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Research Highlights

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Research Highlights

Abstract

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Research highlights

A RANDOMISED, DOUBLE-BLIND AND PLACEBO-CONTROLLED CLINICAL TRIAL IN HOMOEOPATHY FOR ADHD

Title: A randomised, three-arm, double-blind and placebo-controlled study of homoeopathic treatment of children and youth with attention deficit hyperactivity disorder

Authors: David Brule, Violeta Nastase, Nicholas Mitsakakis

Journal: Journal of Integrative and Complementary Medicine. DOI: 10.1089/jicm.2023.0043

Summary: A randomised, double-blind and placebo-controlled clinical trial was conducted in Toronto, Canada to assess the homoeopathic treatment of children and youth with attention-deficit/hyperactivity disorder. Approximately, 30% of children diagnosed with attention-deficit/hyperactivity disorder (ADHD), the most prevalent mental health disorder in children worldwide, do not respond to conventional pharmaceutical treatments. The primary objective of this study was to determine the overall effect of homoeopathic treatment (homoeopathic medicines plus consultation) in the treatment of ADHD. The secondary objective of the study was to know the specific effects of the homoeopathic consultation alone (if any) in the treatment of ADHD. Children aged 6–16 years diagnosed with ADHD were taken as study participants which were randomised to one of three arms: Arm 1 (Homoeopathic remedy and consultation); Arm 2 (Placebo and consultation); or Arm 3 (Usual Care). The improvement was seen in ADHD symptoms as measured by the Conner 3 Global Index-Parent T-score in the two groups (Arms 1 and 2) when compared with the control group (Arm 3). Parents of the children in the study who received homoeopathic consultations (with or without homoeopathic remedy) over 8 months also reported greater coping efficacy compared with those receiving usual care (Arm 3). There was no difference in adverse events among the three study arms.

Comments: This study demonstrated that homoeopathic consultations, combined with the use of homoeopathic remedies, were significantly more effective in reducing ADHD symptoms in participants, as compared to the usual treatment alone. This study suggests that incorporating a homoeopathic approach may offer additional benefits for managing ADHD symptoms beyond what is typically achieved with conventional treatment.

DEMONSTRATION OF ANTIADIPOGENIC ACTIVITY OF CHELIDONIUM MAJUS 30C

Title: Antiadipogenic activity of homoeopathic preparation of *Chelidonium majus* employing 3T3-L1 cell line as a model

Authors: Chinmay Gawade, Parth Aphale, Dharmendra Sharma, Ramesh Bhonde, Avinash Sanap, Avinash Kharat

Journal: International Journal of High Dilution Research. DOI: 10.51910/ijhdr.v23icf.1336

Summary: Metabolism of adipocytes is abnormal in disorders such as obesity, nutritional insufficiency and diabetes. Preadipocyte differentiation in excess will result in high fat accumulation in the adipose tissue which is closely linked to obesity development in the human body. Thus, preventive and therapeutic potential as anti-obesity drugs should have the potential to inhibit differentiation of preadipocytes. The present study aimed to investigate the homoeopathic preparation *Chelidonium majus* (HPCM) 30C in different concentrations and studied its antiadipogenic effect on 3T3-L1 preadipocytes which were evidenced by mapping the area of lipid droplet (LD) accumulation. After measuring the LD accumulation of each group, it was evident that accumulation in control was the highest (2689059 ± 134453). Among the HPCM attenuations, quantitatively LD accumulation was seen highest in HPCM 2% (1349029 ± 67451.45) and lowest in HPCM 1% (352960 ± 17648). For HPCM 0.5%, LD accumulation was seen more than in HPCM 1% (894959 ± 44747.95). It was explored that by the Oil Red O staining, LD accumulation was markedly inhibited by treatment with HPCM.

Comments: This valuable study has demonstrated that the potential of homoeopathic medicine *Chelidonium majus* has antiadipogenic effects on 3T3-L1 preadipocytes, which can be used to combat various diseases such as obesity, type 2 diabetes mellitus (T2DM) and cardiovascular diseases. It will, further, help to study the action of these homoeopathic medicines as a potential line of treatment in patients suffering from metabolic disorders such as type 2 diabetes mellitus.

