An approach to mild to moderate atopic eczema

Motswaledi MH, MBChB, MMed, FCDerm(SA)
Department of Dermatology, University of Limpopo (Medunsa Campus)
Correspondence to: Mojakgomo Motswaledi, e-mail: motswaledi1@webmail.co.za
Keywords: atopic eczema

Abstract

Atopic eczema is a chronic, relapsing inflammatory disease of the skin characterised by dryness and itching, with typical distribution on the elbows and knees in younger children and on the cubital and popliteal fossae in older children and adults. It can be classified as mild, moderate or severe.

S Afr Fam Pract 2012;54(5):411-412

Introduction

The aetiology of atopic eczema encompasses a complex interplay between genetic factors, disrupted skin barrier function, food allergy and many other extrinsic factors.[1] Clinically, it affects the entire body of infants, the extensor surfaces of limbs in young children, and the flexor aspects of limbs in older children and adults.[1] Treatment depends on severity of the disease.

Discussion

Atopic eczema (atopic dermatitis) is the most common cause for consultation in paediatric dermatology. It is a common health problem in children and adolescents throughout the world.[2] The prevalence varies, both within and between countries that are inhabited by similar ethnic groups. This suggests that environmental factors play a role in determining disease expression.[2]

Clinical features are erythema, oedema, vesiculation, crusting, dryness, scaling, excoriations and lichenification. Itching is a chief symptom and can be very troublesome.[1]

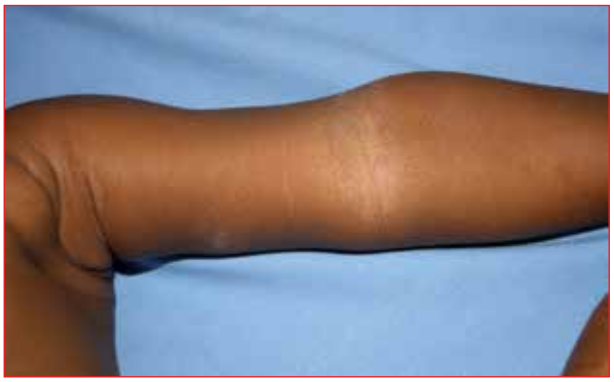

Figure 1: Mild eczema. Note the rash on the cubital fossa.

It is important to determine the severity of atopic dermatitis to evaluate disease improvement during therapy. In general, mild atopic dermatitis causes minimal pruritus and sleep disturbance and reveals barely noticeable or minor findings on skin examination (Figure 1). Moderate atopic dermatitis is likely to cause episodes of marked pruritus, sleep disruption and apparent physical signs (Figure 2). Severe atopic dermatitis is associated with extreme or constant

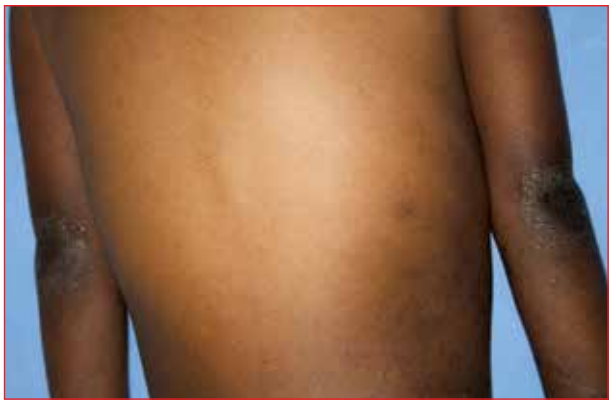

Figure 2: Moderate eczema on the elbows and trunk

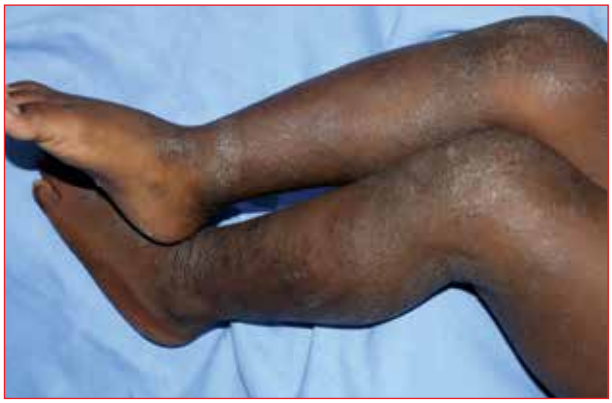

Figure 3: Severe eczema. This child had lesions all over the body.

pruritus, sleep deprivation and major widespread skin signs that include bleeding, crusting, weeping and lichenification (Figure 3).[3]

Presently, four tools are used to assess atopic dermatitis severity. They are the Scoring Atopic Dermatitis (SCORAD) index, the objective SCORAD, the Eczema Area and Severity Index (EASI), and the Three-Item Severity (TIS) score. Each of these assessment tools has its own advantages and disadvantages. The SCORAD and objective SCORAD indices were developed by the European Task Force on Atopic Dermatitis. The SCORAD index is based on three parameters: the disease extent, intensity and some subjective items. To measure the extent of atopic dermatitis, the rule of nines is applied in a front-to-back drawing of the patient's inflammatory lesions.[4] The extent can be graded 0-100. The intensity scoring consists of six items: erythema, oedema, excoriations, lichenification, oozing or crusting, and dryness. Each item is graded on a scale of 0-3. The subjective items include daily pruritus and sleeplessness, and both items can be graded on a 10-cm visual analogue scale.

