Review

Wölk, Melanie: Eminence or Evidence: Homeopathy on the test bench of Evidence-based medicine. (EBM). *Master thesis for graduation as Master of Science, University course in Natural Medicine, Danube University Krems, Department of Health Sciences and Biomedicine, May 2016.*

The Viennese doctor Melanie Wölk, MD, has researched the crucial question whether homeopathy works according to the rules for evidence-based medicine (EBM) or if traditional knowledge, the eminence, is more important than scientific evidence. To perform a revision of the provability and scientific character of homeopathy, the allopathic medical doctor has put homeopathy on the test bench of EBM.

For this the current study situation was evaluated by literature research. All identified meta-analyses and reviews of evidence class Ia, randomised double-blind and controlled studies of evidence class Ib (published between January 2010 and February 2016), the Swiss HTA report 2006 and the study of the Australian health authority NHMRC 2015, as well as each two popular studies often cited from each party, the critics (Shang 2005, Ernst 2002) and the defenders (Frass, sepsis study 2005, Linde 1997) of homeopathy were evaluated.

Research question

The research question was: Are there studies of evidence grades Ia and Ib that can prove the effectiveness of homeopathy? Only if there are such high quality studies, homeopathy can be called evidence-based medicine. This would implicate that identified positive studies are not required to be evaluated for further quality aspects or to be compared with each other, as they already comply with the quality requirements of the highest possible evidence classes, and further investigations would have no relevance to the research question.

Research

The literature research searched in MEDLINE, PubMed, Cochrane Database of Systematic Reviews and Cochrane Central Register of Controlled Trials and covers the medical use of EBM. Doctors usually do not have the opportunity to search in special databases in their practice. Therefore, studies that were not electronically available (local journals) and publications in other languages than English or German were excluded due to their inappropriateness for the daily practice routine.

Meta-analyses or reviews of clinical research with at least five RCTs, as well as randomised and completely double-blinded clinical studies with at least two study arms compared to either placebo or an active control with a non-homeopathic drug were searched.

The search identified 9 meta-analyses and reviews (Ia: Kleijnen 1991, Cucherat 2000, McCarney 2004, Altunc & Ernst 2007, Kassab 2009, Nuhn 2010, Davidson 2011, Mathie 2012 & 2014), of which 4 reviews showed a significant effect of the homeopathic therapy, 3 reviews did not gain conclusive results (positive and negative partial outcomes) and 2 reviews could not prove an effect.

Of the 22 randomised, double-blinded studies (Ib), 11 studies (50%) did prove the effectiveness of homeopathic therapy, 3 studies showed limited effects of homeopathy and 8 studies could not demonstrate effectiveness. More than half of the identified studies were not evaluated due to the strict inclusion and exclusion criteria. However, there was a clear tendency of positive evidence regarding the effectiveness when the studies were smaller and more related to practice. Without limitations to studies according to evidence class Ib, the result would have been more positive.

The HTA report (positive) and the NHMRC study (negative) showed opposing results. As expected, the four popular papers also showed opposing results, and both had strong and weak points. If the authors are qualified specialists or belong to a different specialist area obviously influences the study results. Everybody who wanted to question the quality of a study found what he was looking for. Therefore, the validity of reviews should always be questioned. Study results obviously are interpreted at will and everybody does see only what he wants to see:

The personal world view seems to be immune against evidence-based arguments.

Results

Homeopathy fulfills all criteria of EBM.

The effectiveness of homeopathic therapy can be proven in meta-analyses and reviews (evidence grade Ia) and clinical studies (evidence grade Ib), which are the gold standard of evidence-based medicine.

Homeopathy is an evidence-based medicine.

Further topics

Homeopathy is a science and a medicine.

The subjects important for the scientific discussion (definitions of science, science & homeopathy, medicine & homeopathy, medical basics of EBM) are presented in a plausible manner. For medicine as a science the rule is that knowledge is predominantly based on experience (empiricism). This is also true for randomised studies, which only allow an empiric proof of effectiveness. And this is also true for the clinical experience of the doctor, who has to decide if the available external evidence (clinical studies) fits to the situation of the patient or if another kind of evidence needs to be used.

The author summarizes the discussion on homeopathy: the endless discussion about the right to exist of homeopathy does not seem to be based on an unprejudiced and fair debate on the subject, but upon an irrational and highly emotional fight about world views.

Medical EBM

The master thesis presents a pragmatic, medical approach of how EBM can be done in practice. To do this, the conscious limitation of the databases used, the joint consideration of clinical studies with classical homeopathy, clinical homeopathy, complex homeopathy and isopathy, the terminological equation of the effectiveness of homeopathic therapy, homeopathic remedies and homeopathy, as well as the practice-oriented statement that significant study results verify and prove effectiveness.

This plain method genially differs from huge meta-analyses and HTA's, which only serve the academic scientific discussion, but are hardly understandable for doctors and do not bring prompt value for daily practice.

It is a pleasing and rational decision, not to perform further quality assessment or comparisons, if studies already comply with defined evidence classes. Also Regina El Dib, respected scientist and Cochrane associate, restricted her evaluation of 1016 systematic Cochrane reviews to a survey of positive, negative and inconclusive results and did not perform a quality assessment or bias estimate.[1]

The author indicates an elegant approach through the thicket of endless discussion about evidence, which fully complies with the original basics of evidence-based medicine. This method is guided by clinical experience. It serves the patients and does not loose itself in controversies far from any practical value.

That is how EBM works!

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[1] El Dib Regina P, Álvaro N Atallah, Regis B Andriolo: Mapping the Cochrane evidence for decision making in health care. Journal of Evaluation in Clinical Practice 13 (2007) 689-692.