COMPLEMENTARY AND ALTERNATIVE MEDICINE: THEIR PERCEPTION, ATTITUDE AND USAGE

Title: Perception, attitude and usage of complementary and alternative medicine among patients in a tertiary care teaching hospital

Authors: Anveshu Reddy Biradavolu, Mellamputi Jashika, Yamini Vadlamannati, P. Madhav, Digumurthy Chandana Priya

Journal: International Journal of Toxicological and Pharmacological Research. DOI: 10.4103/0253-7613.153418

Summary: A cross-sectional observational hospital-based study was conducted among 240 patients attending the Outpatient Department of the Government General Hospital, Nalgonda, Telangana to assess the perception, attitude and the extent of use of complementary and alternative medicine

(CAM) among patients. CAM is defined as a group of diverse medical and health-care systems, practices and products that are not generally considered part of conventional modern medicine. Usage of dietary supplements, yoga, homoeopathy, Ayurveda, Unani, Siddha, chiropractic, acupuncture, aromatherapy, herbal medicine, naturopathy and similar examples of other CAM practices, alone or concomitantly with the modern medicine, is a common practice all over the world. Although CAM is a common practice in India, there is a paucity of data regarding the use and acceptance of CAM by patients. Hence, there is a need to identify the most preferred CAM treatments, how often they are being used by patients and the determinant factors for using CAM. The instrument for data collection was a pre-tested, semi-structured and validated questionnaire. The pro formas were divided into two parts. The first part included questions regarding the demographic status. The second part consisted questions pertaining to the perception and attitude toward CAM and its utilisation by the study participants. Here, it was found, 67% of CAM users declared belief in the beneficial role of CAM. The number of CAM users was more in the age group between 40–49 and 50–59 years of age and less in the age group between 70 and 79 years of age. The utilisation of CAM was found higher in rural males than urban females. More than 50% of CAM users had a belief in beneficial role of CAM. Out of 240 patients, 96 (40%) patients were using homoeopathy, 68 (28%) patients were using Ayurveda, 40 (16%) patients were using local healers and 20 (8%) were using yoga therapy as complementary treatment for their ill health. CAM therapy was used most frequently in conditions such as analgesia (15%), dermatological (13%) and neurological (13%) diseases, infectious diseases (11%), metabolic disorders, GIT disorders and renal diseases also.

Comments: According to this original review article, CAM offers numerous benefits to patients, influencing various aspects of their health and well-being. Therefore, it is crucial for doctors to be knowledgeable about the different CAM methods that can aid their patients. To create an effective treatment plan, doctors should engage in open, culturally sensitive discussions with their patients. This approach ensures that patients feel respected and heard, allowing for the integration of suitable CAM therapies that complement conventional treatments and cater to the patient's unique needs and preferences.

HOMOEOPATHY IN SLEEP DISORDERS

Title: Efficacy of homoeopathic higher dilutions in management of sleep disorders: A review

Authors: Parth Aphale, Dharmendra Sharma, Himanshu Shekhar

Journal: International Journal of High Dilution Research. DOI: 10.51910/ijhdx.v23icf.1400

Summary: Sleep disorders, including insomnia, have diverse causes and can significantly impact physical and mental health.

Homoeopathy has been explored as a complementary treatment for these disorders, but its efficacy remains uncertain. Hence, here authors have conducted a comprehensive database search for original clinical studies on homoeopathy in sleep disorders. This study was undertaken with the primary aim to review the clinical research on the efficacy of homoeopathic higher dilutions remedies for sleep disorders. This search strategy encompassed clinical studies with descriptors published up to September 2023. The literature considered for this review was obtained from electronic databases such as PubMed, SCOPUS and Google Scholar. These studies explored the use of homoeopathic remedies for managing sleep disorders with the help of various assessment tools, such as Hamilton Anxiety Rating Scale, STAI questionnaire, Jenkins Sleep Scale, Insomnia Severity Index, Sleep Diary, Sleep Impairment Index, Visual Analogue Scale and Trait of Anxiety Scale. The reviewed studies suggested the potential benefits of homoeopathic treatment for sleep-related conditions. *Passiflora* compose, an individualised homoeopathic treatment, and homoeopathic similia demonstrated promise in improving sleep quality and reducing anxiety.

Comments: Overall, while these studies offer promising results for the efficacy of homoeopathic treatment in management of various sleep-related conditions, further research and larger-scale clinical trials are needed to establish homoeopathy as a more widely accepted and validated treatment option for anxiety and sleep disorders. Nonetheless, the collective evidence underscores the potential value of homoeopathy in improving sleep quality and reducing anxiety in a range of populations.