In the objective SCORAD, the two subjective items are omitted and only the extent and intensity items are considered. The formula for the objective SCORAD is A/5+ 7B/2, where A is the extent (0-100) and B is the intensity (0-18). The maximum objective SCORAD score is 83 (plus an additional 10 points for severe disfiguring eczema on the face and hands).[4]

The TIS score is a simple scoring system that uses three of the intensity items of the SCORAD index, i.e. intensity of erythema, oedema and excoriations (scratches). Each of the three items is graded on a 0-3 scale. Therefore TIS scores range from 0-9.

Table I details the objective SCORAD and TIS scores.

The objective SCORAD should be used in clinical comparative trials, while the TIS score is preferred in epidemiological studies and in daily practice.[4] The TIS has a great advantage because it is simple, quick and easy to perform in routine settings and is shorter to complete.

Treatment of atopic eczema is complex. Patients and parents should be made part of the management team.[5] At present, there is no 100% lifelong cure for atopic eczema.[6] With regard to atopic eczema, the objectives of therapy are to reduce signs and symptoms, prevent or reduce recurrences and to modify the course of the disease.[6]

Table I: The objective SCORAD and TIS scores

Eczema grading	Mild	Moderate	Severe
Objective SCORAD	< 15	15-40	> 40
TIS score	< 3	3-6	≥ 6

SCORAD: Scoring Atopic Dermatitis, TIS: Three-Item Severity

Treatment strategies for mild to moderate atopic eczema include general measures, as well as specific topical therapies. General measures include avoidance of triggering factors such as wool and nylon clothing, pollen and house dust mites, and preventing the skin from getting dry.[5,7]

Topical therapy for mild to moderate eczema includes frequent application of emollients.[5,8] Emollients keep the skin hydrated and can reduce itching. They may even protect against inflammation that is provoked by irritants.[1] They should be applied regularly, at least twice during the day, and should also be applied after swimming or bathing.[6]

Topical corticosteroids are the mainstay of treatment for mild to moderate eczema. When prescribing these, considered factors include the patient's age, the site to be treated, the severity of the eczema and the potency of the preparation.[9]

Mild potency corticosteroids, such as 1% hydrocortisone, are suitable for use on the face in patients with mild to moderate disease.[1] Moderate potency corticosteroids, like betamethasone, can be used to treat mild to moderate disease on the trunk and limbs.

Calcineurin inhibitors, such as pimecrolimus in a preparation of 1%, are indicated for the treatment of mild to moderate atopic eczema, especially for steroid-sensitive areas like the face and skin folds.[5] Pimecrolimus effectively controls the acute signs of eczema, especially on the face, and prevents flares in mild to moderate and severe eczema.[1]

In a preparation of 0.03% and 0.1%, tacrolimus can be used to treat moderate to severe eczema, especially on the face and intertrigenous areas.[1]

References

1. Motswaledi MH. An overview of topical treatment for atopic eczema. S Afr Fam Pract. 2011;53(3):247-249.
2. Williams H, Robertson C, Steward A. et al. Worldwide variations in the prevalence of symptoms of atopic eczema in the international study of asthma and allergies in childhood. J Allergy Clin Immunol. 1999;103(1 Pt 1):125-138.
3. Bershad SV. Atopic dermatitis (eczema). In The Clinic. 2011;ITC 5-2-ITC 5-14.
4. Orange AP, Glazenburg EJ, Wolkerstorfer A, et al. Practical issues on interpretation of scoring atopic dermatitis: the SCORAD index, objective SCORAD and the three-item severity score. Br J Dermatol. 2007;157(4):645-648.
5. Jordaan HF, Visser WI. The diagnosis and management of atopic dermatitis. S Afr Fam Pract. 2009;51(5):368-374.
6. Ellis C, Luger T, Abeck D, et al. International Consensus Conference on Atopic Dermatitis II (ICCAD II): clinical update and current treatment strategies. Br J Dermatol. 2003;148(63):3-10.
7. Potter C. A therapeutic approach to atopic eczema. S Afr Fam Pract. 2010;52(4):277-282.
8. Manjra AI, du Plessis P, Weiss R, et al. Childhood atopic eczema consensus document. S Afr Med J. 2005;95(6):435-440.
9. Bingham EA. Textbook of pediatric dermatology. In: Harper J, Orange A, Prose N, editors. London: Blackwell Science, 2002; p. 215-230.