COMPARATIVE STUDY BETWEEN ALLOPATHIC AND HOMEOPATHIC MEDICINES FOR CORONA VIRUS

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Abstract: Covid-19 belongs to the family of Coronaviridae which has several variants like SARS, MERS, Omicron etc. that have the ability to spread infection. This is zoonotic infection. It can mainly affect the lungs or other respiratory parts. Some clinical trials are performed (Hong kong trial, Italian trial) for the analysis of the medicines/treatment which one is more effective for covid-19 treatment. Detecting methods are also available for the confirmation of covid-19 infection. After detection and case study analysis, we observe that the homeopathic treatment is best for covid-19 infection alerts.

Keywords: Covid-19, SARS, MERS, Zoonotic, Treatment, Homeopathy, Allopathy.

1. INTRODUCTION
Coronavirus are a family of viruses that cause illness such as respiratory diseases or gastrointestinal diseases. Respiratory diseases can range from the common cold to more severe diseases.

- Middle East Respiratory Syndrome (MERS-CoV).[2]
- Severe Acute Respiratory Syndrome (SARS-CoV).

A novel coronavirus (nCoV) is a new strain that has not been identified in humans previously. Once scientists determine exactly what coronavirus it is, they give it a name (as in the case of COVID-19, the virus causing it is SARS-CoV-2). [1,111]

The new strain of coronavirus — COVID-19 — was first reported in Wuhan, China in December 2019. The virus has since spread to all continents. Coronavirus are often found in bats, cats and camels. The viruses live in but do not infect the animals. Sometimes these viruses then spread to different animal species. The viruses may change (mutate) as they transfer to other species. Eventually, the virus can jump from animal species and begins to infect humans. In the case of COVID-19, the first people infected in Wuhan, China are thought to have contracted the virus at a food market that sold meat, fish and live animals. Although researchers don’t know exactly how people were infected, they already have evidence that the virus can be spread directly from person to person through close contact. [2]
Coronaviruses are zoonotic[5], meaning that the viruses are transmitted between vertebrate animals to humans. It has been determined that MERS-CoV was transmitted from dromedary camels to humans and SARS-CoV from civet cats to humans. [4] The source of the SARS-CoV-2 (COVID-19) is yet to be determined, but investigations are ongoing to identify the zoonotic source to the outbreak.

1.1. NAMING OF CORONAVIRUS

As the journal Nature reported in 1968, “these viruses are members of a previously unrecognized group which [the virologists] suggest should be called the coronaviruses, to recall the characteristic appearance by which these viruses are identified in the electron microscope.”

The word “corona” has many different meanings. But it was the sun that the virologists had in mind when they chose the name coronaviruses. As they wrote, they compared “the characteristic ‘fringe’ of projections” on the outside of the virus with the solar corona (not, as some have suggested, the points on a crown).[3] Coronaviruses got their name from the way that they look under a microscope. The virus consists of a core of genetic material surrounded by an envelope with protein spikes. This gives it the appearance of a crown. The word Corona means “crown” in Latin.[1] They are called “corona” because of crown-like spikes on the surface of the virus. Severe acute respiratory syndrome (SARS), Middle East respiratory syndrome (MERS) and the common cold are examples of coronaviruses that cause illness in humans.

2. CLASSIFICATION OF CORONAVIRUS

Variants of Coronavirus: Coronaviridae is the name given to a family of viruses with two subfamilies, Letovirinae and Coronavirinae. The latter has four genera, Alphacoronavirus, Betacoronavirus, Gammacoronavirus, and Deltacoronavirus [7]. These include seven coronaviruses that can infect humans. Coronaviruses can also infect non-human mammals, they can be carried by birds or infect them, and they can be carried by bats.[3]

Alpha: First variant of concern described in the United Kingdom (UK) in late December 2020. Eg. B.1.1.1.7
Beta: First reported in South Africa in December 2020. Eg. B.1.351.
Delta: First reported in India in December 2020.[9] Eg. B.1.617.2
Omicron: First reported in South Africa in 9 November 2021.

