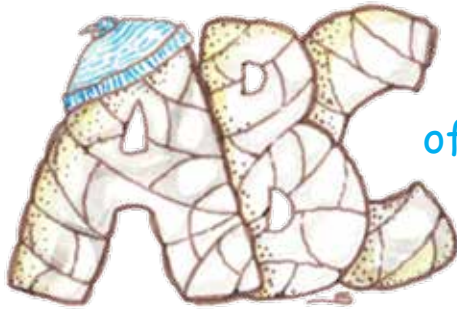




of allergy

Atopic Eczema

Mrs. Adonis brings her 18 month old son Teagan to see Dr Do-A-lot about his **eczema**.

She reports that he developed eczema at three months of age, before she had introduced solid foods. He is still breastfed, but has a good appetite and eats 'from the pot' with the rest of the family.

Her concern is that the whole family is being disturbed at night because Teagan's eczema is so severe and widespread (except for the nappy area) that he spends much of the night wakeful and crying, sometimes staining his sheets with blood as he scratches his skin open. She asks Dr Do-A-lot to test Teagan for allergies and for some guidance regarding management.

On further questioning Dr Do-A-lot discovers the following information about the family:

Mr. Adonis suffered from eczema as an infant, and still has it on his hands. He works in a bank and handles money and papers and sometimes has to wear white cotton gloves as he is embarrassed about the condition of the skin on his palms.

Mrs. Adonis has mild persistent allergic rhinitis for which she uses a daily corticosteroid nasal spray.

Their 11 year old daughter, Talitha, used to have severe eczema as an infant, but the rash is now limited to the flexures on her arms and legs. The rash comes and goes, always in the same area. It often becomes inflamed, red and itchy and she feels self-conscious when she has to wear a costume for swimming, and the chlorine in the pool water irritates her dry skin.

Mrs. Adonis used to teach at a pre-school, but since the birth of Teagan she has been too exhausted to return to work. She is tearful as she describes how difficult it is to care for an itchy, restless infant. She no longer attends the community baby group as she is tired of explaining that the condition is not contagious and watching other mothers attempt to protect their children from Teagan who never looks healthy and wholesome with his scratched, red, weeping skin.



References:

S Afr Med J. 2005 Jun;95(6 Pt 2):435-40.

Childhood atopic eczema consensus document.

Manjra AI¹, du Plessis P, Weiss R, Motala CM, Potter PC, Raboo-
bee N, Ndlova N, Davis M, Weinberg EG; South African Child-
hood Atopic Eczema Working Group

SA Pharmaceutical Journal – June 2009. 32-37.

Atopic Eczema Guidelines. REVIEW. Nadine Butler, MPharm, PhD.
School of Pharmacy, University of the Western Cape

Shaunagh Emanuel

MBChB

The Asthma Clinic, Rondebosch, Cape Town, South Africa

Di Hawarden

MBChB

*Allergy Diagnostic and Clinical Research Unit, UCT Lung
Institute, Mowbray, Cape Town, South Africa*

Atopic eczema

Dr Do-A-lot explains that eczema is a relapsing, inflammatory condition of the skin that results in a defective skin barrier.

This results in a loss of moisture from the skin and allows for easy access by microbes, especially *Staphylococcus Aureus*.

Importantly, affected skin is always itchy. In atopic eczema genetic factors play a role, and the inflammatory process is mediated by immunoglobulin-E (IgE) in response to exposure to environmental allergens which might include foods or inhaled allergens like house dust mite (HDM), pollens or animal dander. It typically affects infants and young children with a family history of atopy or a personal history of allergic disease like food allergy or asthma.

Non-atopic eczema

Less commonly eczema may be non-atopic, where genetics are not a factor and the inflammatory response is not IgE-mediated. This is more common in adults or older children that present with eczema for the first time.

Cause

Eczema is caused by a complex interaction between immune, genetic, infective, neuro-endocrine and environmental factors.

Triggers

Triggers that commonly cause eczema exacerbations include bacterial colonisation, stress, disruption of the skin barrier e.g., washing with soap, change in environmental conditions, exposure to specific allergens like egg or HDM, sweating, pollutants, sensory irritation like wool or synthetic clothing, chemical irritants like chlorine or sunscreen and maternal ingestants in breast milk.



Washing with soap breaks down the oils that help to keep skin hydrated and in good condition

The management of atopic eczema starts with the avoidance, where possible, of specific allergens to which patients may be sensitive, as well as the limitation of exposure to trigger factors like chemicals in soaps or abrasive clothing.

Breast feeding is best for atopic babies. Food should be free from preservatives and additives as far as possible.



Skin testing

Allergy testing

Up to 80% of infants with atopic eczema will have a food allergy, therefore routine food allergy testing is recommended for infants with eczema. Foods to which a true food allergy is demonstrated should be avoided. Testing can be done via skin prick tests, specific IgE blood tests and food challenges.

