

Eczema

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Eczema describes an inflammatory change in the skin. Features of redness, swelling, weeping, crusting and scaling of the skin are present in varying combinations. Many forms of eczema exist, due to endogenous or exogenous factors.

In childhood, atopic eczema is the condition present when most parents use the word eczema.

Atopy is a genetically determined disorder manifesting as asthma, eczema or allergic rhinitis, with an underlying abnormality of the immune system. There is an increased ability to form antibodies of the IgE type, but atopic eczema is not a simple allergic reaction. The immune abnormality in atopy is not well defined but may represent an imbalance in T helper and suppressor cells and the cytokines they secrete.

Eczema commonly first presents between three and six months of age. Over 90% of cases begin in the first year of life. Although the activity fluctuates, the condition runs a resolving course with about 70% entering remission before school age.

Atopic eczema affects approximately 3% of children. It is the most commonly seen condition in the dermatology clinics of children's hospitals. It is a very distressing condition to the patient and its parents.

CLINICAL DIAGNOSTIC CRITERIA

1. Pruritis -
The cardinal feature of eczema.
2. Family or past history of atopy.
3. Morphology of rash
Erythema
Vesicles – weeping and crusting if ruptured
Excoriations
Scale and dryness
Lichenification.
4. Distribution
The changes of eczema can occur anywhere. Classically the first site affected in infants is the face (fig.1). The extensor aspects of limbs are affected during the crawling stage of life. By 18 months of age the flexures of elbows and knees as well as neck, wrists and ankles become involved.
5. Course
Recurrent acute on chronic episodes.



Figure 1 – Facial eczema in infant

Treatment

Detailed explanation and a plan of management is required.

1. Reduction of aggravating factors
 - a) Heat
Heat → increased itch → scratching → infection → worsening of eczema
The child should not to be overdressed. Layers of clothing are best so that some can be removed in a warmer environment eg.

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Figure 2 – Infected atopic eczema

centrally heated buildings. Keep the child relatively cool at night with minimal bedclothes. The child is not to sleep in the parents' bed. Turn home heating down. Turn heater down during long car trips. Give tepid baths. Avoid bathing the child just before bedtime. Avoid overheating due to strenuous exercise.

b) Wet dressings

The use of wet dressings to reduce the heat and itch of eczema plays a major role in management.

- Liberal application of emollient is applied to affected areas.
- Chux or cotton material is soaked in cold water and wrapped around affected limb.
- Crepe bandages are applied over wet dressings. These can be re-applied every 2 or 3 hours when they become dry and warm.
- A similar approach with use of emollient and a wet singlet or t-shirt can be used to treat eczema on the trunk.

Cool compresses for 2 – 3 minutes are suitable for treating eczema on the face.

c) Clothing

- Avoid wool, brushed nylon or fabrics with prickly fibres next to the skin.
- Avoid rough fabrics.
- Avoid clothing with thick seams.
- Make satin pillow cases and sheets to reduce friction.

d) Drying of skin

- Reduce frequency of baths.
- Avoid use of soaps.
- Use bath oil.
- Apply emollients frequently – eg sorbolene and glycerine cream liquid and soft paraffin.
- Turn down home heating.

2. Anti-inflammatory agents

a) Topical corticosteroid preparations. These remain the cornerstone of treatment. Correct usage results in no longterm side effects. The weakest formulation should be used, such as –

- hydrocortisone 0.5% – 1% for the face
- betamethasone 17 valerate 0.02% on trunk and limbs only – not the face.

Stronger preparations can be used for limited periods of a week or so for a severe exacerbation of eczema. Revert back to the weak preparations as soon as possible.

Apply intermittently – two days on, two days off.

The cream preparation is used for acute, wet, weeping eczema. Ointment is used for dry, scaly lichenified eczema.

b) Emollients – should be applied many times each day.

c) Tar preparations – can be used as an alternative to topical corticosteroids especially in localised areas of lichenification.

3. Sedation

Antihistamines can be used to correct poor sleeping habits and to increase the time spent in deep sleep with no scratching activity.

4. Infection

Infection control is critical in the management of eczema.

a) Skin swabs – taken from involved skin of acute eczema invariably grows staphylococcus aureus and at times streptococcus (fig.2).

Control of infection with an appropriate antibiotic is needed if the eczema is to be settled.

Use of antiseptic washes are a useful adjunct to treatment e.g. Triclosan.

b) Infection with herpes simplex – is also common.

A high proportion of cases with severe eczema

requiring hospitalisation have secondary herpes simplex infection. Treatment with acyclovir may be required.

