The management of atopic eczema in the community setting

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Atopic eczema is a distressing and complex skin condition that has no cure. However, with good support, education and the correct application of topical treatments it can be well-controlled. Community nurses can provide patients with information about their condition, how to apply their topical treatment effectively and how to manage flares and maintain a routine that will improve the eczema and the patient’s quality of life. Any information provided should be reinforced with written information and a treatment plan, with follow-up support offered as needed.

KEYWORDS:
Dermatology ■ Atopic eczema ■ Skin care guidance

Atopic eczema is a frustrating and complex skin condition that has no cure. However, with good support, education and the correct application of topical treatments it can be well-controlled. Community nurses can provide patients with information about their condition, how to apply their topical treatment effectively and how to manage flares and maintain a routine that will improve the eczema and the patient’s quality of life. Any information provided should be reinforced with written information and a treatment plan, with follow-up support offered as needed.

Atopic eczema commonly begins in infancy with approximately 60% of children growing out of the condition by adolescence (Baron et al, 2012). However, in about one-third of people, a chronic persistent course of atopic eczema continues into adulthood (Garmhausen et al, 2013).

Atopic eczema is a complex condition caused by several factors involving genetic mutations and skin hyperactivity to environmental stimuli. Mutations in the gene that encodes filaggrin (a protein that plays a role in epidermal haemostasis) has been identified as a factor in the development of atopic eczema (Palmer et al, 2006). Filaggrin has a pivotal role in maintaining the skin barrier, and loss of this function results in dry skin and a strong predisposition to eczema (Williams and Grindlay, 2009). In addition, the skin’s contact with detergents and soaps can have a further detrimental effect on barrier function, causing dryness (Cork et al, 2006).

Other factors include exposure to allergens such as house dust mites, *Staphylococcus aureus* infections, excessive heat and contact with irritants that disrupt the barrier function of the skin (British Association of Dermatologists [BAD], 2013).

Atopic eczema is a chronic condition, causing pruritic inflammation of the epidermis and dermis resulting in thickened, dry cracking skin, which can also be painful. Acute flares can arise resulting in erythema, vesicles and oedema, which can produce scaly, crusty skin prone to infection. Pruritis can be severe, causing scratching, further exacerbation, infection and pain. Diagnosis is usually obtained from patient history, family history of atopy and clinical appearance.

The key to supporting patients in managing atopic eczema is providing time to explain the condition, discussing the application of topical treatment, the avoidance of exacerbating factors and reviewing and assessing their progress to treatment.

COMPLETE EMOLLIENT THERAPY

In atopic eczema the defect in barrier function results in a lack of natural oils. This leads to water loss and increased susceptibility to irritants and penetration of allergy-
For those patients with dry skin conditions such as eczema, The British Association of Dermatologists guidelines advise that the use of soap or detergent based products can exacerbate their symptoms. They recommend the use of soap substitutes.

Doublebase Bath, Wash and Shower provide an effective alternative to the harshness of soap. They all contain a non-foaming soap substitute, which gently cleanses the skin, and a humectant which attracts water to moisturise the skin. The high oil content softens the skin and protects against dryness.

**Doublebase™ Emollient Shower Gel**
Isopropyl myristate 15% w/w, liquid paraffin 15% w/w.
Uses: Highly moisturising and protective hydrating gels for dry skin conditions. Directions: Adults, children and the elderly: Use regularly, as required, as soap substitutes.

**Doublebase™ Emollient Wash Gel**
Isopropyl myristate 15% w/w, liquid paraffin 15% w/w.
Uses: For the relief of dry skin conditions. Directions: Adults, children and the elderly: Add to a bath of warm water. Soak and pat dry.

**Doublebase™ Emollient Bath Additive**
Liquid paraffin 65% w/w.
Uses: For the relief of dry skin conditions. Directions: Adults, children and the elderly: Add 200ml to warm water. Soak and pat dry.

