A Systematic Review of the Use of Ultramolecular Dilutions in Homeopathy

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Summary:

Science has now revealed that molecule only doesn't mean the living body and perfectly not the human body. There is always something beyond the laws of chemistry and physics. Similarly this anonymity explains the homeopathy beyond $10^{-23.}$ The issue always had been in the homeopathic academy whenever the scientificity getting questioned. It is still a puzzle that having such potencies which do not contain a particle of original drug substance in present knowledge of detection limits. The literature on ultramolecular dilutions is reviewed including the application of it in clinical, preclinical as well as fundamental research. This article attempts to supervise the various implementations of ultramolecular dilutions in homeopathic scenario.

The nonlinearity and pharmacological inversion of chemical laws were seen in most cases with some critical results also. Out of all studies clinical studies showed the maximum evidence towards ultramolecular dilutions than fundamental research. To the intersection of all possibilities for mechanism of ultramolecular dilutions there was big scope for further analysis and evaluation. Hahnemann also used such potencies but not beyond 30CH. It was the Kent who started practicing higher potencies on same scale. Commonly he stated its use in prescription based on mental symptoms. Fortunately in drug proving these dilutions were manifested in similar ways as documented in material medica pura. Possibility of multiple choices in application of ultra molecular dilution proves that they were potential enough to produce the clinical effects and pharmacological actions. Including basic studies the totality of these events and consequences reached to the very essential conclusion that homeopathy is not the alternative for placebo.

Key words: Ultra molecular dilution, homeopathy, dynamisation, placebo

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Introduction:

Hahnemann spent many years almost as decade on searching the efficacious cure in his practice of chronic diseases. Besides the theory of evolution of chronic disease and fundamental miasms he thought much deeply for his highest ideal of cure. Chronic degenerative diseases were newer to Hahanemannian therapy in Paris. This shift from lower organotropic potencies to highest scale of potencies what he called them as 50 milisimal potency or Q potency brought somehow a solution for incurable and irreversible cases . On centesimal scale (1:100) the dilutions used to go beyond Avogadro constant but with no satisfactory clinical effect or cure. Development of advance infinitesimal scale was a true discovery of Hahnemann what we presently call them as ultra molecular dilution[5].

To the philosophy of homeopathy ultramolecular dilutions not only was theory but also a new acquaintance. This revolution in theory of dynamisation made hydra headed questions towards efficacy of homeopathy in terms of modern natural as well as synthetic science. Hahnemann had no doubts in principles, but he was dubious about the current methods of preparing the higher centesimal potencies.

He therefore set about developing a new system of dilution and succession which would enable him to produce very highly attenuated remedies without violent succession and the accompanying danger of aggravation of symptoms. Eventually he evolved a method of far more dilution ; 1: 50,000 rather than 1:100 [2,3].

A wide use of ultramolecular dilutions in homeopathic day to day practice seldom proves its fundamental basis and laws which obscures the future source of practitioners for many clinical challenges in selection of the accurate potency with a correct repetition. Failure to reproduce such guidelines with clinical precisions led for the purpose of reviewing literature about ultramolecular dilutions.

Supreme attenuations

Nearby 1838 revolutionary investigation was started on the topic of drug potentisation. Major stalwarts like korsakoff and Jenichen had been constructing on Hahnemann's findings related to the successive serial dilutions in ever increasing order up to 1500c or even more.

In 1801 in an article, 'On the power of small Doses of medicine' he referred for the first time to dynamic action. When he began to adopt dilutions itself as regular process, he varied the dilutions using many different ratios of substance to diluents.

While continuing to experiment with preparation of his remedies, he gradually evolved a relatively stable method of administering then this process is chronicled in the early editions of Organon. The practitioner was to give the one dose of the remedy in an appropriate centesimal potency, and then wait till its action was completed before either repeating or changing the dose of the remedy. Every improvement in an acute or chronic disease is definitely progressive, is a condition which absolutely forbids any further administration of a medicine as long as it lasts[7].

