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Study on Covid 19

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Abstract

Extensive review on Copper mineral element in health and on COVID 19 reveals that there must be deficiency of trace Copper element in the patients of COVID 19 Positive. Copper plays important role in increasing immunity. Moreover, Bordeaux spray will be helpful in removing COVID 19 infection from surfaces. Metronidazole [IUPAC: 2-(2-methyl-5-nitro-1H-imidazol-1-yl)ethan-1-ol], is the best potential cure for the Novel Coronavirus and much better than the current suggested Hydroxychloroquine COVID 19 is seems to be Air brow because TDS of rain water was found high to normal. Coronavirus seems to make inclusion shaped cavity with air, water, oxygen etc. when it comes in contact and this might be the reason coronavirus has long life, late and serious effects. However, the drug does not work on people with milder symptoms.

Keywords: COVID-19 Positive, Coronavirus, Gene therapy technique.

Introduction

Gene therapy technique is area of research for development of Immunization Vaccines for a number of human diseases both genetic and acquired. Literature review reveals that

Origin of COVID-19 is-

1. Animal origin
2. COVID-19 is spread accidently by researchers working on gene therapy
3. Chloroquine medicine for COVID-19 seems to be originated from this research work.
4. But chloroquine was added to enhance gene transfer that's why it was not foundeffective.

Aim of the Study

Study of Covid-19 is to give awareness about origin of Coronavirus and solutions of Coronavirus.

Review of Literature

An outbreak of COVID-19 caused by the 2019 novel coronavirus (SARS-CoV-2) began in Wuhan, Hubei Province, China in December 2019, the current outbreak is officially a pandemic. Since knowledge about this virus is rapidly evolving, readers are urged to update themselves regularly (Singhal, T. A Review of Coronavirus Disease-2019 (COVID-19). Indian J Pediatr (2020). https://doi.org/10.1007/s12098-020- 03263-6.)

COVID 19 has caused varying degrees of illness. Patient shows various symptoms usually fever, cough, sore throat, breathlessness, fatigue, and malaise among others. The disease is being cured through general treatment, symptomatic treatment, by using antiviral drugs, oxygen therapy and by the immune system. It is necessary to identify the potential cases as soon as possible and isolate the suspected people from the confirmed cases of COVID-19, to prevent the potential transmission of infection to other patients and health care staff (DOI: 10.14744/ejmo.2020.90853 EJMO 2020;4(2):116–125).

Recently, Wang and colleagues (Wang et al., 2020) evaluated in vitrofive FDA-approved drugs and two broad-spectrum antivirals against a clinical isolate of SARS-CoV-2. One of their conclusions was that "chloroquine is highly effective in the control of 2019-nCoV infection in vitro" and that its "safety track record suggests that it should be assessed in human patients suffering from the novel coronavirus disease".

Certain Chinese herbal medicines such as RhizomaPolygoniCuspidati and Radix SophoraeTonkinensis were also found to contain certain active constituents that were effective against SARS-COV-2. (Liying Dong, Shasha Hu, Jianjun Gao, Discovering drugs to treat coronavirus disease 2019 (COVID-19), Drug Discoveries EJMO 125 and Therapeutics 2020 DOI: 10.5582/ddt.2020.0102)

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Gelatine

Gelatine is a biocompatible and biodegradable biopolymer obtained by hydrolytic degradation of porcine or bovine collagen. Troung-Le et al. first described the use of gelatine as a potential gene delivery vector [380]. Gelatine–plasmid coacervates were formulated as gelatine nanospheres in the size range of 200–700 nm using salt-induced coacervation of 5% porcine type A gelatine and plasmid at 55°C under high stirring [381]. Salt acts as a desolvating agent that facilitates nanosphere formation by promoting electrostatic interactions between positively charged gelatine and negatively charged DNA. Plasmid can be loaded up to 25–30% w/w at encapsulation efficiency higher than 98%. Endosomatic agent chloroquine was added to enhance gene transfer. Nanospheres displayed improved plasmid stability in serum and nuclease stability as compared to free plasmid. The nanospheres exhibited lower in vitro transfection efficiency as, Gelatine animal sourcecompared to LipofectinTM. However, attachment of transferrin to the surface of gelatine nanospheres tremendously enhanced the transfection efficiency by 200 times over LipofectinTM when evaluated against HEK 293 cells.

