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Electrostatic Mopping of Viruses with Medicinal Synthetic Aluminum-Magnesium Silicate {$Al_4(SiO_4)_3 + 3Mg_2SiO_4 \rightarrow 2Al_2Mg_3(SiO_4)_3$}, for Quick Cure of COVID-19: A Better Control Measure

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Abstract

COVID-19 *virus* has positive electrical charges. So, particles that are negatively charged would, by opposite charges-electrostatic attraction, inhibit its replication's first stage (attachment to cells) and mop its extra-cellular particles. Positively charged particles would similarly mop/destroy cells it infects because unlike healthy cells which are neutral, infected/tumor cells have negative electrical charges. *Nanoparticles* (0.96 nm) of Aluminum-magnesium silicate (AMS), WHO-approved medicine/adjuvant have both negative and positive charged ends. As adjuvant it improves antimicrobials' efficacies (clearing secondary infections) while as silicate it enhances immunity. By inhibiting viral replication; mopping extra-cellular viruses/abnormal cells; clearing secondary infections; enhancing immunity, AMS terminates viral-infections/abnormal cells' metastases. Natural AMS has impurities and its deposits are not found in Nigeria. So, Aluminum silicate and Magnesium silicate (WHO-approved medicines) were used for *Medicinal synthetic AMS* {MSAMS: $Al_4(SiO_4)_3 + 3Mg_2SiO_4 \rightarrow 2Al_2Mg_3(SiO_4)_3$}. Since AMS is un-absorbable, dextrose monohydrate is incorporated in MSAMS-formulations to convey its *Nanoparticles* into blood for circulation to all organs/tissues (active-transportation). The MSAMS achieved quick cure (within 3 days) of all four COVID-19 patients used for its first-phase trial (one in Nigeria, two in Cameroon, one in Tanzania).

Keywords

COVID-19, Medicinal Synthetic Aluminum-Magnesium Silicate, Opposite

Charges' Electrostatic Attraction, Quick Cure

1. Introduction

Viral pandemics cause global panic because designing medicines to combine curative antiviral efficacies with tolerable side effects is difficult. Biochemistry of viruses is similar to biochemistry of animal cells. For that similarity, any medicine designed against viral biochemistry will have side effects which could become intolerable when treatments prolong. Again, viral small sizes enable them to infect cells that are inaccessible to large molecules. For the inaccessible cells, medicines designed to inhibit physical features/physical activities of viruses require complementation from immunity. Otherwise, they cannot terminate viral infections to achieve permanent cure. Yet most viral infections cause immune deficiency thereby denying medicines complementation from immunity against their diseases.

With immune deficiency, treatments with medicines that act physically (and so, have fewer side effects) fail to clear infections in cells, inaccessible to them while medicines that inhibit biochemistry which may not need immunity before terminating viral infections, have side effects that are often so much that their treatments are discontinued. Cells that are inaccessible to conventional antiviral medicines are the so-called "viral reservoirs" or "sanctuary cells" because such cells remain infected against all treatment efforts. That is the reason HIV/AIDS has remained "incurable" for about four decades now while millions are recovering daily, from COVID-19 (caused by a virus that is much smaller than HIV and so, was expected to be more difficult to treat).

Therefore, antiviral medicines should be designed to inhibit physical features or physical activities of viruses, not their biochemistry (to minimize their side effects). Active principles of such antiviral medicines should be smaller (<5 nm) than viruses (to reach all virus-infected cells and end the mystery of "sanctuary cells").

Viruses and abnormal cells are electrically charged [1] [2] [3]. *Nanoparticles* of Aluminum-magnesium silicate (AMS), a solid mineral which is already approved as medicine/pharmaceutical stabilizing agent, by the World Health Organization (WHO) [4], have both positive and negative ends [5]. So, electrostatic attraction from the medicine would serve as a mechanism of terminating viral infections. The AMS-*Nanoparticles* are only 0.96 nm thick [5] which means that they are smaller than *COVID*-19 *virus* (≥60 nm) [6] and any other known virus (≥5 nm) [7]. Infected cells are abnormal cells. So, they too, are negatively charged while healthy cells are neutral (**bio-medical marker**).

