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CME ARTICLE

Simply eczema

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Natalie's mother brought her to your clinic to request for a referral to consult a dermatologist. Natalie had extensive thickened brown skin over her skin folds. From her clinical history, you noted that she had seen several general practitioners over the past ten years and had been given a variety of topical steroid preparation and oral antihistamines. Despite her longstanding skin condition, Natalie and her mother were not well-informed about eczema and were unsure about the management involved.

HOW COMMON IS THIS IN MY PRACTICE?

What is eczema?

The word 'eczema' comes from the ancient Greek language, which means 'to boil over'. This refers to the inflammatory component involved in the skin reaction. The second component is the loss of the epidermal barrier. The word 'eczema' is often used interchangeably with dermatitis.

How relevant is this to my practice?

Atopic eczema is the most common chronic inflammatory skin condition encountered in primary care. Atopy, meaning 'out of place', describes the lowered threshold for an inflammatory reaction to specific exposures. Approximately one in every five school-going children in Singapore was reported to have atopic eczema,[1,2] with an increasing prevalence reported from the two cohorts of school-going children surveyed in the International Study of Asthma and Allergies in Childhood (ISAAC) report.[2]

WHAT ARE THE COMMON PITFALLS IN ATOPIC ECZEMA MANAGEMENT?

The medical literature surrounding optimising care for patients with chronic conditions have grown considerably over the past few decades. The common pitfalls of chronic eczema are similar to many other chronic conditions, and sufficient emphasis should be placed on chronic management and patient empowerment. Acute management of eczema often targets only symptomatic inflammation but neglects the care needed to restore the loss of the epidermal barrier.

Management of chronic atopic eczema

As a chronic atopic condition, the management of atopic eczema should include involving the patient in the identification of triggers, target setting, chronic management and patient empowerment. The process of history-taking and physical examination is often not targeted at arriving at the diagnosis of atopic eczema, but is an attempt to identify possible triggers of the flare together with the patient. It is through this segment of the consultation that the various differential diagnoses of atopic eczema are identified or excluded.

Target setting is important in the management of atopic eczema. Giving patients the opportunity to articulate their concerns and hopes allows clinicians to empathise with the patients and agree upon individualised targets together with them. This conversation would include discussion on the symptoms or presentations that bother the patient, the functional limitations caused by the condition or flare, as well as the ideal stable state that is achievable, both in short- and long-term treatments. This would help to identify the management options that are suitable for the patient and also determine whether there is a need for co-management with a dermatology colleague if some of the modalities of therapy are not available in the primary care clinic.

Follow-up for chronic atopic eczema should be scheduled and timed according to the condition and control. The use of management modalities should not be limited to pharmacological options, but individualised to the patient's daily activities and needs. As with other atopic conditions, a written action plan (Fig. 1) will likely be useful for stable management, and flare management advice should be given as a guide to the use of pharmacological agents dispensed.

Patient empowerment is important. The identification of triggers and the adaptation required for daily activities may not be adequately managed within a consultation setting. Therefore, knowledge of their own conditions, the factors affecting control and their individualised treatment targets must ideally be understood and mastered by the patients or their caregivers.

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ECZEMA ACTION PLAN

Daily maintenance therapy - Eczema under control

- Remove triggers, e.g. heat, soap, house dust mite/ food allergy
- Cut and file fingernails weekly
- 100% cotton clothing

☐ **Bathing** (soap free)
- ☐ Shower with _____ in lukewarm/ cool water for 5-10 minutes, 1-2 times daily
- ☐ Soak with _____ in bath tub for 10-15 minutes, 1-2 times daily

Pat dry (do not rub)

☐ **Scalp (if affected)**
Apply _____ at night/ 1 hour before shampoo
Use _____ to wash hair as instructed

☐ **Moisturizer** _____ immediately after the bath
Apply generously to good and red/ itchy skin, in same direction as hairs, 2-3 times daily

Eczema flare - Start the following medicine for next 7-14 days. If improved, go back to Green zone

- Skin is red, frequently itchy, dry
- Moderate impact on daily activities/ wellbeing
- Disturb sleep

Topical Medicated Creams/ Ointment (apply within 3 minutes after the bath), **followed by Moisturizer**

☐ **Scalp** (red/ itchy areas)
Apply _____, once/ twice daily to affected areas.

☐ **Eye Area** (red/ itchy areas)
Apply _____, once/ twice daily to affected areas.

☐ **Face/ Neck/ Armpit/ Groin** (red/ itchy areas)
Apply _____, once/ twice daily to affected areas.

☐ **Body/ Arms/ Legs** (red/ itchy areas)
Apply _____, once/ twice daily to affected areas.

☐ **Thickened areas**
Apply _____, once/ twice daily to affected areas.

☐ **Increase application of Moisturizers to _____ times daily**

☐ **Oral antihistamine** _____, to be taken in the morning,
_____ to be taken at night to reduce itch and help sleep

☐ **Others**
_____
_____
_____

See your doctor now. DO NOT WAIT.

