



## HOMOEOPATHIC NOSODES IN INFECTIOUS DISEASES AND COVID-19: A SCOPING REVIEW

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### ABSTRACT

**Background:** Concern about infectious diseases laid more burden on the global health which merely affects the global economy too. Highly transmissible infectious diseases which are the commonest cause of death in the world. Vaccines are the one showing considerable evidence in protecting the people from the infectious diseases. Even though evolutions happened in the field of vaccines, there is certain infectious agent which are resistant to vaccines. Despite, people are in search of other alternative effective therapy for the infectious disease rather than vaccine. Nosodes came into existence as an alternative one, but there is no quality evidence for the effectiveness of vaccine. **Objectives:** A review of literature on examining the efficacy of nosodes in infectious diseases. **Methods:** A search (PubMed and google scholar, Indian Journal of Research in Homeopathy) was conducted regarding the history of nosodes, their preparation, and their effects on various epidemics and particular diseases were included. Other studies regarding the experimental studies of nosodes on animals also included. **Conclusion:** A total of 21 articles were included. While this review of literature regarding the efficacy of nosodes in infectious diseases shows a positive tagging on the curing ability of nosodes. However, further more studies elucidate to enhance the mechanism of action of nosodes and its efficacy in infectious diseases.

**KEYWORDS :** Nosodes; infectious diseases; homeopathy.

### INTRODUCTION

A new threat of infectious diseases has serious impact on the public health, serves as the commonest cause of death all over the world.<sup>[1]</sup> Infectious diseases are caused by various morbid agents include bacteria, virus and fungi, etc., and are highly transmissible by various modes of transmission either directly or indirectly. An evolution in the public health, the development of vaccines has dramatically changed the whole world.

Vaccines, once developed are more effective for protecting from infectious diseases. There are many proven effects for vaccine but there is no alternative. Despite, population seeking the need for another effective alternative therapy against the pathogens. Even though there is a recent development in the field of vaccine, there are certain pathogens which are resistant to vaccines also and dissemination of existing vaccines are inadequate.<sup>[1]</sup>

### What is homeopathy?

Homeopathy, the therapeutic medicine evolved 200 years ago in the 17<sup>th</sup> century and early 18<sup>th</sup> century by Dr. Samuel Hahnemann. He was both physician and pharmacist. Hahnemann, with his fluency in 14 languages he was able to read and study the ancient and contemporary healing text developed in other Countries. While translating Dr. Cullen's *Materia Medica* of medicines from English to German, he found that the overdose of Peruvian bark, an herb used in the treatment of malarial fever. Being a scientist, Hahnemann decided to experiment himself by taking small doses of Peruvian bark and found that later he developed a fever which was very similar to malarial fever. Once the Peruvian bark intake was stopped, fever also stops. He again took once and fever starts, then fever ceased he stopped taking.

Based on this experiment he came to the principle, **Law of Similia** i.e., like cures likes. Peruvian Bark was capable of producing a malaria like fever in a healthy person similar to a condition it could relieve (cure) in a person who is unwell with Malaria fever. In orthodox medicine, Peruvian bark (*Cinchona*), the material from which Quinine is produced which is used in the treatment of malarial fevers.

In order to find the curative properties of many substances, homeopaths onwards have conducted homeopathic drug proving's of nearly 3,000 substances which have been synthesized based on Homeopathic Pharmacopeia. This drug proving on healthy human beings results in substantial formation of *Materia Medica* from which medicines can be selected to apply the Law of Similars.

### What is Nosode?

Various scientists include Pasteur used some dilute preparations against the disease causing pathogens using animal and plant sources which includes nosodes, sarcodes and the actual infectious agent (isopathy).<sup>[1]</sup>

The word nosode comes from the Greek word, 'nosos' meaning diseases or a morbid root. The Latin word 'noxia' meaning noxious harmful agents.<sup>[3]</sup> As the name suggests, nosodes are prepared from the noxious and infectious substances which are potentised and used as remedies to treat diseases.