5. Occupation

Advise parents of patients with atopic eczema of occupations their child should avoid – such as hairdressers, nurses, dentists, surgeons, florists, mechanics, bricklayers, or any occupation involving wet work, or contact with detergents, solvents, irritants.

Commonly encountered myths:

1. Diet

We often hear "I want you to find out the food causing this eczema, so that it can be avoided and the eczema cured". There is no one factor causing eczema. A particular food may aggravate eczema.

Diet plays little part in most cases of eczema. We do not routinely do food allergy testing. We test those patients with an urticarial component to their eczema, or those with severe chronic eczema.

2. Asthma

Some parents worry that their child will develop

asthma when the eczema settles. There are no studies confirming this suggestion.

3. Topical corticosteroids

Some parents are reluctant to use topical corticosteroids because they have heard they are dangerous products. Intermittent use of the weak preparations is not associated with any systemic or topical side effects.

Summary

Atopic eczema is a distressing problem. Good treatment requires; attention to aggravating factors, topical preparations, sedation, infection control and advice regarding occupation. Time taken to do this will result in marked improvement of the eczema, confidence and relief on the part of the parents, and a sense of satisfaction in the attending carer.

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O N T H E S H E L F

Children with asthma — your questions answered

Authors: Mike South, Vanessa Williams, Michael Yung, Andrew Kemp and Judith Smith 1997, pp 28 price: \$5.00 (plus \$2.50 for mail orders)

Children with asthma is a recent publication written by staff from the Royal Children's Hospital, Melbourne which fulfils a real need amongst parents for a brief, inexpensive yet very factual guide to the management of asthma.

It is important for parents and children to understand asthma and its treatment. This will help avoid asthma attacks, ensure the best treatment is continued and so allow the child to lead a normal healthy life.

The contents are set out in an easy to follow manner with a question and answer format, although some may find the text on a few of the highly colourful pages a

little difficult. The contents include an explanation of what asthma is, asthma triggers, asthma medicines and how to give them, care of the child with asthma, tests and specialists.

This booklet is full of sensible advice, is well illustrated and covers as much information as many of the lengthier publications.

HELEN ROWAN

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Books are available from the child health information centre, a specialist bookshop, information and referral centre for health professionals, parents, teachers and adolescents. A booklist is available for mail orders, telephone (03) 9345 6429, open 9.30-4.00 weekdays.

Discipline – setting limits

Parents frequently request help in setting limits for their children. Their own experience of being parented will influence their reactions to difficult behaviour, often more at certain stages of development. Some find it difficult to distinguish between discipline and punishment.

It may be helpful for parents who are experiencing daily frustrations to step back and consider the goals of parenting – helping children:

- to feel confident and secure in a loving family environment;
- to understand the cultural values of the society they live in;
- to be socially competent;
- to be independent, self contained and responsible for their actions;
- to develop skills and knowledge appropriate to their age.

Using discipline to set limits reflects family values, establishes clear boundaries, and helps children accept responsibility for their actions. If discipline is delivered in a calm, consistent, fair and loving way it also models behaviour that most parents want their children to achieve.

On the other hand, punishment engenders compliance through fear, encourages children to respond to external controls rather than develop internal controls, models behaviour the parents wish to stop and often reflects the parents anger and frustration rather than a positive learning experience for the child.

If sensible discipline is used as part of daily family living, the common and developmentally appropriate “difficult” behaviours eg attention-seeking, disobedience, tempers, clinging and shyness are unlikely to develop into problems. When such behaviours are more intense and prolonged, or if parents have difficulties at a particular stage, a more detailed assessment may be required.

Encouraging “good” behaviour – at all ages:

- spend time giving individual attention and affection to the child;
- notice and praise desirable behaviour;

- reward desired behaviour – verbal praise, stamps, star charts, token to provide visual reinforcement, concrete rewards;
- give clear instructions, ensure the child understands;
- use everyday examples to help children learn, make choices and thereby encourage independence;
- set a good example – be attentive, listen, stay calm, deal with anger appropriately.

Discipline at different ages

	1 – 2 years	2 – 4 years	4 – 12 years
Establish ground rules		■	
Explanation when rules are broken (keep to a minimum)		■	
Good behaviour charts		■	■
Planned ignoring	■	■	■
Logical consequences		■	■
Time out (to calm down)		■	■
Withdrawal of privileges		■	■

These forms of discipline are delivered in different ways at different ages. The underlying principles remain:

- establish clear boundaries;
- “catch them being good”;
- ignore as much as possible (for irritating behaviours);
- if boundaries are broken, act immediately;
- say as little as possible (rules should already be clear – discussion, blame, threats, restating rules will escalate tension);
- praise the child – for complying, for learning, for completing – then get on with everyday life.

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