



Understanding of COVID-19 (SARS-CoV-2) Pandemic

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Abstract: The SARS CoV-2 (COVID-19) virus comes under the family of coronaviruses because the proteins on the outside of the virus look like a crown. Coronavirus is not new to human beings its primary source was a bat and possesses zoonotic transmission and later on it comes to humans. COVID-19 disease was characterized by symptoms that were very similar to those of SARS or severe acute respiratory syndrome which nearly cause a pandemic in 2002. After carrying the research the genetic feature of the COVID-19 expert with the International Committee of Taxonomy of Viruses (ICTV) and WHO together officially named the virus as severe acute respiratory syndrome coronavirus 2 or SARS-Cov-2. Other types of coronaviruses include SARS-CoV, which causes severe acute respiratory syndrome (SARS), and MERS-CoV which causes Middle East respiratory syndrome (MERS). Both SARS CoV and SARS CoV-2 target the same point ACE-2 receptors (found abundantly in the nose, pharynx, lungs, intestine, blood vessels, and kidney) for entry into the cells. All Coronaviruses attacked the respiratory system through droplet infection. No drug treatment is available yet to combat this condition but the main weapon to cure or to save an individual from this infection is good and strong immunity which is a natural safeguarding complex mechanism of our body and it differs from individuals to individuals. The potency of immunity also changes with age as young individuals possess better immunity than small children and old age people. The immune system allows our body to check what is self and what nonself is and then have the capability to reject the nonself. The complex system of immunity consists of different types of cells and organs which act as custodians in our body. The proper understanding of the pathogenesis of the SARS CoV-2 will help us to find out vaccination along with its proper treatment. In this paper, we will try to understand the pathogenesis, clinical features, researches, and clinical studies on SARS CoV-2 and to find out the role of an alternative system of medicine in controlling, curing and preventing the infection.

Keywords: SARS-CoV-2, COVID-19, Immunity, Coronavirus, Zoonotic, MERS, coronaviruses.

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INTRODUCTION

In December 2019 there was an abrupt increase in cases of pneumonia of unknown etiology in Wuhan province of China whose symptoms were similar to viral pneumonia and it was a life-threatening condition. Many individuals especially old age people and persons with some associated

systemic disease and co-morbid condition suffered more and many of them died. The first case of COVID-19 was seen in China on November 17, 2019, long before it was announced on December 31, 2019. The Wuhan municipal health commission, China reported a cluster of cases of pneumonia in Wuhan Hubei Province as the outbreak of a

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suspected zoonosis (vertebrate animal to human transmitted infectious disease). This was traced to a seafood wholesale wet market the Huanan Seafood Wholesale market in Wuhan Hubei China which was subsequently closed. On January 7, 2020, WHO was notified that the pathogen was a novel coronavirus. Authorities did not publicly admit there was human-to-human transmission until January 21, 2020. By February 2, the same year the infection had already spread to 24 countries outside China. It was declared a pandemic by WHO only on March 11, 2020. Thirty-eight precious days were lost. The Chinese government was widely criticized over attempt to cover up the outbreak in the early weeks. India reported the first confirmed case of the coronavirus infection on 30 January 2020 in the state of Kerala. The infected person had a travel history from Wuhan China.

This infection was previously named severe acute respiratory syndrome-2 (SARS-2), and then later on as COVID19. Looking at today’s scenario it changes the whole world and almost spread to 72 countries within 3 months and it is considered the most critical health issue for humans due to its human-to-human transmission. If we looked at the historical aspect of pandemics the world suffers from *Justinian’s plague* which almost kill 50 million people. In the 14th century, the *Black Death plague* kill almost 200 million people, and then in 1918 *influenza* killed about 50-100 million people. But after observing all the pandemic situations it was observed that the main emphasis was always on preventive measures to reduce the spread of particular disease rather than searching for management and possible treatment that is why WHO advised peoples to wash their hands properly for 20 seconds, frequent washing of hands, maintaining a distance of about 2 yards, wearing a mask and isolation or quarantine for 14 days in order to avoid its further spread [1].

