HOMOEOPOSOLOGY: A SCIENTIFIC REAPPRAISAL

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The homoeoposology has two important aspects: potency and dose. However, considerations on both these aspects lack unanimity of views among homoeopaths on the one hand and compatibility with modern science on the other. That is why even over two centuries after its discovery in 1790 by Hahnemann, Homoeopathy is yet to receive a scientific recognition. Nay, some sporadic demands for ban on its practice have been coming. Recently the two such critical websites: "Homeopathy: The Ultimate Fake", http://www.quackwatch.com/01QuackeryRelatedTopics/homeo.html by Stephen Barrett and "Homeopathy-a Critique", http://www.lysator.liu.se/~rasmus/skepticism/homeopathy.html by Rasmus Jansson were noticed. And the reply of this author has been posted on the websites: http://www.geocities.com/drratiram_sharma/, www.lysator.liu.se/~rasmus/skepticism/sharma.html and www.homoeopathyclinic.com and published in the Journal of Homoeopathy of Northern India [1]. But this is not the end. Such criticisms may be repeated in future also. Therefore this article undertakes a scientific reappraisal of the prevailing practices. This has become urgent in view of the misleading claim by Kadiri Koya [2] that the new quadric potencies are the ultimate in homoeoposology.

1. **The potency considerations**

1.1 **The role of dynamization processes:** It may sound strange but, as shown below, is true that the rational choice of the right potency for clinical use is ultimately related to the mechanism of homoeodynamization processes used for preparing homoeopotencies. These potentization processes are unique only to Homoeopathy and are used in the preparation of all homoeomedicines, without exception.

1.1.1 **The scientists' view**: According to the modern Physics and Chemistry, however, the mechanical processes of forceful agitation, like trituration, stirring or succussion should have no effect on the quality or chemical properties of the solution of a solute in a solvent. That is, the properties of the final solution should remain identically the same whether it is prepared simply by swirling or by using forceful dynamization or agitation at each step of dilution. Consequently according to the Avogadro's law, the homoeopotencies higher than the 24X decimal (X), or 12c centesimal (c) or the 8m millesimal (m) cannot have even a trace molecule of the original drug. But in homoeopathic practice, much higher potencies are routinely used. The used homoeomedicines, therefore, are mere placebos and hence cannot or do not have any curative action. Thus Homoeopathy is an unscientific placebo therapy and its practice should therefore be banned. This is exactly the plea of the critical websites: http://www.quackwatch.com/01QuackeryRelatedTopics/homeo.html by Stephen Barrett. It is supported, among others, by (a) the Executive Director of the American Physical Society, which publishes several top class research journals of Physics, (b) the former Commissioner of the American Food & Drug Administration (FDA), who wanted to, but did not, ban the homoeodrugs only because he was not sure of the Congress support, and (c) fortytwo prominent "critics of quackery & pseudoscience" who have petitioned the FDA against Homoeopathy.

1.1.2 **The homoeopaths' view:** Homoeopaths disagree. They declare that the homoeomedicines, in all type of potencies, owe their medicinal effect only to the dynamization processes, which bring out the "spirit of the drug" and that the medicines prepared without the dynamization processes will not have the desired curative properties. It means that these physical processes introduce a qualitative change in the chemical properties of the resultant solution pointing to an absolutely new scientific phenomenon not yet discovered and recognized by the modern sciences. Let us test these two opposite views.

1.2 **Controlled animal experiments**: Really informative were the controlled animal experiments on Alloxan induced diabetes in rats and DMBA (Dimethyl-benz-anthracine) induced toxicity & cancer in mice. The dynamized 20m (equivalent to 30c) potency of the disease-causing chemical was curative but undynamized simple dilution of the same extent had no effect [1, 3-5, 7-9]. The 20m(30c) potency is significantly higher than the 12c of Avogadro's limit to prove the point undoubtedly that dynamized high potencies do cure even without a trace molecule of the original drug in the dose. These observations of this author were confirmed by other workers [6].

