

Homeopathy - much ado about nothing?

Madam, Homeopathy, described about two centuries ago by German physician Hahnemann, is a method of alternative therapy and is based on the principle - like kills like.¹ In Pakistan, like other parts of the world, the use of homeopathy is apparently on rise by virtue of poor regulation, media campaigns and lack of awareness.²

Science, being evidence based, does not support the homeopathic theories and practices. In contrast to dose-response relationship, homeopathy bases its practice on 'Law of Infinitesimals'. According to it, highly diluted and succused (specifically shaken) solutions containing a medicinal substance (simillium) will treat the disease whose symptoms (Proving Symptoms) are mimicked in a healthy individual by the undiluted potions.^{1,3,4}

Homeopathic preparations are dispensed in decimal (D) or centesimal (C) dilutions or 'potencies'. A decimal dilution means solute to solvent ratio equivalent to 1:10. If this diluted solution is further diluted with nine parts of the solvent, it will yield a solution diluted 10 times further (or $10 \times 10 = 10^2 = 100$ times diluted). If such repetitions are made serially 10 times, it would be a 10X solution; if 100 times, a 100X solution and so on. In the same way a centesimal solution would be 1002 or 10,000 times diluted. If such dilutions are carried out serially 10 times, it is called 10C solution and so on. A dilution greater than 1024 (12C) is below the Avogadro number and hence 'ultramolecular'. Most commonly used potency is ultramolecular potency of 30C.^{4,5} In fact beyond 12C, the active ingredient would not be present in all the solutions but only in a single or few out of many solutions made serially. Thus, most of the dilutions contain only vehicle. It is beyond imagination that a solution of a given substance 'A' has virtually no molecules of the substance 'A' and yet be effective as substance 'A'! In other words, it would only be placebo effect.

Literature survey suggests that quality research is sparse in homeopathy.¹ This seems even more likely, when double-blinded studies and meta-analyses about the 'prov-

ing' symptoms, the basis of the homeopathic materia medica (drug inventory), are also inconclusive.⁵ A series of studies by Linde et al^{1,6} are worth mentioning. In his initial meta-analysis, he had opined that the effects of homeopathic treatment are not mere placebo effects. This was credited by the homeopaths as a proof in favor of homeopathy. Later, the same author published that the analysis confined to methodologically sound studies suggest that there is no significant difference between homeopathic treatment and placebo!

To conclude, it is evident that homeopathy derives its roots from superstitions rather than science. Its efficacy could be attributed to placebo or at the most the vehicle used given that the preparations are really made in the homeopathic way. The claim of being free of side effects is true since it hardly contains any active ingredient(s)! In both situations public is put on stake thus warranting stern action against all forms of quackery.

Nasir Ali Afsar

Department of Pharmacology, Ziauddin Medical College, Ziauddin University, Clifton, Karachi

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