A review on prevention of diseases through homoeopathy

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Abstract
Homoeopathy is one of the latest systems of medicine discovered at the latter part of 18th century, first rose to prominence in the 19th century due to its success in treating epidemics and is currently second largely utilized system of medicine globally. Prophylaxis through Homoeopathy has been strongly promulgated by stalwarts and popular among the general public in the recent times, but still controversy revolves around it. Aim of the study is to review the available literature for analyzing the usefulness of Homoeopathy in prophylaxis of human, animal as well as plant diseases. A comprehensive search has been made in electronic database aimed to target the available literature of various levels of evidence. Examples are summarized under different areas of applicability of homoeopathic medicine as prophylactic. Currently there is convincing evidence to support effectiveness of Homoeopathy in prophylaxis, though sparse. More rigorous research studies are warranted to enlarge the horizon of its application.

Keywords: Prophylaxis, homoeopathy, alternative medicine, preventive medicine, epidemics

Introduction
Homoeopathy is one of the latest systems of medicine discovered by Dr. Christian Fredrich Samuel Hahnemann (MD) at the latter part of 18th century, around the period of evolution of Preventive medicine and vaccination and is the longest established Complementary and Alternative Medicine to have arisen in Europe [1]. Homoeopathy first rose to prominence in the 19th century due to its success in treating epidemic diseases such as cholera, yellow fever and typhus [2], proven to have healing and preventive effects in many human illnesses [3] and is currently second largely utilized system of medicine globally. World-wide, Homoeopathy is either being practiced as an independent system of treatment in about 80 countries or is being practiced as an alternative or complementary system of medicine [4] Ever since the time of its discoverer, prevention of diseases through Homoeopathy has been strongly promulgated by stalwarts and is popular among the general public in the recent times. Although there is an ocean of literature on this topic, Homoeopathic prophylaxis has been still a controversial issue[5]. Different methods of prophylaxis have been enunciated and different approaches have been propounded in the vast homoeopathic literature[6] and evidence base is generated for some extent, but it is indispensable to review the available research literature to assess the effectiveness of Homoeopathic medicines in prevention of diseases. The aim of this article to compile all such information and generate evidence base for scope of homoeopathy in preventive medicine and to suggest possible directions for future research to increase the horizon of its application in preventive medicine and public health programs.

Although “Prevention is better than cure” is an undisputed principle, the concept of prevention has undergone significant changes over the years. Based on the strategies applied, prevention is primarily categorized as Primordial (actions to minimize future hazards to health), Primary (prevent the onset of specific diseases via risk reduction by altering behaviors or exposures that can lead to disease), Secondary (procedures like screening, that detect and treat preclinical pathological changes), Tertiary (seeks to soften the impact caused by the disease on the patient’s function, longevity, and quality-of-life) and Quaternary(action taken to identify patient at risk of over-medicalization, to protect him from new medical invasion, and to suggest him interventions ethically acceptable)[7, 8]. Principles of preventive medicine can be infused into prevalent practices in complementary and integrative medicine including Homoeopathy, promoting public health in the context of more responsible practices [9]. Although prophylaxis remains a controversial area of evidence base for Homoeopathy, there are credible historical accounts of effectiveness of homoeopathy in treating outbreaks of
Typhus, Scarlet fever and Cholera in the 19th century. (Jostin, 1885; Biegler, 1858; Jenkins, 1989; Emmans-Dean, 2006) [10] In the very beginning of Organon of Medicine, after instructing about the requisite knowledge of the physician to achieve an ideal cure, which is the highest mission of the physician, Hahnemann stresses the importance of physician to be a “preserver of health”. For this purpose he advises that physician should be aware of things that derange health and cause disease and how to remove them from persons in health. (Aphorisms 1-4) [11] Since then, several articles were published in the area of prophylaxis in Homoeopathy and available research literature is segregated under the appropriate headings with relevant examples and probable directions for future research have been discussed in this article.