COVID-19 disease was characterized by symptoms that were very similar to those of SARS or severe acute respiratory syndrome which nearly cause a pandemic in November 2002 – July 2003 in which 8000 cases were reported with about 10% of mortality rates. After carrying the research the genetic feature of the COVID-19 expert with the International Committee of Taxonomy of Viruses (ICTV) and WHO together officially named the virus as severe acute respiratory syndrome coronavirus 2 or SARS-Cov-2. Other types of coronaviruses include SARS-CoV, which causes severe acute respiratory syndrome (SARS), and MERS-CoV which causes Middle East respiratory syndrome (MERS). MERS-CoV isolated in 2012 which causes severe illness in humans causes about 35% mortality rate. Both SARS CoV and SARS CoV-2 target the same point ACE-2 receptors (found abundantly in the nose, pharynx, lungs, intestine, blood vessels, and kidney) for entry into the cells. All Coronaviruses attacked the respiratory system through droplet infection. All viruses cannot survive without a host it means that viruses are not active or live unless they enter into something else that has a life [2, 3].

It was observed that the virus may emerge from bats in the Middle East. The coronaviruses were first described in 1966 by *Tyrell* and *Bynoe* [2, 4]. Coronaviruses are positive single-stranded RNA viruses. Each SARS-CoV-2 virion is approximately 50-200 nanometers in diameter. There are four families of corona that exist in the world (alpha, beta, gamma, and delta). The studies have shown that alpha and beta coronaviruses were originated from mammals while gamma and delta originates from pigs and birds. It is also observed that beta coronaviruses cause more fatal symptoms and on the other hand alphaviruses show milder symptoms. Like another coronavirus, SARS-CoV-2 has four structural proteins known as the S (spike), E (envelope), M (membrane), and N (nucleocapsid) proteins [4, 5, 2].

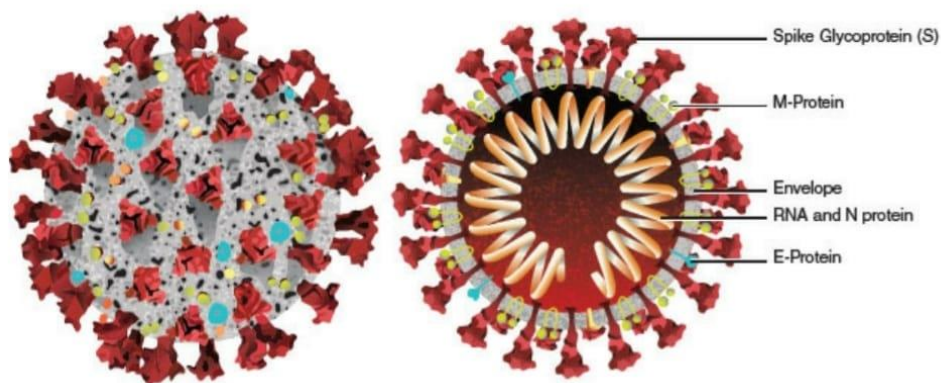


Figure-1: Structure of SARS-CoV-2 (COVID-19)

The spike or S protein which gives a crown-like appearance is the protein responsible for allowing the virus to attach to Angiotensin-converting enzyme-2 (ACE-2) receptors of the host cell and reach inside the cell by endocytosis. The viral RNA attached themselves with the host DNA in the nucleus and replicate in large quantities and then infect a new host cell in a subsequent manner [2].

Source of virus

There are a number of theories trying to explain the origin of disease but three important theories are described here.

1. The actual spreads were from the seafood wholesale wet market, the Huanan Seafood Wholesale Market in Wuhan, Hubei, China. Bats and other wild animals were slaughtered from the market here. The first theory is that the disease was transmitted from these animals to humans and then it spread beyond control.
2. The second theory is research is going on to identify the vaccine for HIV. One younger worker accidentally got the disease within the laboratory. He transferred this to his partners outside and then the spread accelerated when they visited the Wuhan market.
3. The third theory is that it was intentionally developed as a Bioterrorist weapon and in that process, the accident occurred and went beyond control [2].

Mode of Transmission

SARS-CoV-2 is highly contagious which means it spreads easily from person to person through droplet or contact transmission. Compared to other viruses these droplets that carry the SARS-CoV-2 are too heavy to hang in the air and therefore it falls to the ground or floors or other surfaces within one or two meters. In another setting when an infected person coughs or sneezes, the virus particles eventually settle down on different surfaces. Hands touching these surfaces harboring the virus could become contaminated and when they place their contaminated hands on their mouth, nose, eye, it could gain entry into the individual through contact transmission. The virus is highly virulent because its capacity to spread so fast. The incubation period of SARS-CoV-2 is 2-14 days (average 5days). One ml of sputum on a COVID infected person contains millions of viruses [2].

