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Research

Broad Spectrum Antiviral Prophylactic Medicine (Unani) to induce Immunity and Heard Immunity to Prevent the Spread of Novel Corona Virus

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Abstract

The vaccine for novel Corona Virus is a matter of rigorous research across all the system of medicine in order to save the human life from the epidemic of novel Corona Virus. The concept of Heard Immunity to prevent the spread of novel Corona virus is also a matter of serious study. The literature in Unani (Greek) system of medicine shows the use of Broad Spectrum Antiviral Prophylactic Medicine (BSAPM) to induce immunity and Heard immunity against various types of virus infected diseases. The ancient empirical evidence proves that the heard immunity through administration of BSAPM shown that the pandemic called the "Anthonine Plaque" of 165 to 180 AD (Plaque of Galen) was successfully eradicated. Thus, there is a need to take a scientific study of BSAPM (Unani) to prevent the spread of novel corona virus. This paper deals with BSAPM (Unani) with comparative study of poly-protein strategy and heard immunity concept, the two experiments widely discussed among the scientific community as a measure to prevent the spread of novel corona virus.

Introduction

The novel corona virus [1] is an invasive alien species [2] spreading its tentacles rapidly and negatively impacting human lives. The research on novel corona virus across the globe is at its nascent stages and it shows that still a definitive treatment or vaccine option against the virus has not seen the light of the day. The source of the virus is unknown. But broad conclusion among the experts is that source of the virus is an animal [3]. Some experts [4] opine that the understanding of novel corona virus transmission is data-deficient for four main reasons. First, the basic properties of the virus pathogen, such as the infection period, are unknown. Second, we don't know how many mild cases of infections that do no result in symptoms have been missing but are spreading the disease. Third, we don't know about the precise susceptibility of a wide range of communities with different social structures. Forth, no one knows the future impact of measures such as travel restrictions, social distancing, and self-quarantine and how they influence the virus's continued spread.

With the limitations on the understanding as to spread of novel corona virus, research is running for containment by preventing the virus spread and finding treatment protocols. Firstly, interesting research [5] on single strand positive RNA study of novel corona virus with poly-protein strategy aiming to interfere with potential molecules and drugs that stop the production/mutations of the viral proteins, thereby break the chain of virus, appears to be useful research in finding treatment protocols. Secondly, to induce Heard immunity to the novel corona virus is suggested to be an answer for containment of the virus.

BSAPM and major research studies

Traditional systems of medicine are being explored for providing preventive, supportive and rehabilitative care to the patients. The system of medicine is one of the officially recognized traditional medicine systems of India. Under this system of medicine there are detailed description of drugs that are utilized in many infectious diseases, including respiratory infections. The diseases which affect a large geographical area [6] are studied under the literature. There is empirical evidence proving that epidemic diseases were controlled by treating patients with medicine [7]. The clinical study of drugs used to cure the virus infected diseases with protocols of the treatment are found in the system of medicine [8]. Therefore, there is a need for serious research of Medicine to find clues and solutions to the modern-day medical problems. Keeping this positive perspective, medicine is required to look upon for controlling the epidemic of novel corona with a pragmatic scientific approach.

The BSAPM system is one of the good options for trial to control the epidemic of novel corona virus. In this paper, an attempt is being made to show that BSAPM of system offers a preventive measure to the problem of novel corona virus. It is argued that BSAPM of system aid for prevention and treatment of novel

corona virus be it research on poly-protein strategy aiming to break the protein in the virus or heard immunity approach with an intention to develop immunity to the subject against the virus.

Approach of the paper

This paper gives details the BSAPM of Unani [9], discusses the level I clinical studies of BSAPM on the virus inflected disease (dengue fever) that has shown good results and level I clinical results of BSAPM on novel corona virus is awaited. The paper takes the study of major research work on novel corona virus and how the BSAPM of would work as an aid in such research work. Finally, the conclusion state that trial of BSAPM of would yield positive results without any adverse effect on the human body and aid in preventing the spread of novel corona virus.