Contra-indications, warnings, side effects etc: Please refer to SPC for full details before prescribing. Do not use if sensitive to any of the ingredients. In the rare event of a reaction stop treatment. Take care not to slip in the bath or shower. Package quantities, NHS prices and MA numbers: Doublebase Shower: 200g shower pack £5.21, PL00173/0196. Doublebase Wash: 200g pump dispenser £3.21, PL00173/0402. Doublebase Bath: 500ml bottle £5.45, PL00173/0200.

Legal categories: Doublebase Shower & Doublebase Wash GSL, MA holder: Dermal Laboratories, Tatmore Place, Gosmore, Hitchin, Herts, SG4 7QR. Date of preparation: January 2014. ‘Doublebase’ is a trademark.

Adverse events should be reported. Reporting forms and information can be found at www.mhra.gov.uk/yellowcard. Adverse events should also be reported to Dermal.

inducing substances causing itch and inflammation. Further drying and irritation of the skin can be lessened by avoidance of soaps and detergents, which contain perfumes and preservatives.

Complete emollient therapy is the mainstay of treatment (BAD, 2013). Regular application of a moisturiser, washing with a soap substitute and using a moisturising bath or shower oil will provide moisture to the skin, which helps to prevent further water loss (DermNet NZ, 2013a) and the desire to scratch.

**BATHING**

Daily bathing is advised to cleanse and hydrate the skin and reduce the risk of infection. Certain bath additives contain antimicrobial, antiseptic and/or antipruritic properties designed to reduce bacterial load and calm the intense itch provoked by atopic eczema. Antiseptic/antimicrobial preparations should not be used regularly unless infection is recurrent or widespread (British Medical Association and Royal Pharmaceutical Society of Great Britain [BMA/RPS], 2013).

Bath emollients are added to running bath water and some can be applied to wet skin and showered off. These products leave a layer of oil on the skin that seals-in moisture. Bathing should ideally be restricted to 15 minutes to prevent disruption of the skin’s barrier function (British Dermatological Nursing Group [BDNG], 2012).

Soap substitutes are used to cleanse the skin without removing natural oils and they can be applied directly to the skin and rinsed off. A majority of cream-based moisturisers can be used as soap substitutes, and a wide range of products are available including gels, lotions, ointments and creams. After bathing or showering the skin should be gently patted dry, as vigorous rubbing can lead to increased irritation (BDNG, 2012).

**MOISTURISING**

Leave-on moisturisers are available in lotion, cream, ointment, gel and spray formulations. Due to the defective skin barrier function in atopic eczema, moisturisers should be applied to the skin in its entirety and not restricted to affected areas. Moisturisers should be applied even when the skin is clear (National Institute for Health and Clinical Excellence [NICE], 2007). They should also be prescribed in large quantities—at least 600g is recommended for an adult for a weekly, twice-daily whole-body application (BMA/RPS, 2013).

Ointment preparations can be more effective than creams, as they are greasier and do not contain preservatives. This prevents stinging when applied to inflamed skin. However, patient preference is vital in the choice of moisturiser and often a greasy product is not practical for use during the day or while at work. Often a cream-based product is advised for daytime use, and a greasier ointment for overnight application. It is important to find a moisturiser that suits each individual and this can be achieved by providing a variety of sample moisturisers for the patient to try out.

Aqueous cream was designed as a soap substitute, which is applied to the skin and then washed off (Cork and Danby, 2009). It is now recommended that aqueous creams are not used even as washing products (Moncrieff et al, 2013), as they have been shown to weaken the skin barrier and increase transepidermal water loss (Danby et al, 2011).

Spray-on emollients can improve treatment concordance (MacKenzie and Schofield, 2013), especially in adolescents, as they have a non-touch application technique and are quick and easy to apply.

Any moisturiser should be allowed to absorb into the skin before the application of an additional therapeutic product, such as topical steroids (BDNG, 2012). However, the use of aqueous cream as a leave-on moisturiser may increase the risk of skin reactions in eczema (BMA/RPS, 2013). Practical tips for application of emollients are provided in Table 1.

