



SCIENTIFIC BASIS OF 'LAW OF SIMILIA' IN MODERN PHARMACOLOGY

Meenu Murali ¹, Ranjan C Britto ², Skandhan S Kumar ³

¹ PG Scholar, Department of Organon of Medicine, FMHMC, Mangalore – 575018.

² Associate Professor, Department of Organon of Medicine, FMHMC, Mangalore – 575018.

³ Assistant Professor, Department of Organon of Medicine, FMHMC, Mangalore – 575018.

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ABSTRACT: The Law of Similia, the foundational principle of homoeopathy, posits that substances causing symptoms in healthy individuals can be used in small doses to treat similar symptoms in patients. Introduced by Dr Samuel Hahnemann in 1796, this principle was supported by his observations of biphasic drug action: an initial primary action followed by a secondary, opposing response from the organism. This biphasic nature, conceptualized by Hahnemann, aligns closely with the rebound or paradoxical effects observed in conventional pharmacology, where drugs like anticoagulants, diuretics, and analgesics exhibit secondary responses post-administration, often opposite in nature to their therapeutic effects. Modern pharmacology's rebound effect can be seen as a physiological response aiming to restore homeostasis, aligning with Hahnemann's view that the body initiates a secondary counteraction to re-establish balance. This study examines the scientific foundation for therapeutic similitude by evaluating parallels between homoeopathy and the biphasic action of drugs in modern pharmacology. By establishing a link between homoeopathic principle and the physiological basis of drug actions, the study supports the relevance of therapeutic similitude, suggesting a shared scientific foundation between homoeopathy and modern medicine. The study proposes new therapeutic options through the integration of modern pharmacological insights into homoeopathy.



This study highlights challenges in aligning homeopathy's individualized approach with pharmacology's standardized frameworks, paving the way for integrative medical research.

INTRODUCTION

Homeopathy, a globally recognized medical practice for over two centuries, has established its presence in healthcare, education, and research within various institutions and medical schools. As a system of medicine, it is distinguished by its unique clinical approach rooted in complementary scientific principles. These include the law of similars (cure by similarity), homeopathic pathogenetic trials (HPT), the use of dynamized doses, and the prescription of individualized medicines tailored to each patient's unique symptomatology [1]. Among these principles, the law of similars stands out as the cornerstone of homeopathy and this study explores its validity by reviewing the scientific evidences from modern pharmacology. Further, it acknowledges the distinct methodological differences between pharmacological rebound effects observed in diseased states and homeopathic drug provings conducted on healthy individuals.

Dr Samuel Hahnemann introduced 'Law of similia' with the publication of '*Essay on a new principle for ascertain the healing powers of drugs*' in the year of 1796, and used classical deductive logic or syllogism known as "*modus tollens*" a Latin word means "the mode that affirms through negation" and it is the "indirect proof" (null hypothesis in modern biostatistics)² to validate the hypothesis of similitude principle. "*The principle of similitude to be logically valid, its opposite (the principle of contraries) must be unable to heal the symptoms of disease, or actually worsen them.*" His experiences with the enantiopathic method led him to dismiss it as an ineffective therapeutic strategy as it is unable to remove and annihilate the symptoms of disease.

Hahnemann outlined that drugs exhibit biphasic action, where a primary effect elicited by the drug is met with a secondary, opposing response from the organism after the action the drug in the organism, a phenomenon comparable to homeostasis in modern physiology. Similar to this, in conventional pharmacology, the rebound effect or paradoxical reaction, where the cessation of a drug's action leads to the return or exacerbation of symptoms, is increasingly documented. This study seeks to bridge homeopathic principles with conventional pharmacology to establish the therapeutic basis of similitude.



PRIMARY AND SECONDARY ACTION OF DRUGS

In the same essay, he explains direct primary actions of drugs and indirect secondary action of the organism to them. Every medicine has first a direct primary action in the organism followed by indirect secondary action (biphasic action)³ and the knowledge of both is essential for medical practice. Drug produces one set of symptoms in first or primary stage of its action and exactly opposite symptoms will be produced in second stage⁴. Symptoms of primary action are produced by the medicine and the “life preserving power” (“homeostasis”, according to modern physiology)³ conjointly but principally former is involved, later is receptive and passive⁵. Secondary action or counter action is an automatic reaction of “life preserving power.” These actions can be observed in every instance without exceptions, in ponderable and infinitesimal doses, in both healthy and diseased conditions of individuals³.