Exponential Growth Exponential Decline and Linear Growth

In this disease, we are dealing with large numbers of diseases and deaths. Interestingly, the disease is increasing in some countries, slowed down in some, and almost under control in some

others. The following pattern of the disease response could be indicated by three different patterns of growth or decline.

Exponential Growth

When the growth is greater than 1 that is one individual infects more than one individual, say 4 other individuals in every cycle or generation of virus replication, resulting in a huge increase. See the following example. 1- 4-16-64-256 and at a higher level 1000-4000-16,000-64,000-256,000

Exponential decline

When the growth is lesser than 1 that is one individual infects less than one individual, say 0.4 individuals in every cycle or generation of virus replication. See the following example. 1-0.4-0.16-0.064-.026 and at a higher level 1000-400-160-64-26-10.4-0.41 Here within a few cycles or generation of virus replication, the decrease results in zero.

Linear growth

Linear growth means that it grows by the same amount in each time step. For example, you might have a total of 225 infections on Monday morning and then 300 cases on Tuesday morning and then 375 cases on Wednesday morning and then 400 cases on Thursday morning, and so on... This is why it is called linear growth.

Community spread

Where health officials are no longer able to trace the source of infection.

Duration of life of virus of different settings

The COVID-19 virus lives longest on plastic and steel surviving for up to 72 hours, on cardboard for 24 hours, and on the copper surface for 4 hours. A new analysis found that viruses can remain viable in the air for up to 3 hours. The variation in environmental temperature had no effect on the SARS-CoV-2 survival rate because it showed uniform distribution and infection in both cold and hot countries [2].

Pathophysiology

When an infected person expels virus-laden aerosol droplets and someone else inhales the SARS-CoV-2, it enters the nose and throat especially the epithelial lining of the nose. The cells there are rich in a cell surface receptor called angiotensin-converting enzyme-2 (ACE2). These help in producing angiotensin which normally helps regulate blood pressure.

When the virus encounters an epithelial cell in the nose, the spike proteins on its surface stick to

the ACE2 receptors of the host epithelial cells, which allow the virus to gain access and replicate. Once inside, the virus hijacks the cell's machinery, and starts making numerous copies of itself, and also starts invading new cells. As the virus multiplies, an infected person may shed copious amounts of it, especially during the first week or so. Symptoms may be absent at this point or the patient may develop a fever, dry cough, sore throat, loss of smell and taste, or head and body aches. The natural immunity of the individual in most individuals would overcome the virus and the individual may pass off as an asymptomatic or subclinical individual. This is the mildest and may be considered as the initial or phase 1 of this disease.

If the immune system doesn't beat back SARS-CoV-2 during this initial phase, the virus then marches down the trachea and bronchi. This is considered the second phase or the second window of opportunity to 'kill' the virus. The mechanism is similar to that in the nose with the virus sticking the ACE2 receptor cells. The symptoms of cough and fever may be more than in the first phase. Many individuals with COVID-19 without any risk factors would be able to come out safely even in phase two with the help of natural immunity.

If it passes beyond this level to attack the lungs, it can then turn deadly. The thinner, distant branches of the lung's respiratory tree end in tiny air sacs called alveoli, each lined by a single layer of cells that are also rich in ACE2 receptors. In between this layer of cells are tiny capillaries, which are tiny blood vessels. Carbon dioxide in the blood is exchanged for oxygen and carbon dioxide in the alveoli. The oxygen is then carried to the rest of the body.

But as the immune system wars with the invader, the battle itself disrupts this healthy oxygen transfer. Front line white blood cells of the immune system, release inflammatory protein molecules called chemokines or cytokines, which in turn call upon more immune cells that target and kill both the virus, which is the normal function, and also, virus-infected cells (abnormal function in COVID-19).

At this stage, the patient begins to find it difficult to breathe. With supportive measures by providing oxygen supply through masks, many who reach this phase three, are able to overcome the disease and get well. Right from the time a patient is admitted, the lung function of oxygenation is measured by special tests. Oxygen saturation is measured by a pulse oximeter with a sensor attached to a finger. Normal pulse oximeter readings usually range from 95 to 100 percent. Values under 90 percent are considered low. Additionally, the oxygen concentration is measured from arterial blood. Normal arterial oxygen concentration is approximately 75 to 100 millimeters of mercury (mm Hg). Values under 60 mm Hg usually indicate the need for supplemental oxygen.

