conditions to make people's skin symptoms worse ('Psychosocial factors in dermatology' — *www.dermnetnz.org*). For example, people who have a skin condition alongside depression may find it especially difficult to adhere to their treatment

programmes, leading to worsening symptoms, which in turn may exacerbate their depression; similarly, those with obsessive compulsive disorders are more likely to require dermatological treatment than the general public, with repetitive behaviours actually causing or exacerbating skin conditions, including scratching (acne excoriee), excessive handwashing (irritant contact dermatitis) and obsessive hair pulling (trichotillomania). Similarly, stress can make people more aware of symptoms such as itch (hypervigilance), leading to excessive scratching and feelings of helplessness or guilt.

Psychological disturbance is not simply a problem in adults; skin conditions can also be a significant factor in children's mental health, even acting as a predictor of whether they will go on to experience psychological difficulties in the future ('Children with eczema at increased risk of mental problems' — *www.telegraph.co.uk*).

A 2016 study by Pavel Chernyshov, highlighted three main developmental periods crucial to the formation of self-perception and stigmatisation in patients with atopic dermatitis, one of the commonest skin diseases ('Stigmatization and self-perception in children with atopic dermatitis' — *www.researchgate.net*):

- Early infancy until three years of age: children's psychological development is affected by a cycle where severe atopic dermatitis results in parental distress and exhaustion, which then leads to exacerbation of the child's symptoms and subsequent psychological problems
- Three to ten years of age: children are often affected by teasing and bullying from peers
- From 10 years of age to adulthood: problems of low self-esteem begin to dominate in this period, with children becoming increasingly pessimistic and self-critical about their appearance; this is also the period where children and young adults may begin to avoid social contact.

Dermatology care is most definitely more than skin deep and the issues discussed within this paper highlight fundamental aspects of care that are often not considered or asked about. The skin is the largest organ of the body and one we see daily, it is not an inert covering and should be given the importance it deserves. Unfortunately, because the skin is such a visible organ, it is often dismissed. The skin, however, tells a story about our health and wellbeing and for patients with a skin condition it can have a devastating effect. We live in a world where first impressions of people are often based on their physical appearance, and if they look different or have a visible skin condition they frequently encounter negativity and comments about how they look. They can be subjected to stares, whispered comments, antagonism, insults, or excluded from normal social activities. Living with and treating a skin condition is not a quick fix, regular treatments are needed and when applied to the skin take time and need monitoring. Again, this aspect of care is often trivialised by many. For patients, the trivialisation of their condition, the treatments required, and the negativity they encounter has a huge impact both on their physical and psychological well-being.

'Imagine what it feels like sitting on a full bus and the seat next to you is the only one left with people standing rather than sit there!'

'Think what it feels like when your children beg you not to go to school, open evening or sports day.'

So, when caring for patients of any age with a skin condition, be mindful of the psychological issues they may be experiencing. Skin conditions are generally not life-threatening but can most definitely be life 'misery-making'. Spend time listening to your patients, signpost them to appropriate resources highlighted within this paper, and refer appropriately to ensure they receive timely and appropriate support, although service provision, as discussed here, will be variable.

Sandra Lawton, Nurse consultant dermatology, Rotherham NHS Foundation Trust; Queen's Nurse

FINDING SOLUTIONS

Unfortunately, dedicated services for people with skin conditions and psychological issues are rare in the UK. A national survey undertaken by the British Association of Dermatologists (BAD) ('Working party report on minimum standards for psychodermatology services 2012' — *www.bad.org.uk*) revealed poor provision of services, despite the following findings:

- 17% of patients need help with psychological issues secondary to their skin condition
- 14% of dermatology patients have a psychological issue that exacerbates their skin disease
- 85% of dermatology patients have indicated that the psychosocial issues are a major component of their skin condition.

While assessing and treating a person's physical skin disorder may not be a problem for nurses, dealing with the underlying psychological consequences can be a great deal harder. This is made even more difficult by the fact that when it comes to skin conditions, perception is everything — one person with debilitating acne, for instance may cope very well with their symptoms, adhering to their treatment and maintaining a positive outlook; another may find their outward appearance intensely disturbing and become depressed and isolated as a result ('The emotional impact of skin problems' — *www.psychologytoday.com*).

In a 2013 report, the All Party Parliamentary Group On Skin highlighted the 'extensive impact skin diseases have on all aspects of people's lives from schooling, relationships, self-esteem and career choices to social, sexual and leisure activities' ('The psychological and social impact of skin diseases on people's lives' — *www.appgs.co.uk*), while at the same time acknowledging the lack of services dedicated to tackling the psychological needs of patients with skin disease.

The report made the following recommendations:

- The Department of Health (DH) should alert commissioners to the financial benefits of psychological interventions
- Clinical commissioning groups (CCGs) should arrange for primary and secondary care professionals to have access to services, including psychological support, medical social workers, camouflage services and occupational therapy
- Healthcare professionals should be made aware of patient support

There is plenty of evidence that living with a skin condition can result in psychological distress, which can manifest in a range of feelings, symptoms or mental health conditions such as anxiety and depression. The British Association of Dermatologists (BAD) working party report states that 85% of patients have indicated that the psychosocial issues are a major component of their skin condition. That is a huge figure and as healthcare professionals, we cannot fail to address this in our practice. Efforts should be made to assess and care for people with skin conditions in a holistic manner. Anecdotally, I hear nurses and doctors express reservations about making enquiries into mental wellbeing as they feel they may 'open a can of worms' that they are ill-equipped to deal with, both in terms of their clinical skills and resources available.

Psychologists generally recommend that gentle enquiry about how people are feeling about their skin condition can, in itself, help — by asking you are acknowledging that there may be an impact on psychological wellbeing and this normalises and makes acceptable the thoughts that people may be experiencing. It also provides the opportunity to build trust, which can further help develop a therapeutic relationship and improve communication in your consultation.

If you are concerned about low mood in a patient, there are two questions to ask, as recommended by the National Institute for Health and Care Excellence (NICE, 2009; www.nice.org.uk/Guidance/cg91), namely: 'During the last month, have you often been bothered by feeling down, depressed or hopeless?'; 'During the last month, have you often been bothered by having little interest or pleasure in doing things?'

If the patient answers 'yes' to either of these questions, this can be explored a little further to establish more context and the patient then referred on to a specialist or GP for further assessment for depression and management as appropriate. For milder mood disturbance or anxiety or a specific problem like difficulty sleeping, there are also many resources and materials available to signpost patients to. As a starting place, get to know the materials on the Skin-Support website (http://skinsupport.org.uk/), an online portal set up for patients by the BAD.

Karina Jackson, nurse consultant, St John's Institute of Dermatology, Guy's and St Thomas' NHS Foundation Trust, London

groups and should direct patients to these for additional support if needed.

But, what is being done on the ground? Luckily, one UK team that includes nurses is showing the way forward ('Innovative patient care shortlisted for top medical awards' — *www.guysandstthomas.nhs.uk*). Last year, the staff at St John's Institute of Dermatology at Guy's and St Thomas' hospital were named 'dermatology team of the year' by the *British Medical Journal*. The team introduced a screening system, which aimed to improve psychological support for patients by applying the IMPARTS (Integrating Mental and Physical Healthcare: Research Training and Service) system for patients with severe psoriasis or eczema who often have low self-esteem or depression. The system asks patients to complete a screening questionnaire via a tablet computer, which is designed to reveal any psychological issues while they wait for their dermatology appointment. This has allowed the team to provide appropriate psychological support while treatment for skin conditions is arranged.

Another initiative is Skin Support (www.skinsupport.org.uk), a website provided by the BAD, which provides links to patient information leaflets, support groups, self-help materials and helplines, all of which can be accessed and used by nurses. The website acts as a hub providing coordinated resources for people with issues that go beyond their skin condition and affect their psychological health.

What can nurses take away from this? Obviously, on a day-to-day basis, simply acknowledging that a patient with a skin condition may also be experiencing some level of psychological distress is a good starting point, while providing extra time and willingness to listen during any assessment may help them bring up any issues. Similarly, looking at the patient holistically and not just seeing the skin condition in front of you is also crucial. Finally, when it comes to skin disease, remember that appearances are certainly not everything. **SCT**

In spite of what the media portrays, no one has perfect skin. With the widely used forms of technology such as photoshop, it is easy to create an 'ideal' body image. It is easy to forget how common skin problems are. They can vary from a simple skin tag to vitiligo, acne, psoriasis, through to more severe diseases such as ichthyosis (a thickened, scaly skin condition), neurofibromatoses (tumours that grow along nerve system) and rarer diseases.

Regardless of how visual these conditions are, we must acknowledge the impact on that person's life. The more visual the problems, the more likely the judgement may be. However, conditions that are hidden may still cause intimacy difficulties resulting in relationship problems for instance. In other words, psychological distress is not limited to what is seen.

As nurses, we are presented with the physical symptoms and address the options in treating these. When talking with the patient, the psychological impact can become more defined as they describe aspects of their lives that are affected. We have a responsibility to follow up if a patient indicates self-harm or suicidal ideation. We are not necessarily equipped for this response, but obtaining the correct input immediately is vital.

It is well accepted in dermatology that skin conditions have strong psychological connections. However, in the troubled times of the NHS, some services such as skin camouflage are being removed unless special funding is agreed. Time restraints and resources are few and far between in both dermatology and mental health services. Yet, on a positive note, there is a drive towards introducing psychological experts into dermatology departments. It is evident through patient questionnaires such as DLQI (Daily Living Quality Index), GAD-7 (Generalised Anxiety Disorder 7-item scale) and PHQ-9 (Patient Health Questionnaire), that there is a need to assist patients in dealing with their psychological concerns.

In answer to the question: it appears that we are paying attention to the psychological issues of skin disease, but there is still much to be done and offered to support patients in their times of need. Healthcare professionals need increased training and support to guide patients. Support can be found outside the dermatology setting, including condition-specific support groups, Changing Faces (charity helping people with disfigurements) and alternative treatments such as hypnosis, counselling and meditation.

Tonia Goman, dermatology specialist nurse (inflammatory skin conditions) and lead phototherapy nurse, Bristol Dermatology Centre, Bristol Royal Infirmary; joint-chair of British Dermatology Nurse Group (BDNG) phototherapy sub-group; skin camouflage practitioner

Identifying the difference between moisture lesions and pressure damage

Differentiating between moisture- and pressure-related skin damage is notoriously difficult for clinicians. Here Jacqui Fletcher, independent nurse consultant, looks at the differences between the two types of skin damage, as well as focusing on how to prevent the development of moisture-associated lesions.

Figure 1. *Linear sloughy wound in the patient's natal cleft.*

BACKGROUND

Moisture lesions have featured in the literature for over ten years, yet there remains considerable confusion between these lesions and pressure ulcers, with pressure ulcer prevalence studies still reporting that staff find it hard to differentiate between the two types of skin damage (Smith et al, 2016). This is compounded by a lack of consistent definitions and varying terminology (*Box 1*); for example, damage to the sacrum and buttocks from exposure to urine is commonly referred to as a moisture lesion, but may also be termed incontinence dermatitis, incontinence-associated dermatitis (IAD), or moisture-associated skin damage (MASD) (Yates, 2012). While MASD or moisture lesions may be seen as umbrella terms to encompass a range of other indications (*Box 2*), a moisture lesion is more commonly (but not exclusively) found on the patient's 'bottom', while MASD may occur anywhere on the body.

There are two main frameworks used to differentiate between moisture and pressure damage. The Pressure Ulcer Classification (PUCLAS) tool, originally described by Beeckman et al (2010), addresses:

- Cause
- Location
- Shape
- Depth
- Necrosis
- Edges and colour.

On the other hand, Black et al's (2011) tool seeks to differentiate between IAD and category one and two pressure ulcers and looks at:

- History
- Location of affected skin
- Colour of wound bed
- Colour of periwound tissue
- Characteristics of involved area
- Pain
- Odour
- Other.

It is also important to remember that combined lesions can occur where damage due to both pressure and moisture are present.

Perhaps the most important question is — what is the cause of the damage? If there is no history of moisture in an area affected by pressure, then the wound is clearly a pressure ulcer and visa versa. While other factors such as location are important they are less clear,

Box 1:

Definitions used within the literature

All Wales Tissue Viability Forum and All Wales Continence Forum (2012)

- A moisture lesion is defined as being caused by urine and/or faeces and perspiration, which is in continuous contact with the intact skin of the perineum, buttocks, groin, inner thighs, natal cleft and skin folds, and where skin is in direct contact with skin. Moisture lesions cause superficial loss of epidermis and/or dermis, which may be preceded by areas of erythema on intact skin. They will usually cause pain. The skin will either be excoriated, which presents as superficial red and dry broken skin, or macerated, presenting as red and white, wet, soggy, and shiny skin.
- The pattern of skin damage is uneven apart from on the natal cleft when the damage presents as a linear vertical split in the skin. In the case of so-called 'kissing' lesions, the damage usually presents on either side of a skin fold.

Young (2012)

- Young defines a moisture lesion as a reactive response of the skin to chronic exposure to urine and faecal matter, which could be observed as inflammation and erythema, with or without erosion and denudation. Typically, there is loss of the epidermis and the skin appears macerated, red, broken and painful (Cooper et al, 2006; Gray et al, 2007).

Kottner and Halfens (2010)

- Prolonged exposure of the skin to perspiration, urine, faeces or wound exudate may lead to irritation, inflammation and erosion of the superficial skin layers.

Gray et al (2011)

- Moisture-associated skin damage (MASD) is defined as inflammation and erosion of the skin caused by prolonged exposure to various sources of moisture, including urine or stool, perspiration, wound exudate, mucus, or saliva.

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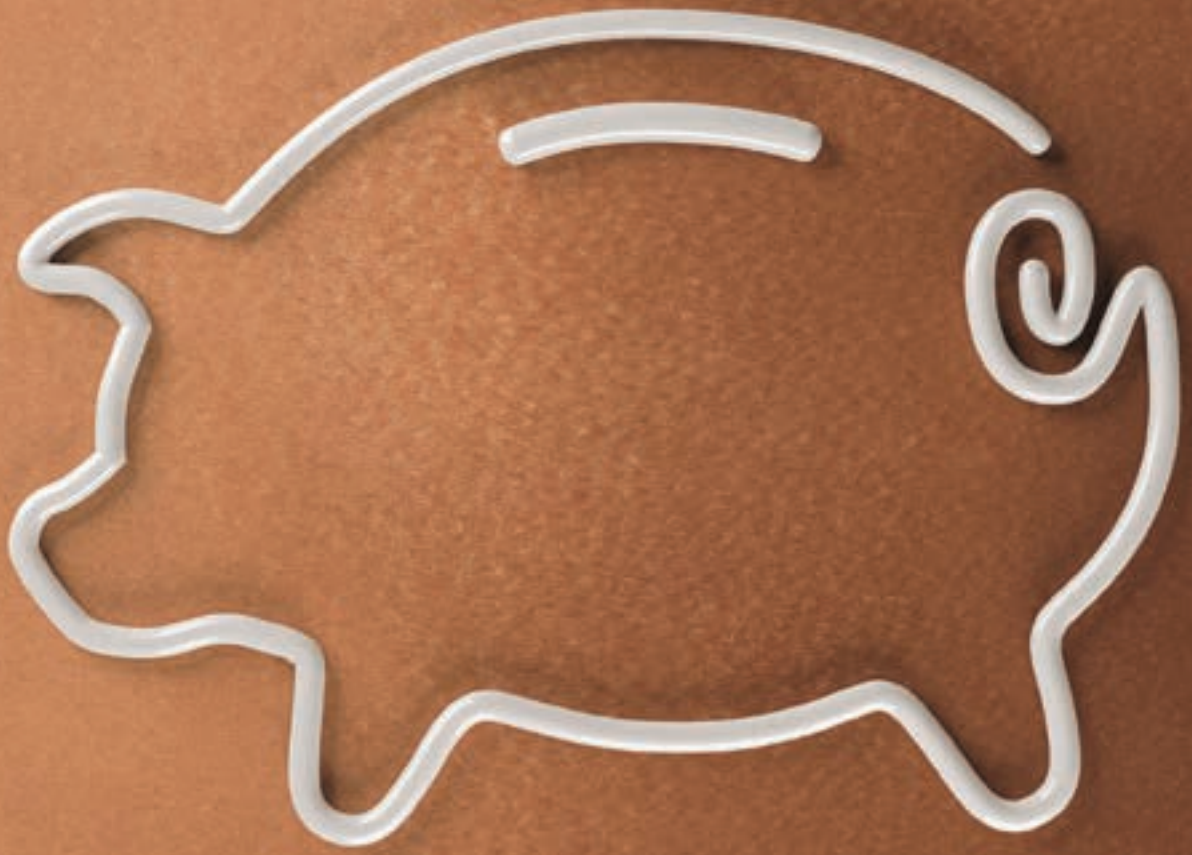

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Box 2:

Types of moisture-associated skin damage (MASD)

Type of MASD	Definition/characteristics
Incontinence-associated dermatitis (IAD)	Prolonged contact with the skin of urine or faeces is also known as IAD. Typically, it presents as inflammation of the skin's surface characterised by redness, and in some cases, swelling and blister formation (Voegeli, 2012).
Peristomal moisture-associated dermatitis	Inflammation and erosion of skin, related to moisture, that begins at the stoma/skin junction and can extend outwards to a four-inch (10cm) radius.
Periwound moisture-associated dermatitis	When a high volume of exudate is produced, healing may be affected as the overhydrated skin becomes macerated, potentially leading to skin breakdown (Cutting, 1999). Exudate from acute wounds contains proteolytic enzymes that tend to be inactive. In contrast, chronic wounds have a higher amount of proteolytic enzymes, which tend to be more active and predispose skin to breakdown (Colwell et al, 2011).
Intertriginous dermatitis	An inflammatory skin condition that affects opposing skin surfaces commonly found in the axillary and inguinal skin folds, as well as under the breasts in females (Black et al, 2011). Thought to be caused by friction that occurs when the skin rubs together and is worsened by trapped moisture, which is a result of poor air circulation (Black et al, 2011). Leads to mild erythema and may progress to more serious inflammation with erosion, oozing, exudation, maceration and secondary infection (Hahler, 2006).

with both pressure and moisture damage occurring commonly on the sacrum, for example. A lesion that occurs in the natal cleft between the buttocks and is linear in shape (*Figure 1*) is clearly moisture-related and as it is located in a place where moisture easily collects and is not located over a bony prominence, it is unlikely to be due to pressure unless the patient has been sat on a device such as a catheter.