Materials and Methods
A thorough search has been made in electronic database aimed to target the available literature of Meta analyses, Systematic reviews, Randomized control trials, Observational studies, Case studies and Review articles related to Prevention and Homoeopathy, excluding non-peer reviewed journals and the search is limited to English language only. Whenever a review article is considered the original articles which were included in the study are not quoted unless there is a different finding. Examples of studies conducted in different areas of applicability of homeopathic medicine as prophylactic in acute, epidemic, chronic, endemic, animal and plant diseases and presented below.

Prevention of Acute Diseases
Several studies were conducted to find the effectiveness of Homoeopathic medicines in the prevention of acute diseases with varied results. An observational study reported reduction in the mean number of RTI episodes during the period of observation vs. the year before inclusion in the study was significantly greater in the homeopathic-treated group than in untreated patients [12]. A pragmatic RCT comparing individualized homeopathic care and waiting-list controls in homoeopathic care for the prevention of “upper respiratory tract infections (URTI) in children shows clinically relevant effect of individualized homoeopathic care in the prevention of URTI in children with statistically significant difference in the median number of days with symptoms of 8 days in homeopathic group to 13 days in control group (p=0.006) [13]. Whereas a double-blind randomized placebo controlled trial to investigate the effect of self-treatment with one of the self-selected ultra-molecular homeopathic medicines for the prevention of “childhood URTI” concludes that there was no effect over placebo for self-treatment with one of three self-selected (Calcarea carb, Pulsatilla, Sulphur) homeopathic medicines in preventing childhood URTI. The probable reason mentioned by the authors that can be due to the lack of effect of the highly diluted homeopathic medicines or the process of selection and type of medicines, out of which the latter seems to be more justifiable and rational in terms of homoeopathic core principle of individualization [14]. A review conducted to assess the effectiveness and safety of oral homeopathic medicinal products compared with placebo or conventional therapy to prevent and treat “acute respiratory tract infections” in children concluded that pooling of two prevention and two treatment studies did not show any benefit of homeopathic medicinal products compared to placebo on recurrence of ARTI or cure rates in children. But low-quality evidence was found that non-individualized homeopathic medicinal products confer little preventive effect on ARTIs (OR 1.14, 95% CI 0.83 to 1.57) and low-quality evidence was found from two individualized prevention studies that homeopathy has little impact on the need for antibiotic usage (N = 369) (OR 0.79, 95% CI 0.35 to 1.76) [15].

A review of homoeopathic research in the prevention and treatment of “Dengue fever” inferred that the two community based studies showed positive results for role of homeopathic medicines as a prophylactic medicine. The comparative clinical study showed that the homeopathic combination appeared to be a more potent treatment against dengue fever when compare with standard maintenance therapy. The case study shows favourable results, but the sample size is only of 10 cases. The study concludes that high-quality randomised controlled trial (RCT), vitro and animal model studies are required to support the efficacy of homoeopathic therapeutics [16].

A systematic review to assess the evidence for effectiveness of complementary and alternative therapies for treating or preventing “Influenza or Influenza-like illness” quotes 14 RCTs testing 7 preparations which include a homeopathic preparation viz Oscillococcinum but the effectiveness is not established beyond reasonable doubt [17]. In another systematic review, Oscillococcinum was found to be superior to placebo as a treatment and prevention of Influenza but the effect size was small and therefore of debatable clinical relevance [18].

It may be noted that vast notes on prevention of acute diseases and long list of specific prophylactics in homoeopathy by William Boericke, Pierre Schmidt and other stalwarts is not within the purview of this article.