In healthy condition of individual, after the primary action of drug in large doses, there will be a significant change in the health of the individuals, which is exactly opposite to the first set of symptoms⁵. Magnitude of effect of this counter reaction is proportional to the intensity of primary action³. The effect of primary action of drug in dynamized doses can be perceptible only with keen observation as its magnitude is small due to the minuteness of the quantity of medicine. Consequently, the secondary action, after the stoppage of medicine, will be small, but this reaction is sufficient to bring back the normal state of health⁵, instead of extending to exactly opposite condition. Administration of medicine according to principle of contraries (antipathic/ palliative treatment) in physiological doses will produce initial short-lasting relief to the patient as disease symptoms and medicinal symptoms are neutralised dynamically. This antagonistic action can't extinguish the disease from the body. But as soon as the medicinal effect is exhausted, the disease will express the symptoms with increased strength. The additional strength is due to secondary reaction to the palliative which was opposite to the original disease symptoms and this counter action is proportional to the magnitude of dose of antipathic medicine⁵. So chronic diseases should not be treated with palliative medicines as relapse of the malady will occur with palpable aggravation afterwards³. Administration of infinitesimal doses of medicines based on principle of similitude can cure the disease. Primary action of medicine will overpower the similar disease symptoms due to its higher strength and extinguish the disease permanently from the individual (natural law of cure). The remaining medicinal disease in the individual is slight and transient due to the minuteness of dose and will disappear by itself after the exhaustion of



action of medicine. Thus, in homoeopathic treatment, after administration of medicine, secondary action will stimulate a healing homeostatic reaction in the body against their own diseases⁶. Exception to the narcotic drugs, all the medicines, when administered in moderate doses will create direct primary action in the organism and no reports of any indirect secondary effects. But with the use of excessively large doses, vital reaction (secondary reaction) will be produced. From this explanation of biphasic action of drugs, Hahnemann suggests a physiological basis to the principle of similitude². He illustrates secondary counter action with countless observations made in his clinical practice and forecasts rebound effect in modern pharmacology with the explanation of primary and secondary actions of drugs.

REBOUND EFFECT IN MODERN PHARMACOLOGY

Hahnemann validated the principle of therapeutic similitude at the same time he explained the “the sad results of the use of the antagonistic remedies” (principle of contraries) of conventional drugs and verified with the same *modus tollens*. Numberless examples can be found out in scientific publications, which describes the secondary reaction of the organism against the primary action of the modern drugs which confirm Hahnemann’s observations. Anticoagulant drugs (argatroban, bezafibrate, heparin, salicylates, warfarin etc) whose primary action is the prevention of thrombosis with secondary action of thrombotic complications. Diuretics (furosemide, triamterene, torasemide, etc) which lower the blood volume cause rebound sodium retention. Analgesics like caffeine, calcium channel blockers, clonidine, ergotamine, opioids, salicylates, etc. make a reaction of hyperalgesia. Anti-dyspeptics (antacids, sucralfate, proton pump inhibitors, etc.) which are used for the treatment of gastritis and gastroduodenal ulcers to lower the acidity, can cause hyperacidity later. Anti-inflammatory drugs (indomethacin, ibuprofen, paracetamol, etc) causes increased plasma concentration of inflammatory mediators after the primary effect. This secondary reaction preserves the homeostasis of the organism and called as *rebound effect / paradoxical reaction* in modern pharmacology⁷.

According to Webster’s New World Medical Dictionary, the word ‘rebound’ is defined as “the reversal of response upon withdrawal of a stimulus”, then ‘rebound effect’ is the “production of increased negative symptoms when the effect of a drug has passed or the patient no longer responds to the drug; if a drug produces a rebound effect, the condition it as used to treat any come back even stronger when the drug is discontinued or loses effectiveness”. It’s the attempt of the organism to bring back to equilibrium after a drug has

withdrawn. Harvard physiologist Walter Bradford Cannon, in 1929, explained ‘homeostasis’ as the tendency or ability of the living beings to keep their internal environment constant through self-adjustment⁸ of their physiological processes. Such physiological processes or homeostatic mechanisms are present at all levels of the biological organization from the simplest of cells to the most complex mental and emotional functions. As exact mechanism is unclear, the accepted hypothesis is that, rebound effect is the up-regulation (process where the body increases sensitivity to a substance after withdrawal) of the receptors of the drug².