PREVENTION AND MANAGEMENT

Clinically, it is important to differentiate between a pressure ulcer and moisture lesions/MASD as the prevention and management plan will vary according to which is being treated (Fletcher, 2008; Kottner and Halfens, 2010).

When considering prevention and management of either wound type, the most important factor is, where possible, to remove the cause. For pressure ulcer prevention, this involves improving mobility, repositioning and the use of specialist equipment; whereas for moisture lesions, keeping the skin clean, dry and well-moisturised are key.

Where it is not possible to fully remove the cause, actions should be taken to maximise the individual's potential to maintain healthy skin. In both MASD and pressure ulcers, this includes:

- Regular skin inspections to identify problems quickly
- Keeping the skin clean, dry and well-moisturised/hydrated.

Lichterfeld et al (2015) developed an algorithm that suggests skin care techniques for managing incontinence and preventing pressure ulcers. The algorithm is simple to follow and focuses on the care of dry or humid skin, targeting different areas of the body — trunk, scalp and face, extremities and feet, anogenital and interdigital, as well as areas of 'skin on skin', e.g. abdominal skin folds and the skin underneath breasts.

Preventing moisture damage

A range of barrier products are available to prevent moisture-related skin damage. These provide additional protection for the skin and come in creams and sprays or as part of a '3-in-1' cloth (which washes, moisturises and forms a barrier on the skin's surface).

The use of ordinary soap and water should be avoided in patients with vulnerable skin, as in most cases the pH of the soap is too alkaline, and may contribute to any irritation (Voegeli, 2010; Lichterfeld et al, 2015). However, skin care product selection can be difficult due to heterogeneous labelling and claims about performance, therefore local guidance should be followed.

Where moisture-related skin damage does occur, it must be remembered that this in turn increases the susceptibility of the patient to pressure damage as it renders the skin more vulnerable to shear, friction and mechanical stripping, as well as to pressure itself (Black et al, 2011). For example, extra care should be taken, particularly with moving and handling, to ensure that the patient's skin is not dragged along the surface of beds and chairs as this can result in shear forces and deep tissue damage.

CONCLUSION

Identifying the type of skin damage a patient is at risk of is important as it affects the care that will be delivered. In reality, many patients are at risk of both pressure ulcers and moisture lesions and care should be planned to ensure that activities meant to prevent one do not increase the risk of the other, such as using too many pads to manage incontinence which may block the action of a pressure-redistributing mattress.

Once a lesion occurs, it is important to get the diagnosis correct, both to ensure the patient receives appropriate care, and also, from an organisational point of view, to ensure that the skin damage is accurately reported. **SCT**

Top tip:

It is vital to differentiate between a pressure ulcer and moisture damage, as prevention and management will vary according to which is being treated.

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IN BRIEF

- It is estimated that 70% of elderly people have skin problems (All Party Parliamentary Group on Skin [APPGS], 2000), and as people age the skin undergoes several changes.
- The continuous process of skin ageing affects the function and appearance of the skin and increases the likelihood of skin problems (Lawton 2008; 2014).
- This article provides an overview of factors to consider when caring for elderly people with skin problems.

KEY WORDS:

- Skin
- Older people's skin
- Emollients
- Dry skin
- Itching

Care of elderly skin

Sandra Lawton

Skin ageing is an inevitable fact of life that presents nurses and patients with a unique set of problems when it comes to assessment, treatment and maintenance. Ageing skin is influenced both by internal physiological factors (intrinsic ageing), and external factors (extrinsic ageing). Intrinsic ageing affects the structure and function of the skin, which results in dryness, atrophy (wasting), laxity (looseness), wrinkling and pigment changes. All components of the skin are affected by ageing, which will eventually affect everyone (Norman, 2003; Lawton, 2010).

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SKIN STRUCTURE

Intrinsic factors

Epidermis

With age the epidermis becomes thinner, there is flattening of the dermo-epidermal junction and the corneocytes (non-living cells that form the outermost layer of the epidermis) become less adherent to one another, which reduces their water-binding capacity and results in dry skin (Hill, 1994). One common exception to this age-related thinning of the epidermis is an increased thickening of the stratum corneum (outermost layer of the skin, made up of keratinised cells) on the soles of the feet. Individuals affected may find that their walking is impaired, especially if these thicker layers are allowed to dry out and split (Kirkup, 2014).

Dry skin (xerosis) is a common feature of ageing skin, resulting from the reduced production of sebum, alteration in the lipid components of the epidermis and disordered activity of the stratum corneum (Kirkup, 2014). The number of melanocytes (melanin-forming cells) and Langerhans cells (antigen-presenting immune cells) decrease, altering the immune response, increasing the risk of infections and skin cancer, and decreasing the skin's ability to heal (Hill, 1994).

Dermis

The main changes in the dermis occur in the supporting fibres. The bulk of collagen (the main structural protein found in skin) decreases and, while the

Practice point

As dry skin is a common presenting feature of ageing skin, first-line intervention should include the use of emollients.

Sandra Lawton, nurse consultant dermatology, Rotherham NHS Foundation Trust and Queen's Nurse

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Table 1:	Skin conditions affecting the older person (Gawkrodger, 2002; Norman, 2003)
Eczematous conditions	› Asteatotic eczema (eczema craquelé) › Gravitational eczema (stasis or varicose) › Allergic contact eczema › Irritant contact eczema › Discoid (nummular) eczema
Infections	› Bacterial – impetigo › Viral – herpes zoster › Fungal – candidiasis, tinea pedis, tinea cruris and onychomycosis
Infestations	› Pediculosis (lice) – head, body and pubic › Scabies
Lesions	› Benign: seborrhoeic keratosis, actinic keratosis › Malignant: basal cell carcinoma, squamous cell carcinoma, melanoma
Others	› Nutrient deficiency disorders: chronic diseases and poor diet may contribute to vitamin deficiencies. Iron deficiency may also cause pruritus (itch) › Vascular: chronic venous insufficiency and peripheral vascular disease, purpura caused by thrombocytopenia, platelet abnormalities, vascular defects, trauma and drug reactions › Bullous pemphigoid › Psoriasis › Drug eruptions › Ulceration: leg and pressure ulcers

amount of elastic tissue may remain unchanged, the fibres lose their regularity, becoming lax. Both processes reduce the robustness of the skin, allowing the development of senile purpura (bleeding into the skin after minor injuries) and contributing to the development of wrinkles. This loosening of the skin's supportive structures results in 'drooping' eyebrows and eyelids and elongated chin and earlobes, while areas of loose, dependent skin are commonly seen under the chin (the so-called 'double chin' or 'dewlap'). The number of mast cells, which have a protective function, and fibroblasts, which have a role in wound healing, steadily decrease (Kirkup, 2014).

Subcutaneous tissue

With age, the subcutaneous tissue diminishes in certain areas, especially the face, shins, hands and feet, while in others — particularly the abdomen in men and the thighs in women — it increases. These changes affect the insulation and protective capacity of the skin (Hill, 1994).

Skin appendages

Age also causes a reduction in the number of sweat glands with both the eccrine and apocrine glands shrinking, which affects the skin's thermoregulatory function as sweating is reduced. Sebaceous glands (small glands that secrete the lubricant sebum) tend to increase in size but their secretory output is reduced, which affects the water retaining/waterproofing effect of the skin.

The nail plate of the fingernails also thins with age, with the surface becoming ridged and lusterless; similarly, the lunula (half-moon shape at the very bottom of the nail) decreases in size. The fingernails grow more slowly, while the toenails tend to thicken and can be affected by external pressure from footwear and increased pressure on the feet from poor venous and lymphatic drainage (Kirkup, 2014). There is also a gradual reduction in the density of hair follicles; the capacity to grow long hair decreases, scalp hair is thinner, and chest and pubic hair declines and loses pigment. However, in men, the hair in some areas — especially the ears, nose and eyebrows — becomes 'bushy' and women may develop hirsutism because of hormonal changes (Burns et al, 2010).

Practice point

Emollients should be applied in smooth downward strokes following the direction of the hair growth to reduce the risk of folliculitis (inflamed or infected hair follicles) (Lawton, 2013). Patients should be taught this technique and made aware of the safety concerns regarding emollients (see *Table 4*).

The facts...

Emollients cleanse the skin, remove old treatments and scale, and hydrate and prepare the skin for the application of topical treatments (Lawton, 2013). Simple emollients leave a fine occlusive layer of lipid or oil, such as petrolatum or mineral oil, over the skin's surface, thereby reducing water loss from the stratum corneum. Emollient products that include humectant ingredients (substances that retain or preserve moisture), such as urea and glycerol, attract and hold water in the stratum corneum, enhancing the moisture-retaining ability of the emollient and thereby its efficacy.

Extrinsic factors

Extrinsic ageing results from the cumulative effects of exposure to a variety of environmental factors such as smoking, pollutants and ultraviolet light (UVL), as well as exposure to potential irritants and sensitisers (central heating, weather, soaps and bubble baths, etc). General health issues and medications, such as poor diet and medications like corticosteroids that interfere with epidermal regeneration and collagen synthesis, are also important factors in the ageing process (Hill, 1994).

Premature ageing is primarily caused by sun exposure (photoageing) occurring over a number of years. Factors that influence this include (Smoker, 1999):

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Table 2: Dermatological history (Lawton, 2015)

Assessment should include basic demographics including age, race, sex, occupation, hobbies and a detailed history of the following:

- Constitutional symptoms associated with acute and chronic illnesses such as headaches, fever, weakness, fatigue, malaise, loss of appetite, weight loss
- Past medical history: operations, illnesses, allergies, medications (past and present), atopic history (eczema, asthma, hay fever)
- Family history of skin disease, atopic conditions, autoimmune conditions
- Social history: smoking, alcohol and drug abuse, sexual behaviour and travel
- The lesion or rash: when it appeared (onset) and where. Has it spread or changed in appearance? Does it fluctuate, or has it been persistent? Is the rash itchy, sore, or painful?
- Triggers: heat, cold, sun, exercise, travel history, medications, pregnancy, time of year
- Treatments: current and previous treatments used, both prescribed and those purchased over the counter, internet and borrowed from friends and relatives. Have they helped?
- Other interventions tried: sunbeds, homeopathy, dietary interventions, herbal remedies

- Skin colour: people with fair skin are more susceptible to photoageing than those with pigmented skin who have more epidermal melanin and a thicker dermis (Vashi et al, 2016)
- Religion and culture: religion may require some people to wear clothing that covers the skin resulting in reduced sun exposure
- History of long-term or intense sun exposure
- Occupation: those who work outside will be more exposed to the sun
- Geographical location, i.e. living in certain climates increases the risk of sun exposure.

Repeated exposure to UVL breaks down existing collagen and impairs the synthesis of new collagen. The sun also attacks elastin (elastic protein found in connective tissue), leaving the skin loose, wrinkled and 'leathery'. Other features of photoaged skin include (Gawkrodger, 2002):

- Coarseness
- Pale yellow colour
- Telangiectatic (broken capillaries)
- Irregularly pigmented
- Prone to purpura
- Subject to benign and malignant neoplasms.

SKIN CONDITIONS AFFECTING ELDERLY PEOPLE

There are a variety of skin conditions and underlying medical conditions that affect older people, including (see *Table 1*):

- Eczematous conditions
- Infections such as impetigo and herpes zoster
- Infestations such as scabies
- Lesions such as those arising from skin cancer.

Dryness and pruritus (itch) are often the major presenting symptoms, while itching in the absence of any obvious skin disease is very common. Persistent severe itching, like pain, can take over a person's day-to-day life, leading to sleepless nights, exhaustion and affecting daily activities and relationships (Fitzpatrick et al, 2001).

Pruritus should trigger a search for underlying causes, including metabolic irregularities such as iron deficiency anaemia, and systemic malignancies such as lymphoma and leukaemia, which may only become obvious after the onset of itching (Kirkup, 2014).

Other causes of pruritus include endocrine conditions, haematological disease, liver disease, drugs and psychological causes such as depression, obsessive-compulsive disorder and anxiety.

Assessment of itch

A comprehensive history should be undertaken, including skin assessment to look for any rashes/lesions, a general physical examination and questions relating to weight loss, fatigue, fever, malaise, recent emotional stress and medication history. If the itching is persistent and no cause is found, blood tests and chest x-rays may be required (Fitzpatrick et al, 2001).

ASSESSMENT

A comprehensive history (*Table 2*) and skin assessment (*Table 3*) should be undertaken to identify possible causes for itching, dryness, rash or lesions where older people present with a skin condition. Other age-related factors to consider include (Burns et al, 2010):

- Social circumstances such as poor housing, bathroom facilities and

Table 3: Skin assessment (Lawton, 2015)

Any skin examination should be performed in a warm well-lit room with natural light. The nurse should provide clear explanations to the patient as to why all areas of the skin are being exposed. It is considered best practice to examine the whole skin and a comprehensive history will signpost and provide clues for the examination.

