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European Committee for Homeopathy
2009 research Abstracts supporting Homeopathy

Homeopathy as an effective treatment for low back pain

A prospective multi-centre observational study describes the details and effects of an individualized homeopathic treatment in patients with chronic low back pain in usual care. The results come from a sub-group analysis of patients suffering from low back pain that were part of a large prospective multi-centre observational study population carried out over an 8-year period. Consecutive patients beginning homeopathic treatment in primary care practices were evaluated over 2 years by using standardized questionnaires.

Diagnoses (ICD-9) and symptoms with severity, health-related quality of life (QoL), medical history, consultations, homeopathic and conventional treatments, and other health service use were recorded. The study included 129 adults, treated by 48 physicians. Nearly all the patients (91.3%) had been pretreated. The severity of the diagnoses and complaints showed marked and sustained improvements with large effect sizes (Cohen's d from 1.67 to 2.55) and quality of life improved accordingly. The use of conventional treatment and health services decreased markedly: the number of patients using low back pain-related drugs was half of the baseline.

The authors conclude that individualized homeopathic treatment represents an effective treatment for low back pain. It improves health-related quality of life and reduces the use of other healthcare services.

Reference

Witt CM, Lüdtke R, Baur R, Willich SN (2009) Homeopathic treatment of patients with chronic low back pain: A prospective observational study with 2 years' follow-up. Clinical Journal of Pain, 25:334-339. [abstract at PubMed]

Patients with chronic sinusitis benefit from homeopathic treatment

A recently published study shows that patients with chronic sinusitis benefit from homeopathic treatment. The results come from a sub-group analysis of patients suffering sinusitis that were part of a large prospective multi-centre observational study population carried out over an 8-year period.

The study included 134 adults, treated by 62 physicians. Patients had suffered from chronic sinusitis for 10.7 +/- 9.8 years. Almost all patients (97.0%) had previously been treated with conventional medicine. They were followed up for 2 years, and complaint severity, health-related quality of life (QoL), and medication use were regularly recorded. For sinusitis, effect size of complaint severity was 1.58 (95% CI 1.77; 1.40), 2.15 (2.38; 1.92), and 2.43 (2.68; 2.18) at 3, 12, and 24 months respectively. Quality of life improved accordingly. The effects were still present after 8 years.

This observational study showed relevant improvements that persisted for 8 years in patients seeking homeopathic treatment because of sinusitis.

Reference
Witt CM, Ludtke R, Willich SN (2009). Homeopathic treatment of patients with chronic sinusitis: A prospective observational study with 8 years follow-up. BMC Ear Nose Throat Disorders, 9(1):7.

High dilution effect reported in NMR study

A new study in the Journal of Molecular Liquids by Jean-Louis Demangeat at the Nuclear Medicine Department of the General Hospital in Haguenau, France reports physical modifications in the solvent of ultrahigh aqueous dilutions of histamine.

20-MHz R1 and R2 water proton NMR relaxation rates were measured in ultrahigh dilutions (range 5.43·10^-8 - 5.43·10^-48) of histamine in water (Hist-W) and in saline (Hist-Sal), prepared by iterative centesimal dilutions under vigorous agitation in controlled atmospheric conditions. Water and saline were similarly and simultaneously treated, as controls. The samples were immediately sealed in the NMR tubes after preparation, and then code-labelled. Six independent series of preparations were performed, representing about 7000 blind measurements. R2 exhibited a very broad scatter of values in both native histamine dilutions and solvents. No variation in R1 and R2 was observed in the solvents submitted to the iterative dilution/agitation process. By contrast, histamine dilutions exhibited slightly higher R1 values than solvents at low dilution, followed by a slow progressive return to the values of the solvents at high dilution.

Unexpectedly, histamine dilutions remained distinguishable from solvents up to ultrahigh levels of dilution (beyond 10^-20 in Hist-Sal). A significant increase in R2 with increased R2/R1 was observed in Hist-W. R1 and R2 were linearly correlated in solvents, but uncorrelated in histamine dilutions. After a 10-min heating/cooling cycle of the samples in their sealed NMR tubes (preventing any modification of the chemical composition and gas content), all of the relaxation variations observed as a function of dilution vanished, the R2/R1 ratio and the scatter of the R2 values dropped in all solutions and solvents, and the correlation between R1 and R2 reappeared in the Hist-W samples.

All these results pointed to a more organized state of water in the unheated samples, more pronounced in histamine solutions than in solvents, dependent on the level of dilution. It was suggested that stable supramolecular structures, involving nanobubbles of atmospheric gases and highly ordered water around them, were generated during the vigorous mechanical agitation step of the preparation, and destroyed after heating. Histamine molecules might act as nucleation centres, amplifying the phenomenon which was thus detected at high dilution levels.

Reference:
Demangeat J-L (2009). NMR water proton relaxation in unheated and heated ultrahigh aqueous dilutions of histamine: Evidence for an air-dependent supramolecular organization of water. Journal of Molecular Liquids, 144:32-39

High dilution effect assessed by UV-Spectroscopy

A team of researchers at the Swiss Institute of Complementary Medicine KIKOM in collaboration with two laboratories in the USA investigated homeopathic preparations with UV-spectroscopy.

