Utility of homeopathic medication ‘Antimonium Tartaricum’ in the treatment of COVID-19 syndrome

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Abstract
To employ and to investigate the effectiveness and safety of the homeopathic medicine Antimonium Tart (Antimonium Tartaricum) in the treatment of Covid-19 infections.

Keywords: Antimonium Tartaricum, treatment, COVID-19 syndrome

Introduction
A. The Basis of Homeopathic Practice
a. Therapeutic Similimum
In Homeopathic therapeutic similimum it is important to note that here the symptomatology in healthy subjects produced by administration of physiological dose of the drug is matched with a similar symptomatology recorded in the patient and importance is given to the symptom pattern that represents a unique identifying set of characteristic influenced by the patient’s constitution and personality. Therefore the clinical selection of the homeopathic medicine is based, not on the diagnostic characteristics of the disease or syndrome but on the totality of the symptom pattern or picture that the patient presents.[2]. Thus, three patients with the “same” conventional medical diagnosis could receive three different homeopathic medicines and experience benefit[9].

b. Combination or Complementary Prescription
Combination homeopathic medicines sold over the counter for self-care may contain two to six or more individual medicines, with the goal of addressing the most common acute symptoms that most people in a given patient population might experience at some point in the course of their illness. Effectiveness of this approach has been demonstrated in the treatment of acute otitis media and acute respiratory infections in children[10]. Thus, primary care clinicians have the option of learning how to select from a small number of individual homeopathic remedies for pediatric AOM or URIs or recommending a combination remedy product containing the most often used remedies together. The relatively small total pool of possible appropriate homeopathic medicines for acute illnesses numbers in the range of 50 to perhaps 100 individual remedy possibilities, thus making acute homeopathic medicines a feasible treatment strategy for primary care clinicians.

c. As an add-on treatment
There have been promising results when homeopathic medicines have been administered as an add-on treatment especially in children with recurrent tonsillitis[4], acute encephalitis syndrome (AES)[5], and Multi-drug resistant tuberculosis (MDR-TB) to name a few.

d. Concept of individualization and genus epidemicus
Every individual has different susceptibility to response to given stimuli of every individual vary, similar to that if a causative factor is same but every individual throw 2 sets of symptom totality 1 common symptoms which includes symptoms of disease and 2 characteristic symptoms which defines the individuality of a patient and on those symptoms homeopathic physician prescribe the remedy However a situation arises when a large group of individuals get affected by one causative factor that is epidemic or pandemic where majority of the sufferers display a common set of signs and symptoms. According to Organon of Medicine 6th edition aphorism 101 & 102 the selection of medicine should be based on those set of signs and symptoms shown by large scale of population who are suffering from common causative factor and the selected remedy is called as genus
epidemicus, which can be used as prophylactic and curative for that particular epidemic or pandemic situation. Dr Samuel Hahnemann used Belladonna in Scarlet fever epidemic in 1801 and in 1831 he used Camphora, Cuprum met and Veratum album as a genus in cholera epidemic [13].

B. Modern Clinical and Pharmacological Practices similar to Homeopathy
i. Personalized medicine, precision medicine, or theranostics is a medical model that separates people into different groups—with medical decisions, practices, interventions and/or products being tailored to the individual patient based on their predicted response or risk of disease [7]. The terms personalized medicine; precision medicine, stratified medicine and P4 medicine are used interchangeably to describe this concept8 though some authors and organizations use these expressions separately to indicate particular nuances.

ii. Biphasic Response There is a recognized principle in pharmacology called the "biphasic response of drugs." Rather than a drug simply having increased effects as its dose becomes larger, research has consistently shown that exceedingly small doses of a substance will have the opposite effects of large doses.

The two phases of a drug’s action (thus the name "biphasic") are dose-dependent. For instance, it is widely recognized that normal medical doses of atropine block the parasympathetic nerves, causing mucous membranes to dry up, while exceedingly small doses of atropine cause increased secretions to mucous membranes. This pharmacological principle was concurrently discovered in the 1870s by two separate researchers, Hugo Schulz, a conventional scientist, and Rudolf Arndt, a psychiatrist and homeopath. Initially called the Arndt-Schulz law, this principle is still widely recognized, as witnessed by the fact that it is commonly listed in medical dictionaries under the definition of "law."

More specifically, these researchers discovered that weak stimuli accelerate physiological activity, medium stimuli inhibit physiological activity, and strong stimuli halt physiological activity. For example, very weak concentrations of iodine, bromine, mercuric chloride, and arsenious acid will stimulate yeast growth, medium doses of these substances will inhibit yeast growth, and large doses will kill the yeast [11].