- Examine the skin systematically, working from the top down, including the hair, nails, skin creases and folds
- Note any unusual odours or smells, which could indicate infection, continence issues or poor care
- Skin lesions should be palpated; this will provide clinical information about skin texture and temperature
- Lesions should be measured accurately and documented on a body plan. This description should include the distribution, type, size, shape and colour of the lesions. The surface characteristics and texture (superficial or deep) should also be recorded
- Lesions are classified as primary lesions, which present at the initial onset of the disease, and secondary lesions, which are the result of changes over time caused by disease progression, manipulation (scratching, rubbing, picking) or from treatments applied to the skin (further information: www.pcds.org.uk/p/describing-skin-disease)
- Other factors to consider when performing a skin assessment are the range of skin colours and hair types — lesions which in white skin appear red or brown, can appear black or purple in pigmented skin, with mild redness (erythema)
- Skin inflammation commonly leads to post inflammatory pigmentary changes: lighter (post-inflammatory hypopigmentation) and darker (post-inflammatory hyperpigmentation) can persist for a long time after the initial inflammation and is often of great concern to patients who think their skin is permanently scarred

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Table 4: Emollient safety (Lawton, 2016)

Correct application: demonstrate correct use (thinly, gently, quickly, frequently) and in a downward motion following the direction of hair growth to prevent folliculitis
Pots versus pumps: if pots or tubs of emollient are used, advise using a clean spoon or spatula to decant from the pot to prevent infections from contaminated pots. Emollients in pumps or tubes reduce this risk. New supplies should be prescribed at the end of treatment for a skin infection
Slipping: care should be taken when using emollients in baths, showers or on tiled floors as there is a risk of slipping. Protect the floor with a towel or sheet. After bathing or showering, the bath/shower should be washed with hot water and washing-up liquid, rinsed well and dried with a kitchen towel. This has several benefits; it prevents a build-up of emollient, skin debris and reduces the risk of infection and slipping. Also, it helps to clear the drains and prevent a build-up of grease
Fire hazard: bandages, dressings and clothing in contact with paraffin-based products, for example white soft paraffin or emulsifying ointment, are easily ignited with a naked flame or cigarette (National Patient Safety Agency [NPSA], 2007)

financial worries about paying bills, etc
- Cognitive decline: personal hygiene, including washing and bathing, are a common source of anxiety for some patients
- Decreased mobility and dexterity where patients are less able to care for themselves and require more help to care for their skin and apply treatments
- Increasing physical frailty resulting in an inability to apply treatments to particular areas of the body, or attend to personal hygiene
- Overwashing to hide problems such as incontinence (see case study box opposite)
- Neglect, particularly an inability to care for oneself with regards to diet, personal hygiene and asking for help.

SKIN CARE

Following assessment, a plan of care should be implemented to treat the underlying skin condition. The treatment of specific conditions is beyond the remit of this article, however, as dry skin is a common presenting feature of ageing and many underlying skin conditions, the first-line intervention should include the use of emollients (see below).

Top tip:

Emollient application routines need to be realistic and achievable and patients should be prescribed adequate quantities for optimal effect (250–600g per week). Patients should also be offered smaller quantity packs for use when 'out and about', and may require more than one emollient product, depending on their lifestyle, seasonal sun exposure, and the severity of their skin problem.

As well as the use of emollients, another general measure to use in ageing skin is to avoid exposure to potential irritants (soaps, shower and bath products) and any environmental factors (i.e. extremes of temperature), which may contribute to dry skin.

Emollients

The word emollient comes from the Latin meaning 'to soften' and in medical terms refers to a substance that acts to smooth the skin's surface. The words emollient and moisturiser are used interchangeably (Voegeli, 2007). Emollients cleanse the skin, remove old treatments and scale, and hydrate and prepare the skin for the application of topical treatments (Lawton, 2013).

Simple emollients leave a fine occlusive layer of lipid or oil, such as petrolatum or mineral oil, over the skin's surface, thereby reducing water loss from the stratum corneum. Emollient products that include humectant ingredients (substances that retain or preserve moisture), such as urea and glycerol, attract and hold water in the stratum corneum, enhancing the moisture-retaining ability of the emollient and thereby its efficacy.

Emollients also contain lipids such as ceramides (molecules that help to bind skin cells), cholesterol and free fatty acids, which are naturally found in the stratum corneum (Moncrieff et al, 2013). Some emollients contain a mixture of occlusive and humectant substances — humectants draw water into the epidermis, while the occlusive elements ensure that it is trapped there (British Dermatological Nursing Group [BDNG], 2012). It is important to remember that there are many different types of emollient and prescribing should be guided by clinical need and patient choice.

Prescribing emollients

Patients should be given the opportunity to choose from the wide variety of emollients, identifying the most suitable product for their skin type (Moncrieff et al, 2013). Emollients come in a range of formulations — oils, lotions, creams, ointments and sprays — with a variety of added

Case study

The author was asked to review an older woman in her home who had developed erythema (redness) and itching on the genital area, which was not responding to topical corticosteroids and barrier products. Clinically, the patient had developed an acute rash affecting the vulva, perianal area and buttocks. She lived alone and was visited by carers daily to support her personal needs. Further questions and an assessment revealed that she was incontinent and did not want to let anyone know as she felt 'dirty' and embarrassed. Consequently, she was asking her carers to buy lavender bubble bath to hide the smell and was using a whole bottle at each visit. A joint visit was arranged with the local community nurse and carers and a care plan put in place that included a continence assessment and a regimen of skin care incorporating washing, bathing and treating the acute irritant reaction to the bubble bath.

Red Flag **Aqueous cream**

Recent evidence about the use of aqueous cream and the role of sodium lauryl sulphate (SLS) has shown that it causes burning, stinging, itching and redness — especially in children with atopic eczema — and has a detrimental effect on the skin barrier function (Medicines and Healthcare Products Regulatory Agency [MHRA], 2013). Dermatologists do not recommend its use as a wash or leave-on product; there are better emollient formulations available that have a positive effect on skin barrier function.

properties such as humectants and anti-itch or antiseptic agents. It is important that nurses are aware of the different preparations so that they can help patients to make an informed choice (Lawton, 2013).

Emollient application routines need to be realistic and achievable for the patient and they should be prescribed adequate quantities for optimal effect (250–600g per week). Patients should also be offered smaller quantity packs for use when 'out and about', and may require more than one emollient product, depending on their lifestyle, seasonal sun exposure, and the severity of their skin problem (Moncrieff et al, 2013).

Application

Emollients should replace detergents (soaps, shampoos, shower gels, bubble bath), while hand washes, including so-called 'soap-free' products, should be avoided. Patients will require both an emollient wash product and a leave-on emollient (Moncrieff et al, 2013). Bathing and cleansing the skin with emollients is an important aspect of any skincare routine. There should be a time interval of at least 30 minutes between the application of any topical treatments and the use of an emollient.

Emollients should be used at least twice-daily, but this may increase depending on the severity of the skin condition, the dryness of the skin and the particular product used.

Emollients should be applied in smooth downward strokes following the direction of hair growth to reduce the risk of folliculitis (inflamed or infected hair follicles) (Lawton, 2013). Patients should be taught this technique and made aware of the safety concerns regarding emollients (*Table* 4). Emollients are generally cosmetically acceptable and safe, with some limited unwanted effects, such as stinging and discomfort on application. If these unwanted effects are an issue, offering a choice of products will help patients find an emollient that is right for them, hopefully improving their concordance and quality of life (Oakley and Lawton, 2016).

CONCLUSION

Skin dryness and itching can significantly affect older people's quality of life. They are often embarrassed about their condition, reluctant to seek help and worry about a possible infectious cause.

Many older patients will attempt to self-treat before accessing medical care, using products that may make things worse rather than better. An understanding of ageing and how it impacts on skin function is an important issue for nurses, and should form an important element of any assessment of an older person's overall health and wellbeing. **SCT**

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IN BRIEF

- Educating the child and parent/carer about atopic eczema is vital.
- The use of an effective emollient should be encouraged for the whole body as opposed to only the affected area.
- A routine of moisturising at least three times a day, even at school times, should be encouraged.
- It is important to triage and recognise eczema flares.
- A combination of therapies, e.g. adjunctive therapy with topical calcineurin inhibitors, bandages and phototherapy may be effective.

KEY WORDS:

- Atopic eczema
- Emollients
- Topical corticosteroids
- Topical calcineurin inhibitors
- Phototherapy
- Systemic therapy

Managing atopic eczema in children

Vilma Conceicao

Atopic eczema is an inflammatory chronic skin disease that commonly manifests in childhood. It is characterised by dry skin, erythema, intense pruritus (itch), excoriations and thickening of the skin. This disease has cycles of relapse and remittance that require effective management to control flares and prevent worsening of the disease (Lawton, 2014).

It is essential that nurses provide patients with sufficient information on the condition, not only to ensure that treatment is effective, but also to help patients build confidence and practical skills that will support self-management. Like many other skin conditions, eczema has a significant impact on quality of life. In children, it affects the patient themselves and also parents and carers. Therefore, early intervention is required, which will to help to control the disease and prevent complications.

AETIOLOGY/ PREVALENCE

The aetiology of atopic eczema is unknown and therefore there is no cure. It is known to be linked to genetic factors, immunoglobulin E (IgE) (allergic) diseases and also the environment. In the UK, atopic eczema affects one in every five children (British Association of Dermatologists [BAD], 2016) and accounts for 30% of dermatological consultations in primary care (Shamssain, 2007).

PATHOPHYSIOLOGY

Atopic eczema develops when genetic factors lead to a breakdown of the skin barrier and mutations in the gene filaggrin. Filaggrin is responsible for the process whereby keratinocytes develop into the lipid squames (flakes or scales) that make up the outmost layer of the skin. Filaggrin mutations lead to allergic reactions that can cause intense pruritus, excoriation and lichenification, dry skin, redness, oozing, bleeding, and cracking. These mutations are likely to be involved in almost half of eczema cases (Thomson, 2016).

CLINICAL FEATURES AND DIAGNOSIS

In infants, eczema is more active on the facial area (cheeks and neck) and also the scalp, whereas in older children the condition is more active and widespread, often extending to flexural areas of the skin such as the axillae (underarms), groin and perianal area.

Did you know:

Twenty percent of children in the UK will have some experience of eczema, and it remains the most common skin condition in children of primary school age or under. Sixty percent of these children will find that their eczema improves over time (Hoare et al, 2000).

Vilma Conceicao, dermatology specialist nurse, Royal Free London NHS Foundation Trust

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Table 1:	Diagnostic criteria of atopic eczema in children (NICE, 2007)
Clinical history of dry skin with pruritus (in the last 12 months)	
Clinical diagnosis of asthma or allergic rhinitis (inflammation of the nose caused by an allergen such as pollen, dust or mould) (aged 18 months or under)	
Clinical history of facial and flexural atopic eczema (aged 18 months or under)	
Onset of signs and symptoms of atopic dermatitis (aged under two years old)	

One of the main clinical features of eczema is the intense pruritus that can cause sleep deprivation and affect the child's academic performance. These symptoms may also cause behavioural issues. When diagnosing eczema in children, nurses should be guided by the diagnostic criteria contained in the National Institute for Health and Care Excellence (NICE, 2007) guidelines, which include personal medical history, family history, presence of skin rash and dry skin (*Table 1*).

Disease severity

To determine the severity of the disease, an assessment of the clinical features is carried out (*Table 2*). The nurse should look for signs of pruritus, excoriation and lichenification, dry skin, redness, oozing, bleeding and cracking. It is crucial that this assessment is precise, both to find the right treatment and to shed some light on how the disease is affecting the patient's quality of life. Additionally, nurses can also use the Children Dermatology Life Quality Index (CDLQI) questionnaire to obtain valuable information about the impact of eczema on the patient's life (NICE, 2007). This asks questions, such as; 'Over the last week, how itchy, "scratchy" sore or painful has your skin been?' and 'Over the last week, how embarrassed or self-conscious, upset or sad have you been because of your skin?'

Red Flag Symptoms

Swelling, cracked skin, increased pain, oedema, exudation and fever are signs of uncontrolled eczema.

MANAGEMENT OF ATOPIC ECZEMA IN CHILDREN

The NICE (2007) guidelines recommended that nurses should follow a stepped-up approach for the management of atopic eczema in children, according to the condition's severity. This means that the treatment is adapted according to the patient's needs (*Table 3*). There is a wide range of management strategies that include emollients as first-line treatment, combined with topical corticosteroids and topical calcineurin inhibitors, bandaging and phototherapy. In more severe cases, a paediatric dermatologist can consider systematic therapy that may include immunosuppressant drugs such as azathioprine and ciclosporin (NICE, 2007).

'Consistent emollient therapy can prevent relapsing of eczema flare and the need for topical corticosteroids. Applying the emollient frequently helps to control the symptoms and, most importantly, prevents the eczema from worsening.'

Practice point

Before starting any therapy, check for signs of infection (localised or generalised) such as bacterial staphylococcal or streptococcal infections.

Emollient therapy

Emollients are the most important therapy in the management of atopic eczema and aim to restore the skin's barrier function. It is important to educate children, parents and carers about the disease and how this therapy works on their skin.

Emollients provide a barrier to prevent moisture evaporation from the epidermis and increase skin hydration (*Figure 1*). A typical regimen requires the emollient to be reapplied at least 3–4 times a day. Additionally, emollient therapy involves the use of bath additives, soap substitutes and other more oil-based products.

Consistent emollient therapy can prevent relapsing of eczema flare and the need for topical corticosteroids (see below). Applying the emollient frequently helps to control the symptoms and, most importantly, prevents the eczema from worsening. It is essential to educate patients and to emphasise the importance of a consistent approach that will make the difference between a successful or failed treatment.

Table 2:	Assessment of atopic eczema severity (NICE, 2007)
Mild	› Areas of dry skin › Infrequent pruritus with erythema
Moderate	› Areas of dry skin › Frequent pruritus › Erythema with and without excoriation › Localised lichenification
Severe	› Widespread area of dry skin › Pruritus › Erythema › Excoriation › Lichenification › Bleeding, oozing, cracked skin › Hyperpigmentation

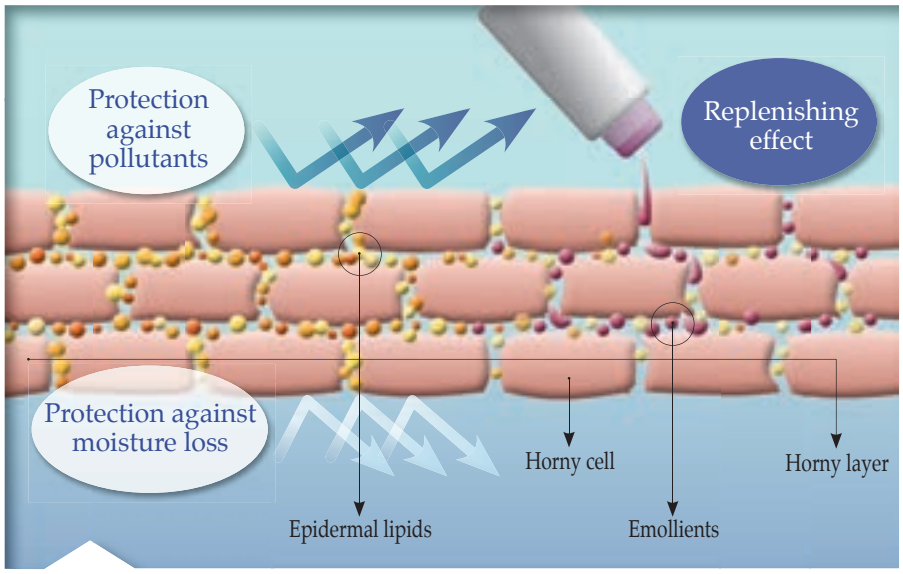

Figure 1. *Mode of action of emollients.*

Nevertheless, when eczema does not respond to emollient therapy, it will require a step up in management and the introduction of topical corticosteroids. Depending on the severity, the stepped approach may also include topical calcineurin inhibitors, bandages and phototherapy. In more severe cases, where the condition is uncontrolled or exhibits signs of erythoderma (generalised acute redness) (Oakley, 2016), paediatric dermatologists may consider using a systemic therapy, usually oral medication that is absorbed into the bloodstream. Oral corticosteroids and immunosuppressant drugs are normally used and aim to improve skin barrier function and reduce inflammation by suppressing the immune response, which will hopefully control intensive pruritus (BAD, 2016).

Topical corticosteroids and calcineurin inhibitors

Topical corticosteroids are an anti-inflammatory medication in the form of a cream or ointment. Steroids are hormones that occur naturally in the body and are key to the immune response — steroid medications are manufactured versions of these natural hormones. Topical corticosteroids work by altering the manifestation of cytokines (cells involved in inflammation), thereby reducing inflammation in the management of moderate-to-severe eczema when applied directly onto the skin (Mehta et al, 2016). In addition, they have an antiproliferative and vasoconstrictive effect.