### Table 1: Practical tips for application of emollients (BDNG, 2012)

<table>
<thead>
<tr>
<th>Tip</th>
<th>Description</th>
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<tbody>
<tr>
<td>Use complete emollient therapy, comprising bath additives, soap substitutes and leave-on emollients</td>
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<tr>
<td>Bath oils can be added to the bath water or applied directly to damp skin as a soap substitute in the shower or bath and then rinsed off</td>
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<tr>
<td>Apply liberal amounts of topical leave-on moisturisers — approximately 500-600g per week</td>
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<tr>
<td>Apply leave-on moisturisers throughout the day</td>
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<tr>
<td>Always apply emollients in a downward motion following the direction of the hair to avoid folliculitis and excess rubbing</td>
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<tr>
<td>Use emollients directly after a bath/shower</td>
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<tr>
<td>Creams should be applied to ‘weepy’ skin</td>
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<tr>
<td>Greasy ointments are best applied to dry, scaly, lichenified and/or fissured skin</td>
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<tr>
<td>Do not stop emollients when eczema resolves. A daily emollient routine can help prevent flares</td>
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<tr>
<td>Always remember that the best emollients are the ones patients like, as they are more likely to apply them</td>
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<tr>
<td>To prevent moisturisers becoming contaminated, use clean implements to scoop products out of tubs or use sealed pump dispensers</td>
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<tr>
<td>Warn patients that paraffin-based products are flammable</td>
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**TOPICAL STEROIDS**

Topical steroids are effective in reducing the symptoms of inflammation through their anti-inflammatory, immunosuppressive, antiproliferative and vasoconstrictive actions (Ersser and Van Onselen, 2009). Topical steroids preparations are available in lotion, cream, ointment, gel, impregnated tape and mousse form, and in four different strengths:
- Mild
- Moderate
Answer the following questions about this topic, either to test the new knowledge you have gained or to form part of your ongoing practice development portfolio.

1 – What are the causes of atopic eczema?
2 – Who is most affected by the condition?
3 – Can you list the different symptoms of infected atopic eczema?
4 – List the main treatments for atopic eczema
5 – What are some of the pharmacological options?

- Potent
- Very potent.

Application should be performed in conjunction with a good moisturising regimen to enhance absorption, efficacy and ease of application. Topical steroids should be applied 30 minutes after applying a moisturiser to avoid diluting the steroid (BDNG, 2012).

Topical application is once-daily (Scottish Intercollegiate Guidelines Network [SIGN], 2011), with the strength of the steroid tailored to the severity, age and site of the eczema (Primary Care Dermatology Society [PCDS], 2013).

A step-up and step-down approach is recommended (NICE, 2007), which matches the strength of topical steroid to the severity of the eczema — once the eczema settles, the strength of steroid is decreased rather than being withdrawn altogether. If the eczema then flares-up again, the strength can be stepped-up (NICE 2007).

The use of a ‘steroid ladder’ aids the identification of steroid strength and a stepped-approach to treatment (Page and Robertson, 2004). The steroid ladder groups the topical steroids according to their strength — ‘very potent’, ‘potent’, ‘moderate’ and ‘mild’ — for ease of identification. The theory is illustrated as a step ladder to advise the user to ‘step-up or down’ the ladder, but not to ‘jump off’. In other words, it reminds patients to reduce the strength of steroid rather than ceasing treatment.

As a general rule, a weak preparation should be used on the face and genital areas, with a moderate or potent steroid applied elsewhere on the body (Baron et al, 2012).

The amount of corticosteroid is measured in finger-tip units, which comprise the distance from the tip of the adult index finger to the first joint. One finger-tip unit will adequately treat the surface area of two adult palms (Long and Finlay, 1991).

For frequent eczema flares, it is suggested that a potent topical steroid be applied to areas of inflammation once-daily for two weeks, then on alternate days for two weeks (PCDG, 2012). Once benefit is seen, the potency of steroid is reduced until they are discontinued.

As with moisturisers, steroid ointment preparations are preferable to creams due to the lack of stinging on application, which can enhance concordance (Baron et al, 2012). However, creams are advised in ‘weepy’ eczema (exhibiting exudate), due to their more effective drying action.

