SECTION 3: GENERAL CARE OF THE SICK CHILD

3.2 Hygiene

3.2.8 Eczema Management (*Atopic Dermatitis*)

Contents

Introduction

Atopic dermatitis (also referred to as atopic eczema) is a common chronic inflammatory skin disorder affecting up to 1 in 3 Australasians at some stage in their lives.[1] The symptoms usually present in early childhood with more than half presenting before 12 months of age.[1]

Disease severity is significantly correlated with quality of life for the child and family.[2,3] Factors such as itching and sleep disturbance can have a significant impact.[2] There is a real potential for improving symptom control and quality of life for these children and their families.

The CAHS dermatology department endorses the use of Therapeutic Guidelines (click here) when recommending management for children with atopic dermatitis.

Aim

To provide optimum management and symptomatic relief for children with atopic eczema.

Scope

This document includes common treatments for atopic dermatitis including use of emollients (moisturisers), topical corticosteroids (TCS), wet dressings and dilute bleach baths. It does not include complementary therapies, treatments such as phototherapy and systemic immunosuppressant drugs. Please refer to the Therapeutic Guidelines for additional information.

Guiding principles for managing atopic dermatitis in children

1. Identification and avoidance of aggravating factors.
2. Improving and maintaining optimum condition of the skin.
3. Treating inflammation and flare.

Identification and avoidance of aggravating factors:

Avoidable aggravating factors include overheating, contact with irritants, infections and allergies.[4]

- Contact irritants include fragranced soaps, shampoos and bubble bath; rough clothing, wool; heavily chlorinated pools; certain foods such as citrus fruits and tomatoes (a greasy barrier can be applied to the face and hands before eating). Soap substitutes should be used.
- Environmental irritants or allergens can aggravate the skin: grasses, pollens, house dust mites, animal dander.

Improving and maintaining optimum skin condition [4]

Bathing

- Daily bathing in tepid-only water with dispersible bath oil added to the bath is recommended. Soap and shampoo substitutes should be used.

Emollient therapy

- Emollients (moisturisers) soften the skin, help in restoring the impaired barrier function of the epidermis, reduce the itch of dry skin, increase the efficacy of topical corticosteroids, and have a steroid sparing action.[2] Patients with atopic eczema should have ongoing treatment with emollients.
- To optimise adherence to emollient therapy, a combination of creams and ointments can be used, depending on patient choice and skin condition. The drier the skin the thicker the emollient needs to be (eg. ointment or thick cream) and the more frequent the application of emollient needs to be.
- Application of emollient immediately after bathing and twice daily is important to prevent dryness and itching. More frequent application is recommended for very dry skin conditions. The emollient should be applied smoothly in the general direction of hair growth to prevent accumulation at hair bases which can predispose to folliculitis.
- Emollient supplied in a tub is the emollient of choice at PMH as they are generally thicker and contain fewer preservatives than the lighter, pump-dispensed emollients which can often sting. Remove the required amount of emollient from the tub with a clean spoon or spatula to prevent contamination by fingers. Emollients should not be shared with others.[2]

Treatments for inflammation and flare:

Topical corticosteroid (TCS)[4]

Topical corticosteroids are the mainstay of treatment for areas of inflammation. Refer to current Therapeutic Guidelines Topical corticosteroids in children: important considerations when using TCS in children.

Key points

- TCS should be used on all areas of inflammation, not just the worst areas, until complete clearance.
- Ointment based treatments have an increased moisturising effect and are less stinging than a cream.
- Once daily application is usually sufficient and encourages compliance.
- Liberal application is often required to bring the condition under control.
- Select a TCS of suitable potency for the area being treated:[4]

Body Surface	Recommended Treatment
Face	Hydrocortisone 1% is the most appropriate preparation, but short-term use (up to one week); stronger preparations such as methylprednisolone aceponate 0.1% or mometasone furoate 0.1% may be necessary for severe inflammation
Axillae/Groin	Hydrocortisone 1% or desonide 0.05% lotion are most appropriate for these delicate areas
Wrists, ankles, cubital and popliteal fossae	Methylprednisolone aceponate 0.1% or mometasone furoate 0.1%
Trunk/Limbs	Betamethasone valerate 0.02% or triamcinolone acetonide 0.02% are practical if there is widespread involvement.

- Do not give strict guidelines about number of days the corticosteroid can be used. It is better to aim for clearance (ie. when there are no red, itchy areas and skin feels smooth) then stop. If clearance is not being achieved then a more potent preparation or wet dressings may need to be considered. Periodic flares are to be expected. Treat as soon as there is flare again.
- Continue with emollient therapy during treatment with TCS.[2]
- Ensure adequate quantities of TCS are prescribed. For example, a 15g tube of ointment would be inadequate to treat widespread eczema. Seek authority under Pharmaceutical Benefits Scheme if increased quantities are required (which is often the case).