Materials and Methods
The employment of homeopathic treatment is based on the following considerations

A. The symptomatic Picture of COVID-19 Illness

i. Mild disease: non-pneumonia and mild pneumonia; this occurred in 81% of cases.

ii. Severe disease: dyspnea, respiratory frequency ≥ 30/min, blood oxygen saturation (SpO2) ≤ 93%, PaO2/FiO2 ratio or P/F [the ratio between the blood pressure of the oxygen (partial pressure of oxygen, PaO2) and the percentage of oxygen supplied (fraction of inspired oxygen, FiO2)] < 300, and/or lung infiltrates ≥ 50% within 24 to 48 hours; this occurred in 14% of cases.

iii. Critical disease: respiratory failure, septic shock, and/or multiple organ dysfunction (MOD) or failure (MOF); this occurred in 5% of cases. [12]

B. The Symptomatic Picture of Antimonium Tartaricum in Homeopathic Materia Medica corresponds with COVID - 19 illness and therefore is a probable genus in the present covid-19 pandemic

i) Homeopathic proving
Antimonium Tart or Tartar emetic has action on mucous membrane producing catarrhal inflammation of larynx trachea and bronchi causing accumulation of mucous .It’s a respiratory poison it affects the nerve center, causing intense venous congestion. It causes muscle relaxation which affects the respiration further. It affects the nerves which produces emesis…… Dr. W. H. Burt: Physiological Materia Medica [13].

In Lecture Notes on Materia Medica, Dr J.T.Kent says that in Antimonium Tart the initial picture of a disease is like usual upper respiratory tract infection fever with dry cough but later on the disease progresses to lower respiratory tract where patient doesn’t respond to any other selected remedy Dr. Kent calls this poor reaction of an individual to the infection and then the respiratory distress starts. So its very good remedy for poor reaction where patient immune system gives up and deadly rattle in chest leads to dead [14].

Dr. William Boericke in his books wrote about the anti-helminthic properties of Antimonium Tart, it stimulates the oxidizing action on protective layer of a parasite. The corona virus also has thick outer lipid coat which can be destroyed by Antimonium Tart [15].

So we present that Antimonium Tart can be used as a prophylactic and therapeutic intervention in COVID 19 syndrome on the basis of available literature and data and its clinical use.

ii) Clinical correlation with COVID-19 presentation

<table>
<thead>
<tr>
<th>Phase</th>
<th>Symptomatology</th>
<th>Indications for Antimonium Tart</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mild disease</td>
<td>non-pneumonia and mild pneumonia</td>
<td>a) Totally asymptomatic but COVID19 positive patients.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>b) throat irritation, dry coughing, appetite loss, weakness, with or with out fever</td>
</tr>
<tr>
<td>Severe disease</td>
<td>Dyspnoea, respiratory frequency ≥ 30/min,</td>
<td>Fever with dry coughing, progressive weakness, with or without fever, appetite loss, burning sensation in chest, breathlessness, rattling in chest with very little expectoration, extreme weakness, sweating, palpitation and dizziness.</td>
</tr>
<tr>
<td></td>
<td>blood oxygen saturation (SpO2) ≤ 93%,</td>
<td></td>
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<tr>
<td></td>
<td>PaO2/FiO2 ratio or P/F [the ratio between</td>
<td></td>
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<tr>
<td></td>
<td>the blood pressure of the oxygen (partial</td>
<td></td>
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<tr>
<td></td>
<td>pressure of oxygen, PaO2) and the percentage of oxygen supplied (fraction of inspired oxygen,</td>
<td></td>
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<tr>
<td></td>
<td>FiO2)] &lt; 300, and/or lung infiltrates ≥ 50%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>within 24 to 48 hours</td>
<td></td>
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<tr>
<td>Critical</td>
<td>Respiratory failure, septic shock,</td>
<td>Not wholly applicable as different homeopathic medicines can be given depending on the clinical</td>
</tr>
<tr>
<td>Disease</td>
<td>and/or multiple organ dysfunction (MOD) or</td>
<td>picture.</td>
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<td></td>
<td>failure (MOF)</td>
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</table>
iii). Usage in both prophylactic and therapeutic intervention

It is not unprecedented that the same Homeopathic remedy has been used as Genus Epidemicus for both prophylactic and therapeutic intervention. In 1831, Samuel Hahnemann described the use of Camphora, Cuprum Metallicum and Veratrum album as genus epidemic for the prevention and treatment of epidemic of Asiatic cholera in the German area. He favored Cuprum as prophylactic; Camphora for the treatment of the initial stages; and Cuprum or Veratrum for the later stages of the disease. Further it has also been suggested that the Homeopathic remedy, Arsenicum Album can be used as Genus Epidemicus for prophylaxis as well as treatment of Influenza.

iv). Recommended dosage

<table>
<thead>
<tr>
<th>Stage of Disease</th>
<th>Dosage</th>
<th>Method of Administration</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>People in Isolation (due to contact with COVID 19 patient) who are COVID 19 negative</td>
<td>Antimonium Tart 30 1 dose</td>
<td>Sublingual</td>
<td>Single dose only.</td>
</tr>
<tr>
<td>COVID 19 positive but asymptomatic patients</td>
<td>Antimonium Tart 30 1 dose</td>
<td>Sublingual</td>
<td>Single dose only.</td>
</tr>
<tr>
<td>Mild disease</td>
<td>Antimonium Tart 200 1 dose</td>
<td>Sublingual</td>
<td>Single dose only.</td>
</tr>
<tr>
<td>Severe disease</td>
<td>Selection of remedy or dosage based on symptom totality</td>
<td>Sublingual</td>
<td>1 to 2 weeks</td>
</tr>
</tbody>
</table>

Basis for Clinical Use without Trials or Toxicity Studies

A. The known Pharmacological Action of Antimony Potassium Tartrate is well documented and it is used especially as an anti helminthic especially in animals.