As expect SARS-CoV is zoonotic and originated from the bats. It is observed that many people are consuming various animals as food-stuffs. Some animals like bats, snakes, cats, mice, rats, dogs, pigs, etc. should not be consumed as these may have dangerous microbes while the only safe animals should be consumed. Moreover, it is also advisable that we should consume vegetables and fruits as maximum as possible in our food. There is an urgent need to educate our new generation for science and technology to fight against any such disaster in future;

the world is progressing towards advancement and even we don’t have highly specialized research centers. Therefore, there should be highly specialized research centers under the umbrella of WHO and funded by all
the countries of the world. These centers should be located in the various parts of the world and be efficient, capable and specialized to control any calamity in the world in the future. The most important required research centers are for viral diseases, bacterial illnesses, mosquito, and insect-based diseases, cancer, etc. Furthermore, the authors reported that TGEV and MHV could be used as conservativeness surrogates for modelling experience, transmission risk and control measurements for enveloped viruses like influenza virus and SARS-CoV virus on the surfaces. Therefore, it may be expected that the propagation of SARS-CoV-2 will decrease at high temperatures and low humidity. Now, we are at the end of April 2020 and progressing towards the summer. Therefore, it is expected that the coronavirus cases will decrease in the coming time; especially in the Middle East countries.[55]

To date seven human coronaviruses (HCoV) have been identified. Four of them are common; less high risk and typically cause only mild respiratory illnesses in healthy human adults.

The other three (those causing MERS, SARS and COVID-19 cases) are known to cause more severe illness such as shortness of breath and even death. COVID-19 illness tends to be milder than SARS and MERS but more severe than disease caused by the four common coronaviruses.

2.1. WHO FIRST DISCOVERED CORONAVIRUS?

- Avian infectious bronchitis was first described in newborn chicks in 1931 by Schalk & Hawn and by Bushnell & Brandly in 1933. These papers were both cited by Beach & Schalm, 1936, who confirmed that the infection was due to a filterable virus and identified two strains, with cross-immunity. The virus was cultivated in 1937 by Fred Beaudette and Charles Hudson, from the New Jersey Agricultural Experiment Station and later by Cunningham & Stuart in 1947.
- In 1951 Gledhill & Andrewes isolated a hepatitis virus from mice, now also known to be a coronavirus.
- In 1965, the virologist David Tyrrell, Director of the Medical Research Council’s Common Cold Research Unit at Harnham Down near Salisbury in Wiltshire, and his colleague Mark Bynoe published a paper in the British Medical Journal, in which they described a virus, which they called B814, and identified it as a cause of the common cold. They tried to characterize other viruses, but without much success, and thought that viruses of which they found evidence were rhinoviruses.
- On 1 April 1967 Tyrrell, this time with his colleague June Almeida, from the Department of Medical Microbiology in London’s St Thomas’s Hospital Medical School, identified three uncharacterized respiratory viruses, of which two had not previously been associated with human diseases. They reported that two of the viruses, 229E and B814, of which they published electron micrographs, were indistinguishable from the particles of avian infectious bronchitis.
- Then Almeida and Tyrell, with six other colleagues, reported in Nature in 1968 that there was a group of viruses that caused not only avian bronchitis but also murine hepatitis and upper respiratory tract diseases in humans, as shown in Figure 1, taken from their brief annotation, which was published under the general heading “News and Views”. This is the first recorded instance of the term “coronaviruses”.
The virus of avian infectious bronchitis is classified as a gamma coronavirus, while most of the coronaviruses that infect humans are betacoronavirus. The human coronavirus HCoV-229E described by Almeida and Tyrrell is an alphacoronavirus.

3. HISTORICAL BACKGROUND

The World Health Organisation (WHO) has declared the coronavirus disease 2019 (COVID-19) a pandemic. [1] A global coordinated effort is needed to stop the further spread of the virus. A pandemic is defined as “occurring over a wide geographic area and affecting an exceptionally high proportion of the population.”[2] The last pandemic reported in the world was the H1N1 flu pandemic in 2009.