For some unknown reason, the normal cytokine reaction gets into overdrive or hyper-reactive, resulting in what is called a cytokine storm. During a cytokine storm, the cells of the immune system attack and kill the virus as well as the normal alveolar cells of the lung. This leads to an accumulation of fluid and dead cells in the air sacs of the alveoli in place of air. This makes the patient struggling to breathe.

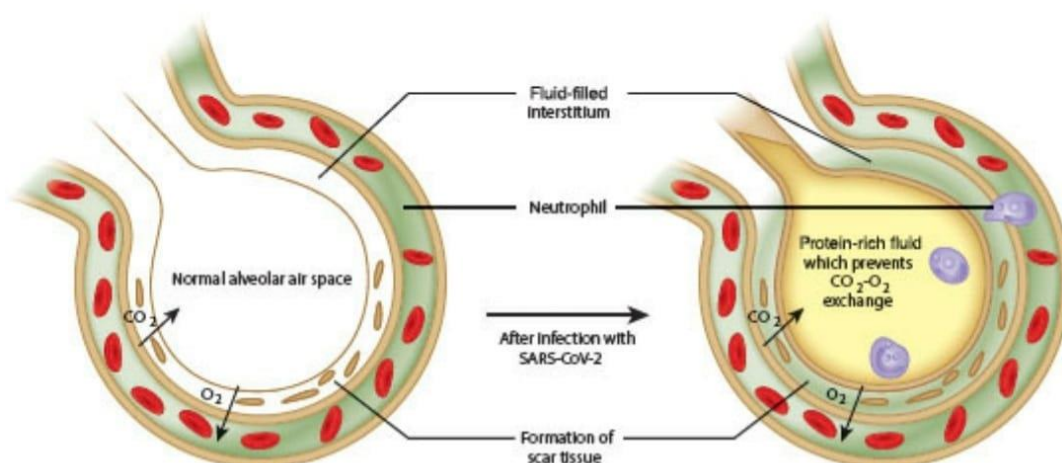


Figure-2: Collection of fluid in the lungs preventing exchange of oxygen and carbon dioxide

Some COVID-19 patients recover, sometimes with no more support than oxygen

breathed in through nasal prongs or masks initially and then under pressure. But others deteriorate,

often quite suddenly, developing a condition called acute respiratory distress syndrome (ARDS). Oxygen levels in their blood plummet and they struggle even harder to breathe. The patient has now reached what I would call the critical phase four.

By the time a patient reaches a stage of breathing difficulty, you can understand the changes that have taken place inside that person's lungs. The

patient is now put on a ventilator. There is very little functioning lung at the alveolar level. Even the oxygen pumped in by the ventilator is not adequately transferred at the alveolar level, because of the damage done by the cytokine storm. Oxygen does not reach in adequate concentration to different organs, resulting in failure of multiple organs, starting with the kidneys, the heart, brain, liver, etc. resulting in death.

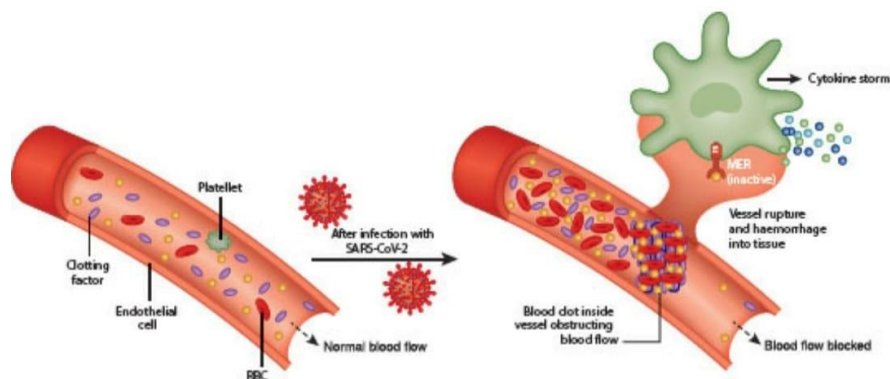


Figure-3: Autopsy of COVID patient showing blood clot in alveolar capillary blocking blood flow

Italian pathologists who carried out a large number of autopsies of patients who died of COVID-19 observed that the cytokine storm created endothelial vascular thrombosis. The lung is the most affected because it is the most inflamed, but there is also a heart attack, stroke, and many other thromboembolic diseases. Taking a viewpoint different from the earlier diagnosis, they conclude that it is not pneumonia but pulmonary thrombosis, which results from the cytokine storm. It was a major diagnostic error. This finding has an echo in the treatment which we shall soon see.