1. Another study by the same group employed transferrin along with endosomatic agentchloroquine and calcium [382].
2. The gelatine nanospheres encapsulating chloroquine and calcium were surface conjugated with transferrin. The gelatine nanospheres displayed higher transfection in the presence of transferrin and calcium. Transferrin is known to facilitate the cellular uptake of nanospheres by means of receptor-mediated endocytosis, whereas calcium facilitates the release of DNA from the gelatine matrix by competing with DNA for electrostatic interactions with the gelatine. Gelatine nanospheres encapsulating Pdna encoding for cystic fibrosis transport regulator were effectively transfected in cultured human tracheal epithelial cells (HTEo). Expression of cystic fibrosis transport regulator was observed in >50% of the cells when transfected with gelatine nanospheres [383]. The same group proposed the solvent precipitation method under controlled conditions of temperature and pH for gelatine encapsulating pDNA [384]. Gelatine was modified with PEG to impart long circulating characteristics. Reporter pDNA encodingfor β-galactosidase (pCMV-β) was encapsulated in gelatine and PEGylated gelatine NPs. β-galactosidase expression was sustained for 96 h when evaluated against Lewis lung carcinoma cells. Various nonviral (chemical) vectors used in gene therapy clinical trials are shown below.

Various Nonviral (Chemical) Vectors Used in Gene Therapy Clinical Trials

1. Delivery Vector Disease Status Reference PEGylated 30mer PLLCystic fibrosisPhase
2. 2[385]PEI mannose and dextrose HIVPhase 2[386]In vivo jetPEIBladder cancerPhase
3. 2[387]CD-based polymerSolid tumorsPhase 1[388]DOTAPCystic fibrosisPhase
4. 1[389]DC–Chol/DOPEBreast and ovarian cancerPhase 1[390]DC–Chol/DOPEHead
5. and neck cancers Phase 2[391,392]DC–Chol/DOPECystic fibrosisPhase 1[217]DC–Chol
6. /DOPEGlioblastoma multiformPhase 2[393]EDMPC–CholCystic fibrosisPhase 1[394]DOSPA
7. /DOPESolid tumorsPhase 1[395,396]DMRIE-DOPEMelanomaPhase 3[397,398]DMRIE
8. -DOPEMelanoma and renal cell cancerPhase 2[399]GL-67-DOPECystic fibrosisPhase
9. 1[400]GL-67-DOPE-DMPE-PEG6000Cystic fibrosisPhase 1[401]PEG-PEI-CholOvarian
10. cancerPhase 1[402]EDMPC: p-ethyl-dimyristoylphosphadityl choline;
11. DMPE: dimyristoylphosphadithyl ethanolamine.

COVID-19 is observed in certain area, community, race, health and wealth people. Study reveals that there may be the Copper deficiency in people. While copper deficiency is rare, it seems that fewer people today are gettingenough of the mineral. In fact, up to 25% of people in America and Canada may not be meeting the recommended copper intake (1). Not consuming enough copper may eventually lead to deficiency, which can be dangerous. Other causes of copper deficiency are celiac disease, surgeries affecting the digestive tract and consuming too much zinc, as zinc competes with copper to be absorbed.

Noted that some work going on Copper: as top consumer China

(https://tradingeconomics.com/commodity/copper)

Copper futures are widely traded on the London Metal Exchange (LME),...Copper market prices displayed in Trading Economics are based on Copper has been trading above $2.3 per pound in May, as recovering economic activity in top consumer China after the coronavirus lockdowns boosted expectations of stronger demand. Still, renewed tensions between Washington and Beijing have spooked investors.

Copper helps in Increasing Immunity

The first observation of copper's role in the immune system was published in 1867 when it was reported that, during the cholera epidemics in Paris of 1832, 1849 and 1852, copper workers were immune to the disease. More recently copper's role in the immune system has been supported by observations that individuals suffering from Menke's disease (an inherited disease in which there is defective copper absorption and metabolism) generally die of immune system-related phenomena and other infections. Further, animals deficient in copper have been shown

to have increased susceptibility to bacterial pathogens such as Salmonella and Listeria. Evidence such as this has led researchers to suggest strongly that copper compounds not only cure disease but also aid in the prevention of disease.