A clear careplan will enhance understanding and concordance with treatment, not only in patients but also in staff, where different nurses might be involved in treatment, for instance. This is particularly relevant as fears about using topical steroid therapy (due to its strength) can often lead to under-treatment, subsequent treatment failure and disillusionment (Smith et al, 2010).

Nurses should take time to thoroughly explain the benefits of topical treatments and formulate a treatment plan that fits into the patient’s daily life. A demonstration of the amount of topical treatment to apply to certain areas, along with application techniques, can improve patient confidence. Written information can also help patients’ understanding and concordance with treatment regimens.

TOPICAL CALCINEURIN INHIBITORS

Topical calcineurin inhibitors are immuno-modulating agents licensed for the treatment of atopic eczema (BMA/RPS, 2013). Their main benefit is that they are not steroid-based and do not cause skin atrophy. They are considered if topical steroid treatment has failed, or where there is a risk of adverse effects from further topical steroid use (NICE, 2004). Treatment is usually initiated by a dermatologist (BAD, 2013).

Topical calcineurin inhibitors include creams and ointments incorporating tacrolimus and pimecrolimus. The commonest side-effect of topical calcineurin inhibitors is stinging on application, which usually settles after a few applications but they should be discontinued if the skin becomes infected (BAD, 2013). Twice-weekly applications of tacrolimus ointment in patients with stable eczema can prevent further exacerbations (BMA/RPS, 2013).

MANAGING INFECTED ECZEMA

Atopic eczema often flares due to infection. This is commonly associated with Staphylococcus aureus, however, the herpes simplex virus can also be involved (BAD, 2013). Signs of bacterial infection include:

- Weeping
- Yellow crusts
- Pustules
- Erythema
- Excoriation
- Rapidly worsening eczema
- Failure of eczema to respond to treatment.

In the case of infected eczema, combined antimicrobial and corticosteroid ointments can be applied for short periods. However, if the infection is widespread, a seven-day course of an oral antibiotic such as

Five-minute test

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as flucloxacillin may be required (PCDS, 2013), in conjunction with a topical steroid and emollient therapy. Bath additives with antimicrobial agents can also be useful in reducing the bacterial load on the skin.

Once the infection has settled, antibacterial products should be avoided unless infection is evident or a frequent complication (BMA/RPS, 2013), otherwise plain bath products are advised.

Patients with atopic eczema are more prone to viral infections, particularly involving the herpes simplex virus. It is important for patients to recognise the signs of herpes simplex infection, as this can spread rapidly causing severe eczema herpeticum (DermNet NZ, 2013b). Eczema herpeticum is indicated by the presence of grouped vesicles, punched-out erosions and generalised illness, and can cause a painful widespread flare of eczema. Prompt treatment is therefore essential. Topical steroids should be stopped and SIGN (2011) recommend an emergency dermatology referral.

**AVOIDING ENVIRONMENTAL IRRITANTS**

Nurses should allow time for discussions with the patient on any potential exacerbating factors, and extremes in temperature, and clothing containing synthetic fibres or wool are best avoided. Practical tips include keeping the fingernails short to prevent damage from scratching, the use of comfortable cotton clothing and bedding, and not using soap and detergents, which might cause further drying of the skin (National Eczema Society [NES], 2013).

An understanding of the causes of atopic eczema and the common factors that can cause flares in the condition — such as general ill-health — can forewarn the patient of the need to step-up treatment application at certain times (Baron et al, 2012). Also, an acceptance of the need to continually apply emollient therapy — even when the skin is clear of eczema — to maintain good skin barrier function will help to prevent flares (Baron et al, 2012).

**OTHER TREATMENT STRATEGIES**

Medicated bandages impregnated with zinc paste or ichthammol are effective for soothing and cooling inflamed, excoriated eczema (Ersser, 2010), and softening chronic thickened or lichenified skin (NICE, 2007). These products can provide some relief from itching and provide protection from scratching.