Another study in the US found that inflammation and systemic changes, due to the infection, are influencing how platelets function, leading them to aggregate faster, which could explain why there is increased numbers of blood clots in COVID-19 patients. It was discovered that the virus causes genetic changes in the platelets that also alter their interaction with the immune system and may be the reason COVID-19 patients often suffer from severe lung damage.

Another, related change at this stage needs to be highlighted. Earlier, mention was made of ACE2 cells. These viruses destroy these cells which help in producing angiotensin, a substance used for regulating blood pressure. With decreased angiotensin, blood pressure starts going upwards, which has to be managed along with oxygen for difficult breathing.

We have talked about breathing difficulty in COVID-19 individuals. This is caused by the swelling of the respiratory tract, which narrows the lumen of the windpipe. The infection fills the empty air sacs with fluid, preventing the exchange of oxygen and carbon dioxide. Thrombosis of the capillaries of the alveoli results in oxygen being not taken to different parts of the body. Scarring of lung tissue takes place, which results in poor functioning of the lungs. All these results in difficulty in breathing [6, 7, 2, 3].

In hypertensive patients the drug angiotensin receptor blocker (ARB) telmisartan, losartan, or lisinopril (ACEI) which is an angiotensin-converting enzyme inhibitor to reduce and counteract the ACE-2 receptor that the disease causes that lowers your blood pressure so by blocking the receptors, the modified cells from the virus are prevented from doing any action [2].

Sign and Symptoms

The most common symptoms are fever, dry cough, and shortness of breath. The other sign and symptoms are chills, loss of taste and smell, fatigue and tiredness, sore throat, runny nose, chest pain, psychosis, nausea, vomiting, diarrhea, abdominal pain. Symptoms can vary from person to person, not everyone will present the same symptoms. Co-morbid conditions like Diabetes, Hypertension, chronic obstructive pulmonary diseases, cancer, liver and kidney diseases, HIV/AIDS, obesity increases the severity of the SARS-CoV-2 diseases [3].

Complication

They can be divided into respiratory complications are like pneumonia and respiratory failure while non-respiratory complications are septicemia, kidney failure, heart failure, and liver disease [3].

Preventive Measures

- Avoid large gatherings.
- Avoid close contact and maintain a distance of 2 meters or 6 feet from the symptomatic person.
- Wash your hand with soap and water at least for 20 seconds or alcohol-based hand sanitizer with 60% of alcohol.
- Close your nose mouth with a handkerchief, tissue, and elbow while sneezing and coughing.
- Avoid unnecessary touching to eyes, nose, and mouth.
- Clean and disinfect the used surfaces [7].

Vaccine

Vaccines usually contain the pathogen, in this case, a virus, or it can be part of it or something similar to it, made artificially; whichever it is, it is introduced in the body in a state where it is weakened or killed for example, so as not to harm the body. When it comes in contact with the body's defense system/ the immune system, the body will respond by killing the virus by producing antibodies against it. Another reason for is that even if a person who is vaccinated develops the disease, it tends to be a milder form of the disease. Therefore, after recovery from the COVID and vaccination protects us from getting the disease. Normal vaccine reactions are fever, swelling at the injection site, headache, myalgia, fatigue are common and these reactions show that the vaccine is working and are usually mild and disappear within a few days.

Most of the vaccine used for SARS-CoV-2 is mRNA vaccine in which they use genetic materials from the COVID-19 virus but not the virus itself for the production of antibodies against COVID-19 mRNA vaccine is derived from new technology and used first time in human being [3].

The memory of Immune system

The great thing about the immune system is that it has memory. That is why the next time the virus enters the body, the immune system will remember how it was killed last time; and this time it will eliminate it quickly before it is able to cause harm to the body again. And that is how vaccines protect us and give us what is called acquired immunity; because it gives the immune system memory, so the next time the body recognizes the

virus, it will fight against it right away, preventing it from getting the disease [3].

