

**POTENTIAL MANAGEMENT / TREATMENT OF COMPLICATIONS OF SYMPTOMS  
IN NOVEL CORONAVIRUS DISEASE-19 (nCOVID-19) BY UNANI POLYHERBAL  
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**ABSTRACT**

The Coronavirus Disease-19 (COVID-19), is termed as Novel Coronavirus Disease-19 (nCOVID-19), is a new infectious disease caused by severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2), which begun in Decemebr, 2019 resulting in 2019-2020 coronavirus pandemic. It was initially discovered on November 17th, 2019 in Wuhan, Hubei, China, in a 55-year-old Shrimp seller who experienced similar symptoms and whose gender was not revealed- It has proven to be the most deadly sickness in a century, posing the greatest threat and wreaking havoc around the globe. Never before has the world been more terrified of a sickness as it is now. Latest figure of Corona cases in the country is 3.59 Crores+1.68 Lakhs and deaths upto 4.84+277 Lakhs but every second, the number shoots up (Data Source: Our World in Data and JHU CSSE COVID-19 Data, Updated till 9 January,2022). However, the total statistics of people getting affected and dying are changing every movement. In a positive case of nCOVID-19, there are four groups(stages) of symptoms like Common Symptoms which include acute respiratory infection, fever, dry cough, sore throat, loss of taste, loss of smell and fatigue; Uncommon Symptoms like headache, nasal congestion, sore throat, coughing up sputum, shortness of breath, pain in muscles or joints, chills, nausea and/or vomiting, and diarrhea; Symptoms in Case of Severity of Disease like high fever, coughing up blood, and kidney failure; and Complications which include pneumonia, viral sepsis, acute respiratory distress syndrome, and kidney failure etc, depending upon the severity of the disease. As a result, there is now no treatment available, and a traditional and alternative management / treatment for this disease-is urgently needed all over the world. In this connection, an attempt was made to revisit various *Unani* Medical (Greco-Arab Medical) Literatures, which go as back as 400 BC and onwards where several viral diseases such as the common cold, common / epidemic fever, hepatitis, measles, smallpox, and others found management / treatment in Unani System of Medicine and it should not be out of context that Complications of Symptoms in nCOVID-19, which is again a Viral disease, should also be managed / treated by *Unani Herbal* drugs in the form of *Unani* Polyherbal Decoction Formulation meant for treating such Viral disease. The details have been discussed in the manuscript.

**KEYWORDS:** Potential; management; treatment; ncoronavirus; *unani*; polyherbal; alternative; therapy; symptoms; complications.

## 1. INTRODUCTION

### 1. 1. Brief Summary

The Coronavirus Disease-19 (COVID-19), termed as Novel Coronavirus Disease-19 (nCOVID-19) is a new infectious disease caused by severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2), started reportedly in Decemebr, 2019 resulting in 2019-2020 coronavirus pandemic for which no treatment is available in present World dispensation. Actually, it was first identified on 17 November, 2019 in Wuhan, Hubei, China in a 55-year Shrimp seller who developed such symptoms, whose gender was not disclosed<sup>[1]</sup> It has proven to be the most deadly sickness in a century, posing the greatest threat and wreaking havoc around the globe. Never before has the world been more terrified of a sickness as it is now, that is affecting people. It has been shown that after infection with nCOVID-19, antibodies against it take between two and fourteen days to appear, with an average of five days. Latest figure of Corona cases in the country is 3.59 Crores+1.68 Lakhs and deaths upto 4.84+277 Lakhs but every second the number shoots up (Data Source: Our World in Data and JHU CSSE COVID-19 Data, Updated till 9 January,2022). However, the total statistics of people getting affected and dying are changing every movement.

### 1.2. Hypothesis

Since no treatment is now available some alternative traditional care / treatment is required until a regular drug or vaccine becomes available which may take sometime. An attempt was made to find some alternate management/treatment options and after going through various Unani Medical (Greco-Arab Medical) Literatures, which go as back as 400 BC and onwards, it was found that in the period of Razi (925 AD)<sup>[2]</sup> several viral diseases like common cold, common / epidemic fever, hepatitis, measles, smallpox, etc,etc (Table 1,2,3,4 & 5) had found successful management / treatment by Unani herbal drugs. The Symptoms found in nCOVID-19 have also been mentioned in a Unani Medical book by *Ajmal Khan* under title, '*Nazla wa Zukaam-e-Wabayee: Influenza* (which roughly translates into *epidemic influenza*)<sup>[3]</sup> The symptoms described in this Chapter are nearly identical to the Symptoms found in nCOVID-19. It will not be out of context to say that the Symptoms in nCOVID-19, a Novel (new) Viral Disease, can be managed / treated with the help of *Unani herbal drugs / remedies* described in the *Unani Medical literature*.