If any of the following symptoms occur, see a doctor **immediately**
• Fever • Pain • Unable to sleep at night for a week

Fig. 1 Diagram outlines the written eczema action plan (adapted from KK Women's and Children's Hospital).

Some common concepts such as the itch-scratch cycle (Fig. 2), finger-tip unit for topical agents (Fig. 3) and total care for eczema (Table I) can be shared as patient empowerment materials.

Short notes on acute flares

A comprehensive review of the management of atopic eczema is beyond the scope of this article, but we will share some short notes from our clinical practice.

1. Acute flares are frequently the reason for our encounters with the majority of our patients with atopic eczema. These are windows of opportunities to introduce holistic chronic management of the condition and agree upon individualised treatment targets with the patients and their caregiver.
2. Identification of triggers and suggestions to help in trigger avoidance or adaptation of daily activities are some consultation tasks encountered in the management of acute flares. Common triggers of atopic eczema include infections (e.g. viral and staphylococcal infections), house dust mites, sweating, insect bites and stress. Explanation on how the itch-scratch cycle will sustain the inflammation and break down the epidermal junction is often necessary for patients to understand the consequences and stop the gratifying scratching.

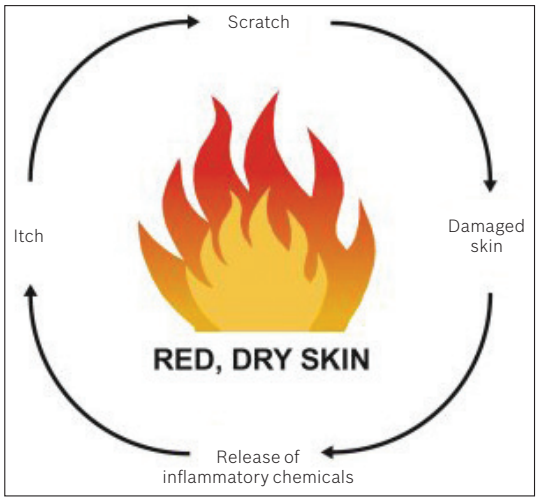

Fig. 2 Diagram shows the itch-scratch cycle.

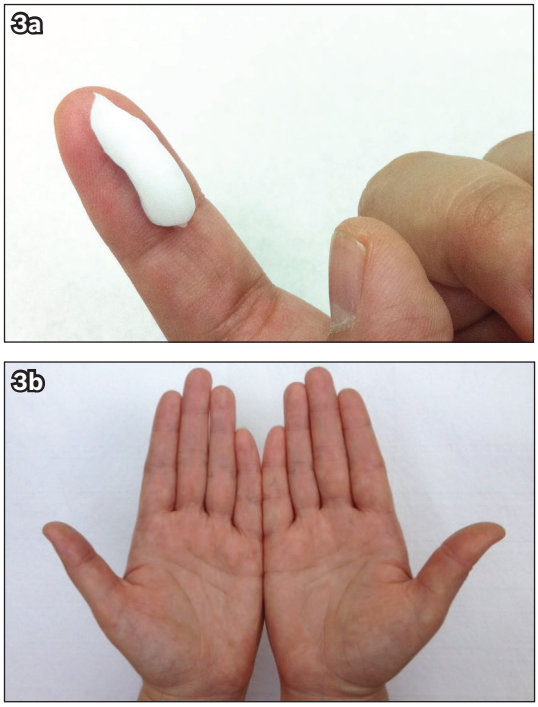

Fig. 3 Photographs show the finger-tip unit for topical agents. (a) One fingertip unit is the amount of cream/ointment from the tip of an adult index finger to the first crease of that finger. (b) This amount will cover an area equal to two adult hands (used with permission from KK Women's and Children's Hospital).

Table I. Total eczema care.

Total eczema care
• Minimise triggers, e.g. sweating
• Keep skin lubricated
• Apply medication as advised
• Oral medications, when necessary
• Use wet dressings/double pajamas
• Use gentle skin products/soap
• Wear loose cotton clothing
• Avoid scratching; anti-itch medication, when necessary
• Keep fingernails short

3. The use of moisturisers to address the loss of the epidermal barrier should be given sufficient emphasis. These agents do not directly address the symptomatic itch experienced by the inflammatory component and are not intuitively useful

to most patients even though they are routinely prescribed. Explanation of the two main components of eczema should ideally be reinforced at every clinical encounter. As many brands of moisturisers are available, the choice of which brand to use largely depends on the patient's preference, what works for the patient and affordability.

4. The use of anti-inflammatory topical medications, i.e. corticosteroids and calcineurin inhibitors, remain the mainstay of treatment to decrease inflammation in flares of eczema. The potency of these topical medications depends on the age of the patient, and the severity and site of involvement. Steroid phobia is a common problem among patients and parents of young patients that needs to be adequately addressed.
5. Colonisation by commensal, secondary infection and continual exposure to trigger factors are considered common reasons for flares of atopic eczema resistant to management.
6. Post-inflammatory hyperpigmentation or hypopigmentation are underlying concerns that might not be raised by patients.