On 31 December 2019, a cluster of cases of pneumonia of unknown cause, in the city of Wuhan, Hubei province in China, was reported to the World Health Organisation. In January 2020, a previously unknown new virus was identified [3][4], subsequently named the 2019 novel coronavirus, and samples obtained from cases and analysis of the virus’ genetics indicated that this was the cause of the outbreak. This novel coronavirus was named Coronavirus Disease 2019 (COVID-19) by WHO in February 2020.[5] The virus is referred to as SARS-CoV-2 and the associated disease is COVID-19. [6] On 9 December 2020, there have been 67,780,361 confirmed cases of COVID-19, including 1,551,214 deaths, reported to WHO.s

SARS-CoV-2 sequenced at the early stage of the COVID-19 outbreak only shares 79.6% sequence identity with SARS-CoV through early full-length genomic comparisons. However, it is highly identical (96.2%) at the whole-genome level to Bat-CoV RaTG13, which was previously detected in Rhinolophus affinis from Yunnan Province, over 1500 km from Wuhan. Bats are likely reservoir hosts for SARS-CoV-2; however, whether Bat-CoV RaTG13 directly jumped to humans or transmits to intermediate hosts to facilitate animal-to-human transmission remains inconclusive. No intermediate host sample was obtained by scientists in an initial cluster of infections of the Huanan Seafood and Wildlife Market in Wuhan, where the sale of wild animals may be the source of zoonotic infection. Furthermore, the earliest three patients with symptom onset had no known history of exposure to the Huanan market. Therefore, there may be multiple sources of COVID-19 in the beginning. According to previous studies by metagenomic sequencing for the samples from Malayan pangolins (Manis javanica) in Guangxi and Guangdong, China, it has been suggested that pangolins might be the intermediate hosts between bats and humans because of the similarity of the pangolin coronavirus to SARS-CoV-2. However, the additional phylogenetic analyses effectively trace COVID-19 infection sources. [6]

4. ETIOLOGY OF CORONAVIRUS

Signs and symptoms of coronavirus disease 2019 (COVID-19) may appear 2 to 14 days after exposure. This time after exposure and before having symptoms is called the incubation period. You can still spread COVID-19 before you have symptoms (presymptomatic transmission). Common signs and symptoms can include:[9]

- Fever
- Cough
- Tiredness
Early symptoms of COVID-19 may include a loss of taste or smell.[8] Other symptoms can include:[9]

- Shortness of breath or difficulty breathing
- Upper respiratory tract infection in immunocompetent individuals.
- Muscle aches
- Chills
- Sore throat
- Runny nose
- Headache
- Chest pain
- Pink eye (conjunctivitis)
- Nausea
- Vomiting
- Diarrhoea
- Rash

The severity of COVID-19 symptoms can range from very mild to severe. Some people may have only a few symptoms. Some people may have no symptoms at all, but can still spread it (asymptomatic transmission). Some people may experience worsened symptoms, such as worsened shortness of breath and pneumonia, about a week after symptoms start. Some people experience COVID-19 symptoms for more than four weeks after they're diagnosed. These health issues are sometimes called post-COVID-19 conditions. Some children experience multisystem inflammatory syndrome, a syndrome that can affect some organs and tissues, several weeks after having COVID-19. Rarely, some adults experience the syndrome too.[8]

4.1. DISPERSION OF CORONAVIRUS.

The main route of human-to-human transmission is by droplets, which are generated during coughing, talking, or sneezing and are then inhaled by a healthy individual. They can also be indirectly transmitted to a person when they land on surfaces that are touched by a healthy individual who may then touch their nose, mouth, or eyes, allowing the virus entry into the body. Fomites are also a common issue in such diseases. [11]

Droplet transmission occurs when a person is in close contact (within 1 m) with someone who has respiratory symptoms (e.g. coughing or sneezing,) and is therefore at risk of having his/her mucosae (mouth and nose) or conjunctiva (eyes) exposed to potentially infective respiratory droplets (which are generally considered to be > 5-10 μm in diameter). Therefore, transmission of the COVID-19 virus can occur by direct contact with infected people and indirect contact with surfaces in the immediate environment or with objects used on the infected person (e.g. stethoscope or thermometer). [19] They may remain in the air for long periods of time and be transmitted to others over distances greater than 1 m. [19,20]