Nosodes are the dilutions which are biologically prepared directly from the disease causing agent like bacteria, virus or their excretions or indirectly from the diseased tissue that contains it or decomposed products from animals or humans.<sup>[2]</sup> In the process of preparation of nosodes, the infected material is identified by standard test and screening, nature of the source material is identified, followed by contamination and co-infection from the material is removed, quantification, dilution, finally the components are separated and potentised, prepared based on the standard homeopathic pharmacopeia.<sup>[3]</sup>

### History of Nosode

Hahnemann was the first to discover nosodes '*Ambra grisea*' (morbid product found in the stomach of sperm whale, introduced in 1827, proved by Hahnemann and his friends) followed by Constantine Hering, student of Samuel Hahnemann who is called as the father of homeopathy first to prove the animal poison called "Lachesis", the venom of bushmaster snake followed by rabies 'poison'. Convinced from this fact he extended his studies to develop and prove a nosode from the sero-purulent material from the scabies vesicles called *Psorinum* in 1830.<sup>[4]</sup> In 1879, *tuberculin* prepared

from the lung tissue of the tuberculosis patient. In 1880, *Syphillinum* prepared from the *Treponema pallidum*. In 1890, *Medorrhinum* prepared from the urethral discharge of gonorrhoeal patients contains *Neisseria gonorrhoea*. These are the four major nosodes developed in homeopathy made the drastic change.

#### Preparation of nosodes

Other nosodes include anthracinum, bacillinum, morbillinum, influenzinum, meningococcinum, Oscilloccoccinum, Partodininum, vaccininum, Diphtherinum, Pyrogenium, bowel nosodes, etc.,<sup>[5][14]</sup> The following nosodes have been developed HIV nosode, hepatitis c nosode, mycobacterium tuberculosis nosode, plasmodium falciparum nosode, cancer nosode, Escherichia coli nosode, salmonella Typhi nosode, candida albicans nosode, Klebsiella pneumonia nosode, human papilloma nosode. Nosodes which are prepared from human gut microbia are called as "Bowel nosodes".

Nosodes are prepared under the guidelines of Homeopathic Pharmacopoeia, due to the nature of source material, the HPI classified the nosodes into following 4 groups:

**N-I:** Preparation made from bacterial endotoxins

**N-II:** Preparation made from microorganisms capable of producing endotoxins

**N-III:** Preparation made from purified toxins

**N-IV:** Preparation made from microorganisms or diseased subjects.

In this antibiotics era, nosodes play a drastic role in world of medicine with negligible amount of side effects.

#### PRINCIPLES OF NOSODES

Homeopathy an emerging alternative medicine popularized the effectiveness of nosodes. Nosodes are biological preparations which works based on the principle of homeopathy called "likes cures likes". Based on the principles of homeopathy that implies that, the substance that tend to produce certain characteristic symptoms in healthy individuals have the ability to cure those characteristic symptoms in diseased persons. These substances are poisonous when administered in large doses, for that reason they are potentised and attenuated to lower doses in order to produce transient resistance against infection.<sup>[6]</sup> Nosodes, when administered strengthen the immune system of the body. Nosodes can be considered as the vaccine-like preparation due to their nature of making, whereas the vaccines are attenuated and nosodes are potentised. However, nosodes cannot be used as substitute for vaccine.<sup>[7]</sup> The complete mechanism of action of nosodes are not yet proven. Various research done in case of influenza, leptospirosis had low quality of evidence on effects of nosodes in infectious diseases. Various experimental studies done in animals using the nosodes like Anthracinum, HIV 30c, showing positive effects.

#### NOSODES IN HOMOEOPATHY

The development of nosodes made a drastic evolution in the system of homeopathy. Nosodes gained a ground in the field of homeopathy by wane off the epidemic conditions. In the history of homeopathy showing evidence on the facts. In practice, nosodes are used as in intercurrent remedies and as a constitutional remedy in case of chronic diseases.<sup>[13] [14]</sup> various case studies in nosodes include dr. Tyler's case of influenzinum and Diphtherinum shows positive effect of nosodes on infectious diseases.<sup>[8]</sup> An experimental study also done using the nosodes showing satisfying results. Over 100 years, more number of nosodes were developed and used for infectious diseases. A trail was conducted by central council of research in homeopathy during the epidemic of chikungunya and dengue there were drastic reduction in the infection rate. In homeopathy, nosodes are vaccine-like preparations but

not be used as a substitute for vaccines. Various contraindications of nosodes include, it cannot be administered during the active phase and incubation period of the disease.<sup>[13][14]</sup>