B. The documented toxicological studies of Antimony Potassium Tartrate give a detailed picture of its toxicological and pathophysiological effects as well as its harmful dosage. Homeopathic dilutions are much safer and well below its toxic proportions.

C. The historical evidence of usage of Tartar emetic for its emetic properties and its gastroenterological action is also well documented.

D. The Pharmacokinetic Action of the compound Antimony Potassium Tartrate on animals and humans as well as well documented fatal dose and therapeutic dose.

Proposed Methodology for the use of Antimonium Tart as an add-on treatment

Clinical Considerations

1. Age and constitutional determinants for prescription
2. It can be given to all age groups in same potency except in severe disease, co morbidity with structurally irreversible conditions- low potency of the medicine should be given.
3. Patients with co-morbidities The remedy can be given safely in patients with co morbidity & they can continue their modern medicine regime for the co morbidity

a. Prophylactic and therapeutic administration through randomized double blind trial

Creation of experimental group and control group

The participants selected for the trials will have the same desired constitutional characteristics. Examples are

Cluster 1: (Prophylactic) Experimental and Control Group participants are healthy males and females belonging to the same age range, are COVID19 negative and have been isolated because they have been in contact with COVID19 positive persons

Cluster 2: (Prophylactic) Experimental and Control Group participants are healthy males and females belonging to the same age range, are COVID19 negative and have been isolated because they have been in contact with COVID19 positive persons

Cluster 3: (Therapeutic) Experimental and Control Group participants are asymptomatic males and females belonging to the same age range, do not have any existing co-morbidities, and are COVID19 positive

Cluster 4: (Therapeutic) Experimental and Control Group participants are males and females belonging to the same age range, do not have any existing co-morbidities, are COVID19 positive and exhibit symptoms of mild disease.

Cluster 5: (Therapeutic) Experimental and Control Group participants are males and females belonging to the same age range, are known to have specific existing morbidities (such as diabetes), are COVID19 positive but do not exhibit symptoms of COVID19 infection

Cluster 6: (Therapeutic) Experimental and Control Group participants are males and females belonging to the same age range, are known to have specific existing morbidities (such as diabetes), are COVID19 positive and exhibit symptoms of mild disease.

b. Random assignment of participants within each group

The participants do not know which group they are assigned. Therefore their beliefs about the treatment are less likely to influence the outcome.

- No differentiation between administration of Antimonium Tart and Placebo
- Researchers administrating the groups are also unaware of differentiation between medicine and placebo and therefore they are less likely to accidentally reveal subtle clues that might influence the outcome of the research.

Administration of Antimonium Tart and placebo

Based on the recommendation given in Table 2, the participants in each cluster are administered the remedy if
they are assigned to the experimental group and administered a placebo if they belong to the control group. Participants in the therapeutic group are administered Homeopathic preparation of Antimonium Tart as an add-on treatment in addition to conventional intervention or management protocol administered to them.

Collation of results in prophylactic group
In the prophylactic group, the participants are evaluated after the quarantine or isolation period and it is determined whether the incidence of positive COVID19 tests differs significantly in the experimental and control groups.

Collation of results in the therapeutic group
Here the emphasis is on evaluating symptomatic relief, minimization of complications and criteria for assessment of clinical progress within the stipulated time period of 1 to 2 weeks.

- Assess relief in their general symptoms or we call it as constitutional symptoms like cough, weakness and feeling of general well being and compare it with improvement in cohort group that did not have Homeopathic administration of Antimonium Tart.
- Also evaluate relief in particular symptoms like cough and breathlessness and compare it with improvement in cohort group that did not have Homeopathic administration of Antimonium Tart.

Conclusion
There is a substantial basis to consider Homeopathic administration of Antimonium Tart for prophylaxis as well as an add-on treatment of COVID19 infection. It is therefore recommended that the utility of Antimonium Tart (as described above) be further explored through a randomized double blind controlled clinical trial.

References
2. Bell I, Boyer N. Homeopathic Medications as Clinical Alternatives for Symptomatic Care of Acute Otitis Media and Upper Respiratory Infections in Children; Global Advances In Health And Medicine, 2013; 2(1):32-43. doi: 10.7453/gahmj.2013.2.1.007
13. Burt, William H. Physiological materia medica, containing all that is known of the physiological action of our remedies; together with their characteristic indications and pharmacology. (Chicago, Gross & Delbridge, 1881.
15. James Tyler Kent. Lectures on Homoeopathic material Medica; Retrieved 28 April, 2020 from https://homeopathybulgaria.org/todormed/JAMES%20TYLER%20KENT-Lectures%20ON%20HOMEOPATHIC%20MATERIA%20MEDICA.pdf
17. Antimony potassium Tartrate (UK PID); (2020); Retrieved 27 April 2020, from http://www.inchem.org/documents/ukpids/ukpids/ukpid37.htm