The doctrine of drug dynamisation by which the mere stirring or shaking with non medicinal vehicle was alleged to increase the power of the drug, naturally met with an opposition from those physicians who believed that an increase of the material quantity of the drug was the sole

way of increasing the activity. The expression Hahnemann employs is diminution, subdivision and attenuation, and through admixture, the strong sucussions of the medicine and vehicle are intended to diffuse to the medicine equally in alcohol, water or other vehicle[16, 17].

It is obvious that to render an arithmetical calculation of this sort in the slightest degree plausible, one of the element in it, viz., the susceptibility of the organism, should be a fixed quantity, where as we know it varies not only in every different individual and in every different disease, but in the same individual and the same disease at different periods.

The natural and logical deduction would be that, in order to produce medicinal action, the ostensible object of Hahnemann's diluting process should in place of diluting the medicine rather than giving them in large doses[9].

Since the well-known observations of Samuel Hahnemann on himself which demonstrated the activity of homoeopathic dilutions, substantially experimented research have been included to elucidate the enigma of a biological activity without molecules.

Reproducibility of experiments is one of the main features of deterministic systems. Scientists therefore routinely investigate experimental reproducibility to identify such systems.
One of the main questions of basic research into homeopathic preparations is whether the effects of the latter are deterministic in their very nature or not.

With regard to their importance for scientific research in ultra high dilutions and homeopathy, major scientific experiments were considered.

Table 1: Overview of the studies in basic homeopathic research justifying ultramolecular dilutions.

Sr.N0.	Author and Year of publication	Source/Journal	Study Title
1	B. J. L. SUDAN, 1997	Medical hypotheses	Total abrogation of facial seborrhoeic dermatitis with extremely low-frequency (1-1.1 Hz) 'imprinted' water is not allergen or hapten dependent: a new visible model for homoeopathy
2	Tytarenko et al, 1998	Journal of Advancement in Medicine	Towards a Biophysics of Homeopathy. I. Conceptual Approach.
3	Tytarenko, et al, 1998	Journal of Advancement in Medicine	Towards a Biophysics of Homeopathy. II. Conceptual Approach.
4	Tytarenko, et al, 1998	Journal of Advancement in Medicine	Towards a Biophysics of Homeopathy. III. Conceptual Approach
5	Brien et al, 2003	British Journal of Clinical	Ultramolecular homeopathy has no observable clinical effects.

		Pharmacology	A randomized, double-blind, placebo-controlled proving trial of Belladonna 30C
6	Shalts et al, 2004	British Journal of Clinical Pharmacology	The conclusion that 'ultramolecular homeopathy has no observable clinical effects' is not supported by the data
7	A. Falus, 2004	Inflammation Research	Homeopathy and high dilutions – is there a real effect?
8	Martin Bland, 2005	Significance	The Horizon homeopathic dilution experiment
9	Steinsbekk et al, 2005	British Journal of Clinical Pharmacology	Self treatment with one of three self selected, ultramolecular homeopathic medicines for the prevention of upper respiratory tract infections in children. A double-blind randomized placebo controlled trial.
10	Bellavite et al, 2006	eCAM	Immunology and Homeopathy- Clinical Studies
11	Bellavite et al, 2006	eCAM	Immunology and Homeopathy- Experimental Studies on Animal Models
12	Bellavite et al,2006	eCAM	Immunology and Homeopathy- Cells of the Immune System and Inflammation.
13	Bhattacharjee et al, 2007	eCAM	Amelioration of Carcinogen-Induced Toxicity in Mice by Administration of a Potentized Homeopathic Drug, Natrum Sulphuricum 200c.
14	Khuda-Bukhsh et al, 2009	eCAM	Modulation of Signal Proteins: A Plausible Mechanism to Explain How a Potentized Drug Secale Cor 30C Diluted beyond Avogadro's Limit Combats Skin Papilloma in Mice.
15	Ellanzhiyil et al,2009	eCAM	Dynamized Preparations in Cell Culture
16	Benkendorff et al, 2009	eCAM	Bioactivity of the Murex Homeopathic Remedy and of Extracts from an Australian Muricid Mollusc Against Human Cancer Cells.
17	Baumgartner et al,2009	Naturwissenschaften	High-field 1H T1 and T2 NMR relaxation time measurements of H_2O in homeopathic preparations of quartz, sulfur, and copper sulfate.
18	Chirumbolo et al, 2009	Inflammation Research	Inhibition of CD203c membrane up-regulation in human basophils by high dilutions of histamine: a controlled replication study.
19	Peters et al, 2009	European Journal of Integrative Medicine	Biophoton emission in high-potency research on wheat seeds models.