According to the concept of *Unani Medicine*, "immunity power is directly related to the onslaught of pathogenic micro-organisms". The nature of human being is described as the protecting power of body. Whenever there is a wrong in our body, this protecting power comes into play and protects the body from effects of wrong. Wrong here could be attributed to effects of pathogenic micro-organisms (say for example, virus, bacteria, etc,etc.). The nature exerts its action through

immunity.<sup>[4]</sup> Immunity in modern concept is enhanced by the activation of T-cells, B-cells and phagocytic cells and all of these are WBCs, or leucocytes. Similar concept has also been given by *Unani Physician, Kabiruddin* (1932) and he describes, I quote, "defense mechanism of the body is due to the function of White particles (WBCs) in the blood. He says, "the white cells of the blood can be said to be defense of the body that destroy and kill the pathogenic micro-organisms. The white cells of the body keep on increasing during invasion by pathogenic microorganisms and increases ten times than normal"<sup>[5]</sup>. These observations of his are strikingly very similar to the modern concept of immunology that got evolved of later, i.e. immunity in the body is due to the involvement of T & B cells of the blood.

### 3. Treatment

As such, there is no treatment for now except some symptomatic and supportive management / treatment in positive cases of nCOVID-19 which involves treatment of symptoms, supportive care, isolation, and experimental measures. People are managed with supportive care, which may include fluid, oxygen support, and supporting other vital organs. Steroids such as methylprednisolone are not recommended unless the disease is complicated by acute respiratory distress syndrome. The Centre for Disease Control (CDC) recommends that suspects should wear a simple face mask. Extracorporeal membrane oxygenation (ECMO) has been used to address the issue of respiratory failure, but its benefits are still under consideration.

While, the WHO does not oppose the use of non-steroidal anti-inflammatory drugs (NSAIDs) such as ibuprofen for symptoms, some recommend paracetamol (acetaminophen) for first-line use. Other management includes precaution to minimize the risk of virus transmission, especially in healthcare settings when performing procedures that can generate aerosols, such as an incubation or hand ventilation. The personal protection equipment (PPE) during pandemic includes respirator or facemask, gown, medical gloves, and eye protector. Homemade masks can also be used in case on non-availability of masks.<sup>[6]</sup>

### 4. Ncovid-19 Drug Development

nCOVID-19 drug development is the research process to develop a preventive vaccine or therapeutic prescription drug that would alleviate the severity of 2019-20 coronavirus disease. Internationally as of March, 2020, some 100 drug companies, biotechnology firms, university research groups, and health organizations were involved in stages of vaccine or drug development. The WHO, European Medicines Agency (EMA), US FDA, and the Chinese government and drug manufacturers were coordinating with academic and industry researchers to speed development of vaccines, anti-viral drugs, and monoclonal antibody therapies(Data till 25 March, 2020).

Since, it takes at least ten years for a new drug to complete, so, in February, 2020, the WHO said it did not expect a vaccine against the SARS-CoV-2 – the causative virus for nCOVID-19 – to become available in less than 18 months, and conservative estimates of time needed to prove a safe and effective vaccine is one year. The average cost to research and develop each successful drug is estimated to be roughly 2.6 billion dollar. So, several national regulatory agencies approved procedures to expedite clinical testing. Though, rate of approval from regulatory authority to drug development process is as low as 19% and for vaccine as low as only 11.5%. Though there is no available vaccine, but research into developing a vaccine has been undertaken by various agencies. Previous work on SARS-CoV is being utilized because SARS-CoV-2 and SARS-CoV, both use the ACE2 receptor to enter human cells. The strategy of vaccine development is to elicit a prompt immune response and sensitize the immune system of the human body to a new infection with nCOVID-19.

