

Homeopathy helps hyperactive children

If prescribed according to classical rules, homeopathic treatment is superior to placebo in treating children who suffer from attention deficits and hyperactivity. This has been shown in a study on 62 Swiss children, all of whom were given their individually matched homeopathic medicines before the study started. Those children whose symptoms improved by at least 50% were split into two groups. In the first group, homeopathic treatment was continued for a period of six weeks, and subsequently changed to placebo treatment. In the second group, placebo was given in the first period, homeopathic medicine in the second. During the first 6-week treatment period, both groups worsened moderately, but in the second period the homeopathically treated patients improved again, whereas symptoms in the placebo treated group remained at a similar level.

(Summary of the original paper, for strengths and weaknesses of the study see the following pages)

This paper summarises and comments on the results of the following research article:

Frei H, Everts R, von Ammon K, Kaufmann F, Walther D, Hsu-Schmitz SF, et al.: Homeopathic treatment of children with attention deficit hyperactivity disorder: a randomised, double blind, placebo controlled crossover trial. *Eur J Pediatr.* 2005;164(12):758-767.

It was selected for the following reason: the study is a recent example for a good trial in children with a completely new design where the optimum homeopathic medicine for each patient was chosen prior to entering into the trial and patients entered the trial after showing a response to this treatment..

This paper has been produced on behalf of the European Information Centre on Complementary and Alternative Medicine (EICCAM) and approved by the EICCAM Scientific Board prior to circulation.

The aim of EICCAM is to promote the provision and dissemination of understandable, objective and high-quality information on the safety, effectiveness and efficiency of Complementary and Alternative Medicine (CAM) to decision makers and the media in Europe for the benefit of European citizens.

Each issue of EICCAM Research Facts provides a summary and commentary on an individual research study. Further details of the EICCAM foundation's work and full details of the process for selecting research articles for summary can be found on www.eiccaml.eu.

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Synopsis

Aim of the study	to investigate whether homeopathic medicines are effective in treating children with attention deficit hyperactivity disorder (ADHD)
Pre-treatment	daily administration of a homeopathic medicine, individually selected according to classical homeopathic rules
Patients	62 children (7 girls, 55 boys) with ADHD, who after the pre-treatment phase improved by at least 50%
Treatment groups	1. in the 1 st period continuation of homeopathic pre-treatment medicine, in the 2 nd period change to a daily administration of placebo 2. in the 1 st period daily administration of placebo, in the 2 nd period change to homeopathic pre-treatment medicine
Length of follow-up	6 weeks per period, i.e. 12 weeks overall
Severity of symptoms (assessed by parents)	1 st period, homeopathic medicines: worsening from 8 to 12 points (scale: 0 to 30) 2 nd period, placebo: unchanged at 12 points 1 st period, placebo: worsening from 9 to 13 points (scale: 0 to 30) 2 nd period, homeopathic medicines: improvement from 13 to 9 points
Other outcomes	children performed better in logic tasks under homeopathic treatment children were less aware of visual details under homeopathic treatment
Authors' conclusions	The study suggests that homeopathy is effective in the treatment of ADHD, particularly in behavioural and cognitive functions.

The study in detail

Attention deficit hyperactivity disorder, abbreviated to ADHD, is one of the most common childhood disorders, boys being more frequently affected than girls. This study, conducted by Dr. H. Frei from the Swiss Association of Homeopathic Physicians, Lucerne, Switzerland, aimed to assess the effectiveness of homeopathic medicines in ADHD as compared to placebo.

In total, 83 children aged 6-16 years were involved, most of them boys. ADHD diagnosis was made according to international criteria. The overall severity of the disease was assessed by an internationally accepted questionnaire (Conners' Global Index), in which parents were asked to score the severity of each of the 10 most typical ADHD symptoms. Subsequently, these scores were summed up into one single value, ranging from 0 to 30 points.

In the first phase of the study, all 83 children received a specific homeopathic treatment. Here the homeopathic medicines were individually selected according to classical homeopathic rules. During this phase the treating physician was allowed to change the

homeopathic medicine as often as he saw the fit. After a mean treatment duration of 5 months, the symptom scores of 70 children decreased by 50% or more. This was seen as proof that the homeopathic medicine was correctly chosen and that the child responded to it adequately.

62 children then entered the second phase of the study (some refused to participate): here one half received the homeopathic medicine selected in the first phase, the other half was given placebo. After a period of six weeks, treatments were switched, so that each child received both his/her individually selected homeopathic medicine and placebo.

During the first 6-week treatment period, both groups worsened moderately from 8 to 12 points under homeopathic treatment, and from 9 to 13 points under placebo. In contrast, the homeopathically treated patients improved from 13 to 9 points in the second period, whereas the placebo treated patients remained at the level of 12 points. Taken together, patients were better by 1.7 points in the homeopathic treatment periods than in the placebo periods.

It is noteworthy that the children who received placebo in the second study period were judged to have improved again after the study, once they went back to their homeopathic medicines.

Although the homeopathic treatment under review proved to be superior to placebo with regard to the improvement of typical ADHD symptoms, this positive result could not be

Commentary

Homeopathy, introduced 200 years ago, is a system of therapy based on the hypothesis that a substance causing certain symptoms in healthy persons is also able to resolve similar symptoms in diseased patients. There are several competing methods of prescribing homeopathic medicines. The predominant method in Germany and Switzerland is the classical approach, where a single, unique medicine is chosen according to the individual patient's symptom presentation and history.