20	Endler et al,2010	Homeopathy	Repetitions of fundamental research models for homeopathically prepared dilutions beyond10^{-23}: bibliometric study.
21	Gosavi et al, 2010	Pharmacology online	Effect of Potentized Homeopathic Preparations in Yeast Induced Pyrexia In Laboratory Animals
22	Weingarten O., 2007	Homeopathy	The nature of the active ingredient in ultramolecular dilutions

Ultramolecular dilutions versus placebo:

The Lancet of August 27, 2005 featured a variety of articles highly critical of homeopathy which attracted considerable media attention. The media reports echoed *The Lancet's* press release: 'homeopathy is no better than placebo'. The midpoint was a meta-analysis of clinical trials of homeopathy compared with clinical trials of main stream medicine.

The empirical use of homeopathic high dilutions, which is probably dependent on the variability of opinions or irrational guidelines for selection of potency such as nature of disease, seat of disease or susceptibility which results imperfect cure and no prospective outcome[2,6].

Only qualitative analysis of sates, phases and stages is not enough to prescribe a right dose regimen in clinical practice. Nevertheless it also requires the evident data supporting a firm guideline came from different and significant experiments.

On the contrary Belon's research were able to document that high dilutions of histamine inhibit human basophil degranulation in which results cannot be explained through molecular theories

The effect of ultra molecular dilutions was documented by Lorenz in an experiment showing the effect of highly diluted Belladonna on acetylcholine-induced contraction of the rat ileum. The model is reproducible and highly recognized in 'the scientific world.

Discussion

In the first edition of Organon, published in 1810, the dynamisation theory is not yet noted; on the contrary , Hahanemann says that while an incredibly small dose suffices to overcome disease, it must not be small as to be inferior in strength to the disease, and hence it is impossible to fix on a standard exiguity that shall be applicable to the medicines; "for," says he[12,13,14], " the medicines themselves vary so much in power[5]." Further as proof that he considered the diminution of the doses as merely a diminution of the material of the drug, he adds that in these very small doses there must still be some of the substance of the drug; no portion can be made so small as that it shall not contain something of the medicine, and that something partakes of all the properties of the whole drug.

The diminution of the dose has for its only object the prevention of aggravation and of the development of accessory sufferings. The expression he employs are diminution, subdivision and attenuation, and through admixture, the strong sucussions of the medicine and vehicle are intended to diffuse the medicine equally in alcohol, water and other vehicle

Hahanemann does not mention how far he was in habit of diluting the medicines, he doesn't tell about millionths, or billionths of a grain. It is probable however that he had already begun to employ the medicines in pretty high dilutions or doses which are nothing other than the ultra molecular dilutions[7, 8,9,10].

Conclusion

The dynamisation process we are told in Organon, may be carried up to 200, 1000, 10,000, 50,000 or much higher, without impairing the strength of medicine much; in such high potencies or ultra molecular dilutions the medicine seems to act more rapidly and penetratingly, but at the same time action appears to last a shorter time.

Hahnemann's doctrines respecting to the dynamisation of medicines involves many contradiction and paucity about explanation of infinitesimal dose.

The infinitesimal quantities of preparations within the cognizance of our senses are serve to realize the imperfect conception we are apt to form of the actual nature of homeopathic attenuation.

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