By late March, 2020, three potential antiviral therapies – favipiravir, remdesivir, and ritonavir – were in the final stage of human testing – Phase III clinical trial – and several possible vaccines had entered the first stage of human safety evaluation, Phase I. On 21 March, 2020, US CDC has allowed *antiviral* drug, *remdesivir* for people hospitalized with pneumonia caused by COVID-19, though, its safety and efficacy is still critical to establish, so, a caution request has been issued to use it judiciously in pneumonia. Numerous other candidates, including immune therapy and antibody compounds, were in development. (The information here is updated uptill April 17, 2020).<sup>[6]</sup>

### 5. Lung Pathology And Immune System

Our immune system consists of a complex collection of cells, processes, and chemicals that constantly defends our body against invading pathogens, including viruses, toxins, and bacteria. Keeping our immune system healthy round the year is key to preventing infection and disease. Making healthy lifestyle choices by consuming nutritious foods and getting enough sleep and exercise are the most important ways to bolster our immune system. In addition, research has shown that supplements with certain vitamins, minerals, herbs, and other substances can improve the immune response and potentially protect against illness.<sup>[7]</sup>

In SARS-CoV-2 infection, CD4+ T lymphocytes are rapidly activated to become pathogenic T helper (Th) 1 cells and generate GM-CSF etc. The cytokines environment induces inflammatory CD14+, CD16+ monocytes with high expression of IL-6 and accelerate inflammation. Given that large amount of inflammatory cells infiltrations have been observed in lungs from severe nCOVID-19 patients. These aberrant pathogenic Th1 cells and inflammatory monocytes may enter the pulmonary circulation in huge numbers and play an immune damaging role to causing lung functional

disability and quick mortality. Pathogenic T-cells and inflammatory monocytes incite inflammatory storm in severe nCOVID-19 patients. Thus, the loss or decrease of these CD4+ T- cells (white particles in the blood in *Unani medical concept*) in infections of nCOVID-19 patients makes body susceptible to the onslaught of pathogenic micro-organisms resulting in a variety of opportunistic infections and complications in nCOVID-19.<sup>[8]</sup>

The coronavirus in nCOVID-19 exerts its effects through development of these opportunistic infections by seriously changing the various effectors of immune system of the body. As soon as the pathogenic micro-organisms, e.g., coronavirus-19 enters the body, it may lead to infection. In the case of nCOVID-19 infection, there can be Common Symptoms like acute respiratory infection, fever, dry cough, loss of taste, loss of smell and fatigue, the Uncommon Symptoms like headache, nasal congestion, sore throat, coughing up sputum, shortness of breath, pain in muscles or joints, chills, nausea and/or vomiting, and diarrhea and the Symptoms in case of severity of disease like include high fever, coughing up blood, and kidney failure, depending upon the stages. The Complications like pneumonia, viral sepsis, acute respiratory distress syndrome, and kidney failure may occur later.

Though nCOVID-19 infection destroys the immune system but the initial immunity at the time of infection or later needs to be taken into account. This probably signifies the importance of status of immunity at the time of infection. It has been shown that after infection with nCOVID-19, antibodies against it take between two and fourteen days to appear, with an average of five days. Further more, the expression of full bloom of infection may take between two and fourteen days or more. Since transition from first infection to full blown cases is different for different persons, the essential parameters for such a discrimination needs to be scientifically worked out.

There are several supplements with certain vitamins, minerals, *herbs*, and other substances can improve the immune response and potentially protect against illness.<sup>[7]</sup> In case of nCOVID-19, the pathogenic micro-organisms makes body susceptible to the onslaught, resulting in a variety of opportunistic infections and complications like pneumonia, viral sepsis, acute respiratory distress syndrome, and kidney failure, etc.<sup>[8]</sup>

### 6. Symptoms in nCovid-19

In a positive case of nCOVID-19, there are four groups(stages) of symptoms as per the severity of disease as under:

#### 6.1. Common Symptoms

They include acute respiratory infection, fever, dry cough, loss of taste loss of smell and fatigue.

## 6.2. Uncommon Symptoms

They include such as headache, nasal congestion, sore throat, coughing up sputum, shortness of breath, pain in muscles or joints, chills, nausea and/or vomiting, and diarrhea.

## 6.3. Symptoms in Case of Severity of Disease

They include high fever, coughing up blood, and kidney failure.

## 6.4. Complications

They include pneumonia, viral sepsis, acute respiratory distress syndrome, and kidney failure.