Diagnosis of SARS-CoV-2

The most common one is the swab test where a swab is introduced through the nose and back of the throat and confirmed by RT-PCR (Reverse transcriptase-polymerase chain reaction) test. Other tests are rapid antigen tests and antibodies tests.

Treatment

There is no cure or specific treatment for COVID-19 at this time. Only symptomatic treatment is provided. Paracetamol for fever and pain management, Aspirin should not be used in children and teens. Anti-malarial drug Hydroxychloroquine/ Chloroquine enhances the entry of zinc into the host cell (ionophore) which inhibits the virus replication that is why zinc should be supplemented in COVID patients. The steroid is used to prevent cytokine storm and Remdesivir is also used to prevent it. Convalescent plasma from recovered COVID patients is used to treat [16-19].

Role of the traditional system of medicine in case of covid-19

The traditional system of medicine provides supportive, preventive, and rehabilitative care to patients via using different traditional medicine and another mode of treatment. The Unani system of medicine is one of the important and officially recognized traditional medicine systems of India and which the part of AYUSH.i.e is. Ayurveda, Yoga, Unani, and Homeopathy. Unani system of medicine has a detailed description of various drugs used in case of respiratory diseases and it is based on the concepts of *akhllaat* and *mizaj*. The concept of microbes was not established in the Unani system of medicine as there is no direct reference of disease-causing agents in Unani medicine but there is a concept of *ajsam e khabeesa* that can transmit from one person to another and may cause disease to a healthy one. In a book *kitab fi al-jadariwa-al-hasbah* Zakariya razi describe the spread of two disease. In *sharahasbabone* disease is mentioned as *nazla e wabaiyain* in the chapter of *anafal anza*. About *nazla e wabaiya* samarqandi states that it is associated with fever, sneezing, sore throat, nasal irritation, and malaise. Samarqandi also says that *nazla e wabaiya* also includes cough, diarrhea, and delirium. If pleurisy and pneumonia is present may worsen the prognosis. The body's ultimate power to keep a body in a healthy state is Immunity (*quwwat e mudafeat*) and an increase in the body's natural defense mechanism helps in the restoration of healthy life [5]. Some immunomodulatory drugs include in Unani medicine are [1].

UNANI DRUGS	SCIENTIFIC NAME	UNANI DRUG	SCIENTIFIC NAME
<i>Asgand</i>	<i>Withania somnifera</i>	<i>Halela</i>	<i>Terminalia chebula</i>
<i>Elwa</i>	<i>Aloe barbidensis</i>	<i>Papita</i>	<i>Carica papaya</i>
<i>Kalonji</i>	<i>Nigella sativa</i>	<i>Amla</i>	<i>Emblica officinalis</i>
<i>Gudhal</i>	<i>Hibiscus rosa sinensis</i>	<i>Gilo</i>	<i>Tinospora cordifolia</i>
<i>Haldi</i>	<i>Cucurma longa</i>	<i>Bartang</i>	<i>Plantago major</i>
<i>Neem</i>	<i>Azadiracta indica</i>	<i>Baboona</i>	<i>Marticaria chammomila</i>
<i>Bargad</i>	<i>Ficu benghalensis</i>	<i>Aam</i>	<i>Magnifera indica</i>
<i>Muslisafed</i>	<i>Chlorophytum borivilianum</i>	<i>Rehan</i>	<i>Ocimum sanctum</i>
<i>Satawar</i>	<i>Asparagus recemosus</i>	<i>Zanjabeel</i>	<i>Zingiber officinalis</i>
<i>Neelofar</i>	<i>Nelumbo nucifera</i>	<i>Kath</i>	<i>Acacia catechu</i>
<i>Assalussoos</i>	<i>Glycyrrhiza glabra</i>	<i>Daarchini</i>	<i>Cinnamomum zylanicum</i>
<i>Filfildaraz</i>	<i>Piper longum</i> L	<i>Balela</i>	<i>Terminalia belerica</i>

Andrographis paniculata is a plant belongs to the family Acanthaceae which is commonly used in common cold treatment. This plant also shows inhibitory activity against SARS-CoV-2 [11].