Prevention of Epidemic Diseases
Homoeopathy has a robust track record of controlling and preventing outbreaks of epidemics at a large scale [19]. Results obtained by homeopathy during epidemics reveal a very important and clear constancy: a very low mortality rate. This constancy remains, regardless of the physician, time, place or type of epidemic disease, including diseases carrying a very high mortality rate, such as cholera, smallpox, diphtheria, typhoid fever, yellow fever and pneumonia [2]. Hahnemann used Belladonna and Aconite during outbreaks of Scarlatina epidemic in Europe in the early 1800s. Thus he proved his point and could not emphasize enough that no two epidemics should be considered the same and treated the same and treated in the similar manner since all outbreaks are different and come with different symptoms and intensity [20]. The key of finding specific prophylactic is constructing a clear picture of the prevailing epidemic. Hahnemann never used the phrase ‘genus epidemics’ but in Aphorisms 102 (footnote), 147 and 241 of Organon of medicine he says about ‘homeopathic (specific) remedy’. Different strategies have been used by homeopaths to manage epidemics like Individualization, Genus epidemicus, Combination remedies and Isopathy [6].
There are several studies published in the literature on the use of homeopathic medicines in the treatment and prevention of epidemic diseases. Boenninghausen had excellent success in using Thuja occidentalis in the prophylactic treatment of Small-pox. In 1902 smallpox epidemic occurred in Iowa. Dr. Eaton treated 2806 patients with Variolimum. Only 14 developed the disease out of 547 patients who were exposed (Hoover, 2003). Hering was the first to consider the use of nosodes, 50 years before Pasteur became famous for using Rabies vaccine. In 1918, Spanish Flu pandemic infected 20% of the world population and killed about 30 million people. Homeopaths treated 6602 cases with 55 deaths which is less than 1% and of 24,000 cases treated allopathically with mortality rate 28.2%. Gelsemium sempervirens was the common remedy used during the epidemic. Dr. Grimmer stated that over 30,000 individuals received Lathyrus sativa successfully to prevent Polio and no one had any side effect. In 1974 epidemic meningitis occurred in Brazil in which 18,640 children were given Meningococcinum prophylaxis. 4 cases only developed meningitis in comparison to 34 cases out of 6340 children who didn’t receive the nosode [20].

Homeopathic prophylaxis is often confused for Homeopathic vaccination but it is more than just homeopathic vaccination. Homeopathic vaccination is the use of homeopathic remedies against diseases either earlier in an epidemic or given routinely to prevent common diseases like chicken pox, measles, mumps and influenza. As a first major involvement of homeopathic research in the field of prevention of epidemic diseases in India, an open observational study on efficacy of miasmatic prescription in the prevention of Japanese Encephalitis (JE) was conducted, which is popular as B.C.T. project (Belladonna, Calcarea carb and Tuberculinum). After its commencement in 1999 in Andhra Pradesh the mortality and morbidity rates of J.E. fell drastically. 343 cases were reported in 2000 with 72 deaths, in 2001 only 30 cases with 4 deaths, in 2002 only 18 cases but no deaths, in 2003 and 2004 no cases were recorded after administration of B.C.T. [23] This study clearly demonstrates the incontrovertible effectiveness of Homoeopathy when the basic principles are thoroughly implicated into studies. Homoeopathic medicine, Belladonna could inhibit JE virus infection demonstrably both in vitro and in vivo models significantly [23, 24, 27].

In a cluster- randomised, double-blind, placebo -controlled trial conducted in Kerala for prevention of chikungunya during the epidemic outbreak in August-September 2007 , Bryonia alba 30C/placebo was randomly administered to 167 clusters (Bryonia alba 30C = 84 clusters; placebo = 83 clusters) out of which data of 158 clusters was analyzed (Bryonia alba 30C = 82 clusters; placebo = 76 clusters) . The findings showed that 2525 out of 19750 persons of Bryonia alba 30 C group suffered from chikungunya, compared to 2919 out of 18479 in placebo group. Cluster analysis showed significant difference between the two groups [rate ratio = 0.76 (95% CI 0.14 - 5.57), P value = 0.03]. The result reflects a 19.76% relative risk reduction by Bryonia alba 30C as compared to placebo [25].

A double-blind study using Euphrasia 30c or placebo was carried out during an epidemic of viral conjunctivitis. Nine hundred and ninety-four subjects were available at follow-up, when 48 subjects in the group given Euphrasia and 43 subjects in the placebo group had signs and symptoms of conjunctivitis, a difference which was not statistically significant. The protocol by which Euphrasia was tried may be used without change to scientifically confirm the efficacy of genus epidemicus. The concept of genus epidemicus lends itself well to experimental double-blind studies in homoeopathy during epidemics [20].

