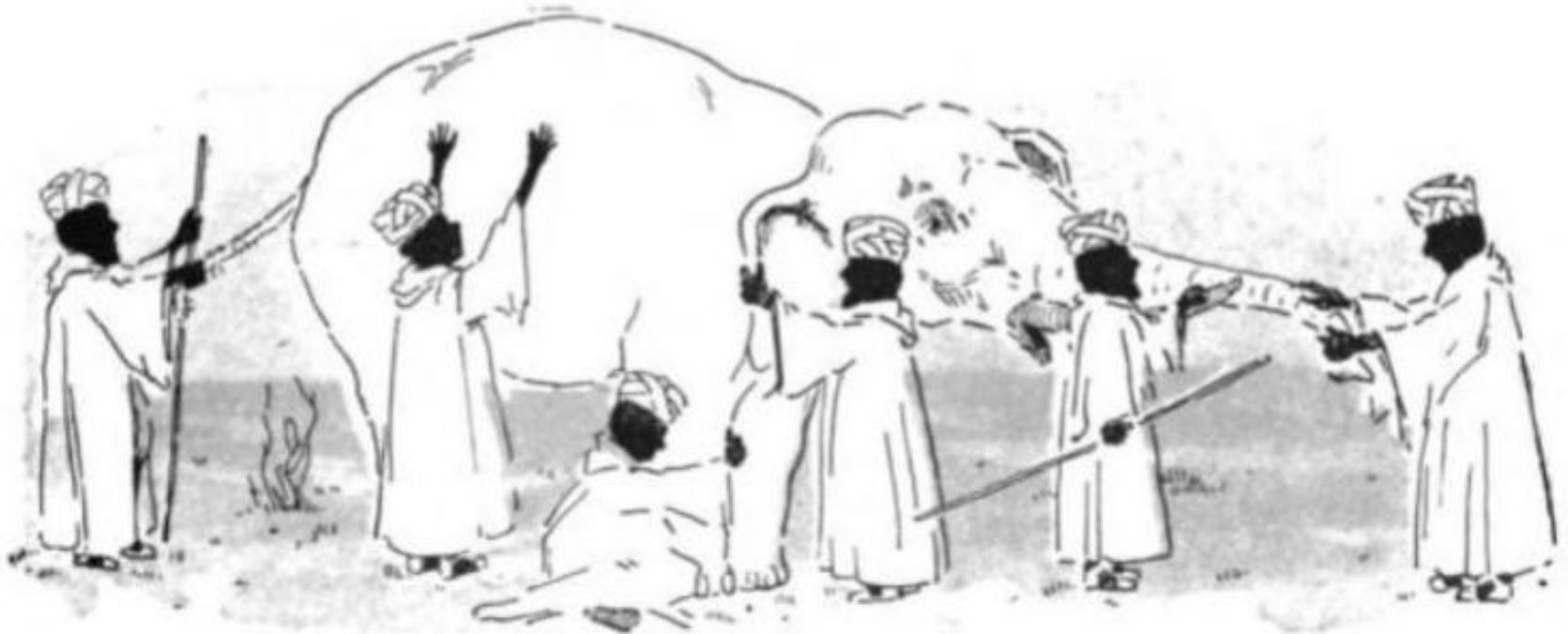


Systematic review of eczema treatments

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Why do we need an overarching systematic review?



Scope of the review

- Randomised controlled trials of eczema treatments
- Primary outcomes – Patient rated outcomes or if not, global severity of eczema
- Prevention of eczema excluded
- Aimed at clinicians, systematic reviewers, guideline writers, healthcare decision makers, patients



The Global Resource of EczemA Trials



The screenshot shows the homepage of the GREAT database. At the top, there are navigation links for 'Campus maps', 'Contact us', 'Jobs', 'Help', and 'A-Z index'. Below these are links for 'UK Campus', 'China Campus', and 'Malaysia Campus'. The main header features the title 'Global Resource for EczemA Trials' and the University of Nottingham logo. A navigation menu includes 'Home', 'Browse', 'Search', 'Publications', 'Links', 'Contact', 'Glossary', and 'News'. A search bar is located on the right. The main content area has a background image of hands and a blue sky with clouds. Two buttons are visible: 'Browse the GREAT database' and 'Search the GREAT database'. Below this is a descriptive paragraph: 'A comprehensive collection of detailed information on systematic reviews and randomised controlled trials of eczema treatments. GREAT database last updated: Wednesday 2nd of April 2014'. The footer is divided into three columns: 'Background' with a photo of a woman and text about eczema; 'Aims' with a target icon and text about providing a comprehensive resource; and 'Latest news' with two news items dated 23/08/2012 and 12/07/2012.