Table 3: Stepped management of atopic eczema (NICE, 2007)

Severity	Management
Mild	› Emollient therapy (creams, lotions and ointments) › Topical corticosteroids (mild potency)
Moderate	› Emollient therapy › Topical corticosteroids (moderate potency) › Topical calcineurin inhibitors › Bandages
Severe	› Emollient therapy › Topical corticosteroids (moderate potency) › Topical calcineurin inhibitors › Bandages › Phototherapy › Systemic therapy (immunosuppressant drugs)

Red Flag Eczema herpeticum

Eczema herpeticum is a virus that deteriorates rapidly and may lead to hospital admission.

Topical corticosteroids can be combined with antibacterial or antifungal agents that are prescribed for the management of eczema in children, particularly on the face (Oakley, 2016). Topical corticosteroids are prescribed for a limited period of time, normally 1–6 weeks and are used in combination with an emollient regimen. The purpose of this approach is to control the flare and to obtain remission from acute flare (Peterson and Chan, 2016).

When treating children with moderate-to-severe eczema, it is recommended that treatment should be initiated with a lower strength corticosteroid to prevent side-effects such as skin atrophy and hyperpigmentation, particularly on the face and the flexural skin (Walling and Swick, 2010).

Due to potential side-effects, parents and carers are often reluctant to use this type of treatment, therefore, education on the risks and benefits is important. Nurses should use a standard recommended method known as the fingertip unit (FTU) to measure the necessary amount of topical steroid that should be used on an active skin area (*Figure 2*). In essence, one FTU represents the amount of topical steroid that should be squeezed from the tube onto an adult's fingertip. This area ranges from the tip or end of the index finger down to the first crease of the finger.

Topical calcineurin inhibitors are used particularly in recurrent eczema flares on the face, groin and neck, replacing the topical corticosteroid therapy in children over two years old. They are composed of immune-modulator and anti-inflammatory agents, which are very effective in

Top tip:

If the eczema does not respond to therapy, this may be a sign of underlying infection.

suppressing the inflammation. These inhibitors are used as maintenance therapy, which can be applied twice a week. This treatment prevents eczema from flaring and also avoids potential side-effects linked to long-term use of topical corticosteroids (Moore et al, 2006).

Bandages (adjunctive therapy)

Occlusive bandages are extremely effective in the management of atopic eczema in children, particularly in preventing the scratch-itch cycle and excoriation of the skin. Bandages are also effective in increasing the hydration of the skin. The application of wet-wrapping involves tubular bandages; the lower section of the bandage is dampened, while the top layer is left dry. This therapy can be used in conjunction with emollients, which are applied under the bandage to increase their efficacy (Berth-Jones et al, 2006). Patients can find this therapy beneficial in retaining moisture in the skin and providing a cooling effect.

Zinc paste and icthopaste are types of impregnated bandages that are also used as an adjunctive therapy to reduce pruritus, bacterial colonisation and, ultimately, to prevent infection. In chronic lichenified eczema or acute flare, topical corticosteroids can also be applied under the bandage.

'Although a cure is yet to be found, children who are affected by eczema can lead a normal life. Unfortunately, lack of knowledge regarding the variety of therapies leads to poor adherence and, subsequently, treatment failure.'

However, this increases their strength and therefore should only be used for short periods of time. With regards to self-management of the condition, it is important that nurses demonstrate the correct bandaging technique to children and parents/carers.

	Finger tip unit for
Child aged 3–6 months	Entire face and neck — 1 FTU An entire arm and hand — 1 FTU An entire leg and foot — 1.5 FTUs The entire front of chest and abdomen — 1 FTU The entire back including buttocks — 1.5 FTUs
Child aged 1–2 years	Entire face and neck — 1.5 FTUs An entire arm and hand — 1.5 FTUs An entire leg and foot — 2 FTUs The entire front of chest and abdomen — 2 FTUs The entire back including buttocks — 3 FTUs
Child aged 3–5 years	Entire face and neck — 1.5 FTUs An entire arm and hand — 2 FTUs An entire leg and foot — 3 FTUs The entire front of chest and abdomen — 3 FTUs
Child aged 6–10 years	Entire face and neck — 2 FTUs An entire arm and hand — 2.5 FTUs An entire leg and foot — 4.5 FTUs The entire front of chest and abdomen — 3.5 FTUs The entire back including buttocks — 5 FTUs

Figure 2. *Finger tip unit (FTU) method of emollient measurement.*

Phototherapy

Narrowband ultraviolet B (UVB) phototherapy works as an immunosuppressant in the skin. Phototherapy is very effective and known to increase vitamin D levels, however, it can only be initiated in secondary care by a paediatric dermatologist, although community nurses can identify potential candidates and refer them on.

Phototherapy should only be undertaken under specialist dermatological supervision and when all other management options have failed. It has short- and long-term potential effects that must be considered, including mild-to-severe sunburn with intralesional blisters, xerosis (abnormally dry skin) and photodamage. Phototherapy can also induce skin cancer due to UV radiation, however, the risk is very small (Rodenbeck et al, 2016).

There are many benefits to this type of treatment, however. For example, many patients experience remission of the symptoms making the use of topical steroids less frequent or even unnecessary (Darne et al, 2014). Similarly, nurses can closely monitor progress and reinforce the importance of emollient therapy.

However, phototherapy is time-consuming as children have to visit the phototherapy department three times a week for sessions. The NICE (2007) guidelines indicate that phototherapy should only be used in moderate-to-severe cases of eczema and when other treatments have been ineffective. Despite the risks involved, phototherapy is highly recommended for the management of eczema (NICE, 2007).

COMPLICATIONS

Infections with staphylococcal and streptococcal bacteria can occur in children with eczema, causing sores and blisters, which can develop into impetigo (a bacterial infection of the superficial skin). In extreme cases, these complications may cause virus

herpes simplex, resulting in eczema herpeticum (a potentially serious viral infection of the skin) (Lin, 2011). In these cases, the condition can deteriorate rapidly as the virus forms blisters, yellow crusts and oozing pus. The child may experience pain, fever and lethargy, and may require hospital admission (Stanway, 2004).

CONCLUSION

Although a cure is yet to be found, children who are affected by eczema can lead a normal life. Unfortunately, lack of knowledge regarding the variety of therapies leads to poor adherence and, subsequently, treatment failure.

It is extremely important for children to have a full understanding of their condition — what causes and how they can treat it. The National Eczema Society is an important source of support, providing information and practical advice about treating and managing the disease.

Community nurses would benefit from more training to enhance their ability to treat the condition appropriately. There are cases where patients require a stepped-up approach, however, the severity of the condition is not appropriately recognised. Nonetheless, community nurses play a crucial role in managing the disease and educating parents/carers about the importance of adhering to a prescribed therapy and highlighting the benefits of treatments that will improve the child's quality of life. **SCT**

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Case report

Angel is a six-year-old girl who has suffered from atopic dermatitis since birth. She experienced severe inflammation with erythema and intense itching, which caused her to scratch her skin to the point of bleeding. Angel was treated with phototherapy for a period of 10 weeks and managed to remain eczema free for over three years. Although Angel's eczema reoccurred, the therapy had a positive impact on her behaviour and self-confidence. Angel's father reported that she became calmer and more focused at school.

Resources

- The British Association of Dermatologists: www.bad.org.uk
- British Dermatological Nursing Group (BDNG): www.bdng.org.uk
- New Zealand Dermatology Society: http://dermnetnz.org
- The International Study of Asthma and Allergies in Childhood (ISAAC): http://isaac.auckland.ac.nz
- National Eczema Society: www.eczema.org
- Royal College of Paediatrics and Child Health (RCPCH) Eczema pathway: www.rcpch.ac.uk/system/files

IN BRIEF

- Psoriasis is a common inflammatory skin condition that affects approximately 1.3–2.2% of the UK population (Parisi et al, 2012).
- It is a long-term skin condition and self-management support is important for disease control.
- It is less common in children. There are two peak age ranges for disease onset. The majority of new onset is seen in young people with a mean age of 15–20 years and then a second, smaller peak can be seen at 55–60 years (Langley et al, 2005).

KEY WORDS:

- Psoriasis
- Topical therapy
- Skin assessment
- Dermatology
- Patient education
- Quality of life

Assessment and treatment of chronic plaque psoriasis

Karina Jackson

Chronic plaque psoriasis is a long-term, immune-mediated, inflammatory skin condition that causes inflammation and epidermal cell proliferation. Women and men are equally affected and it can occur in any race. Psoriasis is thought to be caused through a combination of genetic predisposition, plus an initial trigger such as a physical, hormonal or emotional stress, medicines or infection. These triggers can also play a role in the exacerbation of psoriasis during its course (Menter et al, 2008).

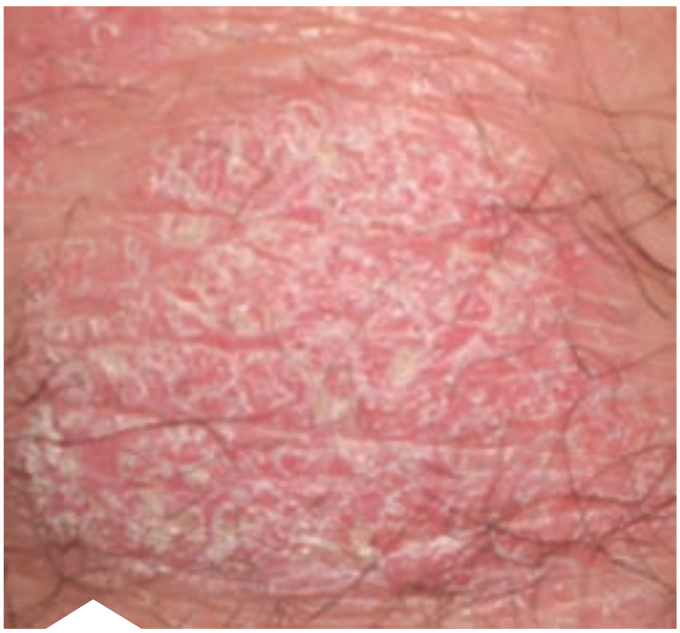

Figure 1. *Chronic plaque psoriasis.*

The classical features of chronic plaque psoriasis are erythema (redness); induration (thickening) and desquamation (scaling), usually in the form of oval-shaped plaques (*Figure 1*). The silvery scale will become white when scratched. The plaque features will vary depending on the body site affected and the type of psoriasis. For example, there will be minimal induration and no scale in flexural areas. Plaques can vary in size from 2mm diameter to large confluent plaques covering an entire body area.

Karina Jackson, nurse consultant, St John's Institute of Dermatology, Guy's and St Thomas' NHS Foundation Trust, London

HOW TO DIAGNOSE CHRONIC PLAQUE PSORIASIS

There are no diagnostic investigations for psoriasis; diagnosis is made following a full skin examination and history-taking. Typical sites affected are extensor aspects such as elbows and knees, the scalp and lumbosacral region. Skin examination should include review of the scalp and nails, as 50% of people with psoriasis will have nail onycholysis or nail pitting (*Figure 2*). There may also be a concomitant psoriatic arthritis, most commonly affecting the small joints, neck or back.

Although there are other forms of less common psoriasis, such as guttate psoriasis, palmar-plantar psoriasis, pustular psoriasis and erythrodermic psoriasis, this article focuses on the most common presentation, chronic plaque psoriasis, which accounts for 85–90% of cases (Menter et al, 2008) (see box on differential disagnoses of chronic plaque psoriasis).

HOLISTIC ASSESSMENT

In 2012, the National Institute for Health and Care Excellence (NICE) published a comprehensive

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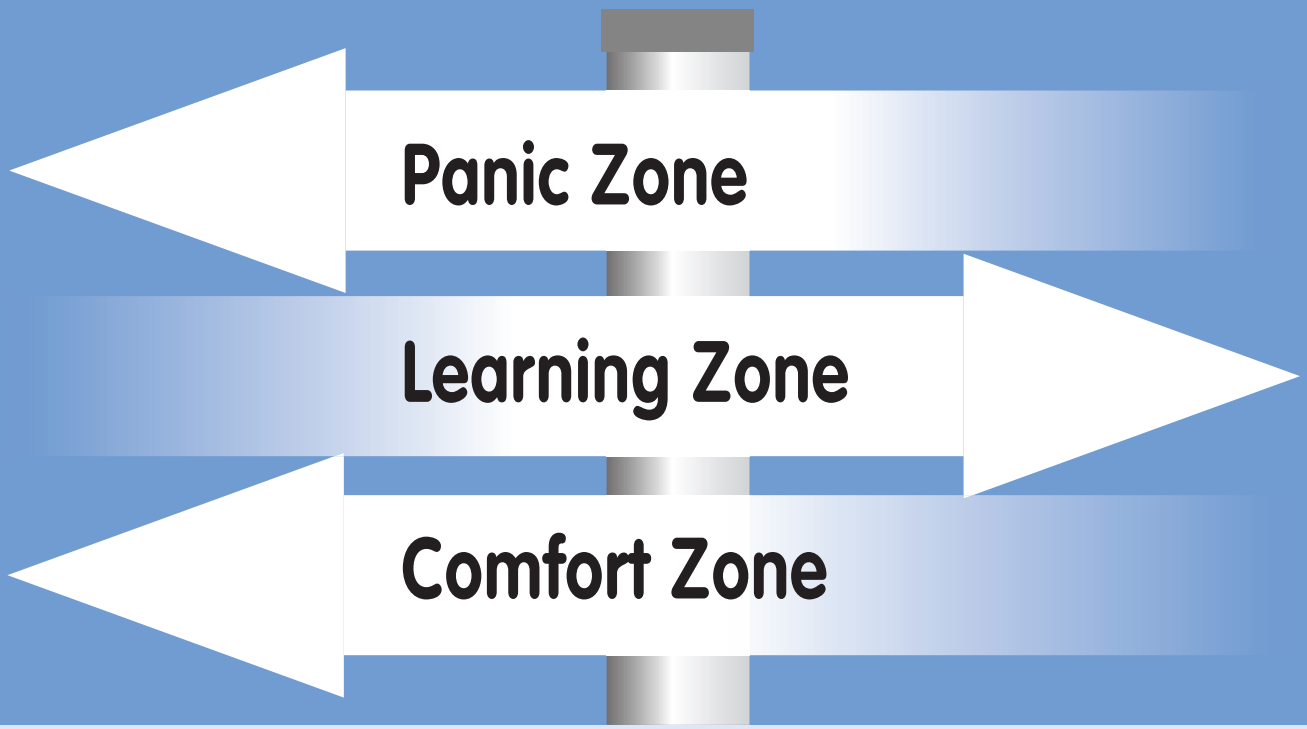

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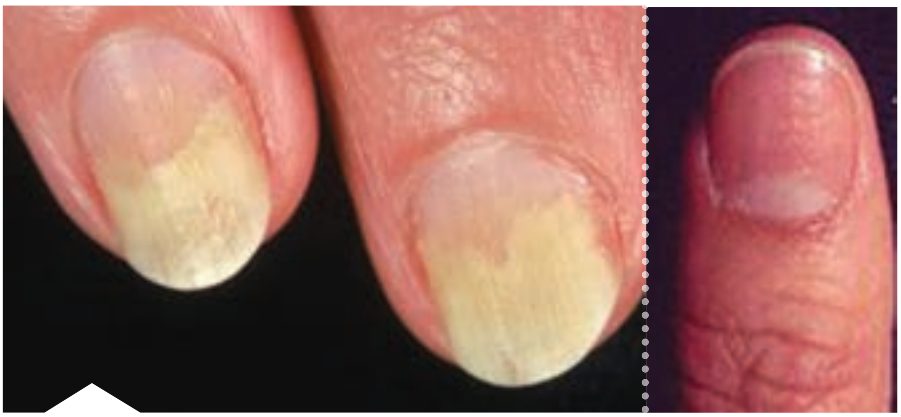

Figure 2. *Examples of nail oncholysis (left) and pitting (right).*

clinical guideline entitled, *Psoriasis: assessment and management*, for application across all age groups. The Scottish Intercollegiate Guidelines Network (SIGN, 2010), also developed similar guidance that applies to the assessment and management of psoriasis and psoriatic arthritis for people in Scotland.

The principles of assessment according to NICE (2012) involve:

- Assessment of disease severity
- Presence of psoriatic arthritis
- Impact of disease on physical, psychological and social wellbeing
- Presence of comorbidities.