Aerosol-based transmission of the virus has not yet been confirmed. [11] Stool-based transmission via the faecal-oral route may also be possible since the SARS-CoV-2 has been found in patient faeces. [12, 13] Some patients with COVID-19 tend to develop diarrhoea, which can become a major route of transmission if proper
sanitation and personal hygiene needs are not met. There is no evidence currently available to suggest intrauterine vertical transmission of the disease in pregnant women. [12, 13] More investigation is necessary of whether climate has played any role in the containment of the infection in countries such as India, Singapore, China, and Israel, as these are significantly warmer countries as compared with the UK, the USA, and Canada. Ideally, a warm climate should prevent the virus from surviving for longer periods of time on surfaces, reducing transmissibility. [10]

5. PATHOPHYSIOLOGY

The SARS-CoV-2 infection enters the host cells through the spike protein by binding to ACE2 for internalization and aided by TMPRSS2 protease. The virus interaction with ACE2 may downregulate the anti-inflammatory function and heighten angiotensin II effects in predisposed patients.[15] With the challenge we face with COVID-19, some have been advocating for the use (or cessation) of Angiotensin II receptor type 1 (AT1 receptor) blockers and ACE inhibitors during the treatment of COVID-19 in patients with hypertension. Currently the recommendation of the Council on Hypertension of the European Society of Cardiology is that patients should continue their antihypertensive treatment with no changes because we do not have evidence supporting its cessation. [16] However, further research is needed to back these recommendations with more evidence.

These changes are mainly related to proinflammatory cytokines including interleukin (IL)-6, IL-10 and tumor necrosis factor α, granulocyte colony stimulating factor, monocyte chemoattractant protein 1, macrophage inflammatory protein 1α, and increased expression of programmed cell death 1, T-cell immunoglobulin and mucin domain 3 (Tim-3). [17] These changes contribute to lung injury pathogenesis, hypoxia-related myocyte injury, body immuneresponse, increased damage of myocardial cells, and intestinal and cardiopulmonary changes. These changes lead to accumulation of oxygen free radicals, changes in intracellular pH, accumulation of lactic acid, electrolyte changes and further cellular damage. [14] An overview of the viral life cycle is shown in figure 1.
6. MODELS USED IN CORONAVIRUS

6.1. Mouse models: The main impediment to the infection of mouse (Mus musculus) cells with SARS-CoV-2 is the lack of appropriate receptors to initiate viral infection. SARS-CoV-2—as severe acute respiratory syndrome coronavirus (SARS-CoV)—uses the cellular surface protein angiotensin-converting enzyme 2 (ACE2) to bind and enter cells, and mouse ACE2 does not effectively bind the viral spike protein. Several strategies have been developed to solve this problem, as detailed here. [22]

6.2. Virus adaptation to mouse ACE2: The spike protein of SARS-CoV-2 can be modified to gain effective binding to mouse ACE2. One strategy to achieve this modification is the sequential passaging of SARS-CoV-2 in mouse lung tissue. [23] Using two approaches, mice have been sensitized for infection but have developed only very mild disease. [24] One potential caveat is that the mutations in the SARS-CoV-2 spike protein that enhance affinity for the mouse ACE2 receptors are located in the receptor-binding domain, which is the primary target for the neutralizing antibody response.

6.3. Expression of human ACE2 in genetically modified mice: There are currently three transgenic mouse models, in which human ACE2 is under the expression of a tissue-specific promoter (for example, the Krt18 promoter for epithelial cells [25]; K18-hACE2 mice), a universal promoter (cytomegalovirus enhancer followed by the chicken β-actin promoter [26]) or the endogenous mouse Ace2 promoter. [27] With the exception of the model in which humanACE2 is controlled by the Ace2 promoter, mice develop encephalitis after infection with SARS-CoV [28] or SARS-CoV-2 [29] in these models. However, while SARS-CoV infection of K18-hACE2 mice results in highly lethal encephalitis, the neurological infection caused by SARS-CoV-2 infection in these mice is less severe. Similar models that express human dipeptidyl peptidase 4—the receptor used by Middle East respiratory syndrome coronavirus (MERS-CoV)—have successfully been developed. One mouse model humanized with human ACE2 has been reported, and supports replication of SARS-CoV-2 in respiratory and brain tissues.
[30] This system, which was pioneered in studies of MERS [31], allows the transient replication of SARS-CoV-2 in the lungs of mice for several days until immune clearance. Virus is generally cleared by seven days after infection, although not in some immunocompromised mice. [26]