In terms of scientific rationality, the primary action described by Hahnemann can be correlate with therapeutic, adverse and side effects of conventional drugs in modern pharmacology and secondary action to the rebound effect/ paradoxical reaction of modern drugs⁹. Rebound effect is the reoccurrence of signs and symptoms which were controlled while taking the medicine and happens after the discontinuation^{10,11}, withdrawal¹² or loss of effectiveness (tolerance) of drugs. It will happen after the biological half-life (effect of primary action) of drug and this produces symptoms with greater intensity than the original disease which makes the real difference between natural return of chronic symptoms and rebound effect, after the end of treatment³.

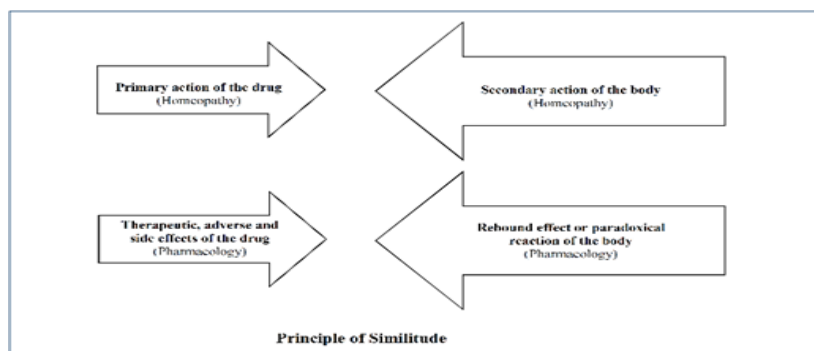


FIGURE 1: Principle of Similitude

Paradoxical reaction of modern pharmacology is similar to secondary reaction described by Hahnemann³

1. Occurs only in susceptible individuals.
2. Automatic action of the body, occurs after the end of primary action.
3. Opposite reaction to the primary action, with greater intensity and long lasting than primary action.
4. It doesn't depend on drug type, repetition of dose, duration of treatment or category of symptoms and disease (*Organon of medicine paragraphs 59,64,69*)

(Disclaimer: Rebound effects are observed in diseased states, while homoeopathy emphasizes



drug proving on healthy.)

HOMOEOPATHIC USE OF MODERN DRUGS

On the other hand, the rebound effect of conventional drugs can be used to cure similar diseases when prescribed based on principle of therapeutic similitude². In the introduction of first edition of Organon of medicine Hahnemann explained hundreds of “examples of homoeopathic cures verified involuntarily by doctors of the old school”. Some instances of accidental homoeopathic cures with modern drugs are reported in scientific literatures. *Methylphenidate*, a central nervous system stimulant was used to improve the attention and calm down the children with attention deficit hyperactivity disorder (ADHD). *Anteovin* contraceptive was used in women with functional sterility to induce rebound ovulation and pregnancy. *Thiomorpholine analogous to prazosin*, an immunosuppressant induced immune stimulation after primary immunosuppression¹⁴. Conventional drugs that show increased blood pressure as primary action (adalimumab, cyclosporine, dopamine, and anti-inflammatory drugs) could be used homoeopathically to treat hypertension, provided that other primary or pathogenic effects of drug present similarity with the set of signs and symptoms of the individual person. Drugs that increase blood glucose (amprenavir, corticotropin, diazoxide, and estrogen and more) could be employed homoeopathically to treat diabetes². Methods are developing to use modern drugs for homoeopathic curative purpose in dynamized doses to treat similar set of signs and symptoms exhibited in patients¹⁰, which enhances therapeutic options in homoeopathy. To make it applicable, Homoeopathic materia medica of modern drugs¹⁵ which contain all the primary or pathogenetic effects (therapeutic, adverse, and side effects) of 1250 modern drugs collected from *The United States Pharmacopeia Dispensing Information* (USPDI) Drug monographs and “Homoeopathic repertory of modern drugs¹⁶” were prepared⁹. A recently developed clinical research protocol for the use of potentized estrogen (17-β estradiol, it causes endometrial hyperplasia as adverse event) for the treatment of endometriosis-associated pelvic pain showed significant improvement in the pain, depression, quality of life¹¹. Potentized estrogen was derived from 17-beta-estradiol valerate following the guidelines of the Brazilian Homeopathic Pharmacopeia. The initial preparation involved three stages of serial grinding with lactose, followed by sequential 1:100 dilutions, each subjected to 100 succussions, to achieve potencies of 12cH, 18cH, and 24cH. The final product was dispensed as drops in a 30% hydroalcoholic solution, packaged in 30-ml vials equipped with a dropper¹⁷. This study



suggests the applicability of this clinical and scientific proposal.