These elements have a bearing on treatment choice and need for onward referral to a specialist.

ASSESSING DISEASE SEVERITY

The severity of chronic plaque psoriasis can be categorised from mild to very severe. For most people, psoriasis is managed in primary care, with specialist referral being needed at some point for up to 60% of people (NICE, 2012).

Specialists measure disease severity using a validated tool called the Psoriasis Area and Severity Index (PASI; Fredriksson and Pettersson, 1978), which requires training to use. A PASI score of more than 10 equates to severe psoriasis. In primary care, it is easier to assess severity according to total body surface area (TBSA) involvement. The handprint guide suggests that one handprint is equivalent to approximately 1% TBSA (Rhodes et al, 2013). Anyone with more than 10% TBSA is considered to have severe psoriasis and should be referred for specialist opinion.

To help guide healthcare professionals on treatment choice, it is also important to note body sites affected. Psoriasis can be present in all body areas, including the scalp, ears, flexures, groin, genital/perianal region, palms, soles and nails. Consider also the severity of features of psoriasis, that is the degree of erythema, induration and scaling. For example, is there light flaky scaling or thick adherent scale?

Patient-reported symptoms should also be noted, for example does the patient experience itching, skin pain or other cutaneous symptoms? These can be used as markers for improvement or worsening of disease following the implementation of treatment.

Differential diagnoses of chronic plaque psoriasis

- Discoid eczema
- Discoid lupus
- Tinea corporis
- Cutaneous lymphoma
- Pityriasis rosea.

Facts...

Studies have found that people with psoriasis have an increased risk of cardiovascular disease (Ahlehoff, 2011), diabetes (Qureshi et al, 2009) and depression (Kurd et al, 2010), especially those with severe psoriasis.

PRESENCE OF PSORIATIC ARTHRITIS

It is estimated in the UK that 13.8% of people with psoriasis may also develop psoriatic arthritis (Ibrahim et al, 2009a). In most cases, skin psoriasis precedes the onset of psoriatic arthritis. The most frequently affected joints are in the hands and/or feet (i.e. distal or proximal inter-phalangeal joints). However, psoriatic arthritis can also present as an asymmetrical oligoarthritis affecting up to four joints; symmetrical polyarthritis or axial arthritis affecting the spine and/or neck. Commonly seen is the swelling of an entire digit (dactylitis), sometimes referred to as a 'sausage' finger or toe and the presence of enthesitis, which is inflammation at tendon, ligament or joint capsule insertions.

To help early identification of psoriatic arthritis, the Psoriasis Epidemiology Screening Tool (PEST; Ibrahim et al, 2009b) is recommended in both NICE (2012) and SIGN (2010) guidelines. This can be repeated on an annual basis for screening purposes. The tool does not, however, detect axial arthritis or inflammatory back pain, so it should only be used as a preliminary screening tool completed by the patient, and followed by further clinical assessment. If there is any suspicion of psoriatic arthritis, the patient should be referred to a rheumatologist.

ASSESSING DISEASE IMPACT

NICE (2012) recommends that healthcare professionals explore

which aspects of daily living are affected by psoriasis; how the person is coping and if their condition has any impact on their family or carers.

These enquiries can be supported through the use of a dermatology specific questionnaire. SIGN (2010) and NICE (2012) guidelines advocate the use of the freely available Dermatology Life Quality Index (DLQI) questionnaire (Finlay and Khan, 1994). This is completed by the patient and is designed to measure the impact of skin disease on quality of life. It consists of 10 questions relating to daily activities, leisure, work/school, personal relationships and treatment. Scores can range from 0–30; the higher the score, the greater the impairment. A score of more than 10 is suggestive of significant impact on quality of life.

Psoriasis may also affect a person's psychological wellbeing. Due to the visible nature of the disease, a person with psoriasis may experience a range of emotional concerns, such as poor self-esteem, embarrassment, anger, helplessness, anxiety and worry. Low mood and depressive symptoms are more common in people with psoriasis than in controls (Kimball et al, 2008).

PRESENCE OF COMORBIDITIES

Recent literature has documented the frequent co-existence of metabolic disorders in psoriasis. All other medical conditions and known allergies a person has should be documented in conjunction with any prescribed medicines. Knowledge of other medicines is particularly important in terms of prescribing, as some medicines, even topical treatments, may be contraindicated. For example, if a person had osteopenia and was receiving vitamin D and calcium supplementation, a topical vitamin D derivative for psoriasis would need to be used with caution because there would be an increased risk of hypercalcaemia.

Top tip:

Using written materials to support information given can be helpful. Patient support groups, such as the Psoriasis Association (www.psoriasis-association.org.uk/) and the Psoriasis and Psoriatic Arthritis Alliance (www.papaa.org/) have a series of helpful leaflets.

'Managing the condition effectively requires a great deal of information-giving, empathy and support. It is important that patients with psoriasis understand that the disease is a chronic relapsing condition and that the aim of treatment is to control signs and symptoms, not to cure.'

NICE (2012) recommends that adults with severe psoriasis (greater than 10% TBSA) should be offered a cardiovascular risk assessment using a validated risk estimation tool, and this should be repeated every five years, or more frequently if indicated. This assessment should ideally be undertaken in primary care. All people with psoriasis should be offered advice on healthy lifestyle, such as diet, exercise, etc.

PRESCRIBING GUIDANCE

Prescribing decisions should be guided by thorough holistic assessment. It is helpful to note current and previous treatments a person with psoriasis may have used, and to establish how long these were used for, and the response or outcome to treatments. Linked to this, healthcare professionals can assess what knowledge and understanding the patient may have about psoriasis and the correct use of topical treatments.

When prescribing, it is important to provide sufficient quantities of

Practice point

People with psoriasis do not qualify for free prescriptions (unless they are exempt for other reasons). Thus, they may benefit from purchasing a prescription prepayment certificate (PPC) if they are likely to need more than 12 prescription items a year.

treatment for the patient to treat their skin adequately. A patient with extensive psoriasis will use up to 500g of emollient in a week.

Managing the condition effectively requires a great deal of information-giving, empathy and support. It is important that patients with psoriasis understand that the disease is a chronic relapsing condition and that the aim of treatment is to control signs and symptoms, not to cure. To improve concordance, time should be spent talking about what the treatment is designed to achieve and how, where and for how long to use the therapy, as well as any local side-effects to expect, such as stinging, burning, irritation and staining.

TOPICAL THERAPY

Topical therapy is first-line treatment for psoriasis. Second-line treatments (e.g. phototherapy or systemic drug therapy, such as methotrexate) should be specialist-led. Treatment algorithms have been developed based on clinical and cost-effective analyses and are available to download from the NICE website (http://pathways.nice.org.uk/pathways/psoriasis).

Different sites affected will require different topical therapies, as some body areas are more susceptible to treatment side-effects. For example, the face, flexures and genital region are particularly vulnerable to steroid atrophy, and corticosteroids should only be used for short-term treatment of psoriasis at these sites (1–2 weeks per month) (NICE, 2012).

When to refer...

- **Emergency:** Patients with generalised pustular psoriasis or erythroderma: Telephone for same-day specialist (hospital) assessment and treatment
- **Routine referral** if there is:
  - Diagnostic uncertainty
  - Severe/very severe psoriasis
  - Extensive psoriasis, for example, more than 10% of the body surface area affected
  - Any type of psoriasis which cannot be controlled with topical therapy, i.e. acute guttate psoriasis (small, red, and scaly teardrop-shaped spots appear on the arms, legs, and middle of the body), which requires phototherapy
  - Nail disease which has a major functional or cosmetic impact
  - Any type of psoriasis having a major impact on a patient's physical, psychological or social wellbeing.
- **Children:** Refer children less than 12 and young people 12–18 years with any type of psoriasis
- **Psoriatic arthritis:** If psoriatic arthritis is suspected, ensure that the patient is referred to a rheumatologist

According to NICE, all adult patients should be reviewed four weeks (children two weeks) after starting a new topical therapy to evaluate tolerability and initial response to treatment. Psoriasis lesions should be responding to treatment within four weeks of therapy, but may require a further 2–4 weeks to achieve clearance. If there is no response after four weeks, treatment should be switched to an alternative and NICE (2012) has a recommended treatment algorithm.

Prescribers need to have a good understanding of the different strengths of topical corticosteroids and to ensure that people using topical steroids are fully informed about their safe use. As a general rule, ointment bases are preferable to cream ones as they are better moisturisers and do not contain preservatives, but they are not as cosmetically acceptable. Creams should be used in flexural areas (skin folds) and the face.

Patients should be instructed to stop applying their treatment when a plaque has been flat (not palpable) for a few days. However, the skin may remain discoloured for some time after the psoriasis has resolved.

Emollients

Emollients help to:

- Moisturise dry skin
- Ease itching
- Reduce psoriatic scale
- Soften fissured areas
- Enhance the penetration of other topical treatment.

They should be used when bathing or washing as a soap substitute and can be applied before psoriasis treatment. Patients should be advised to leave about 30 minutes after applying an emollient before applying the psoriasis treatment. Very mild psoriasis may respond to emollient treatment only. Emollients come in a range of consistencies, from light lotions through to thick, white soft paraffin. The very light lotions are not generally useful in psoriasis, with the exception of the scalp, face and flexures. Very greasy emollients may inhibit penetration of other therapies and therefore additional time may be required before applying further treatments.

TOPICAL PSORIASIS TREATMENTS

As said, NICE (2012) guidance provides an evidence-based treatment algorithm for chronic plaque psoriasis. This includes the different categories of topical psoriasis treatments, which are detailed below.

Topical corticosteroids (steroids)

Topical corticosteroids (steroids) have an anti-inflammatory, anti-proliferative and immunomodulatory effect. They are first-line topical therapy for chronic plaque psoriasis (alternating with a vitamin D3 derivative in NICE guidance). Once daily use of a topical steroid is sufficient.

Topical steroids can be used in all body sites affected with psoriasis, but different potencies are appropriate for different sites. Mild-to-moderate corticosteroids are suitable for facial, ear, flexural and genital psoriasis. Potent corticosteroids can be used on plaques on the torso and limbs, and very potent corticosteroids are generally kept in reserve for psoriasis on the palms and soles where the epidermis is thick.

Very potent topical steroids should not be prescribed for widespread psoriasis, as there will be a risk of systemic absorption and also increased risk of side-effects, such as skin thinning and striae (stretch marks). They should also only be used for up to eight weeks continuously with a four-week break before re-starting use. Topical corticosteroids combined with salicylic acid can be helpful if there is more scaling present on the plaques (NICE, 2012).

It is common practice to slowly reduce the frequency of application of topical steroid to avoid a rebound effect when discontinued. For example, reduce from daily application to every other day, then to twice a week, then stop.

Vitamin D derivatives

Vitamin D derivatives come in

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different formulations. They act by normalising the abnormal epidermal keratinocyte proliferation and differentiation that occurs in psoriasis. In the UK market, the products available are; calcipotriol (Dovonex®, Leo Laboratories), tacalcitol (Curatoderm®, Almirall) and calcitriol (Silkis®, Galderma). Calcipotriol and calcitriol can be used twice daily and tacalcitol once daily. They are not steroids and are therefore helpful for longer term use. There are recommendations on the maximum weekly amount used for each product, as there is potential for hypercalcaemia. One product, calcipotriol, is also available in combination with a potent steroid (Dovobet®, Leo).

Figure 3. *Psoriasis on the hairline and scalp.*

Coal tar

Coal tar has anti-inflammatory and anti-proliferative properties. It is available in cream, ointment, lotion and shampoo formulations. It can cause some staining of clothing so people should wear old clothes when using these products. It can have a mild odour, which may make it less acceptable. The proprietary brand products usually come in 1–6% strength. Higher strengths of crude coal tar 'specials' are used under supervision in specialist clinics.

Dithranol

Dithranol has a powerful anti-proliferative effect on epidermal keratinocytes, but has a high risk of staining and can burn or irritate the skin surrounding a psoriasis plaque. Proprietary brands of dithranol can be prescribed for use at home (Micanol®, Derma Ltd; Dithrocream™, Dermal Laboratories). The treatment is applied carefully to plaques only and cannot be used on flexures, face, or on inflamed psoriasis. It is a short contact treatment and must be removed after 10–60 minutes. Following the specific product instructions for the careful removal of the treatment is important to reduce the risk of skin staining. Dithranol is used once daily and the strength of the preparation can be increased after a few days if the treatment is tolerated.

'Patients with moderate-to-severe psoriasis will often require second-line therapy, via a specialist dermatology service. This can include phototherapy, photochemotherapy or systemic drug treatment.'

Dithranol is not suitable for multiple small plaques of psoriasis, as it will be too difficult to apply safely. It is time-consuming to apply so best used for large plaques only. Plastic gloves should be worn to prevent staining of fingers. It will also stain any fabric or furniture permanently so must be used with great caution. Patients should never receive a prescription for dithranol products without adequate instruction and review.

Calcineurin inhibitors

Although not licensed for psoriasis, calcinuerin inhibitors may be prescribed 'off label' for thin plaques of psoriasis on the face or flexures, if steroid alone is not effective in maintaining control of the psoriasis (NICE, 2012). The two calcinuerin inhibitors available are tacrolimus (Protopic®, Leo Laboratories) and pimecrolimus (Elidel®, Meda Pharmaceuticals). Calcineurin inhibitors may cause a transient burning sensation after application for the first few days of treatment. They are topical immuno-suppressants and therefore should not be used if there is a skin infection or a cold sore (herpes simplex virus) present. They also increase the risk for ultraviolet (UV) damage, so a sunscreen should be used on exposed sites if sunny.

MANAGING SCALP PSORIASIS

Scalp psoriasis can be very distressing for patients, as it is often visible around the hairline (*Figure 3*). The scalp will be affected in about 50% of patients with chronic plaque psoriasis. Very mild flaky scalp psoriasis can be treated with medicinal shampoo alone, such as a coal tar shampoo. The patient should wet their hair, massage the shampoo into the scalp and leave it for 10 minutes before rinsing out. This should be performed at least three times a week. Dryness can also be aided with the use of a simple emollient (oil or lotion) massaged into the affected area.

If the patient has an erythematous scalp psoriasis with minimal scaling they may benefit from a scalp corticosteroid preparation. These come as lotions or gels. More scaly scalp psoriasis will require treatment with an ointment such as Cocois® (UCB Pharma) or Sebco® (Derma UK) (coal tar and salicylic acid).

Very scaly scalp psoriasis will probably require some nursing intervention initially. The nurse can use oils or emollient ointment to soften adherent scale. Once this treatment is washed out, loose scale can be gently combed away before using other active psoriasis treatments.

SPECIALIST TREATMENTS

Patients with moderate-to-severe psoriasis will often require second-line therapy, via a specialist dermatology service. This can include phototherapy, photochemotherapy or systemic drug treatment. This may be further supported by a period of inpatient or day-care treatment at the hospital.

Ultraviolet B (UVB) radiation is indicated for chronic plaque and guttate psoriasis when a patient fails to respond to topical treatment alone. The treatment is administered and supervised by specially trained nurses or physiotherapists. The whole body is exposed to predetermined doses of UVB three times a week as an outpatient. The dose schedule varies according to the patient's skin type and is based on the minimal erythema dose (MED), which is the dose of radiation required to produce faint erythema. The dose will be increased at each visit according to local protocol and tolerance. A course of treatment will last about 12 weeks (British Association of Dermatology [BAD] phototherapy patient information leaflet; http://bit.ly/2kFsQnI).

Photochemotherapy combines a photosensitising medication (psoralen) with long-wavelength ultraviolet A (UVA) light. This treatment is known as PUVA. Psoralen can be administered systemically or topically before UVA exposure. There is a theoretical risk of cataracts, therefore, the patient is instructed to wear sunglasses for 12 hours after ingesting psoralen. Long-term PUVA causes photoageing and non-melanoma skin cancers, especially squamous cell carcinoma (SCC). It is thus rarely given to children and only short courses should be prescribed for adults. Trained nurses at specialist centres administer PUVA twice weekly, and doses of UVA are adjusted according to skin type and response to treatment.

