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[Intervention Review]

House dust mite control measures for asthma

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ABSTRACT

Background

The major allergen in house dust comes from mites. Chemical, physical and combined methods of reducing mite allergen levels are intended to reduce asthma symptoms in people who are sensitive to house dust mites.

Objectives

To assess the effects of reducing exposure to house dust mite antigens in the homes of people with mite-sensitive asthma.

Search methods

Cochrane Airways Group trials register, and PubMed and The Cochrane Library (last searches June 2004), reference lists.

Selection criteria

Randomised trials of mite control measures vs placebo or no treatment in asthmatic people known to be sensitive to house dust mites.

Data collection and analysis

Two reviewers applied the trial inclusion criteria, assessed their quality and extracted the data independently. Study authors were contacted to clarify information.

Main results

Forty-nine trials (2733 patients) were included; the number of patients has more than doubled since the last version of this review. Thirty-one trials assessed physical methods, ten assessed chemical methods, and eight a combination of chemical and physical methods. Despite the fact that many trials were of poor quality and would be expected to exaggerate the reported effect, we did not find an effect of the interventions. For the most frequently reported outcome, peak flow in the morning (1339 patients), the standardised mean difference was -0.02 (95% confidence interval (CI) -0.13 to 0.08). There were no statistically significant differences either in number of patients improved (relative risk 1.01, 95% CI 0.80 to 1.27), asthma symptom scores (standardised mean difference -0.01, 95% CI -0.10 to 0.13), or in medication usage (standardised mean difference -0.05, 95% CI -0.18 to 0.09).

Authors' conclusions

Chemical and physical methods aimed at reducing exposure to house dust mite allergens cannot be recommended. It is doubtful whether further studies, similar to the ones in our meta-analysis, are worthwhile. If other types of studies are considered, they should be

methodologically rigorous and use other methods than those used so far, with careful monitoring of mite exposure and relevant clinical outcomes.

PLAIN LANGUAGE SUMMARY

Chemical and physical methods of reducing mite allergen levels seem to lack an effect in people with asthma

The major allergen in house dust comes from mites. Chemical and physical methods of reducing mite allergen levels are intended to reduce asthma symptoms in people who are sensitive to house dust mites. The review did not find an effect of control measures to reduce the exposure to mites or their products.