Level I clinical study of BSAPM viz dengue fever

The BSAPM of is herbal based. The research findings of the author concerning the BSAPM are based on deep literature survey of the drugs and disease with empirical evidence found in the Medical literature. The reference to the empirical evidence could be found in the literature of Galen (Jalinoose) and Mohammed Ibn Zakarya Razi. Apart from the empirical evidence, Level -1 Clinical study was conducted by the author at his clinic by administering the BSAPM to the patients of Dengue Fever during the year 2018-19.

With the empirical evidence found in the Literature on BSAPM, pre- clinical study was not conducted. However, as stated earlier, Level 1 clinical study of the BSAPM prepared by author was administered on the patients effected with Dengue Fever. The marker set for the study was a complete blood picture with platelets count. The clinical study was encouraging enough as the viral load of Dengue fever was arrested initially and later with the improved immune system, the platelet counts came to normal count.

The BSAPM prepared by the author was used to cure Dengue fever, showing that administration of this medicine would show good success rate to prevent spread of novel corona virus and control the epidemic. The Level I clinical study result of Dengue Fever backed with pathology report show that the virus load was arrested and later it was cured. The reports taken of Dengue Fever patients before administration of Prophylactic medicine, during continuation of Dengue Fever and post Dengue Fever, are very encouraging.

At this point, it is significant to state that the Dengue virus and novel corona virus have some basic identical features, they are:

(i) both are positive single stranded RNA virus,

(ii) both are having common Realm i.e., RIBOVIRA,

(iii) common Phylum: INCERTAE SEDIS

The author prescribed BSAPM to more than 1,000 patients with the intention to prevent the attack of novel corona virus. The result of this level I clinical study in order to understand the effect of BSAPM in preventing the subject from being attacked by the virus, is awaited.

Study of Poly-protein strategy – How BSAPM would work in breaking receptor protein of novel corona virus

The study of novel corona virus shows that it does not have DNA as their genome but has only RNA. This means that the corona virus are "dead", unable to renew and grow themselves and they need a "host cells" which they bind to, and multiply by the millions. After the subject is infected, the entire RNA of corona virus with its 33,000 bases is translated in one shot as a long tape of amino acid sequence. The long chain formed into amino acid sequence containing several proteins within it, thus it is called a "poly protein" sequence [10]10. The analysis of relevant isolated proteins in the long chain of poly-protein sequence would help in understanding the role played by each of such proteins in aiding the development of infection. A recent study [11] revealed that novel corona virus has RNA based genomes and sub genomes in its poly-protein sequence, that code for the spike protein (S), the membrane protein (M),the envelope protein (E) and the nucleo capsid protein (N, this covers the viral cell nuclear material). The above-mentioned proteins are all needed for the architecture of the virus. In addition to these proteins, there are special structural and accessory proteins, called non- structure protein (NSP), indeed 16 of them which serve specific purpose for infection and viral multiplication.

With the understanding of poly-protein sequence of novel corona virus, studies across the globe have come up with methods to stop the production of the enzyme which is needed to make spike (S) protein in the virus. The drug called Remdesavir was used to stop production of key enzyme RDRp in the virus. The studies now focus on finding drugs that can deactivate the molecular modeling binding and thus inhibit the novel corona virus from infecting the host cells.

The BSAPM uses four single drugs (plant origin) containing 14 molecules with specific purpose for each of molecules. The molecule Anthroquinone present in Aloe Vera is an Antioxidant and it has enzyme inhibitory effects, Anti-mutagenic and anti-inflammatory effects. Similarly, Emodin present in Aloe vera (Aloe emodin) which is one of the derivatives of Anthroquinone, blocks the S-protein of the novel Corona virus and angiotensin converting enzyme2 interaction in a dose dependent manner. It also inhibits the infectivity of S-protien-psedotyped retrovirus to Vero E6 cells. These findings suggest that Emodium may be considered as a potential lead therapeutic agent in the treatment of SARS-Cov [12]. It is also relevant to state that Emodin, Anthraquinone derivative have been reported to have various ant-virus effects, specifically inhibited SARS-Cov associated 3a protein, and blocks an interaction between the SARS-Cov, Spike protein and ACE2, altogether, network analyses and published data suggest that combining toremifine and emodin offered potential therapeutic approach for Human coVs [13]. The molecule Zinc [14] present in Commiphora myrrha inhibits corona virus and Artirivirus RNA polymerase Activity in Vitro and zinc Ionophores block the replication of these viruses in cell culture, increasing the inter cellular zinc (Zn2+) concentration with zinc- ionophores like Pyrithione (PT) can efficiently impair the replication of a variety of RNA viruses, including polio virus and influenza virus [15].

