ABC OF ALLERGOLOGY

ATOPIC ECZEMA – THE ITCH THAT ERUPTS

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Atopic eczema, otherwise known as atopic dermatitis or infantile eczema is a chronic relapsing itchy skin disease. Atopic eczema is usually the first clinical manifestation of allergy in atopic families. It usually commences about the third month of life as a weepy rash on the face and outer surfaces of arms and legs and then progresses in later childhood as a dry scaly and itchy rash commonly in the inner creases of the elbows and knees. Some children may not outgrow their eczema and the condition can persist or recurs in adulthood.

Preventing eczema

Diet

Institute general allergy prevention measures in high allergy-risk newborns. These include avoidance of parental smoking during pregnancy and after birth, and breastfeeding until at least 6 months of age. Common allergy-provoking foods such as cow's milk, eggs, fish, peanuts, wheat and soya should be avoided in the breastfeeding mother's daily diet. Avoidance of solid foods in babies up to 6 months of age can be followed by the careful introduction of the potential allergy-provoking foods such as cow's milk, wheat and egg after 12 months, with nuts and fish only being introduced after 24 months. Up to 25% of infantile eczema is aggravated by food allergy and food additives or colourings can also aggravate eczema in older children. Skin irritation from pseudo-allergens in acidic citrus fruits, tomatoes, pineapples, berry fruits, cheese, chocolate and Marmite, occurs in patients with eczema. These foods may also cause peri-oral and contact facial irritation. Discourage hit-and-miss elimination diets in children with their potential for malnutrition.

Clothing

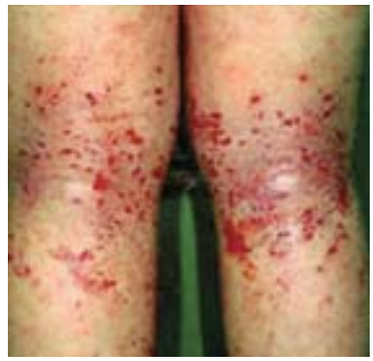
Children should avoid hot, humid and cold, dry weather, sweating, woollen or synthetic clothing close to the skin and perfumed soaps. Cotton underwear, clothing and bed-linen are recommended. Dry winter air and dust mites also aggravate eczema.

Detergents and chemicals

Non-biological washing powders should be used instead of enzyme-enriched products. Use an additional rinse cycle to remove all washing powder. Bubble baths, household antiseptics and medicated soaps are best avoided. Swimming pool chlorine may also irritate and dry out the skin. Local household skin irritants include detergents, wool, mohair, nylon and feathers. House-dust mites and dog and cat dander may aggravate eczema.

Bath

Bath water should be lukewarm and moisturising emollients must be applied to the skin within 3 minutes of patting the skin dry (never rub the skin dry). Avoid all soap, shampoo and bubble bath; rather use plain aqueous cream as a soap substitute. Add Oilatum Plus, colloidal oatmeal and/or liquid paraffin to bath water.



Atopic eczma

In bed

Cover as much skin as possible with non-allergenic lightweight cotton clothing, taking care not to overdress or overheat the child. Cotton night mittens as well as neatly clipped fingernails will reduce scratching. Sometimes elbow splints need to be applied to stop intractable scratching at night. Avoid all woollen and synthetic garments.

Careers

Young adults should decide on a career that is less likely to expose them to irritant chemicals and avoid nursing, hairdressing, catering, motor mechanics, or the building industry. Protective gloves with cotton inner-linings will help prevent irritant contact dermatitis that is so very common in eczema sufferers.

Treating eczema

Emollients

Ointment is better than cream, use as much and often as possible.

These moisturising creams and ointments (the greasier the better) are the mainstay of eczema treatment. They are completely safe and should be applied liberally to the whole body frequently (every 4 hours if necessary) to hydrate and protect the skin. Some people may find that some of these preparations irritate their skin because of preservative or fragrance content; if this occurs, try another product. Suitable emollients include emulsifying ointment, petroleum jelly, Epimax, cetomacrogol, etc. Sometimes coal tar is applied to treat thickened skin. Aqueous cream is a good soap substitute but a poor emollient. Apply plenty of emollient a few minutes before applying the steroid creams. Prescribe at least 250 g per week for children and 600 g per week for adults.

