Dietary exclusions for established atopic eczema (Review)

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[Intervention Review]

Dietary exclusions for established atopic eczema

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ABSTRACT

Background

Atopic eczema (AE) is a non-infective chronic inflammatory skin disease characterised by an itchy red rash.

Objectives

To assess the effects of dietary exclusions for the treatment of established atopic eczema.

Search methods

We searched The Cochrane Skin Group Specialised Register (to March 2006), The Cochrane Central Register of Controlled Trials (CENTRAL) in *The Cochrane Library* (*Issue* 1, 2006), MEDLINE (2003 to March 2006), EMBASE (2003 to March 2006), LILACS (to March 2006), PsycINFO (1806 to March 2006), AMED (1985 to March 2006), ISI Web of Science (March 2006), www.controlled-trials.com, www.clinicaltrials.gov and www.nottingham.ac.uk/ongoingskintrials (March 2006). Pharmaceutical companies were contacted where appropriate for reviews or unpublished trials.

Selection criteria

People who have atopic eczema as diagnosed by a doctor.

Data collection and analysis

Two independent authors carried out study selection and assessment of methodological quality.

Main results

We found 9 RCTs involving a total of 421 participants of which 6 were studies of egg and milk exclusion (N=288), 1 was a study of few foods (N=85) and 2 were studies of an elemental diet (N=48).

There appears to be no benefit of an egg and milk free diet in unselected participants with atopic eczema. There is also no evidence of benefit in the use of an elemental or few-foods diet in unselected cases of atopic eczema. There may be some benefit in using an egg-free diet in infants with suspected egg allergy who have positive specific IgE to eggs - one study found 51% of the children had a significant improvement in body surface area with the exclusion diet compared to normal diet (RR 1.51, 95% CI 1.07 to 2.11) and

change in surface area and severity score was significantly improved in the exclusion diet compared to the normal diet at the end of 6 weeks (MD 5.50, 95% CI 0.19 to 10.81) and end of treatment (MD 6.10, 95% CI 0.06 to12.14).

Methodological difficulties have made it difficult to interpret these studies. Poor concealment of randomisation allocation, lack of blinding and high dropout rates without an intention-to-treat analysis indicates that these studies should be interpreted with great caution.

Authors' conclusions

There may be some benefit in using an egg-free diet in infants with suspected egg allergy who have positive specific IgE to eggs. Little evidence supports the use of various exclusion diets in unselected people with atopic eczema, but that may be because they were not allergic to those substances in the first place. Lack of any benefit may also be because the studies were too small and poorly reported. Future studies should be appropriately powered focusing on participants with a proven food allergy. In addition a distinction should be made between young children whose food allergies improve with time and older children/adults.

PLAIN LANGUAGE SUMMARY

Dietary exclusions for improving established atopic eczema in adults and children

Atopic eczema is the most common inflammatory skin disease of childhood in developed countries. The cause of atopic eczema is probably due to a combination of genetic and environmental factors. Atopic eczema varies in severity, often from one hour to the next and the disease can be associated with complications such as bacterial and viral infections. There is a substantial economic cost not only to the family of the person with atopic eczema but also to health services. Although there is currently no cure for atopic eczema, a wide range of treatments are used to control the symptoms. One such approach is a dietary one, whereby certain foods such as cows' milk are excluded on the basis that they are thought to cause eczema to worsen. The reason for undertaking this review is because the effectiveness of removing various foods from the diet in the short term management of atopic eczema is unclear.

The general quality of the studies was poor. The main findings of the review suggest that there is some evidence from one study for the use of an egg-free diet in infants with a suspected egg allergy who have positive specific IgE antibodies to eggs in their blood. Other studies that compared a dietary exclusion with ordinary diets did not test the people taking part to see if they were allergic to the foods concerned. There appears to be little benefit in eliminating cows milk from the diet or using an elemental (liquid diet containing only amino acids, carbohydrates, fat, minerals and vitamins) or 'few foods diet' for improving atopic eczema in people who have not undergone any form of testing.

Three of the studies used soya based substitute which itself can be allergenic to people with atopic eczema.

Adhering to elimination diets is difficult. The studies were performed in different populations with only one study describing the severity of the atopic eczema. The clinical relevance of changes in severity scores obtained in many studies is unknown.