#### NOSODES IN INFECTIOUS DISEASE

Homeopathy since its discovery it gained a successful result from treating the epidemics including leptospirosis, chikungunya, cholera, flu, dengue. During epidemics the two way of treating the disease is by Genus epidemics the symptoms from the people who are affected are collected and a remedy based on those symptoms are used as a prophylactic for the disease. The second way of treating the disease is by giving nosode, the causative organisms are prepared and potentised based on the Homeopathic Pharmacopoeia. During an outbreak of meningococcal meningitis in Brazil, the role of nosode meningococcinum yield a significant positive results towards the cure of the epidemic. Further in case of dengue outbreak in Delhi, the Homeopathy council advised the nosode prepared from the infected person serum which was potentised based on the guideline in Homeopathic Pharmacopoeia as a prophylactic for dengue, which shows a positive result.

A studies conducted on in vitro conditions of hepatitis c nosode and shows significant results as they are reducing the telomerase synthesis which is the pre-requisite of cell division, a 'gene regulatory hypothesis' gained the ground and slowing down the process of conversion of double stranded DNA to single stranded RNA.<sup>[9][10]</sup> A clinical trial also done in case of HIV infected individual using hiv-30c to explore its efficacy and safety. The progression of illness depends on the increase of viral load and depletion of cd4+ cells count. The effect of nosode evaluated on enhancement of the cd4+ cells count and reduction in the replication of virus.<sup>[11][12]</sup> An evidence of interventional study on nosodes in leptospirosis in Cuban population shows a drastic reduction in cases throws light on the fact that they are using nosodes as their homeoprophylaxis.<sup>[13] [14]</sup> In a blind randomized clinical trial with the nosode Influbio, a nosode from purified influenza virus sample shows positive effects against influenza in Brazil.<sup>[15]</sup> An anti-malarial nosode prepared from the *plasmodium falciparum* in experimental studies showing the convincing result used as prophylactic for malaria and inhibiting the hemozoin formation in cell line model. From the above studies it showed the effects of the nosodes but these are not satisfying the demographic immunological needs in terms of vaccination. (Bagai et al., 2012; *Indian Journal of Research in Homeopathy : Table of Contents*, n.d.) With the advancement in the field of microbiology, nosodes are also prepared by newer methods like *mycobacterium* nosode (Emtact) from different strains of *mycobacterium* and test their safety and therapeutic applications for further investigations. (Joshi et al., 2016) *Human papillomavirus nosode* prepared from the genital wart tissue and various cancer nosodes are developed and their anti-cancerous effects were tested, used for various viral warts for their therapeutic potential.<sup>[19]</sup>

#### NOSODES IN COVID-19

Covid-19, outbreak declared by world health organization as a pandemic outbreak is a highly contagious viral disease.<sup>[15]</sup> There is no recent study showing the evidence of presence of nosode for the coronavirus, only Rota corona vaccine, as the name suggests it is a potentised vaccine for veterinary use there is no way in use of coronavirus. The project coronavirus nosode is initiated in collaboration with department of life science. Historically homeopathy gained prominence on certain epidemics like cholera, influenza, scarlet fever, leptospirosis, etc., there is a substantial evidence supporting the homeoprophylaxis effectiveness in the treating the pandemic coronavirus cases.<sup>[20]</sup>

From the above studies, it is evident that the nosodes has

shown efficacy against many epidemic and pandemic diseases like leptospirosis, influenza, dengue, malaria, swine flu, cholera in many parts of the world. Historical evidence shows the noteworthy efficacy of homeopathy against many infectious diseases.

## CONCLUSION

Hence, the nosodes had a therapeutic potential, cytotoxic effects and alter the nuclear condensation, DNA fragmentation, reactive oxygen species generation and inhibitory effects on the inflammation process, the cell proliferation. Nosodes are quite successful in clinical practice, even though many challenges lie inside regarding the safety issues while preparing the nosodes from various pathogenic organisms.

In the modern era of antibiotics, nosodes are also used for its substantial effects on epidemic infectious diseases. However, further studies are elucidating to prove the mechanism of action of nosodes and revamp the old nosodes for the newer strains using the modern technology. Above mentioned studies, scientific experiments, historical evidence offers the strong pointers on grabbing the opportunity to develop coronavirus nosode.

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