**Prevention of Chronic Diseases**

By employing an integrative approach to the diagnosis and treatment of organic dysfunctions, homeopathy can act preventively in a wide scope of acute and chronic diseases, well before their actual appearance. To do so, homeopathic medicines must stimulate a homeostasis reaction in the organism against different idiosyncrasies predisposing to disease; in this context, application of therapeutic similitude according to the totality of characteristic symptoms of each individual patient is a sine qua non requirement (Individualized medicine) [27].

Apart from studies showing effectiveness of Homeopathic intervention to offer positive health changes to a substantial proportion of patients with a wide range of chronic diseases [28], there are examples of Chronic diseases prevented through Homoeopathy. In a study conducted by Dalla et al on Complementary and alternative medicine (CAM) use in an Italian cohort of pediatric headache patients, CAM was used as preventive treatment in 80 % cases out of which Homeopathy (47 %) was 2nd largely used CAM after Herbal medicines (64%) the most commonly used medicines for preventing headaches were Silicea, Ignatia amara, Pulsatilla, Aconitum, Nux Vomica, Calcarea phosphorica [29].

A case series on Usefulness of classical homoeopathy for the prevention of urinary tract infections in patients with neurogenic bladder dysfunction reported 8 cases treated with homoeopathy as add on to standard urologic prophylactic measures, 5 patients remained free of UTI whereas UTI frequency was reduced in 3 patients over a period of 15 months. Studies with larger sample sizes are warranted to confirm the effectiveness [30].

Interestingly there is a study conducted on “Post- Acute Withdrawal Syndrome (PAWS), Relapse Prevention and Homeopathy, in which participants who were treated with Nux vomica reported an immediate reduction in frequency and intensity of cravings, which often trigger for relapse. Few other studies on Alcohol dependence were also conducted and reported positive outcomes. Chronic (non-communicable) diseases are leading causes of death and disability globally but are surprisingly neglected elements of the global-health agenda. Urgent action is needed for implementation of evidence-based efforts to promote global, regional, and national action to prevent and control chronic diseases [32]. The global emphasis has been on a few extrinsic key modifiable risk factors for chronic diseases like unhealthy diets, physical inactivity and tobacco use etc., but Homoeopathy can offer intrinsic approach in prevention of chronic diseases by its “Miasmatic treatment”. Homoeopathy is known for curing the chronic diseases from the roots and the basic principles on which it is founded have to be really followed for the rational healing and curing [33]. The phenomenon of suppression is a concept fundamental to the Miasm theory because it explains how a single entity, psora, led to multitude of chronic diseases [34]. But these theories and concepts have to be verified and demonstrated on research grounds.

In India Homoeopathy has been integrated into a public health program called “National Program for Prevention and
Control of Cancer, Diabetes, CVD and Stroke (NPCDCS)" in 2015, the data related to the outcome is yet to be published.

Prevention of Endemic Diseases

Central council for Research in Homoeopathy creates awareness among public use homeopathic medicine as prophylaxis in endemics along with epidemics [35]. In 2007 and 2008, Cuban health officials conducted large homoeoprophylaxis interventions of over two million people against rising rates of leptospirosis, a water borne parasitic disease which is endemic in Cuba. The study establishes value of homoeoprophylaxis in providing a rapid, economical, effective and safe option to vaccination. Published results showed that the interventions were highly successful, [36] but some questions regarding possible confounders were raised. But a reevaluation of effectiveness is done and the results support the previous conclusions that homoeoprophylaxis can be used to effectively immunize people against targeted infectious diseases such as leptospirosis [37].

In Kenya, Abha Light Foundation has been working in the field of malaria for a long time, treating the disease with homeopathy and characteristic drugs. They built up a convention of homeopathic drugs for all-round prophylaxis treatment. As per them, homeopathic plan of Neem (2X or D2) has demonstrated its viability in disposing of repeating malaria [38].