www.greatdatabase.org.uk

Quality of trial reporting

Much improvement in quality in the last decade:

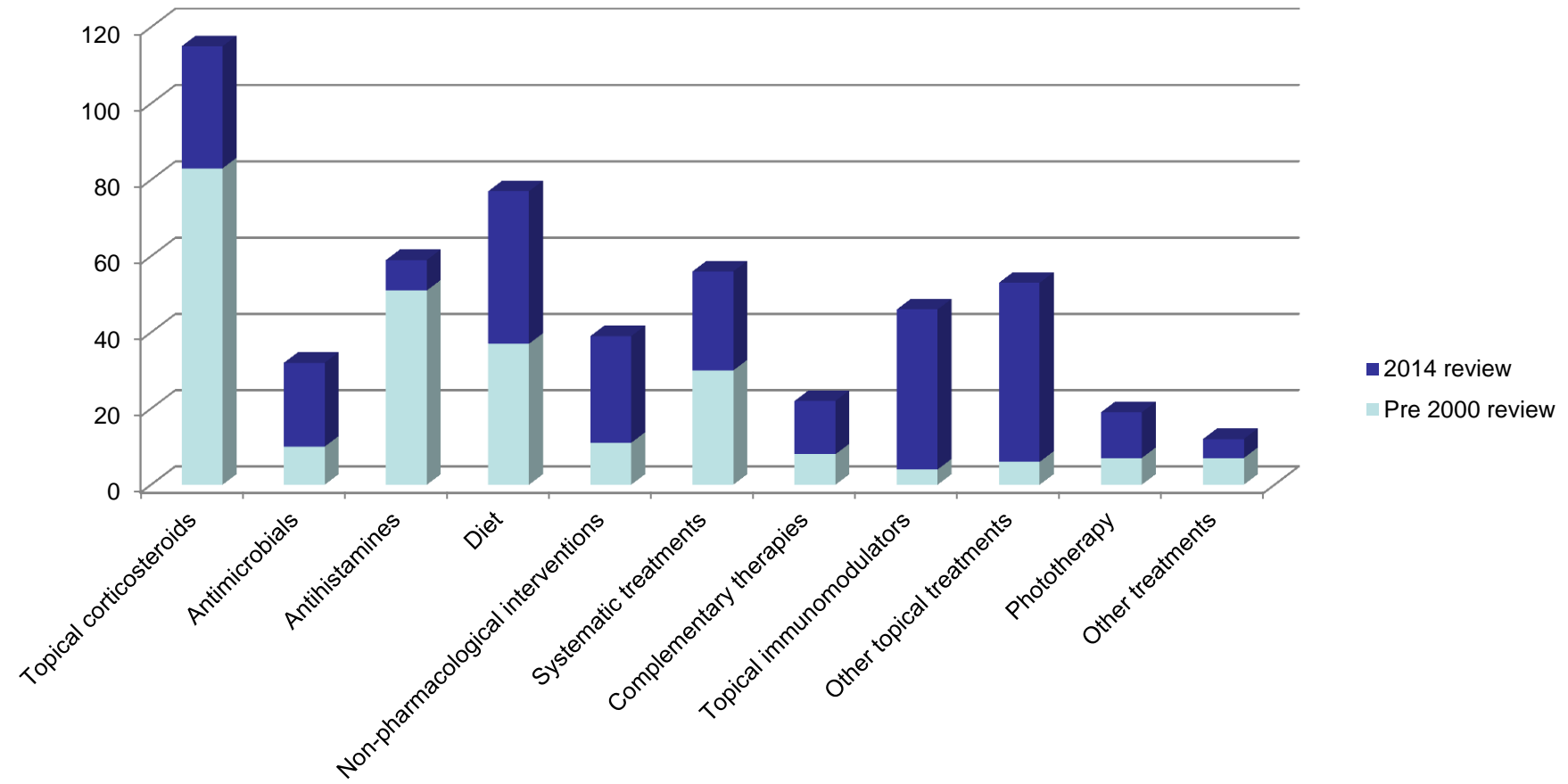
- Easier to find
- Clarity of reporting

Still room for improvement in the future:

- Longer, larger trials
- Patient reported outcomes
- Clinically relevant treatment comparisons
- Primary care population and setting

Summary of results

287 new included RCTs (Over 500 trials in total)



Which treatments have sufficient evidence of benefit?