BRAIN MAPPING BEING USED AS A BIOMARKER FOR FOLLOW-UP AFTER HOMOEOPATHIC TREATMENT

Title: Brain wave oscillations as an objective neurophysiological biomarker of homoeopathic subjective well-being

Author: Marcus Zulian Teixeira

Journal: Homoeopathy. DOI: 10.1055/s-0044-1779706

Summary: Psychoemotional expressions hold significant weight and are typically prioritised across most facets of the homoeopathic clinical-therapeutic methodology, from deciphering cause-effect relations of disease aetiopathology to evaluating case prognosis and determining the sufficiency of the administered dose. Hahnemann noted that 'a greater degree of comfort, increased calmness and freedom of the mind, higher spirits may be easily perceived on close observation soon after the medicine'. Hence, to assess treatment outcomes in clinical practice, this concept of 'homoeopathic subjective well-being' can be relied on. This commentary article discusses the potential use of neurophysiological parameters, such as quantitative electroencephalography (qEEG), functional magnetic resonance imaging, to conduct brain mapping and quantify variables related to the homoeopathic response and subjective well-being experiences after medicine

administration. EEG profiles can be used as a biomarker of wellbeing, examining the association between mental well-being and brain frequency bands – δ (delta), θ (theta), α (alpha), β (beta) and γ (gamma). In a series of studies involving fibromyalgia patients, they found that those who responded exceptionally well to individualised homoeopathic medicines showed distinct changes in EEG α wave activity, compared to the placebo group, suggesting that pre-frontal EEG measurements could serve as an early indicator of treatment effectiveness. Researchers have also investigated the effects of meditation on brain activity. It tends to increase activity in cortical regions as well as θ and α frequency bands (with increased gamma in advanced practitioners). These neurophysiological changes are associated with improved attention, working memory, cognitive control, emotion regulation and subjective well-being, potentially explaining reductions in anxiety, depression, stress and negative emotions. The study suggests using qEEG due to its cost-effectiveness, to quantify changes in subjective well-being resulting from homoeopathic treatments, patterns such as decreases in β and increases in δ , θ and α waves and could serve as indicators of homoeopathic therapeutic action. This approach aligns with the methodologies of positive psychology and meditation research.

Comments: This study proposes using brain oscillatory activity as a marker to quantify well-being in clinical homoeopathy research, based on measurable changes. EEG is fairly inexpensive, and fMRI could be employed later for validation of ascending levels of evidence hierarchy in various qualitative and quantitative experimental models.

DEMONSTRATION OF ANTIBACTERIAL ACTIVITY OF *BAPTISIA TINCTORIA* (IN VITRO)

Title: An *in vitro* study to evaluate the synergy of *Baptisia tinctoria* against *Salmonella typhi*

Authors: Soumya Bhattacharyya, Rishita Ghosh, Antara Majumder, Pritam Goswami, Satadal Das

Journal: Homoeopathic Links. DOI: 10.1055/s-0044-1779705

Summary: The study was done to explore the role of homoeopathic remedy *Baptisia tinctoria* as an antimicrobial compound against *Salmonella enterica* (sub.sp. typhi) a Gram-negative rod that commonly infects through contaminated food and drinks to cause enteric fever. The 2017 findings from the Global Burden of Disease Study indicate that in India, there were 586 cases of typhoid/paratyphoid/100,000 person-years with a notable increase in cases of multi-drug-resistant typhoid. The study highlights *S. typhi* growing resistant to ampicillin, chloramphenicol and cotrimoxazole. This prompted a shift in treatment protocols to include fluoroquinolones. Hence, to demonstrate the effectiveness of *Baptisia tinctoria*, antibiotic susceptibility testing was performed using the Kirby–Bauer disc diffusion method. The experimental procedure involved inoculating single colonies in peptone water, adjusting to standardised growth levels and applying them to plates

where Mueller–Hinton Agar served as the culture medium. 0.06 mL *Baptisia tinctoria* in respective potencies such as mother tincture, 6C, and 30C and antibiotic discs in varied concentrations were applied separately and in combination, incubated overnight at 37°C and growth inhibition zones (GIZ) measured for analysis. Control experiments utilised alcohol as a substitute for *Baptisia tinctoria*, and *Escherichia coli* acted as a control organism. Each experiment was repeated thrice. Results show potency of *Baptisia tinctoria* in inhibiting bacterial growth, even surpassing conventional antibiotics with significant GIZ in some potencies. The mechanism behind the action of *Baptisia tinctoria* is attributed to wild indigo's alkaloid cytosine (Baptitoxin/Baptistine) and glycosides like arabinogalactan-proteins (AGPs), though the exact state of alkaloid molecules in dilutions remains unclear, the structural similarities between microorganisms and natural compounds like *Baptisia tinctoria* suggest a mechanism for their inhibitory effects on *Salmonella*. Overall, the findings suggest BT as a promising therapeutic option against *Salmonella* infections.

Comments: This analysis shows the utility of homoeopathy to address the rise of drug-resistant organisms and enhances our understanding about the mechanism of action of *Baptisia tinctoria*. AGP on IgM production might directly influence B-lymphocytes or indirectly activate macrophages, leading to IL6 release. These findings support *Baptisia tinctoria* as a potent therapeutic option against *Salmonella*.