Ayurveda recommends some prophylactic measures for a respiratory disease that may be beneficial in the management and prevention of COVID-19. It includes rinsing of the mouth with medicated water, gargling, steam inhalation, nasal oil application, and the use of Rasayana as immune-strengthening therapy. The Ayurvedic Rasayanas are used for the purpose of immunomodulation and rejuvenation in COVID-19 management. Some clinical researches held in demonstrating the immunomodulatory effect of some Rasayana drugs are *Ashwagandha* (*Withania somnifera*), *Guduchi* (*Tinospora cordifolia*) and *Amalaki* (*Emblica officinalis*). In Ayurveda, some classical formulations like *Sudarshan ghnnavati* and *Sanshamani vati* are used in cases of coryza and fever [12].

The National Taskforce on COVID-19 formed by the Indian Council of Medical Research (ICMR) recommended the use of HCQ as prophylaxis of high-risk patients of COVID-19 as a protection measure and in one clinical study it is reported that the clinical efficacy of HCQ was found to be equivalent to an *Ashwagandha* formulation [13].

Ayush also recommends the use of Ayush Kwath' or Ayush Kudineer' or Ayush Joshanda which consists of several herbs like Holy basil, cinnamon, ginger, and black pepper. These remedies are easily available in the kitchen and are cost-effective [14].

The Unani Joshanda was used as a preventive and curative measure of COVID-19 and also *Khameera marwareed*, *tiryaq e arba*, *aloe vera gel*, *murmakki*, and *senna leaves* were used as an intervention in recovery studies. A renowned physician Hakim Ajmal Khan recommends an Unani formulation in the prevention and treatment of *nazla e wabai* includes: *Behidan* (*Cydonia oblonga*) 3g,

Unnab (*Ziziphus jujuba*)⁵, and *Sapistan* (*Cordia myxa*). This formulation is given in the form of decoction [15].

Zakariya razi advised the use of certain drugs for the purpose of fumigation during the epidemic which have antiseptic, disinfectant, antimicrobial and aromatic properties. The drugs used are *Styrax benzoin Dry* and *Cyperus rotandus*. He also recommends certain formulation which includes *Agarwood*, *Ambargris*, *Sandalwood*, and *Boswellia serreta*. The fumigation may also be done with some other drugs which include *Ferula assafoetida*, *Crocus sativus*, *Cyperus rotendus*, *Acorus calamus*, bitter almond, *Cymbopogon jwarancusa*, *Parmelia perlata*, and *Tamarix auriculate* [16].

Homeopathy system also recommends the use of *Arsenic album*, *Aspidosperma-Q 20*, *Bryoniaalba*, and *Camphora* in prevention and treatment of Covid-19. *Arsenicum album* and *Bryonia* show that it is effective in symptoms like fever, cough, running nose, and headache in H1N1 influenza in 2009.

A combination of homeopathic medicine and hydroxychloroquine was given to Covid-19 patients in Pune India. The report of this study shows a marked reduction in recovery time with this given combination. In Gujrat, India a combination of homeopathic medicine and Ayurvedic medicine was given to 3174 and 2000 quarantine individuals to boost immunity and also as a preventive measure. The results show that the persons who received this medication don't show any symptoms of COVID-19 during the quarantine period and they were tested negative for coronavirus infection [17].

CCRH (Central Council for Research in Homeopathy), Ministry of Ayush and Govt. of India Dated 29/01/2020 & 06/03/2020 issued the use of Homeopathic medicine *Arsenic 30* one dose empty

stomach daily for three days as a preventive measure against Coronavirus infection [18].

There are about 197 total registered studies on CTRI and the majority of studies are from Ayurveda. The highest registered studies are from the Maharashtra site (65) in the month of June and *Gudchi* was the drug that is being used most frequently. All AYUSH studies were registered during the period of 1st February 2020 to 24th August 2020 [19].

CONCLUSION

After going through the various Research paper and clinical trials it is observed that to date no authorized treatment protocol, drugs, or vaccine is available against COVID-19. The first case of the corona was observed in Wuhan, China in late 2019 and from the emerging of the first case of corona no specific drug either in case of modern or in alternative system of medicine is available but some preventive measures and via using different prophylactic measures include steam inhalation, nasal application of oil, mouth rinsing, gargling and use of certain type decoction shows excellent results in prevention and control of this highly contagious disease. Still, scientists are continuously involved in making vaccine which is safe and efficacious with fewer or no adverse reactions.

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