DISCUSSION

The findings in this study reveal an intriguing correlation between Hahnemann's principles in homoeopathy and the biphasic action of drugs observed in modern pharmacology, specifically the rebound effect. This parallel supports the concept of therapeutic similitude, as both disciplines recognize that a drug's primary action can be followed by an opposing secondary response. Modern pharmacology documents various examples where conventional drugs produce a rebound effect or paradoxical reaction, closely resembling Hahnemann's observations of secondary counteraction after a drug's initial impact. This phenomenon, observable in both infinitesimal doses and in traditional pharmaceutical applications, points to a physiological basis for homeostasis, wherein the body strives to counteract the external effects of a drug to restore balance. The potential for this secondary reaction to contribute to healing underlines the relevance of similitude in medical treatment, where minimal doses of a drug inducing symptoms similar to those of the disease may prompt the body's natural counteraction, thus facilitating recovery. By considering these scientific insights into the rebound effect, homoeopathy and modern pharmacology may find common ground, encouraging further research into minimal-dose therapy and expanding therapeutic options across medical systems. The integration of modern drugs into homeopathy must prioritize symptom totality and individualization to maintain alignment with classical homeopathic principles.

One key limitation of homoeopathic use of modern drugs is the inability to document the idiosyncratic and individualized symptoms, which is central to homeopathic remedy selection, as outlined in Hahnemann's *Organon* (paragraphs 133, 139, 140), as the adverse events of modern drugs in the standard forms provided by pharmacovigilance schemes doesn't need details of modalities and peculiarities of symptoms. Conventional drug testing, typically conducted in their crude, non-potentized states, further limits the exploration of their inherent therapeutic potential. In homeopathic philosophy, potentization is considered essential for unlocking the "hidden powers" of substances. Without this process, the ability of conventional drugs to exhibit their full pathogenetic spectrum remains constrained. However, evidence suggests that therapeutic doses of modern drugs demonstrate significant pathogenetic power, producing observable effects in large populations. This highlights their potential for homeopathic application when administered in infinitesimal doses, provided



they are selected according to the totality of symptoms, which minimizes the deficiency of idiosyncratic symptoms. Initiating treatment at an intermediate potency, such as 6cH, and tailoring dosage repetition to the patient's individual susceptibility ensures both safety and therapeutic efficacy⁹. This approach minimizes the risk of aggravations and adverse effects while allowing for a systematic evaluation of the relationship between substantial and infinitesimal doses. It suggests that even modern pharmacological agents, when repurposed under homeopathic principles, could address clinical complaints traditionally managed by homeopathy. This approach also broadens the applicability of the principle of therapeutic similitude⁹.

CONCLUSION

Through the exploration in light of modern pharmacology, we can confirm the principle of therapeutic similitude is universal irrespective of any system of medicine. The parallels between Hahnemann's concept of biphasic drug action and the rebound or paradoxical effects observed in conventional pharmacology not only validate the scientific foundation of therapeutic similitude, but also enhances the therapeutic options by the use of modern drugs homoeopathically. Despite challenges in documenting idiosyncratic symptoms due to the standardized nature of pharmacovigilance and the crude state of conventional drug testing, this study highlights the potential of modern drugs when utilized under the law of similitude. The significance of this study lies in advancing the scientific foundation of homoeopathy, fostering its recognition within the wider medical community, and contributing to a more holistic approach to healthcare.

However, validation of the method of using modern drugs for therapeutic purpose requires a concerted effort: physicians should adopt it in clinical settings and systematically document their outcomes through case reports, pharmacists must prepare the necessary homeopathic potentized medicines, and researchers ought to develop and implement robust clinical protocols. This approach has the potential to broaden homeopathy's scientific acceptance and therapeutic scope without compromising its foundational principles.



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***Address for Correspondence:**

Meenu Murali, PG Scholar,
Department of Homoeopathic
Paediatrics, Father Muller
Homoeopathic Medical
College, Deralakatte, Mangalore
-575 018.

Email:

meenu97murali@gmail.com

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