Non-biologic (ciclosporin, methotrexate, acitretin, apremilast) and biologic (etanercept, adalimumab, usetkinumab, infliximab, secukinumab and ixekizumab) systemic therapies are used respectively, as second- and third-line treatments for severe psoriasis. A patient requiring systemic treatment should be under the care of a specialist. All these medicines have potentially dangerous side-effects and the patient requires pre-treatment counselling and regular monitoring.

CONCLUSION

Chronic plaque psoriasis is an inflammatory skin condition that can have a considerable impact on quality of life. Most people have mild–moderate disease that can be well managed in primary care. Nurses play a pivotal role in the provision of patient education and support to enable safe and effective self-management. SCT

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IN BRIEF

- As the healthcare professional most likely to visit patients in their recovery period, the community nurse is the person best-placed to discuss any stoma-related problems.
- Patients are taught how to change their stoma appliance in hospital, but often over time they will develop poor technique.
- One of the most common problems associated with a stoma is degradation of the peristomal skin, particularly skin stripping and sore skin due to leakage from the stoma appliance.

KEY WORDS:

- Peristomal skin
- Skin stripping
- Leakage
- Stoma maintenance

Caring for the peristomal skin

Jennie Burch

Simply trying to cope can be a challenge for the many people in the UK who have a stoma — this can include issues such as how to clean and maintain the appliance and what to do if there is a complication once they have been discharged home into the community.

Community nurses may be the first point of contact when there are problems with a stoma in the patient's home. This article aims to provide more information on how to change a stoma appliance as well as how to deal with issues such as skin stripping and leaking. Finally, the author considers the effect on body image and how patients might cope emotionally with having a stoma.

BACKGROUND

There are over 100,000 people in the UK with a stoma (Black, 2009). Therefore, it is common for community nurses to have a number of these patients on their caseload. It is important to have a working knowledge of the more common stoma types; the appliances that are generally used; the general frequency of bowel activity; and how the appliance is emptied (if appropriate) and changed.

Patients are generally taught how to change their stoma appliance in hospital, however, it is possible that over time they will develop a poor technique. Thus, it is essential that the community nurse knows how to advise them or to seek assistance from the stoma specialist nurse if further care is necessary.

One of the most common problems associated with a stoma is degradation of the peristomal skin, particularly skin stripping and sore skin due to leakage from the stoma appliance. This article explores the assessment and treatment of these issues, as well as touching on the effects on body image of having a stoma.

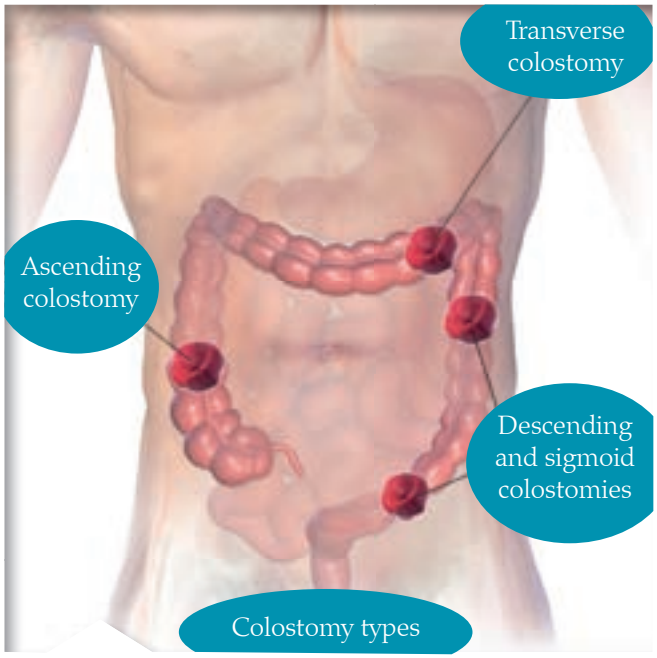

Figure 1. *Different colostomy sites.*

In the immediate post-discharge period, community nurses are in an ideal position to help patients adapt to their stoma.

TYPES OF STOMA

There are three main types of stoma that can be surgically formed:

- Colostomy (see *Figure 1* for the different colostomy sites)
- Ileostomy
- Urostomy.

Jennie Burch, enhanced recovery nurse facilitator, St Mark's Hospital, Harrow, Middlesex

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Practice point

Skin stripping occurs when the surface layer of the skin is removed, particularly if the appliance is removed roughly or frequently.

A colostomy is formed from the colon or large bowel and passes soft, formed faeces and flatus into a closed appliance (Burch, 2008) (*Figure 2* shows a typical stoma pouch). The colostomy appliance is replaced between three times a day and three times a week.

An ileostomy is formed from the ileum or small bowel and passes loose faeces and flatus into a drainable appliance fastened most commonly with a Velcro-type fastening. The ileostomy appliance is changed daily or every other day and requires emptying several times a day — commonly between 4–6 times.

Finally, the urostomy is formed to divert urine via a small segment of bowel, most commonly the small bowel or ileum. Urine and a small amount of mucus from the segment of bowel are passed into a drainable appliance with a tap, which is emptied several times a day. The urostomy appliance is replaced daily, or every other day.

CHANGING THE APPLIANCE

Patients are usually taught to maintain their stoma before being discharged from hospital, but as mentioned above, over time bad habits can set in. Furthermore, Stott et al (2013) reported that about one-third of patients are not confident about stoma maintenance on discharge.

However, Wu et al (2007) disagreed with this, stating that many patients did consider themselves able to care for their stoma. In an ideal world, all patients with a stoma would be trained to be independent while in hospital (unless they are more dependent and being discharged to a nursing home, for example). However, in reality it is essential that community nurses understand how to change stoma appliances in case they need to guide those patients who do encounter post-discharge problems.

Technique

The adhesive part of the appliance is termed the flange, face plate or base plate and it is essential that it adheres well to the abdominal wall — this can help to reduce the risk of leakage and the skin becoming sore. *Table 1* lists the correct steps for changing an appliance, however, each nurse and patient will have slight variations in their technique.

SKIN CARE

If appliance changes are performed regularly and to the necessary standard, the peristomal skin should remain healthy and intact. Ideally, the appearance of the peristomal skin should match the surrounding healthy skin, however, there are a number of ways that community nurses can assist patients if problems arise.

Accurate assessment is essential — this should include the cause of the skin problem; how long it has persisted for; if any treatments have been tried; the results; and what, if anything, makes the skin problem better or worse. There are a number of issues that can affect people with a stoma including skin stripping and leakage from the appliance itself.

Skin stripping

Skin stripping occurs when the surface layer of the skin is removed (Stephen-Haynes, 2013), particularly if the appliance is removed roughly or frequently (Burch, 2011), or if the skin is weak, perhaps as a result of ageing. One method of preventing the skin from becoming sore is to retrain the patient in removal — the gentler the removal, the less chance of skin stripping.

Another method of avoiding trauma to the skin is to use an adhesive remover when taking off the appliance. These come as sprays or wipes and help to remove any adhesive residue from the skin before the appliance is separated from the skin. Research has shown that many stoma nurse specialists recommend their use in practice (Rudoni and Dennis, 2009).

In the author's experience, another stoma accessory that can prevent skin damage as a result of skin stripping is a protective skin barrier film. These come as wipes or sprays and are used after the peristomal skin is cleaned and dried. The skin protector leaves a thin layer of barrier film, which will protect the skin from the stomal output and also from trauma as a result of the appliance being removed.

Managing a leaking appliance

There are many reasons why a stoma appliance might leak, for instance, if it is not securely placed around the stoma, formed faeces may leak

Table 1: Appliance change procedure (Burch, 2013)

Collect all the stoma equipment (clean appliance, warm tap water, cloths for cleaning and drying, rubbish bag, measuring guide, scissors, and/or stoma accessory)
Empty the appliance if it is drainable
Gently remove the old stoma appliance (possibly with the use of an adhesive remover) and dispose of it in the rubbish bag
Gently but firmly clean the skin (the peristomal skin). The skin should be checked for signs of soreness (red or broken skin)
After any faeces/urine has been removed from the skin, it should be dried
The new appliance (possibly with a stoma accessory) should now be applied to the abdominal wall. The size of the aperture in the stoma flange should be 2–3mm larger than the stoma and the same shape — this prevents the skin being damaged by stomal output
The waste should be placed in the rubbish bag and disposed of with general rubbish

onto the peristomal skin. Another common reason for leakage in stoma appliances is where they are applied to uneven peristomal skin. For the appliance flange to adhere to the abdominal wall it needs to be on a level surface, and if there is a crease or 'skin dip' near the stoma this needs to be smoothed-out to provide a flat base for the flange.

There are a number of stoma accessories that can be used to achieve this, including stoma adhesive paste, strip paste or seal/washers (Black, 2013). These accessories are manufactured from a similar hydrocolloid material to the flange and are designed to be adherent. The seals and washers are available in a circular shape, which can be used around the stoma to aid adhesion of the flange to the abdominal wall.

Alternatively, small parts of the seal, adhesive paste, or strip paste can be used directly in the 'dip' or crease in the skin to level it out — it might even be necessary to use adhesive paste in conjunction with a seal or strip paste.

Adhesive paste (Burch, 2013) comes in a tube and often contains alcohol, which can cause a stinging sensation if the skin is broken, although, in the author's experience, only for a short period of time. Therefore, adhesive paste should be used with caution. The use of a barrier film will also prevent the alcohol from touching the skin and thus reduce or prevent the stinging sensation.

However, it should be noted that adhesive paste should only be used sparingly, as it takes time for the alcohol to dry and, if used excessively, the appliance itself will not be dry or secure for a period of time.

Red Flag **Leakage**

A stoma appliance might leak if it is not securely placed around the stoma causing formed faeces to leak onto the perstomal skin. Leakage can also result when stoma appliances are applied to uneven peristomal skin.

In the author's experience, another cause of a leaking appliance can be an ileostomy or urostomy that is 'flush' or level with the skin's surface; similarly, a colostomy that has retracted below the level of the abdominal surface may cause leakage. In these situations, a convex appliance or convex seal might be used. These have a dome-shaped flange instead of the normal flat flange, and this pushes into the abdominal wall around the stoma to prevent leaks from occurring. A thin elastic belt that is clipped onto the edge of the convex flange helps to hold it in place (Burch, 2013).

However, community nurses need to ensure that the elastic belt is worn level with the stoma and not at waist level — if worn at waist level the belt will pull the appliance in the wrong direction; when level with the appliance, the belt will hold it securely to the patient's abdomen. The belt can be hand-washed as necessary.

Caution must be exercised when using convex or dome-shaped flanges, as the pressure exerted on the skin can result in bruising and, in rare cases, pressure damage (Boyd et al, 2004). Therefore, the skin will need careful assessment by the community nurse before and after this method is used. Erwin-Toth et al (2012) considered that a patient's quality of life could be significantly improved by managing issues such as appliance leakage, thus community nurses have an important role in assisting patients to resolve such issues.

BODY IMAGE AND LEARNING TO LIVE WITH A STOMA

Having a stoma can affect people in different ways (Grant et al, 2013) and it is commonly reported that patients often struggle with their body image following the procedure. The concept of body image includes the 'perceived' and the 'actual' body image — the latter is certainly altered with the formation

Figure 2. *A typical colostomy pouch.*

of a stoma, but patients may also perceive themselves differently.

This altered body image can be expressed in a variety of ways — patients may find it hard to adjust to physical changes to the body such as loss of the anus; they might experience anger at the stoma, which can lead to them neglecting its maintenance; or they may be concerned that their clothes will become soiled and that they are in some way regressing to childhood, which can in turn lead to low self-esteem (Salter, 1992).

Other historic research by Wade (1990) and White and Hunt (1997) found that 20–25% of patients had psychological problems after their stoma formation, while later evidence highlighted feelings of depression (Krouse et al, 2009).

On a more positive note, Notter and Chalmers (2012) reported that depression does eventually resolve. This is confirmed in a review by Pachler and Wille-Jorgensen (2012), who stated that quality of life differed little between people with or without a stoma, while Pittman et al (2009) found that quality of life improved dramatically during the first few months following the procedure as

Top tip:

Nurses should seek to resolve any issues that might affect people's confidence in socialising or resuming their normal life, such as ensuring that the stoma appliance does not leak and is securely adhered to the abdominal wall.

patients became more accustomed to their new body image. Despite this, Ito et al (2012) noted that there may be a dip in this recovery at about two months, possibly because at that point people are physically recovered from their surgical procedure but are still adapting to life with a stoma.

Practical tips

As the healthcare professional most likely to visit patients in their recovery period, the community nurse is the person best-placed to discuss any stoma-related problems. In the author's experience, practical tips that nurses can provide to stoma patients include:

- Physical exercise: it is generally safe to increase exercise gradually and when the patient feels strong enough
- Social life: nurses should seek to resolve any issues that might affect people's confidence in socialising or resuming their normal life, such as ensuring that the stoma appliance does not leak and is securely adhered to the abdominal wall. Patients should be encouraged to make contact with friends and family, or resources such as stoma support groups or spiritual groups (Li et al, 2012). This will help with rehabilitation and adaptation
- Sexual relations: nurses should offer patients the chance to discuss sexual relations — it is generally possible for people to have intercourse if there is no damage to the nerves in the genital area, but the surgeon should have discussed the risks with the patient before the operation. However, in the author's experience, practical advice around sexual relations includes ensuring that the stoma appliance is emptied before intercourse and the availability of underwear that can disguise or support a stoma appliance.

CONCLUSION

This article has shown that the community nurse can assist the patient with a stoma in a number of ways. As well as helping the patient cope emotionally with their new body image, the provision of appropriate support and advice will help patients deal with the practicalities of having a stoma, such as preventing the appliance from leaking and protecting the peristomal skin from damage.

Of course, nurses are not expected to be experts in every facet of stoma care and it may be that referral to the stoma specialist nurse for further advice on skin care or the GP for counselling may be appropriate. However, by following the advice in this article, the community nurse will be better placed to provide advice and support to the patient with a stoma. **JCN**

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IN BRIEF

- Around 17 million adults in the UK have venous disease and around two million of those have venous eczema (Grudzińska and Czuba, 2014; Oakley, 2014; Office of National Statistics [ONS], 2017).
- Venous eczema is part of a continuum of venous disease that may be misdiagnosed and inappropriately treated.
- It is important that healthcare professionals understand why venous disease occurs, and how to diagnose and manage venous eczema.

KEY WORDS:

- Venous disease
- Venous eczema
- Management
- Treatment of symptoms
- Referral
- Quality of life

Venous eczema: a guide to diagnosis and treatment of symptoms

Linda Nazarko

Venous eczema is 'a non-infective inflammatory condition that affects the skin of the lower legs' (Gawkrodger, 2006: 35), and is one of the manifestations of venous disease. It can also be described as gravitational/stasis eczema or varicose eczema, (Patel et al, 2001a; Beldon, 2006).

Venous eczema is part of a continuum of venous disease known as the Clinical Etiological Anatomical Pathological (CEAP) classification (Eklof et al, 2004; *Table 1*).

The CEAP classification is used to:

- Determine the level and severity of venous disease
- Manage venous disease
- Reduce the risks of disease progression.

This can be used in conjunction with the venous clinical severity score (VCSS) to evaluate changes in disease severity over time and response to treatment (Vasquez et al, 2010).

PREVALENCE AND RISK FACTORS

It is difficult to determine prevalence of venous disease as studies vary due to differing definitions (Robertson et al, 2008), for example definitions may rely on reports of varicose veins by study participants, based on self-diagnosis or recall of a diagnosis, or on a standardized physical examination. Research suggests that around one-third of adults have venous disease (Grudzinska and Czuba, 2014), which becomes more common as people age and is thought to affect 20% of people aged 70 and over (Oakley, 2014).

Around 3% of people with venous disease develop a venous ulcer (Bergan et al, 2006) and 37–44% of people with level C6 disease (active venous ulceration) have venous eczema (Patel et al, 2001b).

Known risk factors for venous disease include ageing, obesity, immobility, varicose veins, venous thromboembolism, pregnancy, abdominal tumours and cellulitis.