Wet Dressings

- Wet dressings help penetration of TCS for severe inflammation or when the skin is lichenified (ie. diffuse thickening of the epidermis with exaggeration of the normal skin creases and a leathery appearance caused by chronic rubbing/scratching).
- Wet dressings also help to reduce the itch by cooling the skin and may be recommended if a child is hot and itchy or waking at night with itch.[5]
- Wet dressings generally consist of two layers, a wet/damp bottom layer and a dry top layer. Clothes can be used. They are also available in bandage form or purpose made garments.[2]
- There are no strict guidelines about duration of treatment with wet dressings. It is better to aim for clearance (ie. when there are no red, itchy areas and skin feels smooth) then stop.
  - In the outpatient setting, wet dressings are *usually* recommended daily (preferably before bed) for one week then second daily until clear.[6]
  - In the hospital setting the frequency of wet dressings is increased and dependent on the severity of the flare.
- If signs of folliculitis are present discuss with treating doctor.

- Patients should be reviewed two weeks after discharge from hospital in the dermatology outpatient clinic or the GP if wet dressings have been recommended for home. For wet dressing procedures go to Appendix 1

Treatment of infection

- Eczema is prone to infection. Patients with severe dermatitis have increased staphylococcal skin carriage.[4]
- Routine swabbing of skin is not indicated in the management of patients with atopic dermatitis.[2]
- Swabs of potential *staphylococcal aureus* carriage sites should be considered in patients with recurrent infection.[2]
- Oral antibiotics are recommended if there is widespread secondary bacterial infection. Antibiotics are recommended if the dermatitis has not settled with other appropriate measures and there is suspicion that infection is a contributing factor.[4]
- Topical antibiotic ointment may be added if there is localised infection.[4]

Dilute bleach baths

- Dilute bleach baths are an effective adjunct for anti-infective treatment which have been shown to reduce the incidence of recurrent *staphylococcal aureus* cutaneous superinfection[7] and have also shown significant improvement in condition.[8]
- Dilute bleach baths are very safe. The final concentration of bleach when diluted in the water is approximately 0.005%[7] which is similar to chlorinated swimming pool water.
- Dilute bleach baths are inexpensive and well tolerated.[8,7] If the child experiences any irritation discontinue the use of bleach baths and discuss with the treating doctor.
- Dilute bleach baths are usually performed twice weekly for approximately three months. This may be prolonged for children with recurrent or persistent skin infections which are not responsive to standard treatments.[9]
- Dilute bleach baths are contraindicated in patients with known allergy to chlorine[10] and should be used with caution in children under 12 months[6].
- For dilute bleach baths procedure go to Appendix 2.

Treatment of itch

- Itch can be a very distressing symptom in eczema and difficult to treat. Antihistamines are usually not effective for the itch of eczema and rarely suppress the itch completely.[11]

- Sedating antihistamines may be suggested[11] to help people sleep through their itch, but are not routinely recommended and should not be used in young children without specialist supervision. It is preferable to avoid triggers and manage the eczema effectively.
- Cold compresses and wet dressings may be more effective in controlling itch.

Referral

Patients with atopic dermatitis (eczema) should be referred to a Dermatologist when there is:

- Uncertainty concerning the diagnosis.
- Poor control of the condition or failure to respond to appropriate topical treatments.
- Psychological distress.
- Recurrent secondary infection not responding to appropriate treatment.

Eczema Treatment Plan documentation

An Eczema Treatment Plan can be utilised to assist patients/carers to continue management and treatment at home. Refer to Appendix 3 and/or the Emergency Department Management Guidelines.

If you need any assistance with completing the CAHS Patient Eczema Treatment Plan please contact the Dermatology Clinical Nurse Specialist or the Dermatology Registrar through the PMH Switchboard.

Related Policies, Procedures and Guidelines
PMH Emergency Department Management Guidelines
Eczema Treatment Plan
Therapeutic Guidelines (available from the CAHS Library and Information Service)

Useful Resources
Caring for your child's eczema (Consumer information leaflet)
Eczema Association of Australasia
The Royal Children's Hospital, Melbourne http://www.rch.org.au/rchcpg/hospital_clinical_guideline_index/Eczema_management/

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Appendix 1: Wet dressing procedure (also referred to as wraps)

- Consist of the application of topical treatment (emollient and/or corticosteroid), followed by a wet layer then covered with a dry layer of material.
- Materials used can include towels, clothing, tubular bandages or purpose made garments and will depend on severity of the condition, availability, age of the child, patient preference/tolerance.