6.4. Other mouse models and approaches

Severely immunodeficient mice transplanted with human immune cells have widely been used to study human-specific viral infections [32], and the combination of human immune system and ACE2 expression could help to further explore the efficacy of vaccines and therapies—in particular, those that modulate human immune cells. However, infection remains heavily dependent on a functional entry receptor. [33] Collaborative Cross mice were previously used with mouse-adapted SARS-CoV to identify mechanisms of pathogenesis and genetic loci that determine susceptibility. [34] All of these models will be useful for the evaluation of vaccines and antiviral agents, and some share features with the human disease. At present, no mouse model recapitulates all aspects of COVID-19 in humans, especially the unusual features such as the pulmonary vascular disease and hyperinflammatory syndromes observed in adults and children, respectively. [35]

6.5. Syrian hamster model: Syrian hamsters (Mesocricetus auratus) are small mammals that have been used as models for infection with respiratory viruses, including SARS-CoV, influenza virus and adenovirus. [36] In silico comparison of the ACE2 sequence of humans—known to interact with the receptor-binding domain of the SARS-CoV-2 spike glycoprotein—with that of hamsters [37] suggested that Syrian hamsters might be susceptible to infection with SARS-CoV-2. All hamsters that have been challenged by different groups and with different SARS-CoV-2 isolates consistently showed signs of respiratory distress, including laboured breathing. [37] Thus, aged hamsters and male hamsters seem to develop a more severe disease than young and female hamsters, respectively. [38]

Histologically, inflammatory infiltrates with abundant expression of viral antigen and apoptosis were observed in the upper and lower respiratory tract, starting at 2 days after infection, being at their most severe at 4 days after infection and resolving at 14 days after infection. Lung disease was also demonstrated by computed tomography. High-resolution micro-computed tomography scans showed airway dilation and substantial consolidations in the lungs of infected hamsters. [39]

Interferon-γ, and pro-inflammatory chemokines and cytokines, were potently induced at two and four days after infection, respectively, and dropped to the baseline level at seven days after infection. SARS-CoV-2-induced lung pathology in hamsters appears to be driven by immune pathology, as lung injury at four days after infection is markedly reduced in STAT2-knockouthamsters whereas viral loads are massively increased and viral RNA is disseminated in several peripheral tissues. [39] Serum neutralizing antibodies were detected as early as seven days after infection. Furthermore, SARS-CoV-2 can be transmitted between hamsters via close contact and non-contact routes. [40] Transmission via fomites was possible, but not efficient. [40] Limited or
no efficacy has been demonstrated for the repurposed drugs hydroxychloroquine (with or without azithromycin) and favipiravir—although high doses of favipiravir did reduce infectious virus titres in the lungs of infected hamsters. Adoptive transfer of SARS-CoV-2 neutralizing antibodies protected hamsters from SARS-CoV-2-induced disease. [41]

6.6. Ferret models: Ferrets (*Mustela putorius furo*) have been shown to be a highly valuable model for testing the pathogenicity and transmission of human respiratory viruses, including influenza virus and respiratory syncytial virus. [42] Following mucosal exposure to SARS-CoV-2, clinical alterations in ferrets are undetectable or mild and may include lethargy, nasal discharge, wheezing, oropharyngeal build-up of mucus, sneezing and loose stools. [43] Shedding of SARS-CoV-2 virus is observed in nasal and oropharyngeal swabs. [44] Ferrets also are able to transmit virus efficiently to uninfected ferrets in experimental settings. Efficient transmission occurred from experimentally infected ferrets to naive cage-mates; transmission from exposed ferrets to companion ferrets that were separated by steel grids did occur, but was not efficient. [44]

6.7. Non-human-primate models: non-human primate models have been explored for COVID-19 in rhesus macaques (*Macaca mulatta*), cynomolgus macaques (*Macaca fascicularis*) and African green monkeys (*Chlorocebus aethiops*). Studies from several laboratories have shown high levels of viral replication for 7–14 days (including both viral RNA and infectious virus) in both the upper and lower respiratory tract, pathological features of viral pneumonia and the variable induction of mild clinical disease. [45] Non-human primates inoculated via multiroute mucosal, intrabronchial and aerosol exposure showed radiographic abnormalities (by chest X-ray, computed tomography scan or fluorodeoxyglucose positron emission tomography scan) within 2 days, which tended to resolve by 11–15 days after infection.