Copper Trace element will be useful in treatment of Covid-19

Treatment for COVID 19

1. Balanced Copper(Cu) electrolyte water should be given frequently to COVID 19
2. Positive patients who help to destroy the RNA structure of COVID 19.
3. Practice of drinking water regularly from pure Copper Utensils will help increase immunity power of human body.
4. Spraying of Bordeaux mixture (CuSO4: Ca (OH) 2: H_2O: 1:1:100) will remove.
5. Surface infections of all type's fungi, prokaryotic as well as eukaryotic virus, etc.

Copper is useful in the treatment of COVID 19

1. Copper is essential in the human body as both a catalyst and as part of enzymes.
2. Copper is mainly involved in redox reactions throughout the body, but also plays a role iniron transportation in blood plasma Production.
3. Copper stimulates the immune system to fight infections, to repair injured tissues, and to promote healing. Copper also helps to neutralize "free-radicals", which can cause severe damage to cells.
4. Copper is an essential element. An adult human need around 1.2 milligrams of copper a day, to help enzymes transfer energy in cells. (https://www.msn.com/en-in/news/other/10...of...copper.../ar-AA2brHe)

Potential Medicinal Cure for Covid-19 better than Hydroxychloroquine

Metronidazole [IUPAC: 2-(2-methyl-5-nitro-1H-imidazol-1-yl) ethan-1-ol], is the best potential curefor the Novel Coronavirus and much better than the current suggested Hydroxychloroquine.

Metronidazole is the active ingredient in Metrogyl tablets [200 & 400 mg] and Flagyl Tablets [250 &500]. Metrogyl is also on the list of WHO's list of Essential Medicines.

Reasons

1. Metronidazole dissolves faster in human bodies as compared to Hydroxychloroquine and results in faster inhibition of growth of the virus. The bioactivity analysis of Metronidazole using QSAR gives a logP value of (-)0.143 which is much lower than that of Hydroxychloroquine's logP of 3.6.
2. Usage of Hydroxychloroquine as treatment of Covid-19 has shown widespread Heart ailments, this is because of larger Ring size, higher molecular weight, lower absorption, and absence of Nitro group. Whereas, Usage of Metronidazole will not result in heart ailments due to small ring size, lower molecular weight, faster and high absorption, and most importantly the presence of Nitro group. All medicines used for the cure of cardio vascular ailments contain nitro group in their molecular structure.
3. The electron donating methyl and Hydroxy groups present in Metronidazole helps the nitro group to bindfaster with the replicating RNA of the coronavirus (due to inductive effect) thereby inhibiting the replication cycle of the RNA. This process releases HNO2 (Nitrous Acid) which further metabolizes in NO (Nitric Oxide). It is interesting that NO gas (Nitric Oxide gas) is also used for the treatment of Coronavirus in some parts of the world. This further strengthens the case to use Metronidazole for the treatment of the Virus.

It is sincere request to you to perform the clinical study and trials for Metronidazole for the treatment of the Virus. Usage of Hydroxychloroquine or Radiations to kill the virus can prove to be very harmful for Human Bodies, which itself defeats the purpose of the treatment.

Covid 19 Seems to Be Air Brow

Rain water and seawater have similar relative proportions of dissolved solids, although rainwater is much more dilute. Most of the dissolved salts in rainwater come from sea spray dispersed into the atmosphere. A major difference in composition is the greater relative proportions of dissolved gases in rainwater, particularly carbon dioxide.

Natural rain water is slightly acidic as a result of this reaction, with an average pH of 5.7, whereas the average pH of seawater is 8.2.

Rain water may be even more acidic in areas where the highly soluble acidic gases sulphur dioxide and nitrogen dioxide (both produced by fossil fuel power generation, transportation and industrial processes) are present in the atmosphere.

TDS of Rain water is normally have average value is about 35ppm whereas during COVID 19 it is varied from 295ppm to 20ppm. Second wave of Covid 19 again increases the TDS of rain water about 185 ppm.