Steroid creams

Do not be afraid to use to clear eczema.

Topical steroids provide rapid relief and when used no more than twice daily for short periods (5-7 days) will settle eczema flare-ups. They may also be used for longer periods by diluting in any emollient (50:50) in which case treatment can be tapered off more slowly. Long-term steroid use may lead to thinning of the skin and colour changes; however the newer preparations seem to be less problematic (mometasone and flutica-

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sone). Unfounded steroidophobia is a major problem and always leads to suboptimal eczema control. Treating the eczema aggressively in early life may reduce further eczema exacerbations by 'disciplining' the eczema. Hydrocortisone 1% is suitable to use on the face but is too weak to treat eczema on the body. Alternate-day cortisone tablets may occasionally be necessary in very severe eczema.

Antibiotics

These may be needed if eczema suddenly deteriorates.

Eczema sufferers are more prone to skin infections (bacterial, fungal and viral, including the common wart). Antibiotic skin creams (fucidic acid and mupirocin) or chlorhexidine 5% in the bath and occasionally oral antibiotics (flucloxacillin) are prescribed to treat infected eczema. Suspect an infection if there is sudden deterioration in the eczema with crusting, oozing and diffuse skin redness. Swab the skin for bacterial MC&S to identify staphylococcal and streptococcal colonisation, and remember to treat nasal carrier-status.

Antihistamines

These are *essential to stop itch, sleep disturbance and 'allergic march'*.

The older sedating-type antihistamine tablets or syrup such as chlorphenamine and hydroxyzine will reduce itching especially at night. Antihistamine creams may sensitise the skin and should be avoided. Newer non-sedating antihistamines have both anti-itch and anti-inflammatory properties (cetirizine, loratidine, fexofenadine and their isomers) and should be use continuously for a few months. Clinical studies suggest that continuous use of cetirizine in early life slows the 'allergic march' from eczema to asthma and urticaria (ETAC study)

Wet wraps *(if all else fails)*

Application of damp tubular elasticised bandages and occlusive dressings to the limbs at night promotes skin hydration and the absorption of emollients and steroid creams. This is very effective in severe childhood eczema on limbs with exudates. First apply steroid ointment with plenty of moisturising emollients. Two layers of elastic tubular bandages are applied over the affected limbs. The inner layer is applied wet to aid absorption of emollients and the outer layer applied dry.

Other therapies *(mostly ineffective)*

Be wary of unsubstantiated alternative eczema therapies. Miraculous natural cures for eczema are very often laced with crushed prednisone. Evening primrose oil (or gamolenic acid), flaxseed & omega 3 oils offer no additional benefit to eczema sufferers. Extracts of Chinese herbal tea have been evaluated but taste awful and may cause liver toxicity. Difficult-to-treat eczema especially on the face may respond to non-steroidal immune-modulator creams such as tacrolimus (Protopic) and pimecrolimus (Elidel) but skin redness may be a side-effect. Ultra-violet light therapy treatment may be helpful. There is growing evidence that lactobacillus supplements if given early may reduce eczema in infants by altering the gut immune responses.

Declaration of conflict of interest

The author declares no conflict of interest.

REFERENCES

1. Primary Care Dermatology Society & British Association of Dermatologists, Guidelines for the management of atopic eczema 2006, http://www.bad.org.uk/healthcare/guidelines/BCDSBAD-Eczema.pdf (accesssed ?????)
2. Lowe AJ, Hosking CS, Bennett CM, et al. Skin prick test can identify eczematous infants at risk of asthma and allergic rhinitis. *Clin Exp Allergy* 2007; **37:** 1624-1631.
3. Warner JO. A double-blinded, randomized, placebo-controlled trial of cetirizine in preventing the onset of asthma in children with atopic dermatitis: 18 months' treatment and 18 months' post treatment follow-up. *J Allergy Clin Immunol* 2001; **108:** 929-937. (Query: Is this the ETAC study mentioned above? If not, please supply ref for ETAC study.)