Currently, two non-human-primate studies in rhesus and cynomolgus macaques have focused on the effect of age on infection with SARS-CoV-2. [45] These studies highlight the importance of including age in the selection criteria of animals, as testing treatment options for severe disease require animal models that recapitulate the disease as seen in humans. Recent studies have reported the immunogenicity and protective efficacy of several candidates for a COVID-19 vaccine in the rhesus macaque model. [46] Despite this caveat, the vaccines tested so far have induced binding and neutralizing antibodies and have resulted in substantial reductions of viral replication in the lower respiratory tract, and—to a lesser extent—the upper respiratory tract, following challenge with SARS-CoV-2. Vaccine-elicited neutralizing-antibody titres also correlated with protective efficacy.

6.8. Additional animal models: In addition to animal models that are more commonly used in infectious disease research, recent studies have characterized infection with SARS-CoV-2 in other animals. Here we highlight these recent findings, which may have implications for virus ecology and the evolution of the current pandemic like fruit bats, chickens, dogs, etc.

6.8.1. Minks: The mink (*Neovison vison*), which is a member of the Mustelidae, has previously been shown to be susceptible to infection with SARS-CoV; mink lung epithelial cells and lung-derived cells could also be
infected with SARS-CoV. Minks are also naturally susceptible to infection with SARS-CoV-2. In the Netherlands, an infection of mink with SARS-CoV-2 on two breeding farms was detected at the end of April 2020—most probably as a result of contact with a farm worker who was infected with SARS-CoV-2. [47]

6.8.2. Cats: Three experiments have demonstrated that domestic cats (Felis catus) are highly susceptible to infection with SARS-CoV-2 and are able to transmit the virus to naïve cats. [48]

6.8.3. Pigs: By contrast, infection with another bat betacoronavirus—known as swine acute diarrhoea syndrome coronavirus (SADS-CoV)—has been demonstrated in swine. [49] Therefore, owing to their importance as livestock and the enormous global number of pigs, it may be important for future studies to address the putative susceptibility of additional pig breeds to infection with SARS-CoV-2.

6.8.4. Chickens and ducks: These findings are similar to those previously reported for infection with SARS-CoV, in which experimental inoculation of different bird species with SARS-CoV (including chickens) resulted in neither replication nor seroconversion. [50]

6.8.5. Fruit bats: Pre-pandemic studies that assessed the potential emergence of SARS-like coronaviruses in bats indicated that some of these viruses were able to use several orthologues of human ACE2 for docking and entry. [51] Conversely, previous studies showed that a SARS-like coronavirus did not replicate in fruit bats after experimental inoculation. [52]

7. Comparison between Allopathy and Homeopathy

Table 1: Comparison between allopathy and homeopathy are given below:

<table>
<thead>
<tr>
<th>ALLOPATHY</th>
<th>HOMEOPATHY</th>
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<tbody>
<tr>
<td>It provides a faster result by the use of therapy, surgery and some modern / advanced technologies to treat disease.</td>
<td>It provides a slower result by the use of traditional / conventional remedies to promote health.</td>
</tr>
<tr>
<td>It is short term treatment technologies.</td>
<td>It is long term treatment technologies.</td>
</tr>
<tr>
<td>It follows the time-to-time research and development technologies so, it is evidence-informed medication techniques.</td>
<td>It tries to improve the immune system ability of patients naturally at the low dose of medicines.</td>
</tr>
<tr>
<td>Allopathic medicines are prescribed form of medicines.</td>
<td>Homeopathic medicines are not prescribed form of medicines.</td>
</tr>
</tbody>
</table>
These medicines are given on the basis of symptoms and diseases. These medicines are given on the basis of Theory of Simplex, Theory of Similia, Theory of Minimum, Theory of drug dynamization, Theory of drug proving, Doctrine of chronic disease.