For preparing the 20m(30c) potency the mixture was vigorously agitated by the acts of trituration or succussion at each of 20 steps of 1000-fold dilution but in simple dilutions the acts of agitation were omitted. It is therefore clear that the mechanical dynamization processes induce the diluent molecules (lactose, water, ethanol) to acquire and later, during curative action of the drug, mimic the chemical specificity of the original drug molecule so as to themselves act as the therapeutic agent. So, the homoeodose is not "micro placebo" but contains plenty of medicinally active diluent molecules, removing for good the perennial conceptual impasse created by the Avogadro's law. Modern Physics recognizes the induction of magnetic pole and electric charge of opposite kind but not of the chemical specificity of one molecule into another, which underlies the process of homoeopotentization.

All sciences are based on the real facts of observation and their theoretical explanation. If and when there is a conflict between theory and observation the former is revised to describe the latter faithfully. But if the theory is so well established that the new observations seem anomalous the latter are again repeated in a different setting. If even then the observations get strengthened, there is a need for a deeper re-evaluation to discover new scientific phenomenon, which bypasses and yet is consistent with the old theory. This is exactly the challenge thrown up by the curative action of high potency homoeodrugs. The underlying new phenomenon is the induction of chemical specificity of the solute drug molecules into the molecules of solvent medium via dynamization processes. The modern sciences do not provide for it and hence will be enriched by recognizing and investigating it further. Revision of the physical basis of the 'chemical specificity' of a molecule becomes necessary, however.

1.3 **Physical Bases of chemical specificity & recognition of molecules**: The chemical and biochemical discriminatory mechanisms recognize a molecule in two steps: *first*, of physical bonding via complementary 3-dimensional structures and *second*, of exchanging the energy dE specifically characteristic of the recognizer-recognizee pair. The first step exercises a *negative recognition* and the second constitutes the *positive recognition*. The first step can be certain only to tell that the molecule not binding to the receptor for the molecule A is not A. But the second step identifies positively via the chemically exchanged energy dE particularly specific of the molecule A.

Spectrophotometry identifies an atom/molecule by its electromagnetic spectrum because no two different atoms/molecules and no atom/molecule in no two different energy states can emit the same e.m. spectrum. This is because the energy quantum for every spectral line is uniquely characteristic of the atom/molecule and its energy state. But the same very outermost valency electrons produce both the e.m. spectrum as also the chemical bonds. Molecule is the unit of chemical reaction and chemically exchanged energy between two interacting molecules is uniquely characteristic of the molecule pair. So chemically exchangeable energy-quantum is the new physical basis of the chemical specificity of a molecule. If a molecule B is induced to carry the exchangeable energy of A, the discriminatory machinery is fooled to treat B as A, as during the action of a homoeodrug here [4,8,11].

1.4 **Mechanism of the homoeodynamization processes**: The molecules of lactose, water and ethanol have one and only one thing in common, namely the -OH group radical. The oxygen atom in the -OH group, due to sp^3 hybridization, has four equivalent valency orbitals. Two of these have bond pair electrons and the other two unshared lone pair electrons. The latter having no definite higher energy levels, can be raised, in small steps, to any desired energy level and hence play the basic role here. The organic solvent DMSO (Dimethyl-Sulphoxide) has lone pair electrons but no -OH group and does not serve as a diluent medium [9,10], emphasizing the role of the lone pair electrons of the -OH groups.

During forceful triturations and impacted succussions the outermost electron shell of the solute drug molecules comes repeatedly in close proximity with those of the diluent molecules. This induces *resonant promotion* of the lone pair electrons of the diluent -OH groups, in small steps, to energy levels of the chemically active electrons of drug molecules. The diluent molecules thus acquire the chemically exchangeable energy and hence the chemical specificity of the drug molecule to get "potentized" with the drug. During serial dilutions of potency preparation the original drug molecules get eliminated and the diluent molecules resonantly promoted by them take over the resonant promotion of the unpromoted diluent molecules [11, 12]. These considerations have experimental support [13, 14].