In a blinded, randomized, controlled experiment homeopathic preparations of copper sulfate ($CuSO_4$; 11C–30C), quartz (SiO_2; 10C–30C, i.e. centesimal dilution steps) and sulfur (S; 11D–30D, i.e. decimal dilution steps) and controls (one-time succussed diluent) were investigated using UV-spectroscopy and tested for contamination by inductively coupled plasma mass spectrometry (ICP-MS).

The UV transmission for homeopathic preparations of $CuSO_4$ preparations was significantly lower than in controls. The transmission seemed to be also lower for both SiO_2 and S, but not significant. UV transmission values between homeopathic preparations had a significantly higher variability compared to controls.

Thus, experimental evidence accumulates that highly diluted homeopathic preparations, i.e. diluted beyond the Avogadro limit, exhibit particular physicochemical properties different from shaken pure solvent. The exact nature of these properties is not yet known; the current working hypothesis is an increase in the solvent's molecular dynamics for homeopathic preparations. All high-quality experimental data obtained so far by several independent working groups for different homeopathic preparations, involving studies with high- and low-field 1H NMR relaxation time, 1H-NMR-spectroscopy, and thermodynamics are compatible with this 'dynamization hypothesis'.

Reference:
Wolf U, Wolf M, Heusser P, Thurneysen A, Baumgartner S (2009). "Homeopathic Preparations of Quartz, Sulfur and Copper Sulfate Assessed by UV-Spectroscopy," Evidence-Based Complementary and Alternative Medicine, doi:10.1093/ecam/nep036.

Proving shows significant distinction between Aconitum C30 and placebo

Just recently a new study conducted in Switzerland has significantly demonstrated a distinction between the proving symptoms of Aconitum napellus C30 and a placebo. This is another study published in an academic journal that has found substantial effects from high potencies in randomly selected, healthy test subjects when compared with placebo.

Participants and Methods:
From the 33 subjects randomized for this double-blind, placebo-controlled crossover study, 27 could be included in the analysis. The study comprised two 7-day-long treatment periods, each including the intake of a study preparation for 3 days and a wash-out period of 4 days. One group was first treated with Aconitum napellus C30 and then with placebo; the other group received the two study preparations in the reverse order. The signs and

symptoms before the first treatment and after each treatment were collected, evaluated, weighted and repertorized. Based on this classification the blinded physician assessed these signs and symptoms as study outcome parameter to represent the responses to each of the study preparations. Statistical analysis of the data was performed using the Wilcoxon-Mann-Whitney rank test.

Results:
Crossover differences yielded statistical significance between the classified reactions towards Aconitum napellus C30 and to placebo ($p = 0.004$). Conclusions: A clear difference between the reported short-term reactions of healthy subjects towards Aconitum napellus C30 and towards placebo was shown. The crossover design with intra-individual comparisons proved to be adequate to recognize the study preparations and for the statistical analysis of a small population sample.

Reference:
Piltan D, Rist L, Simões-Wüst P, Saller R (2009). Test of a homeopathic dilution of Aconitum napellus. A clinical, randomized, double-blind, controlled crossover study in healthy volunteers. Forschende Komplementärmedizin, 16:168-73.

Nobel Prize winner reports effects of homeopathic dilutions

In a recent study Professor Luc Montagnier, a French virologist who co-discovered HIV and who won the Nobel Prize in 2008, and his team report the results of a series of rigorous experiments investigating the electromagnetic properties of highly-diluted biological samples.

The study demonstrates that some bacterial DNA sequences are able to induce electromagnetic waves at high aqueous dilutions. It appears to be a resonance phenomenon triggered by the ambient electromagnetic background of very low frequency waves. The researchers used aqueous solutions that were agitated and serially diluted (the researchers note that the solutions were 'strongly agitated' and that this step was 'critical for the generation of signals'). In other words homeopathic potencies, although the word 'homeopathy' is not mentioned in the article.

The researchers found that pathogenic bacteria and viruses show a distinct electromagnetic signature at dilutions ranging from 10^-5 to 10^-12 (corresponding to 5D to 12D) and that small DNA fragments (responsible for pathogenicity) were solely accountable for the electromagnetic signal. The researchers also noted that one experiment found significant effects from dilutions as high as 10^-18 (equivalent to 18D). The electromagnetic signature changed with dilution levels but was unaffected by the initial concentration and remained even after the remaining DNA fragments were destroyed by chemical agents.

They observed that the electromagnetic signal was destroyed by heating or freezing the sample. Also, a 'cross-talk' effect was found whereby a negative sample inhibits the positive signal in another sample if they are left together overnight in a shielded container. The

researchers propose that specific aqueous nanostructures form in the samples during the dilution process and are responsible for the electromagnetic effects measured.

The researchers also detected the same electromagnetic signals in the plasma and in the DNA extracted from the plasma of patients suffering from Alzheimer disease, Parkinson disease, multiple sclerosis, and rheumatoid arthritis.

This study is an important contribution to the growing evidence base in fundamental research with direct relevance to homeopathy.

Reference

Montagnier L, Aissa J, Ferris S, Montagnier J-L, Lavallee C (2009). Electromagnetic Signals Are Produced by Aqueous Nanostructures Derived from Bacterial DNA Sequences. *Interdisciplinary Sciences: Computational Life Sciences*, **1**: 81-90.