



ROYAL CHILDRENS HOSPITAL
WYETH HEALTH AND NUTRITION

Volume 2, Number 4 ♦ Summer 1993



A National Publication for Nurses and Other Health Professionals

Community

PAEDIATRICS

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ECZEMA: The Role of Diet in Management

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Eczema is extremely common, usually begins in infancy and spontaneously disappears in 80% of children by school age.

A 6 weeks trial of topical treatment is recommended before considering the role of diet except in patients known to have immediate reactions to foods. Many patients are allergic to dust mite faeces, animal dander, pollens and passive smoking has an over-riding adverse influence; these factors should be addressed first eg exclusion of (lamb's) wool blankets, selection of appropriate clothing, covering of mattresses, reducing dust exposure and advising the parents not to smoke.

The role of diet ♦

The use of diets in the management of eczema is controversial. Diet does not change the course of the disease but can relieve symptoms in some cases. Diet is unlikely to benefit older children. Allergy and intolerance can be the cause of many symptoms including eczema, which may coexist with others such as anaphylaxis, angioedema, swollen eyes or lips, flushing, asthma, rhinitis. Symptoms may

occur immediately the food is eaten or be delayed (Hill et al 1984). Reactions occurring some time after ingestion may be the cause of symptoms, but equally they may be due to other factors or conditions which must be excluded, and a diagnosis sought.



Calcium

We apologise for not including the name of the author of our last issue's article on Calcium.

This was contributed by Judith Myers, Dietitian to whom we extend our apologies for this omission.



Diagnosis ♦

Positive skin and 'Rast' tests to the foods most commonly implicated in allergy, ie cow's milk, egg, peanuts and shell-fish indicate those individuals likely to benefit by dietary manipulation. A negative test however does not ensure the child will tolerate the particular food and some foods eg. wheat, can give false positive results making diagnosis difficult. Other tests (Vega, Pulse, Sublingual, Rinkel's etc.) are of no value in the management of allergy and intolerance.

Multiple allergy and intolerance can occur including reactions to dust mite, dander and pollens as well as foods; improvement is unlikely until all contributing causes are excluded simultaneously. When multiple foods are incriminated the expertise of a paediatrician, immunologist or medical allergist with the input of a dietitian is essential.

Prevention ♦

There is no place for diet during pregnancy in the hope of preventing allergy. Breast-feeding is highly recommended for all infants in their first year for a variety of nutritional and immunological reasons. Those with infants at risk of allergy should be advised to breast-feed and restrict the rate of introduction of solids and to the use of low allergen foods between 4 and 12 months. If symptoms develop in the infant manipulation of the maternal diet should be considered. Infants who are not breast-fed should have a standard cow's milk formula, but if diet related symptoms develop a change to a soya or hydrolysate formula (see Table) is recommended (Hill & Hosking 1993). Any foods which provoke reactions should be omitted initially and introduced later.

Caution is necessary to ensure over zealous food exclusion does not result and the diet must be nutritionally adequate at all times.

Dietary management of suspected allergy or intolerance ♦

This requires withdrawal of provoking foods with subsequent improvement of symptoms, then challenge with the suspect foods and relapse.

- Immediate reactions in eczema patients necessitate exclusion of the provoking foods.
- An 'empirical' diet trial may be warranted excluding foods known to provoke symptoms in a number of patients with eczema eg Milk, egg, peanuts and shell-fish exclusion. Cross reactions with cow's milk, goat's milk and soya can occur in those who react to cow's milk necessitating use of an hydrolysate formula. In older children exclusion of the azo dyes, tartrazine, benzoates and artificial colours may be all that is required.
- A nutritionally adequate formula (see Table) alone is used temporarily in those with total body eczema. The formula selected must be appropriate from the individual's history. This approach

is mostly, but not exclusively, restricted to infants. Once improvement occurs foods are introduced singly and systematically to identify those which provoke symptoms.

Assessment of food withdrawal ♦

Charts monitoring symptom severity should be kept for at least 1 week before starting any diet, during the dietary trial and subsequent challenges to objectively measure the benefit of the diet.

If no improvement is seen in 3-6 weeks, factors other than food are contributing to symptoms or the diet still contains provoking items. The diet should be **abandoned** and an alternate explanation sought. If food is still thought to be incriminated a different diet may be tried which contains a different type of formula and range of foods.