Electrical charges on viruses and on abnormal cells enable AMS to mop/destroy both viruses and virus-infected cells, by **opposite charges-electrostatic attraction**. As a silicate, AMS enhances immunity [8] and as a stabilizing agent [9], it also enhances efficacy of antimicrobial agents for effective treatment of second-

ary infections. Drawback to use of AMS as a systemic medicine for termination of viral infections is its poor absorbability. So, there was need to find a means of getting it across mucous membranes into blood circulation.

Natural AMS ($Al_2Mg_3(SiO_4)_3$ contains many impurities and deposits of the medicinal-mineral are not found in Nigeria but the country has large deposits of Aluminum silicate ($Al_4(SiO_4)_3$) and Magnesium silicate (Mg_2SiO_4). Aluminum silicate and Magnesium silicate are also solid minerals that have been already approved as medicines by WHO. So, we had to develop a reaction [10] for Aluminum silicate and Magnesium silicate to get the ***Medicinal synthetic Aluminum-magnesium silicate*** {MSAMS: $Al_4(SiO_4)_3 + 3Mg_2SiO_4 \rightarrow 2Al_2Mg_3(SiO_4)_3$}. Dextrose monohydrate (a simple sugar) is incorporated in MSAMS-formulations, to convey the electrically charged *Nanoparticles* across mucous membranes, into blood circulation by the principle of active transport [11].

Mopping pathogens; destroying abnormal cells; normalizing immunity and clearing secondary infections, would cure any viral/abnormal cell disease. In addition, AMS (a stabilizing agent) prolongs time drugs remain at high concentrations in plasma of treated patients, thus enhancing the drugs' efficacies. With enhanced efficacies, lower doses achieve desired effects. Use of lower doses of drugs for treatments minimizes their side effects and so adds to improving patients' immunity. Enhancing efficacies and improving immune responses terminate even drug-resistant secondary infections [12] thereby further aiding patients to recover from viral diseases.

2. Materials and Methods

Outcomes of treatment of four confirmed cases of COVID-19 (one in Nigeria, one in Tanzania and two in Cameron) and a suspected case (in Nigeria) are being reported.

Case history

Four persons (3 adult—males and 1 adult—female) who were confirmed positive for COVID-19 by accredited government agencies in Nigeria, Tanzania and Cameron and were permitted to isolate at home for treatment, used the MSAMS to treat themselves. Another patient (adult-male) who manifested characteristic signs of COVID-19, in Nigeria, started the MSAMS-treatment, one day before the accredited agency came to test him.

The 4 confirmed COVID-19 patients were on MSAMS-Ampicillin formulation (Antivirt® A) for 7 days and then changed to a formulation of MSAMS alone (Antivirt® B) for another 7 days before they went for the repeat COVID-19 test. They were also treated with Immunace extra protection® (anti-oxidants), every day.

The Antivirt® was taken in empty stomach (≥2 hours after dinner) while the Immunace Extra Protection® was in full stomach (immediately after breakfast). Once the Antivirt® was taken, the patients did not eat any other thing (except water) till the following morning. If they had need to take other oral medicines for any condition, such medicines were taken, two hours before the Antivirt® or

two hours after (to prevent the Antivirt® adsorbing onto electrically charged particles in food/medicines). They were retested by the government agencies on day 14, from the day they were confirmed COVID-19 positive which was same day they started the MSAMS treatment.

3. Results

The four confirmed cases reported clinical recovery after 3 days (72 hours) of being on the MSAMS treatment and tested negative at the 14th day retest while the suspected case (who had taken the MSAMS for just one day before being tested) returned negative for COVID-19 at the initial test.

4. Discussion

In one of the trials of the MSAMS on HIV/AIDS [13], it took 20 months (about 600 days) for the patient to test HIV-negative (antibody and antigen) while in this trial all the COVID-19 patients recovered within 3 days. Even the suspected case may have been COVID-19 positive but returned negative because of the single dose of the MSAMS he took before the test, done to confirm diagnosis of COVID-19.