Furthermore, the number of people with advanced venous disease is rising because of:

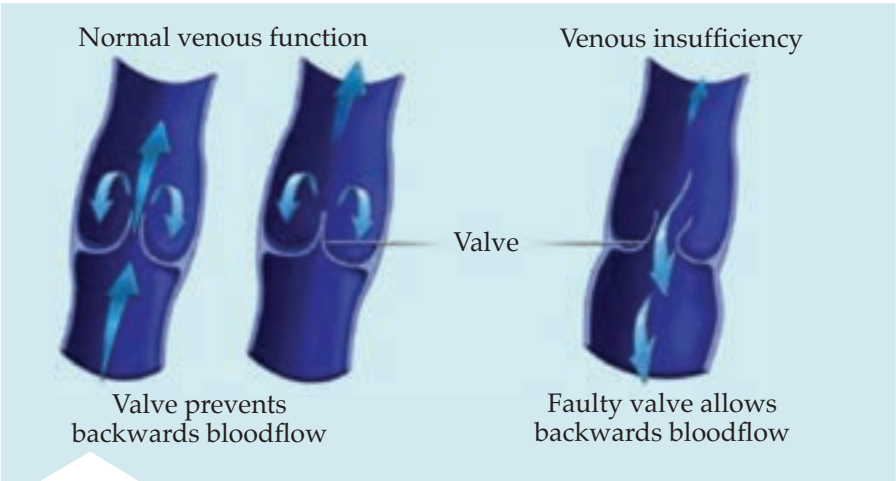

Figure 1. *Normal venous function and venous insufficiency.*

Linda Nazarko, nurse consultant, physical health care, West London Mental Health NHS Trust

- Population ageing (van Langevelde et al, 2010; Chi and Raffetto, 2015)
- Falling activity levels (Department of Health [DH], 2011)
- Increasing numbers of adults who are overweight and obese (Lumley et al, 2015; Public Health England [PHE], 2016).

PRINCIPLES OF DIAGNOSIS AND TREATMENT

It is important to diagnose venous eczema accurately, and to identify and treat any associated problems, such as infection, and work with the patient to maintain health and wellbeing and improve quality of life (*Figure 2*).

Diagnosis of venous eczema

This is made on the basis of clinical features (Bergan et al, 2006; Middleton, 2007; *Table 2*). Venous eczema can be misdiagnosed as 'bilateral cellulitis' (Nazarko, 2013), with research indicating that around 28–33% of people diagnosed as having cellulitis are misdiagnosed (David et al, 2011; Levell et al, 2011). Around half of those cases of misdiagnosed cellulitis are venous eczema, a smaller percentage are lymphoedema and lipodermatosclerosis (Quartey-Papafio,1999; Cox, 2002; Levell et al, 2011). *Table 2* outlines the clinical features of lipodermatosclerosis, venous eczema and cellulitis.

Table 1: CEAP classification — chronic venous disorders (Eklof et al, 2004)

C0	No visible or palpable signs of venous disease
C1	Telangiectasia (spider veins) or reticular veins
C2	Varicose veins, distinguished from reticular veins by a diameter of 3mm or more
C3	Oedema
C4	Changes in skin and subcutaneous tissue secondary to chronic venous disease, divided into two sub-classes to better define the differing severity of venous disease
C4a	Pigmentation or eczema
C4b	Lipodermatosclerosis or atrophie blanche
C5	Healed venous ulcer
C6	Active venous ulcer

The facts... pathophysiology of venous disease

Arteries bring oxygenated blood from the heart and veins return de-oxygenated blood back to the heart. The legs contain deep and superficial veins and these contain valves that prevent backflow of blood (*Figure 1*).

The deep veins in the legs can be damaged by conditions that raise venous pressure. These include pregnancy, obesity, abdominal tumours or direct injury such as a thrombosis in one of the deep veins in the legs (deep vein thrombosis [DVT]). High pressure stretches and pushes the valve apart and they becomes damaged and no longer work effectively. This leads to a further increase in pressure and failure of the next valve along, which results in established high pressure in the veins — chronic venous hypertension causing backflow of blood into the thin walled superficial veins, which subsequently become stretched and dilated. This causes further backflow of blood and increased pressure in the superficial veins and capillary distension, which leads to blood and plasma leaking into the tissues. It is thought that this results in an inflammatory reaction resulting in venous eczema and skin damage (National Institute for Health and Care Excellence [NICE], 2012; NHS Choices, 2015; National Eczema Society, 2015; British Association of Dermatologists [BAD], 2016).

Treatment and management

Pigmentary changes (commonly referred to as staining) are common in venous eczema, and it is important to differentiate between inflammatory changes that may require treatment and pigmentary changes that do not (*Figure 3*).

Pigmentation changes occur because high venous pressure causes blood to leak from the capillaries into the tissues. The haemoglobin in the blood is oxidised and haemosiderin deposition occurs. This leads to the skin on the lower legs becoming red or brown. Staining is an important indicator of venous disease but can be confused with infection, as clinicians misinterpret the colour change as indicative of infection despite the lack of clinical indications (Graham et al, 2003). Clinically, staining looks brown or reddish brown while inflamed skin is redder. Skin that is stained feels and looks smooth. Inflamed skin feels and looks a little lumpy and bumpy. *Figures 3* and *4* illustrate the differences.

Treating red itchy inflamed skin

The role of topical steroids in managing flare ups

Emollients are essential in the treatment of venous eczema and should be used at least once a day and more often if needed (Barron et al, 2007; Nazarko, 2010). Steroids are used in conjunction with emollients to treat acute and subacute flare ups of eczema. The order in which these should be applied is not known, however they should be applied 30 minutes apart (Ladva, 2012).

Steroids are an essential aspect of treatment of severe venous eczema, with topical steroids being classified according to potency (*Figure 5*). Steroid creams are usually applied daily, and application of potent steroids, such as betamethasone valerate 0.1%, will flatten raised red patches of skin and treat inflammation (Oakley, 2014). They should be applied for at least two weeks, as discontinuing early can

Practice point

Some features of venous eczema require treatment, while others do not.

Table 2: Clinical features of lipodermatosclerosis, venous eczema and cellulitis

	Lipodermatosclerosis	Venous eczema	Cellulitis
Symptoms	No fever	No fever	May have fever
	Pain and discomfort	Itching	Painful
	History of varicose veins or DVT	History of varicose veins or DVT	No relevant history
Signs	Does not feel generally unwell	Normal temperature	May experience chills, feels sweaty and unwell
	Bilateral	Bilateral	Unilateral
	Erythematous, inflamed	Erythematous, inflamed	Erythematous, inflamed
	No tenderness	No tenderness	Tenderness
	Hardening and thickening of the skin	Vesicles	One or a few bullae
	Woody feel to skin	Crusting	Skin does not feel woody
	Small white star-shaped scarred areas (atrophie blanche)	Lesions on other parts of the body, particularly other leg and arms	Absent
	Changes in pigment may be present (haemosiderin staining)	Changes in pigment may be present (haemosidering staining)	Absent
	Legs shaped like inverted champagne bottles	Varicose veins may be present	Leg shape normal
Portal of entry	Not applicable	Not applicable	Usually unknown, but break in skin, ulcers, trauma, athlete's foot implicated

lead to recurrence. However, long-term use should be avoided as they can cause the skin to thin (Abraham and Roga, 2014).

It is important to apply sufficient cream to treat skin effectively. The fingertip unit (FTU; i.e. 0.5g of ointment) is a practical way to work out how much steroid cream to apply. An adult lower leg requires approximately three FTUs (depending on the size of the leg).

If not managed appropriately, venous eczema can lead to dry, thickened, scaly cracked skin that can easily become infected (*Figure 6*).

Treating scale and lichenified skin

Chronic eczema causes skin changes such as dryness and thickened areas of skin (*Figure 6*). This is known as lichenification. Hyperkeratotic (thickened areas of scale and skin) skin should be removed to promote comfort and skin health. Mechanical debridement was once popular, but removing dead tissue with wet or dry gauze is now considered to be potentially harmful (Vowden and Vowden, 2011), and there are new products available to remove dry dead skin, such as Debrisoft® (an active debridement pad, Activa Healthcare) and UCS™ debridement cloth (a pre-moistened single-use cloth, medi UK).

Emollient therapy is more effective when scale and lichenified skin is removed, as emollients can penetrate the skin and hydrate it more effectively.

Role of emollient therapy in maintaining skin health

Combined with gentle skin cleansing, emollient therapy is essential to maintain skin health when a person has venous eczema, and should be prescribed as part of the treatment plan and ongoing care. Prescribing decisions should be based on a number of factors, including skin condition and patient preference (*Table 3*).

The stickiness and thickness of an emollient is a guide to lipid content:

Practice point

When venous eczema is diagnosed the clinical priorities are to assess and treat symptoms. Common problems include infected venous eczema, weeping eczema, itching, dryness, scale and leg swelling.

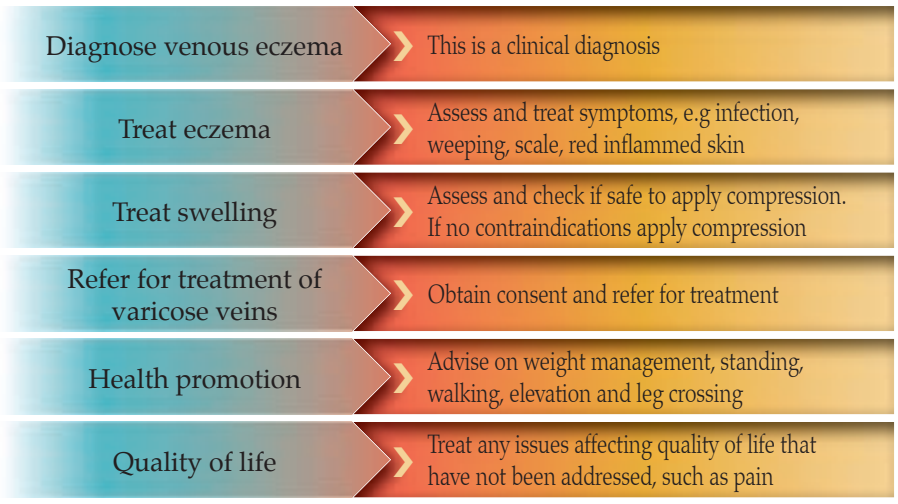

Figure 2. *Principles of diagnosis and treatment.*

Figure 3. *Red, inflamed skin in venous eczema.*

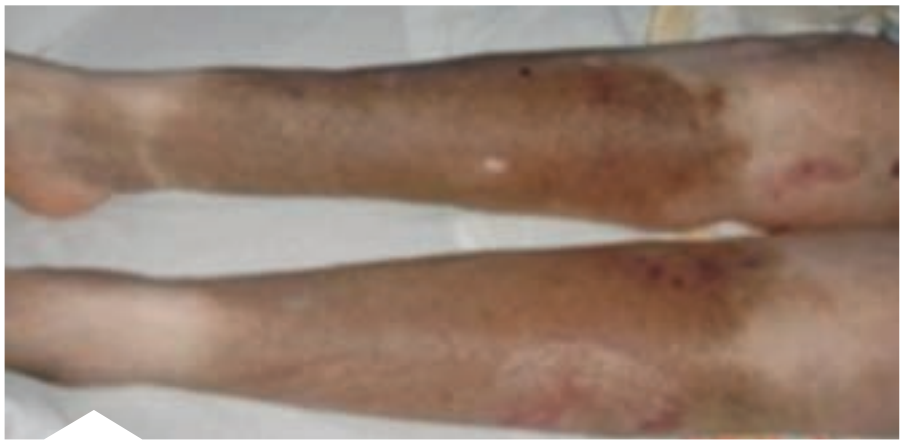

Figure 4. *Pigmentary changes in venous disease. Staining does not need treatment.*

- Lotions have the lowest lipid content and are light and easily absorbed
- Creams have higher lipid content
- Ointments have the highest lipid content.

Thus, it is important to provide a preparation that the patient finds effective and acceptable (British Dermatological Nursing Group [BDNG], 2012; NICE, 2015a).

Sometimes people with dry skin do not apply emollients frequently enough. If this is a problem, or if the person is reliant on others to apply emollients, it can be helpful to supply ointment or liquid and soft paraffin as these moisturise for longer. Creams containing urea can also be helpful, as urea is an effective moisturiser and reduces scale (Oakley, 2014).

Prescribers should prescribe generously — an adult can require 500 grams of emollient a week (NICE, 2015a) — and nurses should encourage patients to apply sufficient emollient to hydrate the skin (Nazarko, 2015). Healthcare professionals should be aware that some ointments, such as 50/50 liquid and soft paraffin, can make hard surfaces such as floors and chairs slippery and increase the risk of falls. The use of non-slip slippers can reduce these risks. Patients should also be advised not to smoke or come in contact with naked flames when using paraffin-based emollients (BDNG, 2012).

Diagnosis and treatment of infected venous eczema

It is important to check for clinical features of systemic infection. Systemic infection should be treated with antibiotics according to local antibiotic guidance, with a wound swab being taken to check that the infection is sensitive to the prescribed antibiotic. The nurse should check that the patient and the wound are responding clinically to antimicrobial treatment. *Figure 7* shows a patient's leg before and after 10 days of treatment with oral antibiotics, potassium permanganate soaks, topical steroid and emollient therapy.

Very potent	*Clarelux, Dermovate, Etrivex, Nerisone Forte*
Potent	*Beclometasone dipropionate 0.025%, Betamethasone valerate 0.1%, Betacap, Betesil, Bettamousse, Betnovate, Cutivate, Diprosone, Elocon, Hydrocortisone butyrate, Locoid, Locoid Crelo, Metosyn, Mometasone furoate 0.1%, Nerisone, Synalar*
Moderate	*Betnovate-RD, Eumovate, Haelan, Modrasone, Synalar 1 in 4 Dilution, Ultralanum Plain*
Mild	*Hydrocortisone 0.1–2.5%, Dioderm, Mildison, Synalar 1 in 10 dilution*

Figure 5. *Steroid creams by potency (British National Formulary [BNF], 2017).*

Top tip:

Emollient therapy maintains skin hydration and health and reduces the risks of flare ups, infection and the development of scale.

Treatment of weeping eczema

If eczema is present, the skin is normally dry and can be red and cracked. When the skin weeps fluid, this is known as 'weeping eczema' and indicates infection (NHS Choices, 2015).

Potassium permanganate soaks (see below) have astringent properties and dry up weeping infected eczema. Although potassium permanganate is also thought to have antiseptic agents (Nygen, 2013; BAD, 2015), recent research suggested that it is not effective against *Staphylococcus aureus* (Leitch et al, 2015).

A bucket is lined with a black plastic bag to reduce the risk of infection if being used for more than one patient. One potassium permanganate tablet (Permitabs®, Alliance Pharmaceuticals) dissolved in four litres of warm water gives 1:10,000 solution. The water should be stirred to ensure that the tablet

Red Flag

Potassium permanganate preparations should be stored carefully, as there were 43 reported incidents of accidental ingestion between 2011 and 2014, in one of those cases the patient died. Ingesting potassium permanganate can lead to local inflammation that blocks the airway and could cause death. It can also lead to perforations of the gastrointestinal tract, and can cause death through toxicity and organ failure (NHS England, 2014).

Practice point

Standard assessment should always be carried out by a trained and competent practitioner to determine if it is safe to apply compression (Beldon, 2010; Todd, 2016). This should include using a hand-held Doppler to calculate the ankle brachial pressure index (ABPI) (Scottish Intercollegiate Guidelines Network [SIGN], 2010). Compression should not be used if there are contraindications such as peripheral arterial disease (PAD).