Challenges ♦

Food challenges and introduction can be either as capsules or foods, introduced singly and given openly or as double blind challenges. The latter are not required where immediate reactions to foods can be identified and should never be attempted in patients with symptoms of asthma, anaphylaxis or angioedema, except in expert clinics. Challenges with egg, milk or peanuts should not be attempted until a negative skin prick test is obtained.

A treatment period follows, totally excluding the provoking foods. Review, repeated skin tests and challenges are usually attempted at least yearly; remember children have a habit of getting better (Bishop, Hill and Hosking 1990).

Problems ♦

● Eczema fluctuates periodically. As there are no tests to easily diagnose allergy and intolerance, and the dietary manipulation required is fraught with difficulties, expert advice is essential.

● Many parents due to guilt, cost of the diet, misunderstandings or the practical difficulties of the diet will permit dietary indiscretion, abandon the diet, or the child will pilfer 'forbidden foods' thus destroying any good the diet may be doing. The result is frequently a diet with inadequate quantities of important food groups and poor nutrition results. When the diet is worse than the symptoms, and the latter are not causing actual harm, the diet should be formally stopped.

● The nutritional adequacy of any diet depends on the actual food intake and replacement of excluded foods by appropriate alternatives.

Conclusion

Dietary modification in eczema is controversial but can relieve symptoms in some patients. Diagnosis is fraught with difficulties but should be approached systematically and similarly managed to food allergy. It must be remembered children have a habit of improving with time. The prescribed diet must be nutritionally adequate for the growth needs of the child.

FORMULAE USED IN ALLERGY AND INTOLERANCE

BREAST FEEDING -

see **Prevention** above
Breast-feeding should continue as long as possible ideally up to 1 year. Mother's diet may require some modification.

Soya

Infants and children:
Prosobee, Infasoy, Isomil

Adults & children over 2 years:
So-good, Soy-fresh or calcium fortified alternative soy beverage

Hydrolysates

For those intolerant to cow's milk and soya:

Alfare (whey)
Nutramigen (casein)
Pregestimil (casein)

Elemental Amino-acid based

Only for those with multi-intolerance to cow's milk, soya and hydrolysates:

Infants:
Neocate

Adults & older children:
Elemental 028

References:

Hill D et al. A study of 100 infants and young children with cow's milk allergy. *Clin. Rev. Allergy* 1984; 2: 125-142.

Bishop J, Hill D, & Hosking C. Natural history of cow milk allergy: Clinical outcome. *Journal of Pediatrics* 1990; 116: (6) 862-7

Hill D. & Hosking C. Preventing Childhood Allergy. *The Medical Journal of Australia* 1993; 15 March

Parent Handouts

A series of Parent Information Leaflets covering common paediatric conditions are available. They are simple to read, colourful, factual, and are packaged conveniently in tear off pads of 100 sheets.

We are pleased to announce that these parent handouts have now been translated into 15 languages, so that nurses who work with population groups whose native language is not English can use them.

They are now available in the following languages: English, Arabic, Cambodian, Chinese,

Croatian, Greek, Italian, Loatian, Macedonian, Polish, Portugese, Spanish, Turkish, Vietnamese. The translations are available in smaller quantities, down to single sheets.

The Ambulatory Paediatrics Department makes them available at cost plus a small mailing charge. If you are interested in obtaining these leaflets, please write to us for a sample and order form.

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from
the
literature...



FALLING OUT OF BED:

A RELATIVELY BENIGN OCCURRENCE

TJ Lyons & RK Oates. *Pediatrics* 92 (1) Jul 1993 pp 125-127.

Parents frequently ask when is the right time for a toddler to be taken out of a cot and put into a bed. They are fearful of injuries being caused by falling out of bed. The results of this review of 207 Sydney children, who were examined after falling out of beds or cots while patients at The Children's Hospital, Camperdown, should be reassuring.

During a ten year period there were 235 documented falls of which 207 were studied. There were 124 falls from cots and 83 from beds varying in height from 25 to 54 inches (when children fell while climbing over the cot sides). From these incidents there were 29 superficial injuries, one fractured clavicle and one simple skull fracture, but no serious life-threatening injuries.

Since beds in hospitals are much higher than beds at home, and these cases were independently documented, the authors indicate that serious injuries reportedly resulting from falls from short distances such as from beds and cots usually require further investigation for possible abuse or neglect.

Jan Shield

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