Equipment

- Bowl
- Lukewarm water
- Moisturiser
- Topical corticosteroid (if prescribed)
- Spatula
- Wet layer
- Dry layer

Method:

1. Fill bowl with lukewarm water
2. Depending on the material used, add towels, patient's clothes or elasticated tubular bandages to the bowl
3. Apply topical corticosteroid to all affected areas, not just the worst areas
4. Squeeze/wring out the towels, clothes or bandages and apply to the body
5. Apply the dry layer over the top
6. Leave wet wraps in place for 20-30 minutes
7. Remove the wet wraps and immediately apply moisturiser to the whole body including face; remove moisturiser from tub using spatula to avoid contamination

Wet dressings using towels

1. Wrap the wet towels around the limbs and body as appropriate. Ensure the towels are not wrapped too tightly. Do not cover the face.
2. Do not leave infants unattended wrapped in towels.[12]

Wet dressings using patient's own clothes

1. Two layers of clothing are required (wet inner and dry outer layer) with 100% cotton preferred. A long sleeved shirt, t-shirt or singlet depending on areas of inflammation and long pants is suitable.
2. Pyjamas also work well; top dry layer can be a dressing gown or blanket if the child prefers.
3. Baby grow suits are convenient for infants and small toddlers.

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Wet dressings using tubular bandages (eg Tubifast™) or garments.

Measure the lengths of elasticated tubular bandages for the areas to be treated:[5]

- For arms: measure from top of the shoulder to tips of the fingers and add approximately 8cm. 4 lengths are needed (2 for each arm)
- For legs: measure from thigh to tips of toes and add approximately 8cm. 4 lengths are needed (2 for each leg)
- For trunk: measure from top of neck to base of bottom. Cut out armholes. 2 lengths are needed. Alternatively for the trunk, a wet long sleeved shirt, t-shirt or singlet can be used

Cool compressing is a wet dressing for the face and should be applied as often as needed until the itch is relieved.

Procedure:

- Wet disposable towels or face washer in a bowl of cool water and wring out
- Hold the disposable towels or face washer onto the face for 5-10 minutes
- Apply moisturiser to face immediately after finishing the compressing; remove moisturiser from tub using spatula

Appendix 2: Dilute bleach baths procedure (in hospital)

Equipment :

- Bath tub or baby bath
- Bucket or jug (with a measurement scale)
- Measuring device for bleach e.g. measuring cup, syringe
- Sodium hypochlorite 0.125%
- Bath oil
- PPE: apron, gloves, goggles
- Face washer or disposable towel
- Clean dry towels

Procedure

1. Using a measuring jug or bucket add appropriate volume of lukewarm water to bath.
2. Apply PPE to protect from inadvertent splash or spill of undiluted sodium hypochlorite.
3. Add measured volume of sodium hypochlorite 0.125% to the water, 2-3 capfuls of bath oil can also be added to the bath water.

   To achieve a concentration of 0.005%, mix as follows: For every 10L of water add 400ml of sodium hypochlorite 0.125%.

   Note: different strength bleach will require different volumes. Seek advice from ward pharmacist if alternative strengths are to be used.
4. Patient is to soak in bath for up to 10 minutes

   Whilst bathing, wipe the face and scalp with a clean cloth. Take care to avoid the eyes.

   Gently try to remove any crusts off the skin by wiping with face washer or disposable towel.
5. The patient does not need to rinse after bathing
6. Pat the skin dry when out of the bath; use fresh towels for every bath
7. Apply moisturiser to the whole body and face immediately after the patient gets out of the bath and is dry
8. If a topical corticosteroid has been prescribed, apply it liberally to all affected areas as directed by the treating doctor before the moisturiser

For preparing dilute bleach baths at home refer to the parent brochure

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Appendix 3: Patient Eczema Treatment Plan

Government of **Western Australia**
Department of **Health**
Child and Adolescent Health Service

Patient label

Eczema treatment plan

Everyday management of your eczema

Bathing (Short bath or shower is important)

Add dispersible bath oil to bath_____ ☐ daily

OR

Use soap free wash in shower _____ ☐ daily

Moisturiser

Should be applied at least once a day to face and body within two minutes after bath or shower.

Face _____ ☐ morning ☐ noon ☐ afternoon ☐ night

Limbs and body_____ ☐ morning ☐ noon ☐ afternoon ☐ night

Comments _____

Active eczema (red, itchy, rough area)

Medicated ointments (Ointments are less likely to sting than cortisone creams and lotions)

Apply as soon as there is flare (e.g. sudden deterioration, redness, increased itch) and apply until the skin is clear and feels smooth. Apply liberally to ensure you are using adequate amounts. Recommence again as soon as there is another flare.

Scalp_____ ☐ morning ☐ night

Face/Armpits/Groin_____ ☐ morning ☐ night

Body/Limbs_____ ☐ morning ☐ night

Wet wraps (also known as wet dressings) may be recommended

Apply until eczema is clear or as specified by your treating doctor.

☐ Use patient's own clothes (100% cotton preferred)

☐ Use Tubifast™ garments

Apply wet dressings to the arms/legs/feet/chest /back ☐ morning ☐ night

Comments _____

Apply cool compress to face to relieve itch ☐ morning ☐ noon ☐ afternoon ☐ night

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