**But here, we have discussed the potential unani medical management / treatment of Complications of symptoms in nCOVID-19, which is our focus of research manuscript for the august readers.**

## 7. Potential Unani Medical Management / Treatment Of Complications Of Symptoms In Novel Coronavirus Disease-19 (Ncovid-19) By Unani Polyherbal Decoction Formulation

### 7.1. Need of the Present Study

The need and bottom line of the present study is that every symptom of nCOVID-19 figures in the vastness of *Unani* Medicine and thus is potentially manageable / treatable, given clear comprehension and careful investigation. It finds logic in the *Unani* Medical treatment which goes as back as 400 B.C. & onwards and it is in the period of *Razi* (925 AD)<sup>[2]</sup> when several viral diseases (Tables 1,2,3,4,& 5) had found their cure by *unani herbal drugs* in *Unani* system of medicine. Therefore, it shall not be out of context/ logic to presume and hence to workout a way to tackle the Complications of Symptoms in nCOVID-19 with *Unani herbal drugs* in the form of *Unani* Polyherbal Decoction Formulation as an alternative therapy in the *Unani* system of Medicine (Tables 6).

These *Unani* Polyherbal drugs, besides managing the Symptoms of Complications, also improve the immunity power thus help bear the brunt of the dreadest disease of the Mankind and also improve the quality of life (QOL). This *Unani* Polyherbal Decoction Formulation may be treid as an alternate in this disease till a regular drug and /or vaccine becomes fully available.

### 7.2. Potential Unani Medical Management / Treatment for them Management of Complications of Symptoms in Novel Coronavirus Disease-19 (nCOVID-19) By Unani Polyherbal Decoction Formulation

The potential *unani* medical management / treatment of complications of symptoms in nCOVID-19 like pneumonia, viral sepsis, acute respiratory distress syndrome, and kidney failure may be tackled with eight *unani herbal drugs* mentioned along with their indications / activities against each other including one *unani herbal drug* as an immune-modulator as well as

anti-oxidants in the form of decoction given in the *Unani* polyherbal formulation (Tables 6).

### 7.3. Method of Preparation of Decoction and Mode of Administration

All the eight *unani herbal drugs* (Tables 6) are to be soaked in 250 ml water at room temperature in evening for ten hours (at 9 PM) and boiled in the morning at 100 degree for 01 minute and the decoction (extract) so prepared is to be filtered through 60 No. sieve, or domestic sieve (*channi* used for filtering tea), set to cool for 05 minutes and given with or without honey 10 ml or with or without 1 teaspoon sugar at 7 AM empty stomach half-an-hour before breakfast.

Similarly, the decoction will be prepared from the residue of the above herbs left in the morning by adding 250 ml water at 7 AM and decoction to be prepared and given at 5 PM before evening tea in the same fashion along with preventive measures.

### 7.4. Duration of Decoction

15 days or more

### 7.5. Preventive Measures

The preventive measures will include all those measures which are otherwise recommended for this disease. The patient is also advised to take steam inhalation two times daily, in the morning at 8 AM and then before going to bed to get rid of the sore and congested throat-as well as chest congestion and difficulty in breathing. It will give a good relief in the symptoms of the patient along with taking of above *Unani* herbal formulation of decoction as per the duration mentioned. The duration may be increased if symptoms of complications of disease persist for long.

## 8. Discussion (Scientific Justification / Interpretation Of Unani Polyherbal Decoction Formulation For Management/ Treatment Of Complications Of Symptoms In Ncovid-19

The *unani* medical management / treatment of complications of symptoms in nCOVID-19 like pneumonia, viral sepsis, acute respiratory distress syndrome, and kidney failure may be tackle with *unani* herbal drugs like *Banafsha* (*Viola odorata* Linn) having activities against cough with asthma; *Sapistan* (*Cordia latifolia* Roxb) having activities against respiratory disorders & anti-inflammatory, antimicrobial activities, *Khatmi* (*Althoea officinalis* Linn) having antibacterial & immune-modulatory activities; *Shahatra* (*Fumeria spp*) acting as blood purifier; *Kafoor* (*Cinnamomum camphora* (Linn) Nees & Ebern) having activities against acute coughs with diuretic activities; *Baranjasif* (*Artemisia vulgaris* Linn) with activities agaisnt UTI; *Chobchini* (*Smilax china* Linn) with diuretic activities & reducer of fluid retention; and *Aloobukhra* (*Prunus domestica* Linn) with anti-oxidant, immune-modulator activities to increase power and immunity in

the patient to fight the menace of this dreadful disease (Tables 6).