Smith & Boericke [12] studied the CH_3-, CH_2- and -OH peaks in the Nuclear Magnetic Resonance spectra of ethanol, unsuccussed and succussed dilutions of sulphur in ethanol. Only the -OH peak of only the succussed potency spreads and reduces in area under the curve. No modern science can explain this observation, which in our theory however, follows from the resonant promotion of lone pair electrons of -OH groups in the potentized ethanol [12].

The Laser Raman Spectral peak [14] of diluent alcohol disappears in succussed dilution of Potassium Dichromate and reduces in height in that of Ammonium Nitrate but a new peak of the solute appears in both cases. These results cannot be explained by modern sciences, but follow easily from the resonant promotion of the lone pair electrons of -OH groups of the potentized alcohol [12].

1.5 **Selecting the right potency for clinical use**: Every dynamized potency is finally raised in ethanol (ethyl alcohol). Potencies higher than 24X, 12c or 8m comprise two types of alcohol molecules, the ones resonantly promoted with original drug molecule and the unpromoted normal molecules. The potencies lower than 12c, in addition, also contain some original drug molecules. The unpromoted normal alcohol molecules have no effect. The original drug molecule and the alcohol molecule resonantly promoted with it carry the same "chemically exchangeable energy" hence have similar chemical effect or behavior. Both can be and have, in fact, been used for "drug proving" as well as for treating "similar" symptoms of natural diseases according to the Law of Similars.

But in actual practice the patient dose should not contain any molecule of the original drug because the toxic metabolites produced during its biodegradation are unsafe whereas those (water and carbon dioxide) of the resonantly promoted alcohol are safe. It is therefore logical to use only potencies higher than but nearest to the 12c. In actual practice one may start the treatment with 15c or 10m to be followed, if and when needed, with a mixture of (14c + 16c) or (9m + 11m). This is because the Nuclear Magnetic Resonance spectrum of a drug potentized in alcohol is not a sharp thin line but has a spread indicating the presence of promoted molecules with exchangeable energies higher as well as lower than the test drug molecule. Therefore when the utility of the molecules present in 15c or 10m is exhausted the (14c + 16c) or (9m + 11m) mixture offers a wider range for curative action.

At present a very large number of potencies is available in the market to confuse the practitioner. To start with, Hahnemann used the mother tinctures of original drugs but found them unsatisfactory and hence introduced potentized dilutions, first on the decimal (X), then centesimal (c) and later 50 millesimal scale using 3c as the starting base. This author has introduced and used the new millesimal (m) scale effecting 1000-fold dynamized dilution at every stage. And Kadiri Koya is reported [2] to have prepared "quadric" potencies by a method in all other ways similar to that of Hahnemann's 50 millesimal potencies. Instead of 3c he uses the 30c, 200c or higher up to CM potency as the starting base. The quadric potencies are denoted as Q30\1, Q200\6 etc.

The popular use of 15c and (14c+16c), or still better of 10m and (9m+11m) potencies, will drastically reduce the manufacturing cost of useful potencies in clinical practice and obviate the need of all other innumerable potencies higher or lower, including the 50 millesimal and quadric potencies.

1.6 **Clinical drug trials**: Under the aegis and financial support of the "Association for Scientific Research in Homoeopathy", the Kerala State Homoeopathic Cooperative Pharmacy Limited has supplied the carefully prepared 14c, 15c & 16c potencies of six medicines: Arsenic album, Belladonna, Bryonia, Calcarea carb, Rhus tox, and Sulphur. These are now available from M/s Duggal Homoeo Store, SCO 2462, Sector 22C, Chandigarh-160022 in one-dram vials of 20 grade medicated globules free at the counter, with postal charges as applicable. Initial trials at multiple centres so far have been consistent with expectations. But curious and interested readers are encouraged to get these medicines and use them in their clinical practice to satisfy themselves. The 14-16c or 9-11m potencies of other medicines can be arranged from the drug manufacturers. As already described [15], these potencies can also be easily prepared from the 6X potency readily available in the market.