A REVIEW ABOUT HOMOEOPATHIC INTEGRATIVE APPROACH FOR GERD MANAGEMENT

Title: Homoeopathy as an integrative approach for GERD management: A comprehensive review

Authors: Parth Aphale, Himanshu Shekhar, Dr. Dharmendra Sharma

Journal: International Journal of High Dilution Research. DOI: 10.1016/j.jpop.2017.02.002

Summary: The paper reviews the use of homoeopathy through an integrative approach for managing gastroesophageal reflux disease (GERD). It discusses how GERD is commonly treated with lifestyle changes, medications and surgery but highlights concern about prolonged medication use. The review examines various clinical studies on homoeopathic treatments for GERD, showing promising results in improving symptoms and quality of life. A study by Dr. Leena Dighe showed that *Arsenicum album* was the indicated medicine in 52.5% of GERD cases. Another study by R. Sitharthan concludes commonly indicated medicines: *Nux vomica* (20.69%), *Sulphur* (16.48%), *Bryonia* (9.96%), *Argentum nitricum* (9.58%) and *Lycopodium* (9.20%). One study also specifically focuses on *Robinia pseudoacacia* showing significant symptom improvement over a 6-month period. Overall, the findings suggest that homoeopathy could be a valuable alternative to conventional treatment options. The author endeavoured to meticulously compile the findings into a literature review, carefully scrutinising them to uncover

further relevant studies that provide evidence supporting the use of homoeopathy in the management of GERD.

Comments: GERD can cause serious complications, ranging from mild irritation to severe erosion, ulcers and oesophageal narrowing. In severe cases, it may lead to gastrointestinal bleeding, anaemia and difficulty in swallowing due to scarring and strictures from prolonged acid exposure. In terms of treatment, initial treatment of proton-pump inhibitors and their prolonged administration has been linked to various adverse effects, including osteoporosis-related fractures, pneumonia, gastrointestinal and non-gastrointestinal infections and the development of polyps. This review highlights the need for future rigorous studies and RCTs to establish the role of homoeopathy in the management of gastro-oesophageal disorder.

A DOUBLE-BLIND, RANDOMISED AND PLACEBO-CONTROLLED CLINICAL TRIAL IN HOMOEOPATHY FOR PREDIABETES

Title: A double-blind, randomised and placebo-controlled clinical trial to evaluate the efficacy of individualised homoeopathic medicines in prediabetes

Authors: Nilanjana Guha, Shubhamoy Ghosh, Sanjukta Mandal, Aakash Deep Das, Chithra Palanisamy, Shukdeb Maiti, Priyanka Ghosh, Navin Kumar Singh, Munmun Koley, Subhranil Saha

Journal: Homoeopathy. DOI: 10.1055/s-0043-1769506

Summary: The article describes a study conducted in India to investigate the efficacy of individualised homoeopathic medicines (IHMs) compared to placebos in treating prediabetes (PD), a condition that increases the risk of stroke, cardiovascular diseases and type-2 diabetes mellitus. The study involved 60 participants with PD who were randomly assigned to receive either IHMs or placebos for 6 months in a double-blind, randomised and placebo-controlled trial. Both groups received additional care measures such as dietary advice, yoga, meditation and exercise. The primary outcome measures were fasting blood sugar (FBS) levels and the oral glucose tolerance test (OGTT), while the secondary outcome was to assess the Diabetes Symptom Checklist-Revised (DSC-R) score before and after the treatment. Measurements were taken at baseline, 3 months and 6 months. Results showed that IHMs significantly reduced FBS levels and improved DSC-R scores compared to placebos. However, there was no significant difference in OGTT results between the two

groups. The frequently prescribed homoeopathic medicines were *Calcarea carbonica* ($n = 6$, 10%), *Thuja occidentalis* ($n = 5$, 8.3%), *Sulphur* ($n = 4$, 6.7%) and *Natrum muriaticum* ($n = 3$, 5%) among others. No harmful or serious adverse events were reported in either group. The study concluded that IHMs were more effective than placebos in reducing FBS levels and improving DSC-R scores in individuals with PD. However, further independent studies with larger sample sizes are needed to confirm these findings. The authors suggested the avenue for future research including measures such as haemoglobin A1C and blood insulin levels for more reliable results and to explore less frequently used remedies alongside constitutional homoeopathic prescriptions.

Comments: Dysglycaemic status is defined by impaired glucose tolerance, and elevated glycated haemoglobin, which, if not corrected, develops into overt diabetes. Here, FBS for experimental group was significantly better against placebos ($P = 0.007$), but not for OGTT ($P = 0.199$). OGTT is more sensitive but FBS has a higher specificity in diagnosing diabetes. The secondary outcome, DSC-R total score, favoured IHMs significantly, compared with placebos ($P < 0.001$).

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Conflicts of interest

None declared.

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