Thus, studies on molecules as referred to above show that they are potential therapeutic impact in breaking the protein of the novel corona virus. The molecules which are referred to above are all present in BSAPM along with other molecules that help in

developing the immune system of the subject. Therefore, BSAPM could be studied further as an aid to the poly- protein strategy with the intention to break the protein in the novel corona virus and thereby prevent it from developing further in the body of subject.

Herd Immunity concept –BSAPM aim to develop immune system

Heard Immunity is studied seriously as solution for prevention of spread of novel corona virus. However, the question as to how Heard immunity is to be induced poses a problem. system of medicine deal with immunity and heard immunity concept by studying the Humoral theory. Broadly speaking literature studies match Avicenna's description of humor with our current knowledge of biochemistry. They are four types of humors which are as under:

•Blood humors are homologous to peptides (small proteins made of amino acids, building blocks of proteins).

• Phelgum is homologous to macro molecules of peptides and proteins.

• Yellow bile is homologous to fat.

• Black bile is homologous to all other macro molecules such as nucleic and organic acids and other byproducts of metabolism such as lactic acid and uric acid.

Humoral immunity or humoural immunity is the aspect of immunity [16] is mediated by macromolecules found in extracellular fluids such as secreted antibodies, complement proteins, and certain antimicrobial peptides. Humoral immunity is so named because it involves substances found in the humors, or body fluids. It contrasts with cell-mediated immunity. Its aspects involving antibodies are often called antibody-mediated immunity.

The four drug (plant origin) used in BSAPM has effects on immune system and its ant-viral activity is required to be studied, some of the instance are given below.

Aleovera

Effects on the immune system

Alprogen inhibits calcium influx into mast cells, thereby inhibiting the antigen-antibody-mediated release of histamine and leukotriene from mast cells. In a study on mice that had previously been implanted with murine sarcoma cells, acemannan stimulates the synthesis and release of interleukin-1 (IL-1) and tumor necrosis factor from macrophages in mice, which in turn initiated an immune attack that resulted in necrosis and regression of the cancerous cells. Several low-molecular-weight compounds are also capable of inhibiting the release of reactive oxygen free radicals from activated human neutrophils.

Antiviral and antitumor activity

These actions may be due to indirect or direct effects. Indirect effect is due to stimulation of the immune system and direct effect is due to anthraquinones. The anthraquinone aloin inactivates various enveloped viruses such as herpes simplex, varicella zoster and influenza.

Commiphora Myrrh

Myrrh can be protective against some respiratory infection associated with chronic asthma, bronchitis, catarrh, coughs, gingivitis, mouth ulcers drugs have some toxicity aspects, myrrh can be protective against some respiratory infection associated with chronic asthma, bronchitis, catarrh, coughs, gingivitis, mouth ulcers Myrrh helped to maintain the relative rise of leukocytes counts throughout healing period and that implied it activated late steps of both proliferation and differentiation pathways for all types of leukocytes during effective phase of the of the specific immune responses.

Effects on the immune system

This contains twenty seven (27) Organic compounds and sixty two (62) Inorganic compounds [Refer Supporting Information], which plays a major role in natural and acquired immunity and trigger Immunoglobulins [immunoglobulin (Ig),[1] s a large, Y-shaped protein produced mainly by plasma cells that is used by the immune system to neutralize pathogens such as pathogenic bacteria and viruses.