Natalie most likely had atopic eczema with flares at night after a school day with physical education lessons. She was possibly one of the many patients who has developed lowered thresholds for perspiration, and thus not changing into a fresh set of clothes after physical education lesson for the rest of the school day might have exacerbated a flare. Natalie and her mother listened attentively to your explanation of the itch-scratch cycle and the many other things they can do to stabilise her eczema. You ended the consultation with a short written plan, which clearly divided the daily use of moisturisers and the different topical steroid preparations suitable for flares at different body sites. Natalie was instructed to book a follow-up appointment for her next review a month later.

TAKE HOME MESSAGES

1. Atopic eczema is a chronic skin condition commonly encountered in primary care practice.
2. The two components of skin reaction encountered in an acute flare are inflammation and loss of the epidermal barrier.
3. Principles for good chronic care, such as individualised target setting and patient empowerment, can be useful in the management of atopic eczema.
4. Principles for atopic conditions, such as identification of triggers and a written action plan, can also be helpful in the management of atopic eczema.

ABSTRACT Atopic eczema is a commonly encountered chronic skin condition in primary care. In this article, we share a holistic, structured approach, which is grounded on the chronic and atopic nature of the condition – planned reviews, patient empowerment, a written action plan for chronic and fare management, and trigger avoidance. Common pitfalls in management are insufficient emphases on scheduled reviews and patient empowerment, as well as neglect in the care of the loss of the epidermal barrier during acute flares.

Keywords: atopic dermatitis, atopic eczema, management, written action plan

REFERENCES

1. Tay YK, Kong KH, Khoo L, Goh CL, Giam YC. The prevalence and descriptive epidemiology of atopic dermatitis in Singapore school children. Br J Dermatol 2002; 146:101-6.
2. Wang XS, Tan TN, Shek LP, et al. The prevalence of asthma and allergies in Singapore; data from two ISAAC surveys seven years apart. Arch Dis Child 2004; 89:423-6.

RECOMMENDED READING

Rubel D, Thirumoorthy T, Soebaryo RW, et al; Asia-Pacific Consensus Group for Atopic Dermatitis. Consensus guidelines for the management of atopic dermatitis: an Asia-Pacific perspective. J Dermatol 2013; 40:160-71. doi: 10.1111/1346-8138.12065. Epub 2013 Jan 5.

SINGAPORE MEDICAL COUNCIL CATEGORY 3B CME PROGRAMME

(Code SMJ 201305A)

	True	False
1. Skin changes in eczema include inflammation and loss of the epidermal barrier.	☐	☐
2. The term 'dermatitis' refers to endogenous triggers of skin inflammation, while eczema refers to exogenous triggers of skin inflammations.	☐	☐
3. Contact eczema is the most common form of chronic inflammatory skin condition encountered in primary care.	☐	☐
4. The common pitfalls of chronic eczema management in primary care are the lack of focus on chronic management and patient empowerment.	☐	☐
5. Treating the symptomatic inflammation in acute eczema flares will simultaneously restore the loss of the epidermal barrier.	☐	☐
6. The management of atopic eczema is simple and does not involve the patient in the identification of triggers, target setting, chronic management and patient empowerment.	☐	☐
7. History-taking and physical examination can help identify possible triggers of an eczema flare.	☐	☐
8. Target setting is important in the management of atopic eczema.	☐	☐
9. The treatment target for ectopic eczema should always be the restoration to normal skin complexion and texture.	☐	☐
10. Setting treatment targets in chronic eczema should be individualised, taking into account the patient's concerns and hopes.	☐	☐
11. Individualised treatment targets help to narrow down the management options suitable for the patient.	☐	☐
12. Co-management of a patient with a dermatology colleague is indicated when the required modalities of therapy are not available in the primary care centre.	☐	☐
13. Atopic eczema should only be seen during acute exacerbations.	☐	☐
14. Management modalities for atopic eczema are not limited to pharmacological options.	☐	☐
15. A written action plan will likely be useful for stable management and flare management of atopic eczema.	☐	☐
16. Patient empowerment is important because the doctor may not be able to help with trigger avoidance and modifications of daily activities, which may be essential in controlling an individual's atopic eczema.	☐	☐
17. Common concepts such as the itch-scratch cycle, finger-tip unit for topical agents and total care for eczema can be used to increase patient empowerment.	☐	☐
18. Acute flares of atopic eczema are windows of opportunities to introduce holistic chronic management of the condition to patients and their caregiver.	☐	☐
19. Understanding the itch-scratch and inflammation relationship can help patients stop the gratification to scratch during eczema flares.	☐	☐
20. Colonisation, secondary infection and continual exposure to trigger factors are considered reasons for resistant atopic eczema.	☐	☐

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