Paste bandages can also be useful in occluding chronically excoriated areas and can be applied over moisturisers and topical steroid therapy. They should be applied in an incomplete spiral fashion, folding back or cutting the bandage into individual strips to prevent tightening — and secured with a further tubular bandage. They can be left in place for 12–24 hours. The occlusion provided by bandaging will increase skin hydration and improve the penetration of topical steroids, although the potency of the topical steroid used should be considered due to enhanced absorption (McAleer et al, 2012). However, occlusive dressings should not be used on weepy, infected eczema (PCDG, 2013) and application can be time-consuming and messy.

In atopic eczema, the short-term use of sedating antihistamines at night may be useful if flares are causing sleep disturbance (SIGN, 2011). There seems to be no need for non-sedating antihistamines unless for co-existent hay fever (PCDG, 2013). Behaviour modification techniques such as habit reversal may be useful and complement conventional therapies — this approach aims to heighten the patient’s awareness of scratching and helps to break the itch-scratch cycle, where scratching leads to further itching and exacerbation of the eczema (Bridgett et al, 1996).

**PSYCHOLOGICAL AND SOCIAL IMPACT**

Eczema can cause a great deal of distress for patients and their families, with physical discomfort, the need to apply time-consuming ‘messy’ treatments and sleep loss all combining to have a deleterious impact (APPGS, 2013).

Society’s increasing emphasis on appearance and pressure to attain the ‘perfect’ body place greater strain on people with skin conditions. In adolescents, when considerable focus is placed on appearance, skin disease can be devastating to self-esteem and psychological wellbeing (APPGS, 2013). Patients may isolate themselves to avoid comments from others, preventing participation in social activities and sports. Eczema can also place a strain on intimate relationships and limit professional opportunities (APPGS, 2013).

Financial hardship may also be a factor because of absence from work due to flares, attending medical appointments, or the cost of obtaining treatments. These obstacles may cause anxiety and depression, resulting in some patients not treating their skin, leading to further exacerbation. The adverse effects on quality of life for patients and their families should always be considered when assessing atopic eczema (SIGN, 2011).

**WHEN TO REFER TO SECONDARY CARE**

Patients should be referred to a dermatologist when there is uncertainty about the diagnosis, failure to respond to appropriate topical therapy or poor control of the condition, recurrent secondary infection and sleep problems, or psychological upset (SIGN, 2011). Treatment options in this setting include phototherapy and oral immunosuppressant agents.

**CONCLUSION**

Atopic eczema is a frustrating and complex condition, which has no cure. However, with good support, education and correct application of topical treatments the condition can be well-controlled.

Community nurses can provide patients with information about their condition, how to apply their
topical treatment effectively and how to manage flares and maintain a routine, all strategies that will improve the eczema and patient quality of life.

Any information should also be reinforced with written information and treatment plans, with follow-up support offered as needed.

REFERENCES


KEY POINTS

- Atopic eczema is a frustrating and complex skin condition that has no cure.
- With good support, education and correct application of topical treatments atopic eczema can be well-controlled.
- Community nurses can provide patients with information about their condition, how to apply their topical treatment effectively and how to manage flares and maintain a routine that will improve the eczema and patient quality of life.
- Any information provided should be reinforced with written information and a treatment plan, with follow-up support offered as needs.
- Atopic eczema usually presents in childhood but affects 2–10% of adults in the UK and its prevalence continues to rise.
- Atopic eczema is a complex condition caused by several factors involving genetic mutations and skin hyperactivity to environmental stimuli.
- Pruritis can be severe causing scratching, further exacerbation, infection and pain. Diagnosis is usually obtained from patient history, family history of atopy and clinical appearance.
- The key to supporting patients in managing atopic eczema is providing time to explain the condition, discussing the application of topical treatment, the avoidance of exacerbating factors and by reviewing and assessing their progress to treatment.
- Atopic eczema causes pruritic inflammation of the epidermis and dermis, resulting in thickened, dry cracking skin, which can be painful.
- Acute flares can arise resulting in erythema, vesicles and oedema, which can produce scaly, crusty skin prone to infection.