Natural organic material biodegradable organic materials; normally decomposed by aerobic bacteria (which require water-dissolved oxygen) domestic sewage; food-processing industries; farms excessive depletion of oxygen in water damages aquatic life;

Complete removal of oxygen causes anaerobic bacteria action on pollutants, resulting in offensive smells sewage treatment works, by physical and biological processes; containment of sewage, cattle slurry and silage effluent living organisms disease-causing organisms (bacteria, viruses)human and animal wastes; certain industries (e.g. tanning, slaughtering)curtailed recreational use of rivers, lakes, etc. most commonly controlled with chlorine; seldom possible to remove all bacterial and viral contamination, but concentrations aregreatly reduced.
Much of the natural organic material found as a pollutant in water comes from domestic sewage and the effluents of farms and food-processing industries. Farm waste can be especially polluting and is an important EU issue: cattle slurry is up to 100 times as

polluting per cubic metre as domestic sewage, and silage effluent is up to 200 times as polluting.

Conclusion

Natural organic material consists of carbohydrates, proteins and fats, plus a number of other substances in lesser amounts. These are biodegradable; that is, they can be broken down by bacteria and other organisms into relatively harmless end-products.

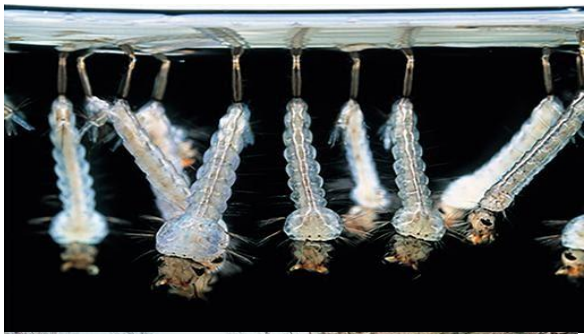
If sufficient oxygen is present in the water, aerobic bacteria (oxygen-using bacteria) feed on the organic material, using oxygen dissolved in the water. The polluting material is converted into water, carbon dioxide (CO^2), nitrates (NO^3-), sulphates (SO_4^2-) and phosphates (PO_4^3-). This process can continue as long as the bacteria can get enough oxygen from the water.

Besides the living organisms that form part of the natural cycle in rivers, there are other organisms that are less desirable. Their presence is generally due to human activities, and they are a form of pollution. Many of these organisms are pathogenic bacteria, which can cause disease.

The most common source of pathogenic bacteria is sewage, and the purpose of the 19th Century legislation in England and Wales prohibiting the discharge of raw sewage into rivers was to prevent the spread of disease.

Pathogenic bacteria are adapted to body temperatures so they die off relatively quickly in cold river waters. For example, typhoid bacteria die within seven days in river water at the temperatures found in Britain—but a week is long enough to spread infection.

As well as bacteria, there are other aquatic organisms that may be harmful. Diseases may also be transmitted by protozoa, worms, snails and insect larvae.



Author's request to society is that constitute world level transparent control body for people doing research work activity in the area of animal source. So that spread of virus or microbes due to large scale production will not kill lives.

1. The World Health Organization (WHO) is running the Coved Solidarity trial to assess promising treatments in countries around the world
2. Multiple pharmaceutical companies are running trials of their own drugs
3. Chloroquine, and the related drug, hydroxychloroquine, may have antiviral and immune-calming properties.
4. The drugs were thrust into the spotlight as potential coronavirus therapies, largely because of claims made by President Trump, and because early laboratory tests showed they could inhibit the coronavirus.
5. However, the UK's Recovery trial found that hydroxychloroquine does not work as a treatment for Covid-19 and the WHO has stopped trialling the drug.
6. The hope is that the drug will stimulate the immune system, priming cells to be ready to fight off viruses.

There are three broad approaches being investigated:

1. Antiviral drugs that directly affect the coronavirus's ability to thrive inside the body
2. Drugs that calm the immune system (severe Covid-19 is caused by patients' immune systems overreacting and damaging the body)
3. Antibodies that can target the virus, taken from either survivors' blood plasma or made in a lab

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