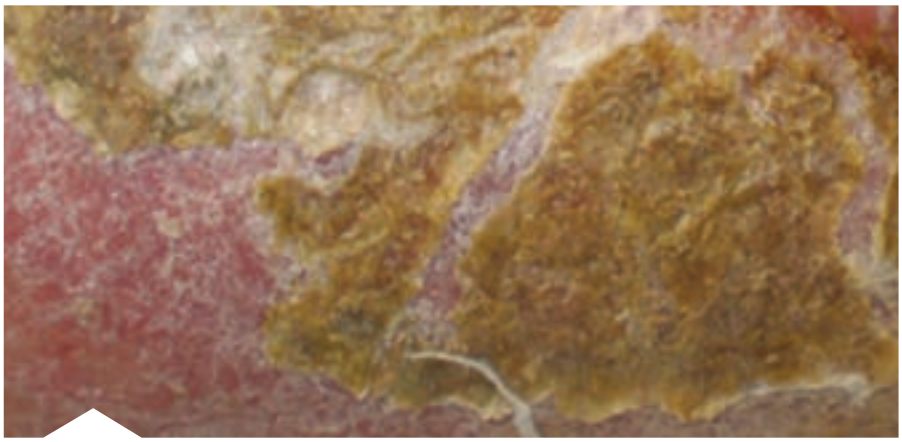

Figure 6. *Skin changes in venous eczema.*

has fully dissolved. The leg is soaked once or twice a day for 10 to 20 minutes. Applying soft paraffin to the toenails before soaking prevents toenail staining. The skin will be stained brown, but the stain wears off as skin is shed. The soaks should be stopped as soon as the skin dries up and stops weeping, which usually takes 3–5 days (Patel et al, 2001b).

REFERRAL FOR TREATMENT

NICE (2013b) guidance recommends that people who have primary or symptomatic recurrent varicose veins, lower-limb skin changes, such as pigmentation or eczema, superficial vein thrombosis and suspected venous incompetence, venous ulcers or a healed venous leg ulcer should be referred for assessment and treatment in a vascular service. NICE also recommends a range of treatment, dependent on the severity of varicose veins. Treatments include endothermal ablation, endovenous laser treatment of the long saphenous vein, ultrasound guided foam sclerotherapy and surgery. Anecdotal evidence suggests that despite NICE guidance, many clinical commissioning groups (CCGs) have restrictive criteria that make it extremely difficult to have varicose veins treated, as treatment is considered 'cosmetic'.

TREAT SWELLING

Compression hosiery (or bandaging) can help those who are unsuitable for active treatment of varicose veins, or who are awaiting treatment for varicose veins which have led to venous eczema. People with venous eczema often have aching swollen legs because the venous pump action is infective, with the swelling increasing the risks of skin deterioration.

If severe, compression bandages can be applied by a competent healthcare professional to reduce swelling. Once this has settled, compression stockings/garments can be used to control swelling and alleviate pain on a long-term basis (Oakley, 2014).

If legs are swollen, they also need to be elevated above hip level to help reduce swelling. However, this can be uncomfortable for people who have osteoarthritis. If this is the case, patients should be advised to stretch out on the sofa when watching television and, ideally, to rest their feet on a pillow on the arm of the sofa. Elevating the foot of the bed at night also helps. If this is difficult,

Table 3: Summary of guidance on emollient prescribing (NICE, 2013a)

Consideration	Recommendation
Dryness of skin	› Mild-to-moderately dry — use creams › Moderate-to-severely dry — use ointments
Weeping dermatitis	› Use creams, as ointments will tend to slide off, becoming unacceptably messy
Frequency of application	› Creams are better tolerated but need to be applied more frequently and generously to have the same effect as a single application of ointment
Choice and acceptability	› Take account of the individual's preference, determined by the product's tolerability and convenience of use
Efficacy and acceptance	› Only a trial of treatment can determine if the individual finds the product tolerable and convenient
One size does not fit all	› More than one kind of product may be required. The intensity and area of treatment should guide choice
Balancing acceptability and effectiveness	› The individual (and prescriber) need to balance the effectiveness, tolerability and convenience of a product

Top tip:

Healthcare professionals should work with the person living with venous disease to promote health and wellbeing. This includes advice on weight loss, taking exercise and avoiding prolonged standing. Walking and exercises such as ankle dorsiflexion and plantar flexion increase venous return, which helps maintain skin health. It is also important to advise patients not to sit with legs crossed and to elevate legs when possible (BAD, 2016).

pillows can be put under the mattress to elevate the foot of the bed.

CONCLUSION

Venous disease and venous eczema can affect quality of life (González-Consuegra and Verdú, 2011; Maddox, 2012), and if not managed appropriately can lead to further deterioration in health and quality of life. Healthcare professionals are in a unique position to work with the person to treat existing problems and manage venous disease to reduce the risk of further complications and improve well-being. **SCT**

Figure 7. *Patient's leg after ten days of treatment for infected venous eczema.*

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Periwound skin care

Most nurses are familiar with the basics of good wound care. But what about the skin surrounding the wound? Here, *Skin Care Today* looks at the care of the periwound area, and its importance in preventing further wound breakdown.

1 Why is the periwound skin important?

Nurses can often make the mistake of focusing exclusively on the wound itself without taking into consideration the condition of the periwound skin. Overlooking this vulnerable area around the wound, however, can result in its breakdown and extended wound margins. The integrity of the often fragile periwound skin is easily breached if wound symptoms are not managed effectively. For example, the application of the wrong dressing to a heavily exuding wound or fragile skin can result in damage and increased wound size. This can be avoided through careful assessment and dressing selection.

Ongoing assessment of the wound and surrounding skin is a key factor in protecting the periwound skin and nurses need to be aware that wound conditions such as exudate volume can change over time. It is important to select management options that provide an optimum environment for wound healing while protecting the surrounding skin according to local conditions at the time of assessment.

Here, we examine the factors that can affect the periwound skin, as well as techniques and products that nurses can employ to minimise damage to this vulnerable area.

2 The effects of exudate

Normal wound exudate produced during the inflammatory phase of healing is rich in enzymes and growth factors required for the wound-healing process. In acute wounds, as healing progresses, the amount of exudate gradually decreases. However, chronic wounds become stuck in a prolonged inflammatory stage and the components of chronic wound fluid become dysfunctional, resulting in damage to the wound bed and surrounding skin. If not managed, chronic wound exudate can leak onto the periwound skin, where the enzymes contained within the wound fluid can begin to break down the vulnerable and delicate skin.

3 What is maceration?

Over-hydration of the epidemis which leads to softening of the tissues is known as maceration. It usually develops when a wound dressing is unable to handle the volume of exudate, which, as a result, overflows onto the surrounding skin. It can be seen as a white 'soggy' discolouration around the wound edge (such as that seen on the skin after prolonged bathing).

In patients with venous leg ulcers, for example, who sit with their legs down, the maceration may be seen at the base of the wound, where the force of gravity has caused the wound fluid to pool.

Macerated skin is weaker than normal skin and vulnerable to trauma and the corrosive effects of wound exudate. It is also more vulnerable to bacterial and fungal infections due to the warm and moist conditions created by wound dressings.

Extended contact with wound exudate can also lead to other symptoms such as the periwound skin becoming red and inflamed; there may also be burning, stinging pain and itching around the affected area.

4 The danger of skin stripping

Repeatedly removing and applying adhesive tapes and dressings will eventually result in stripping of the stratum corneum, the outermost layer of the epidermis. This outermost skin layer is responsible for the skin's integrity and barrier function. Incorrectly removing wound dressings can also cause skin stripping, i.e. when they are removed too quickly. Similarly, some dressing types should be avoided in patients with a fragile periwound area, due to their effect on the skin when they are removed. These include any dressings, films or fixing tapes that contain an adhesive.

When removing a dressing, nurses should follow the guidelines of the manufacturer for removal. Ideally the surrounding skin should be supported with one hand before gently lifting the dressing away with the other hand. Similarly, loosening the edges of the dressing

first can help with atraumatic removal, as can applying water to the dressing's edges to break the adhesive bond. Medical adhesive removers are also available. Another strategy may be to encourage the patient to remove their own dressing; this can help to avoid excessive pain and skin damage as the patient removes the dressing according to their own comfort.

Some dressings are specifically designed to reduce the damage caused by dressing removal. Some contain silicone, which helps to ease the potential pain and trauma of skin stripping in patients with fragile skin.

5 Using skin barrier products

Applying barrier products such as zinc oxide paste BP and petrolatum-containing emollients can help to protect the periwound area from maceration. Zinc oxide paste is recommended when protecting the periwound skin around venous leg ulcers, however, it can obscure the wound, making assessment difficult. Emollients containing liquid paraffin BP form an external barrier against moisture, however, they can 'melt' due to the patient's body temperature and leak into the wound. Nurses also need to be aware that the paraffin contained in these products can interfere with silver-containing wound treatments. It is always important to check the manufacturer's instructions before application.

More recently, liquid-forming acrylate skin barrier products have been introduced. These are mainly delivered via liquid spray, creams or wipes and form a barrier film against wound fluid on the skin's surface. These barrier films are suitable for use on both intact and broken skin and are alcohol-free and non-stinging. The cream version also has moisturising properties. Nurses need to ensure that they select the right product for the individual patient and avoid a 'one size fits all' approach.

6 Using the correct dressing

One of the main steps in protecting the periwound skin is to prevent wound fluid from coming into contact with the skin in the first place. There are various dressings designed to manage exudate, but it is beyond the scope of this article to describe in detail all the different categories of dressings available for exudate management. However, it is important that nurses select one from their local formulary that can manage the volume of wound fluid produced while maintaining moisture balance within the wound bed, and which will not damage the periwound skin during wear or on application or removal.

Foam dressings are commonly used as they are designed to deal with varying quanitities of exudate and are available with different degrees of absorbency — some can adapt the volume of moisture they absorb by allowing exudate to evaporate from the dressing into the atmosphere to maintain a moist wound environment. The speed at which an individual dressing does this is known as its moisture vapour transmission rate (MVTR).

Superabsorbent dressings are also available and, as the name, suggests they are capable of holding a large volume of exudate. Superabsorbents consist of multiple elements including a wound contact layer, an inner core of absorbent fibres, powders, crystals or gel, and a fluid-repellent backing. Some superabsorbent dressings absorb exudate via osmosis; others use a capillary action where exudate is absorbed and retained within the hydrophilic layer of the dressing.

It is important to remember that dressings alone are not enough to deal with large quantities of exudate. The patient must be assessed holistically to identify underlying conditions that may be contributing to excess exudate production. A sudden increase in exudate volume may be a sign of wound infection which will need addressing if the volume is to be reduced.

Conclusion

Overlooking the vulnerable skin around a wound can result in trauma and pain for the patient, and a deteriorating and extending wound. Conditions such as maceration and skin stripping that affect the periwound area can be prevented, however, with careful assessment and selection of the right barrier products and dressings.

Continuous assessment is the primary principle when managing periwound skin and nurses need to continuously monitor any fragile areas. They also need to be aware that exudate volume can change over time and ensure that they select the most appropriate dressing and barrier products to protect the skin.

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  - Cetraben ointment ranked as the most preferred ointment versus leading brands[2]
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1. Preference study, September 2013. Data on file. 2. Preference study, August 2014. Data on file.

ABBREVIATED PRESCRIBING INFORMATION:

Cetraben® Ointment Presentation: An opaque white ointment. **Main ingredients:** White soft paraffin 35.0% w/w, Light liquid paraffin 45.0% w/w. **Indications:** An emollient used to moisturise and soften dry skin in eczema, dry cases of psoriasis and other dry skin conditions. Also used as a skin cleanser or bath additive. **Dosage and Administration:** Adults, the elderly and children: **As an emollient:** Apply to the affected areas as often as required. Smooth gently into the skin, following direction of the hair growth. **As a bath additive:** Melt about 4g in hot water in a suitable container then add to the bath. **As a soap substitute:** Take a small amount of the ointment and lather it under warm water and use as required when washing or in the shower. Pat skin dry. **Contraindications:** Hypersensitivity to any of the ingredients. **Precautions:** For external use only. May cause local skin reactions. Avoid contact with eyes. Baths and showers may become slippery when used. If this product comes into contact with dressings and clothes, it can be more easily ignited with a naked flame. Keep away from fire when using this product. Do not use if you are allergic to any of the ingredients listed. Talk to your doctor before use if the skin is badly cracked, infected or bleeding. **Pregnancy and breastfeeding:** Unlikely to have any ill effect when used as directed. If unsure, talk to your doctor or pharmacist. **Side effects:** None known. **Pack size:** 50g, 125g & 450g. **Trade Price:** **125g:** £3.49 **450g:** £5.39 **Medical Device:** Class I. **Manufacturer:** Thornton & Ross Limited, Huddersfield, HD7 5QH, UK. **Date of preparation:** 05.11.2015.

Cetraben® Emollient Bath Additive Light Liquid Paraffin Please refer to Summary of Product Characteristics before prescribing. **Presentations:** Bath additive – Clear liquid containing lightliquid paraffin 82.8% w/w. **Indications:** Symptomatic relief of red, inflamed, damaged, dry or chapped skin, especially when associated with endogenous or exogenous eczema. **Dosage:** Bath additive – Adults: Add one or two capfuls; Children: add half/one capful to a warm water bath or apply with a wet sponge to wet skin before showering. **Contra-indications:** Hypersensitivity to any of the ingredients. **Special Warnings and Precautions:** Care should be taken if allergy to any of the ingredients is suspected. Care should also be exercised when entering or leaving the bath. Avoid contact with the eyes. **Side Effects:** Very rarely, mild skin reactions have been seen **Marketing Authorisation Numbers:** Cetraben Emollient Bath Additive: PL 06831/0260 **Basic NHS Price:** £5.75 **Legal Category:** GSL. **Date of Preparation:** November 2015. **Further Information is available from:** Genus Pharmaceuticals Ltd, Linthwaite, Huddersfield, HD7 5QH, UK. Cetraben® is a registered trademark. CETBA.API.V11.

Cetraben® Cream Presentation: A thick white cream. **Main ingredients:** White soft paraffin 13.2% w/w, Light liquid paraffin 10.5% w/w. **Indications:** An emollient, moisturising and protective cream for the symptomatic relief of red, inflamed, dry or chapped skin, especially when associated with eczema. **Dosage and Administration:** Adults, the elderly and children: Apply to dry skin areas as often as required and rub in. **Contraindications:** Hypersensitivity to any of the ingredients. **Precautions:** For external use only. May cause local skin reactions. Avoid contact with eyes. Talk to your doctor before use if the skin is badly cracked, infected or bleeding. Do not use if allergic to any of the ingredients. Children under 1 year should be treated under medical supervision. **Pregnancy and breastfeeding:** Using Cetraben Cream during pregnancy and breastfeeding is unlikely to have any ill effects. If unsure, talk to your doctor or pharmacist. **Side effects:** Mild allergic skin reactions. **Pack size:** 50g, 150g, 500g, 1050g Rx packs, 50ml, 200ml & 500ml (with 475ml fill) OTC packs. **Trade Price:** **50g:** £1.40 **150g:** £3.98 **500g:** £5.99 **1050g:** £11.62 **50ml OTC:** £3.00 **200ml OTC:** £4.80 **500ml (with 475ml fill) OTC:** £7.25 **Medical Device:** Class I. **Legal Manufacturer:** Thornton & Ross Limited, Huddersfield, HD7 5QH, UK. **Date of preparation:** 13.05.2016.

Cetraben® Lotion Presentation: A smooth white lotion. **Main ingredients:** White soft paraffin 5.0% w/w, Light liquid paraffin 4.0% w/w. **Indications:** For the relief of the symptoms of eczema, dermatitis and other dry skin conditions. **Dosage and Administration:** Adults, the elderly and children: Apply to the skin and gently rub in until absorbed. Use as often as required, or as directed by your doctor or pharmacist. **Contraindications:** Hypersensitivity to any of the ingredients. **Precautions:** For external use only. Do not swallow. Avoid contact with eyes. May cause local skin reactions. Talk to your doctor before use if the skin is badly cracked, infected or bleeding. Do not use if allergic to any of the ingredients. **Pregnancy and breastfeeding:** Using Cetraben Lotion during pregnancy and breastfeeding is unlikely to have any ill effects. If unsure, talk to your doctor or pharmacist. **Side effects:** Mild allergic skin reactions. **Pack size:** 200ml & 500ml Rx packs, 50ml, 200ml & 500ml (with 475ml fill) OTC packs. **Trade Price:** 200ml: £4.00 500ml: £5.64 50ml OTC: £3.00 200ml OTC: £4.80 500ml (with 475ml fill) OTC: £7.25 **Medical Device:** Class I. **Legal Manufacturer:** Thornton & Ross Limited, Huddersfield, HD7 5QH, UK. **Date of preparation:** 05.11.2015.

Adverse events should be reported. Reporting forms and information can be found at www.yellowcard.mhra.gov.uk. Adverse events should also be reported to Medical Information on 0870 851 207

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