In the classical approach, homeopaths often need several attempts until they find the best match. This complicates the conduct of effectiveness studies considerably. Dr. Frei's study is the first to tackle this problem by introducing a pre-study phase which involved selecting the optimum medicine for each patient and treating patients until there had been the required response to treatment before being entered into the trial. The 'matched' medicine for each patient was then used for the active treatment phase of the trial. From this point of view, the study is a pioneer approach and may serve as a model for future research in classical homeopathy, which until now has not been convincingly proven to be superior to placebo in any medical condition (see also EICCAM Research Facts 5.)

It should also be noted that the study was well conducted: the decision on whether each patient was treated first with placebo or homeopathy was governed by chance, and neither patients nor physicians were aware of which treatment was being given. Treatment success was assessed by internationally accepted questionnaires and tests. Thus, the study results can be seen as valid.

However, some aspects are problematic. First, the study could not convincingly prove the

unambiguously confirmed by several standardised tasks the children had to perform during the study: children under homeopathic treatment performed better in logic tasks, but worse in recognising visual details.

Essentially, this study showed that homeopathic medicines, if applied according to classical rules, may be effective in the treatment of ADHD.

effectiveness of the homeopathic medicines for all relevant outcome parameters. Although proof was found for the parameter selected *a priori* as the most relevant, there were no differences between homeopathy and placebo for most other parameters. Thus, there remain some doubts as to whether the positive findings are the product of chance.

Second, the effectiveness of the homeopathic medicines was obvious only in the second treatment period, but not in the first. Here all patients -- both homeopathic and placebo -- worsened noticeably. It is unclear why, but the best explanation is that all patients were concerned when the study started that they might receive a placebo instead of the homeopathic medicine which had already been shown to help them.

The results of this study are of great importance to medical decision makers. Approximately 5% of all children worldwide suffer from ADHD, with regional variability being relatively small. Common ADHD drugs are effective but are stimulants which fall under narcotic control laws: they are in effect similar to amphetamines, both in action and in the potential to create dependence. Between 1993 and 2003 their use nearly tripled, global spending increased nine-fold; for example, major increases were found in France and Sweden. In 2005 it was estimated that the annual costs for ADHD in children and adolescents exceeded € 9,000 per individual.

These figures show that there is an increasing need for effective, safe and low-cost alternatives to common drugs. Homeopathy may indeed be one approach, requiring further investigation and confirmation of these results.

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The following sources were additionally used to prepare this summary:

Shang A, Huwiler-Müntener K, Nartey L, Jüni P, Dörig S, Sterne JAC, Pewsner D, Egger M: Are the clinical effects of homoeopathy placebo effects? Comparative study of placebo-controlled trials of homoeopathy and allopathy. Lancet 2005; 366: 726–732.

Polanczyk G, de Lima MS, Horta BL, Biederman J, Rohde LA. The worldwide prevalence of ADHD: a systematic review and metaregression analysis. Am J Psychiatry 2007; 164(6):942-948.

Scheffler RM, Hinshaw SP, Modrek S, Levine P. The global market for ADHD medications. Health Aff (Millwood) 2007; 26:450-457.

Pelham WE, Foster EM, Robb JA. The economic impact of attention-deficit/hyperactivity disorder in children and adolescents. J Pediatr Psychol 2007; 32(6):711-727.

Lahey BB, Applegate B, McBurnett K, et al. DSM-IV field trials for attention deficit hyperactivity disorder in children and adolescents. Am J Psychiatry 1994; 151(11):1673-1685.

Overview of the process for producing EICCAM summary papers

Selection of articles

The initial assessment which articles are to be summarised is carried out by the relevant member(s) of the Scientific Board i.e. with expertise in the particular therapy or research type. The Scientific Board also receives advice from the EICCAM Management Board on topical key questions (of particular importance/relevance to decision-makers in Europe at the time). Articles are selected according to an initial assessment of quality and relevance and either deal with a relevant health condition in terms of prevalence or costs and one of the following key therapies, or an aspect of particular interest such as the mechanism of action of a therapy. Because of limited funds each therapy will be dealt with in turn.

- Phytotherapy (Herbal medicine), including Traditional Chinese Herbal Medicine
- Anthroposophic medicine
- Homeopathy
- Acupuncture
- Osteopathy and Chiropractic.

Priority is given to:

- systematic reviews and meta-analyses on the effectiveness of CAM therapies
- large-scale trials
- large-scale outcome studies
- cost.

Priority is also given to studies published in peer-reviewed journals. Relevant studies published in other formats, e.g. reports produced by specific organisations, may also be selected (*if, in the view of the Scientific Board, the findings are likely to have significant implications on practice or healthcare*).

Selection of articles is not on the basis of whether positive or negative findings are reported. The list of papers considered is provided at www.eiccaml.eu.

Preparation of the summary, commentary and critical appraisal.

A draft of the summary is prepared by an external author who is an academic with expertise in CAM, research methods, statistics and communication of research according to a pre-defined template.

The draft is reviewed by the relevant members of the Scientific Board for accuracy and clarity.

Members of the board may choose to send the summary for external review.

A final version is prepared and sent to the Scientific Board for approval.

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