Quick cure of COVID-19 patients and delayed cure of HIV/AIDS patients treated with same regimen of MSAMS and Immunace extra-protection® may have resulted from the difference between features of HIV infections and COVID-19 infections. HIV causes severe immune deficiency while *COVID*-19 *virus* is not associated with severe immune deficiency. The fact that HIV/AIDS or any other viral disease has been "incurable" does not mean that COVID-19 cannot be cured. The claim, that COVID-19 is "incurable" but can only be symptomatically managed is not in agreement with current literature which reveals that the causative virus (RNA) is positively charged while every infected cell is negatively charged and that there is a medicine which molecules consist of *Nanoparticles* that are much smaller than the virus and that those *Nanoparticles* have both negative and positive electrically charged ends (opposite, charges that are on the virus and charges that are on the infected cells) [5].

It is an old scientific knowledge that opposite charges-electrostatic attraction will make such medicine bond to the virus. Bonding of the *Nanoparticle*s to *COVID*-19 *virus* will inhibit first stage of the viral replication processes (attachment to hosts-cells). The medicine will also mop and/or destroy *COVID*-19 *virus*-infected cells.

What is needed to design medicines for any disease is a feature or activity of the causative agent which normal cells do not have or need (biomedical marker). Since it has been discovered that every virus has either positive or negative electrical charges while healthy cells are neutral, efforts should shift to searching for medicines that have charges opposite those on any virus of interest. AMS has both positive and negative charged ends. So, the MSAMS would have antiviral efficacy against both the RNA viruses (positively charged) and the DNA viruses (negatively charged).

AMS-*Nanoparticles* are only 0.96 nm thick which means, they are much smaller than most other *Nanoparticles* (≤100 nm). So, the MSAMS will be able to reach any virus (≥5)-infected cell to mop viruses from all organs/tissues while at the same time enhancing patients' immunity. These effects terminate viral infections and permanently cure viral diseases. What may vary would be treatment durations before such cures. Infections of viruses that cause severe immune deficiency like HIV would require prolonged treatment before cure for their diseases while infections of viruses that are not associated with much immune deficiency would take short treatment durations before their diseases are cured.

Recovery (within 72 hours) of COVID-19 patients who were treated with the MSAMS, means cure (not successful symptomatic management). That short duration before cure suggests that though COVID-19 is a serious disease, the infection is fragile and easy to terminate. Treating COVID-19 patients with medicines that terminate infections of the virus in addition to managing symptoms of the disease would lead to quicker recovery of patients and higher recovery rates than results of present practice of managing only the symptoms and wait for immunity to clear the infection. Adopting the strategy of quick cure of infected persons will reduce rates at which the infection is being transmitted within and between countries.

By destroying cells which become electrically charged as a result of being infected, free radicals could be massively released in patients being treated with the MSAMS. Free radicals damage organs (oxidative stress). To protect patients who are on MSAMS medication from oxidative stress, they should also be placed on antioxidants sources such as Immunace extra-protection® to mop free radicals.

Developing medicines for quick cure of COVID-19 may be a better control measure for the pandemic than current efforts. Since MSAMS' antiviral effects are physical (not biochemical) and it inhibits viruses by bonding to a bio-medical marker common to every variant of every virus, there would not be difference between its present efficacy and its efficacy in future. So, treating every infected person with the medicine may be solution for the problem of constant mutation by *COVID*-19 *virus* which leads to new variants. Testing all citizens of all nations and isolating/treating all positive persons would interrupt transmission of the virus and lead to its eventual eradication.

WHO may consider adopting, as strategy, mopping *COVID*-19 *virus* and infected cells with opposite charges from MSAMS-*Nanoparticles* and other electrically charged *Nano-medicines*, for quick cure of infected persons, in order to eradicate COVID-19 pandemic.

Authors' Contributions

The authors collaborated for the research. Author MCOE designed the experiments and drafted the manuscript while authors FO, MES, IJO, EK, NUN and MU processed the manuscript for publication. All the authors read the draft manuscript.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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