Skin testing in infants with eczema is often performed on the back when the skin on the arms is not clear.

The management of atopic eczema requires the development of consistent good habits.

General measures

include the following: avoiding overheating and external irritants, keeping skin covered to decrease exposure to irritants and trauma from scratching, keeping finger nails short, avoiding skin care products that cause irritation like soaps and astringents, avoiding irritating or occlusive fabrics, avoiding irritants associated with hobbies or occupational exposure and minimising harmful habits like excessive hand washing.

Adjuvant measures

In addition to these general measures, the following adjuvant measures are recommended: regular bathing (in warm but not hot water) to hydrate the skin and debride crust, the use of moisturising cleansers instead of soap, gently patting the skin dry after bathing, not allowing air drying, and, most importantly, the liberal and frequent application of emollients.



Keeping the skin hydrated is central to the success of eczema management

Emollients

Emollient ointments or creams provide a better barrier to moisture loss than lotions. Make certain that patients find their emollients acceptable, using less oily preparations on the face. Simple, fragrance-free emollients are recommended. They should be applied twice daily as a minimum. They should be applied even when the skin is in good condition. It is recommended that they are applied within three minutes of swimming or bathing to retain hydration. They should be available to patients in large amounts so that they can use them liberally and often. Patients must take care not to introduce bacteria into their moisturising preparations to prevent colonisation.

Anti-inflammatory preparations

Topical treatment with anti-inflammatory preparations is necessary in acute flare-ups of atopic eczema.

Glucocorticosteroid creams and calcineurin inhibitors are the topical treatments of choice.

Glucocorticosteroid preparations

There is a large variety of steroid preparations. They may be mild, moderate or potent in strength and they are available as ointments, creams and lotions. The choice of steroid depends on the severity of the dermatitis and the area on the body that is being treated. It is recommended to use mild steroid creams on the face.

Patients should treat flares early and aggressively, tapering steroid treatment as the skin condition improves and continuing emollient use to maintain skin integrity.

The least potent steroid that controls the disease should be selected.

High potency steroids are indicated for short-term use in areas of lichenification and thickening.

Wet wraps are an effective method of maximising steroid potency and skin hydration, and provide significant relief and good results provided that skin is not open or infected.

Topical steroids should be used judiciously to avoid cutaneous adverse effects including skin atrophy, telangiectasia, hypo-pigmentation, steroid acne, hirsutism and rosacea-like reactions. Systemic adverse effects are uncommon if topical steroids are used as recommended.



Topical steroid preparations for eczema

Calcineurin inhibitors

The calcineurin inhibitors like pimecrolimus are non-steroidal topical anti-inflammatory medications that modulate the immune mechanism that results in atopic eczema. They can be used on the body and on the face in children 2 years and older. Their use does not result in the adverse effects typical of prolonged topical steroid use. They can be recommended for prevention and long-term treatment. There is a concern regarding the potential development of cutaneous malignancies due to their immunosuppressive effects, and patients should be counselled about limiting sun exposure and concomitant use with sunscreen preparations.



Calcineurin inhibitors are immune modulating anti-inflammatory topical preparations developed for eczema

Other therapeutic modalities

Other therapies that are helpful in the management of atopic eczema include systemic antihistamines which are often used during flare-ups. Sedating antihistamines may be given at night to minimise restlessness and scratching.

Phototherapy has been used successfully in the management of atopic eczema, but the risk of carcinogenesis with long term use requires clarification.

Tar preparations may be beneficial but many patients find them unacceptable from a cosmetic point of view.

Systemic immunomodulators, like cyclosporine and azathioprin, administered orally, are only indicated in severe cases and under specialist supervision.

Systemic steroids are not recommended in eczema treatment. They effectively ameliorate an acute flare-up, but their withdrawal often results in an acute severe rebound exacerbation.

Complementary therapies like herbal remedies, acupuncture, homeopathy, massage therapy, climatotherapy and African traditional medicine have failed to produce demonstrable or reproducible beneficial effects.

Investigating Teagan:

Teagan has no history of urticaria, angioedema or anaphylaxis and he has not taken any antihistamines in the past 5 days. After his mother signs a consent form, Dr Do-A-lot performs a skin prick test on the clear skin on his back. She includes a standard inhalant panel with HDM, pollens, moulds and animal dander as well as several foods including milk, egg, wheat, soya, potato, fish, peanut and maize.

He tests strongly positive for HDM and soya protein. Dr Do-A-lot discusses the broad principles of atopic eczema management with Mrs. Adonis.

She refers Teagan to the practice dietician for advice on managing soya allergy. She asks Sister Sweet to schedule an appointment for comprehensive skin care education and wet wrap training. She also schedules appointments with Mr. Adonis and Talitha for management of the physical and psychosocial aspects of their eczema. Mrs. Adonis leaves the office feeling more empowered to manage a truly testing and relentless condition.



Wet wrapping is an effective treatment for eczema