- Proactive use of topical corticosteroids, tacrolimus, pimecrolimus to prevent flares
- Systemic treatments in adults
- Phototherapy
- Education



Which treatments have sufficient evidence of NO benefit?

- Twice daily versus once daily application of topical corticosteroids
- Supplements containing linoleic acid (Evening primrose oil and borage oil) versus placebo
- Ion exchange water softeners
- Antibiotic/steroid combinations in non-infected eczema



Which treatments need more high quality research?

- Emollients to reduce the severity of eczema/prevent flares/reduce the need for other eczema treatments
- Topical corticosteroids in combination with antibiotics for infected eczema
- Systemic treatments (methotrexate, montelukast)
- Large number of other treatments fall into this category





TOPICAL VITAMIN B12

Studies

No trials looking at topical vitamin B12 were reported before 2000.

Two new trials were reported after 2000.

Two within person trials, both industry funded, compared the same concentration of cyanocobalamin (0.07%) in a cream compared to the base cream only. In the trial by Stucker and colleagues, 48 adults aged 18 to 70 years applied the treatments twice a day for 8 weeks. In the trial by Januchowski and colleagues, 22 children aged 6 months to 18 years and no severity inclusion criteria stated were randomised to treatment for 4 weeks, but it was not clear how often they were instructed to use the treatment.

Table 29: Topical vitamin B12 - risk of bias of included studies

Trial	Sequence Generation	Allocation concealment	Blinding	Other potential sources of bias
Stucker 2004	Low risk	Unclear risk	Unclear risk	
Januchowski 2009	Low risk	Low risk	Unclear risk	

Benefits

The trial by Stucker and colleagues found that there was significant decrease in severity after 8 weeks treatment, measured using a modified SASSAD score with a maximum for each side of the body of 240 points, for the topical vitamin B12 treatment compared to the base cream....

The trial by Januchowski and colleagues also reported significant decreases in severity, measured using modified SCORAD scores, with a maximum of 27, for topical vitamin B12 cream compared to the base cream after 4 weeks of treatment....

Overall implications for research and practice

Two reasonably well reported trials appear to show a significant beneficial effect on severity of eczema for topical vitamin B12 cream, however, the clinical relevance of a change in modified SASSAD scores of around an additional 25 points compared to the base cream or just under three additional modified SCORAD points remains debatable. The lack of CI for all results in both trials published reports means that there is no way to judge the statistical robustness of the trial's claims. Taking into account that there were a number of adverse events relating to skin irritation probably caused by topical vitamin B12, it seems unlikely to be worth ploughing more research time and money in. Whether or not to try this topical treatment will probably remain a decision based on individual circumstance and preference.

Harms

Thirty three cutaneous events were reported, all mild except one, which involved a moderate reaction of weeping, itching and limited neck mobility after applying the placebo cream. There were four cases of irritation only in the topical vitamin B12 group that were considered 'probably related', and two cases were 'possibly related'. These were two cases of burning, two cases of itching, one case of redness and one case of hyperthermia and formication.



Points the way for more
specific, detailed systematic
reviews and randomised
controlled trials



Provides a map of the
evidence about eczema
treatments

Acknowledgements

- Co-authors: Hywel Williams, Kim Thomas, Finola Delamere, Sebastien Barbarot
- Help with preparing the review: June Cody and Natasha Rogers
- Translators and data extractors around the world

This presentation presents independent research funded by the National Institute for Health Research (NIHR) under its Programme Grants for Applied Research Programme (RP-PG-0407-10177). The views expressed in this presentation are those of the author(s) and not necessarily those of the NHS, the NIHR or the Department of Health.