2. **The dose considerations**

The dose has two important aspects: quantity of medicine in a dose and frequency of repetition of dose. Homoeopathy differs from other drug therapies in both these respects. The preferences and views also differ among the homoeopaths. Hence the need of a scientific reappraisal.

The Allopathy, Ayurveda, Unani and Sidha stand together in a group since they all work on the Principle of Opposites and employ large and frequently repeated doses of medicine. Their medicines oppose i.e. neutralize, remove, suppress or block the results and products of the 'particular' disease process. The degree of relief is generally proportional to the quantity of medicine. The interval between doses depends on the rate of drug metabolism.

Homoeopathy instead, operates according to the Law of Similars and itself singly forms a distinct group of drug therapy. It aims at curing the 'patient' with 'whole disease' as manifested and mediated via the totality of physical and mental symptoms with their modalities of variation due to modifying factors. This is achieved by removing the primary cause of disease at the molecular level. Therefore the amount of medicine required is to be counted as number of molecules of the potentized and medicinally active alcohol and not measured by weight of the medicated pills.

The symptom totality of a disease, in fact, indicates the total biological response of the *healthy subject in the patient* to the causative xenobiotic X'. It has two components: activation of the defence mechanisms against the antigenic determinants on the xenobiotic molecule and the pathophysiology of the affected biomolecules, cells, tissues & organs. The potentized homoeomedicine D_x prepared by resonantly promoting the diluent molecules D with the crude drug molecules X contains a mixture of diluent molecules resonantly promoted with the antigenic and pathogenic determinants of X. The xenobiotic X′, crude drug X and the homoeopotency D_x carry similar chemically exchangeable energies and chemical specificities, hence elicit similar symptom totality. The homoeocure has two pronged effect: one of stimulating the immune response (aggravating some symptoms), and second of dislodging X′ from the disease complex MX′ formed with the biomolecule M (ameliorating some symptoms), through competitive chemical exchanges:

$$MX' + D_x \approx MD_x + X'$$
$$MD_x \approx M + D_x$$
$$X' \rightarrow \text{biodegraded/ bioeliminated}$$
$$D_x \rightarrow \text{depromoted to} \rightarrow D \text{ , the diluent molecule} \rightarrow \text{metabolized .}$$

Competitive chemical exchanges between the pathogenic and curative xenobiotics are thus basic to the homoeopathic drug action on the **Law of Similars**. For this, the tiny amount of homoeomedicine as potentized ethanol molecules adsorbed/absorbed, and retained for long via hydrogen bonds, on sugar pills is sufficient in a dose.

But so long as the morbid symptoms persist, repetition of the medicine in small doses, say as 1 or 2 medicated pills of the 20 grade is desirable as is also supported by personal experience to effect speedy recovery. Single dose therapy entails avoidable agony and suffering of the patient.

3.**The use of more than one medicine**

In actual clinical practice a homoeophysician does come across a case when the totality of symptoms, mental and physical, cannot be covered by any single homoeomedicine and is better covered by two or three medicines together, which do not mutually antidote but follow well. These homoeomedicines can be given in a cycle with advantage to the patient. And when the selected homoeomedicines do not mutually antidote and are unrelated these can even be mixed in 2 or 3 pills of each and administered together. Moreover, the allopathic and homoeopathic medicines differ in their modes and planes of action. Therefore, the former may be given to control homoeopathic aggravations and morbid symptoms within the tolerable limits of the individual patient. The allopathic medicines are tapered off with the progress of the homoeocure, which continues at deeper molecular levels.

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