These drugs besides fighting the disease also eliminates the toxicities (noxious substances) produced due to the disease out of the body by the complex process of detoxification, a term already in vogue since centuries in Unani Classical Medical text under the head and term of “Tanqiya (nearly translated as detoxification’ or ‘detoxication’). The term ‘detoxification’ or ‘detoxication’ means all the biochemical processes, where--by noxious substances are rendered less harmful and more easily excreted in the urine and faces. The detoxification covers all those biochemical changes proceeding in the body, which converts foreign molecules generally toxics, but not always so, to

generally non-toxic or less toxic but not always so and more soluble so that they can be easily excreted. Foreign molecules may be exogenous, which include those substances that are not originally ingested or utilized by the organisms. Some of them may be endogenous and may be produced in the body by synthesis or as metabolites of various processes in the body due to disease or otherwise. The toxic compounds are made less toxic by transforming into compounds having a surface tension nearly like water than the parent compounds. In this way toxic compounds are prevented from accumulating at the surface of cells. Since the non-toxic forms are swept into body fluids and excreted and thus render patient toxic and disease free, and cause reduction in oxidative stress level thus enabling him / her to get improvement in quality of life.

**Tables 1,2,3, 4 & 5: Showing Viral Diseases Like Common Cold; Common / Epidemic Fever; Hepatitis; Measles; Smallpox; And Their Successful Unani Remedy (In Past) Viral Disease and its remedy (treatment) in Unani Medicine.**

S. No.	Disease	Unani Remedy	Common/English Name	Botanical / Scientific Name	References
1.	Common Cold	<i>Banafsha</i>	Violet herb	<i>Viola odorata</i> Linn	[2]
2.		<i>Unnab</i>	Jujube	<i>Zizyphus vulgaris</i>	[2]
3.		<i>Sapistana</i>	Sebestan	<i>Cordia latifolia</i> Roxb	[2]
4.		<i>Gauzaban</i>	Borage	<i>Borago officinalis</i> Linn	[10]
5.		<i>Jadwar</i>	Tiryak	<i>Delphinium denudatum</i> Wall	[10]
6.		<i>Munaqqa</i>	Grape	<i>Vitis vinifera</i> Linn	[10]
7.		<i>Parsiyaoshan</i>	Maiden-hair Fern	<i>Adiantum capillus-veneris</i> Linn	[10]
8.		<i>Khubazi</i>	Common Mallow	<i>Malva sylvestris</i> Linn	[10]
9.		<i>Khatmi</i>	Marsh Mallow	<i>Althoea officinalis</i> Linn	[10]
10.		<i>Nilofar</i>	Water lily	<i>Nymphaeaceae spp.</i>	[2]

**Table 1: Viral Disease and its remedy (treatment) in Unani Medicine.**

S. No.	Disease	Unani Remedy	Common/English Name	Botanical/Scientific Name	References
1.	Common/ Epidemic/Fever	<i>Afsanteen</i>	Absanthium	<i>Artemisia absinthium</i> Linn	[11]
2.		<i>Aloobukhra</i>	Prunus	<i>Prunus domestica</i> Linn	[9]
3.		<i>Baranjasif</i>	Artemisia	<i>Artemisia vulgaris</i> Linn	[9]
4.		<i>Behi</i>	Quince apple	<i>Cydonia oblonga</i> Mill	[9]
5.		<i>Chobchini</i>	China root	<i>Smilax china</i> Linn	[10]
6.		<i>Khaksi</i>	Hedge mustard	<i>Sisymbrio iori</i>	[10]
7.		<i>Kafoor</i>	Camphor	<i>Cinnamomum camphora</i> (Linn) Nees & Ebern	[12]
8.		<i>Sandal surkh</i>	Red sandal	<i>Petro carpus santalinus</i> (Linn)	[10]
9.		<i>Shahatra</i>	Fumitory	<i>Fumeria spp.</i>	[11]
10.		<i>Unnab</i>	Jujube	<i>Zizyphus vulgaris</i> Lau	[9]

**Table 2: Viral Disease and its remedy (treatment) in Unani Medicine.**

S.No.	Disease	Unani Remedy	Common/English Name	Botanical/Scientific Name	References
1.	Hepatitis	<i>Anar</i>	Pomegranate	<i>Punica granatum</i> Linn	[9]
2.		<i>Barhamdandi</i>	Thistle	<i>Echinop spp.</i>	[2]
3.		<i>Banafsha</i>	Violet herb	<i>Viola odorata</i> Linn	[9]