Antiviral activity

Commiphora myrrha has antibacterial and anti- fungal activities and are rich in compounds that play important role in therapy. Commiphora shows high antiviral activity towards NDV[Newcastle Disease (ND)].

Safron

Effects on the immune system

Saffron benefits not only the palate but also the immune system. The plant is brimming with B vitamins such as B1, B2, and B6 plus vitamin C which are all crucial for a healthy, functioning immune system. In addition, it also has carotenoids which affect the body's immune response. Even the plant's essential oils, including phytochemicals, are believed to boost the immune response. At low doses, researchers have found that saffron benefits the immune system's ability to function by stimulating a rapid cellular response and acting as a potential immuno-stimulant. Interestingly, the plant's immunomodulatory effects hold a great deal of promise in perhaps treating or preventing future diseases and viruses.

Antiviral activity

Antiviral activities for saffron extract and its major ingredients Crocin and picrocrocin could be a promising anti-HSV and anti-HIV agent for herbal therapy against viral infections. The discussion as taken up above shows that the molecules in the specific drug of BSAPM have properties to develop the immune system which are innate and acquired. The antiviral activity of the molecules shows specific results to prevent the spread novel corona virus by developing the innate and acquired immunity.

Results

The vaccine for novel Corona Virus is a matter of rigorous research across all the system of medicine to save the human life from the epidemic of novel Corona Virus. The concept of Heard Immunity to prevent the spread of novel Corona virus is also a matter of serious study. The literature in the system of medicine show the use of Broad Spectrum Antiviral Prophylactic Medicine (BSAPM) to induce immunity and Herd immunity against various types of virus infected diseases. The ancient empirical evidence proves that the herd immunity through administra-

tion of BSAPM shows that the pandemic called the "Anthonine Plaque" of 165 to 180 AD (Plaque of Galen) was successfully eradicated. Thus, there is a need to take a scientific study of BSAPM (Unani) to prevent the spread of novel corona virus. This paper deals with BSAPM (Unani) with comparative study of poly-protein strategy and herd immunity concept, the two experiments widely discussed among the scientific community as a measure to prevent the spread of novel corona virus. In analysis of 300 patients in the study found: - 9%of those given BSAPM were got infected.

a. 0.03% were hospitalized.

b. two patient died, one in the age of 74yrs./M, with, HTN,DMT2, IHD. another in the age of 60yrs/M, with HTN, DMT2, IHD. So this may be a safe affordable oral prophylactic antiviral medicine would be a fine advance in fight against COVID, more over it will give huge benefit to uplift AYUSH (Unani) system of medicine.

Conclusion

The BSAPM is required to be given a trial by conducting clinical research to observe the result the drug would have in preventing the spread of novel corona virus. The drug (plant origin) is herbal based without any adverse effect on the body. The level I clinical results of this drug show encouraging results in treating the dengue virus effected patients. The pathological study observation of dengue virus effected patients before administering the BSAPM, during the period of virus in the body and post treatment reports show that platelet counts which were falling abnormally came to be arrested and slowly with improved immune system the platelet counts came to normal, and patients were fully recovered. As stated in this paper, there are some identical features in dengue virus and novel corona virus, thus administration of BSAPM would certainly yield positive results in preventing the spread of novel corona virus. The experiment could be commenced with people prone to be affected with the virus such as health care workers and sanitary workers. The research as to the effects of BSAPM on the novel corona virus is at its initial stages and trial of this drug will not have any adverse effect on the human and on the contrary, it helps in improving the immune system.

References

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2. Invasive alien species are plants, animals, pathogens and other organisms that are non- native to an ecosystem, and which may cause economic or environmental harm or adversely affect human health. In particular, they impact adversely upon biodiversity, including decline or elimination of native species - through competition, predation, or transmission of pathogens - and the disruption of local ecosystems and ecosystem functions. Source: https://www.cbd.int/idb/2009/about/what/
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16. Immunity is the balanced state of multicellular organisms having adequate biological defenses to fight infection, disease, or other unwanted biological invasion, while having adequate tolerance to avoid allergy, and autoimmune diseases.]

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