It was also reported that, at many clinics in Kenya, Malaria X is a regular prescription for hundreds of patients. In a Kenda Bay Malaria prevention project in Kenya, Malaria X (3-step program) was distributed to 1500 families. Six months before starting the program, 100% of participants had attacks of malaria or malaria-like symptoms at least once in their lifetime. Of the 34 participants 71% used to get malaria or malaria like symptoms once a month or every two weeks. Since starting the 3-step program, only 12% (4 out of 34) respondents had an attack of malaria or malaria like symptoms. This demonstrates the usefulness of Homoeopathic medicines in prevention of malaria in endemic areas [39].

A single case report of Swedes, who became ill with malaria inspite of prophylaxis with two homeopathic medicines i.e Ledum pal 5CH and Malaria officinalis 4CH, over generalizes that the homeopathic principle of similia is not always advisable and gives erroneous confirmation for inefficacy of homeopathic drugs for malaria prevention and treatment. However more rigorous trials are necessary to refute the observation scientifically [40].

Prevention of Diseases in Animals

Few animal studies were conducted to assess the prophylactic effect of Homoeopathic medicines in diseases like Anthrax, Colibacillosis, Bovine mastitis etc.

A study on prevention of Anthrax in sheep and goats during an outbreak in an endemic place of India reported that there was not even single incidence after administration of Anthracinum 200. It is discussed that containment of epidemic with vaccination is time-consuming, but with Homoeopathy, prevention is cheap and rapid. The study concluded that Anthrax in cattle can be prevented well with Homoeopathic medicine [41].

In a review article published by Zeise and Fritz on “Use and efficacy of homeopathy in prevention and treatment of bovine mastitis” subjected top 8 studies of healing and prophylaxis of mastitis to differential evaluation showed the positive treatment outcome of homeopathy and possibility to reduce antibiotic use by 75%. Positive long term effect of homeopathic medicines is also indicated through some studies [42].

A 4 arm controlled study conducted by Coelho C et al to assess homoeopathic treatment as preventive against colibacillosis in newborn piglets concluded that homeopathic and biotherapeutic treatment were more effective than antibiotics in the control of diarrhea in newborn piglets; combination of homeopathic and isopathic treatment resulted in the highest weight gain. These results suggest that homeopathy and isopathy are effective alternatives for the treatment of diarrhea by E. coli in newborn swine [43].

Prevention of Diseases in Plants

Agrohomoeopathy has evolved as a quest for studies to focus on the development of environmentally safe, long-lasting and effective bio-control methods for the management of plant diseases. There are studies to support the premise that homeopathic and high dilution preparations have the potential to be effective on replacing pesticides that are used on crops [44] and that “Similia Principle” is very useful to overcome abiotic stresses of plants [45].

A completely randomised design study conducted on Mangifera indica (Mango) to design appropriate control measure against C. gloeosporioides by using selected homeopathic medicines of different potencies and concentrations. Results in this study inferred that all of the selected homeopathic medicines exhibited significant (p<0.0001) antifungal effect against C. gloeosporioides at 3000 ppm on OMA contained Petri-plates. Among the tested medicines Arsenicum album showed significant (p<0.0001) inhibition against C. gloeosporioides in controlling the disease [46].

Conclusion

Available literature stimulates ideas for future research studies to confirm the effectiveness of homeopathic medicines in prevention of acute and chronic diseases in humans, plants as well as animals. No adverse events were reported in any of the homeopathic studies making them safest method of treating and preventing illnesses. Key limitations are found in few of the included studies, in particular methodological inconsistencies, failure to conduct intention-to-treat analysis and selective reporting, which have to be overcome in future studies. Further Meta analyses and Systematic reviews of preventive trials are warranted. Role of Homeopathy in Prophylaxis will become more unequivocal with further rigorous research with high quality clinical trials, experimental epidemiological studies, in vitro and in vivo research studies based on appropriate study designs along with integration of the fundamental principles.

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