**Table 3: Viral Disease and its remedy(treatment) in Unani Medicine.**

S.No.	Disease	Unani Remedy	Common/English Name	Botanical/Scientific Name	References
1.	Measles	<i>Angoor</i>	Grape	<i>Vitis vinifera</i> Linn	[9]
2.		<i>Anar</i>	Pomegranate	<i>Punica granatum</i> Linn	[12]
3.		<i>Banafsha</i>	Violet herb	<i>Violeta odorata</i> Linn	[12]
4.		<i>Gauzaban</i>	Borage	<i>Borago officinalis</i> L	[9]
5.		<i>Khaksi</i>	Hedge mustard	<i>Sisimbrio iori</i>	[9]
6.		<i>Marwarid</i>	Pearl	<i>Calcareous concretion</i>	[9]
7.		<i>Nilofar</i>	Water lily	<i>Nymphaca spp.</i>	[2]
8.		<i>Unnab</i>	Jujube	<i>Zizyphus vulgaris</i> Linn	[12]

**Table 4: Viral Disease and its remedy (treatment) in Unani Medicine.**

S.No.	Disease	Unani Remedy	Common/English Name	Botanical/Scientific Name	References
1.	Smallpox	<i>Afsanteen</i>	Absanthium	<i>Artemisia absinthium</i> Linn	[10]
2.		<i>Banafsha</i>	Violet herb	<i>Violata odorata</i> Linn	[12]
3.		<i>Khaksi</i>	Hedge mustard	<i>Sisymbrio iori</i>	[13]
4.		<i>Sartan</i>	Crab	<i>Crab</i>	[2]
5.		<i>Unnab</i>	Jujube	<i>Zizyphus vulguris</i> Linn	[2]
6.		<i>Zohra mohra</i>	Gemstone	Serpentine	[2]
7.		<i>Nilofar</i>	Water lily	<i>Nymphaca spp.</i>	[12]
8.		<i>Makoi</i>	Mako	<i>Solanum nigrum</i> Linn	[2]
9.		<i>Revandchini</i>	Revand	<i>Rheum emodi</i> Linn	[9]
10.		<i>Sumbulteeb</i>	Valerian	<i>Valeriana officinalis</i> Linn	[9]

**Table 5: Composition of Unani Polyherbal Decoction Formulation for Management/ Treatment of Complications of Symptoms in nCOVID-19.**

S.No.	Unani Drugs (Herbs)	Quantity / Dosage	Indications / Activities
1.	<i>Banafsha</i> ( <i>Violata odorata</i> Linn)	5 masha (5 gm)	cough with asthma
2.	<i>Sapistana</i> ( <i>Cordia latifolia</i> Roxb)	5 nos.....	Respiratory disorders, anti-inflammatory, antimicrobial
3.	<i>Khatmi</i> ( <i>Althoea officinalis</i> Linn)	5 masha (5 gm)	anti-bacterial, immune-modulatory
4.	<i>Shahatra</i> ( <i>Fumeria spp</i> )	5 masha (5 gm)	blood purifier
5.	<i>Kafoor</i> ( <i>Cinnamomum camphora</i> (Linn) Nees & Ebern)	5 masha (5 gm)	Acute coughs, cold, diuretic
6.	<i>Baranjasif</i> ( <i>Artemisia vulgaris</i> Linn )	5 masha (5 gm)	UTI
7.	<i>Chobchini</i> ( <i>Smilax china</i> Linn)	5 masha (5 gm)	diuretic, reducer of fluid retention
8.	<i>Aloobukhra</i> ( <i>Prunus domestica</i> Linn)	5 nos.....	anti-oxidant, immune-modulator

(After taking the decocotion for 15 days or more, as the case may be, the patient will certainly get relief in the Complications of Symptoms in nCOVID-19 and his / her quality of life (QOL) will improve and he / she will feel a sense of well-being.

#### 9. Authors. Contribution

All the four authors have contributed for this manuscript. The final manuscript has been read, revised, and approved for submission by all authors

#### 10. Conflict of Interest

The authors declare no conflict of interest

#### 11. Funding

There was no any type of funding involved in the study

#### 12. Author Disclosure Statement

There is no any competing financial interest.

#### 13. Ethical Statement

This review research study did not involve any human or animal exepriemnt.

#### 14. Declaration of Interest

None

#### 15. Data Availability

This study involves no development of data.

#### 16. ACKNOWLEDGEMENT

None

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