It shows many side effects/adverse effects after administration of drug. It shows less side effects/adverse effects after dose administration because of the high amount of diluted form of drug is provided.

It is mostly toxic in nature and affect the immune system. It is non-toxic in nature and stimulate the working of immune system.

Some dosage forms are: tablets, capsules, syrup, elixirs, linctus, powders, etc. Some dosage forms are: tablets, gels, creams, ointments, oromucosal preparations, etc.

Dr. Routh, an allopathic physician from Britain, was an allotted authority by the medical appointee of London to list a mortality-statistics for all diseases. After studying of total 32,655 homeopathic cases, and 119,630 allopathic cases from several hospitals of England, Australia, and Germany, in 1852 he was strained to give evidence against Allopathy. The recorded mortality rate under homeopathic treatment was 4.4%, and the under allopathic treatment mortality rate was 10.5%. [79]

8. TREATMENTS / THERAPY

8.1. ALLOPATHY: A system of medical practice that aims to combat disease by use of remedies (as drugs or surgery) producing effects different from or incompatible with those produced by the disease being treated— compare Homeopathy.[53]

8.1.1. ROLE OF ALLOPATHY IN COVID 19

In the allopathic approach, treatment in coronavirus included intravenous infusion of fluid, oxygen therapy, and life support system in critical cases. It was advisable if anyone prevails symptoms of the virus like flu, fever, and breathlessness, they should contact the doctor immediately. This virus is similar to the human immunodeficiency virus (HIV) in terms of virus replication and proteins. Different administrating drugs were found to clear and handle in vitro action against SARS-CoV and MERS-CoV. [62]

8.1.2. EFFECTIVE ALLOPATHIC MEDICINES USED IN COVID-19

- Chloroquine and Hydroxychloroquine

Chloroquine” is an allopathic antimalarial drug used to treat patients infected with malaria. It is an FDA approved drug for treating malaria, lupus, and rheumatoid arthritis. [56] It was primarily recognized in the 1930s. [57] Chloroquine and hydroxychloroquine have a possibility of curing an intestinal disorder, systemic lupus erythematosus (SLE), and rheumatoid joint torment (RA). [63] Chloroquine and hydroxychloroquine obstruct glycosylation of host receptors, proteolytic, and maturation of endosomes. These mechanisms have immunomodulatory shocks to host cells by bringing down the cytokine level and control of autophagy and
lysosomal. In vitro studies revealed that in the low micromolar concentration, chloroquine crushes SARS-CoV-2 with a half-maximal credible Center (EC50) and hydroxychloroquine with a lower EC50 for SARS-CoV-2 differentiated, i.e., EC50 = 6.14 μMand chloroquine: EC50 = 23.90 μM. [64]

The treatment of COVID-19 included the oral dosage of chloroquine (500 mg) and hydroxychloroquine (400 mg) on daily basis. [65] But still, there is a lack of data which proves the mechanism of chloroquine and hydroxychloroquine. Pharmacokinetic studies reviewed that the ideal dose of hydroxychloroquine for treating COVID-19 patients should be replaced by 200 mg twice instead of 400 mg on daily basis. [64] Unusually, elective outlines are made for 600 mg of total dose step by step by dividing reliant on freedom and clinical experience for Whipple’s disease. [65]

Some evidence shows that Chloroquine is effective in treating coronaviruses infections. [58] Chloroquine inhibits HCoV-OC43 (human coronaviruses strain OC43) replication in HRT-18 cells, with a 50% effective concentration (± standard deviation) of 0.306 ± 0.0091μM and a 50% cytotoxic concentration (± standard deviation) of 419 ± 192.5 μM, resulting in a selectivity index of 1,369°. In addition, a recent study conducted by Wang, et al. [59] indicates that Chloroquine effectively prevents entry step and post-entry into Vero E6 cells for COVID-19 infection. The authors further demonstrated that besides Chloroquine’s antiviral activity, it has an immunomodulating activity, which may synergistically enhance its antiviral effect in vivo.

Furthermore, Chloroquine is not only one of the best medicines being used for many years but it is also hypothetically appropriate to cure the COVID-19. [59] There are many side effects of using Chloroquine. For instance, [60] reported that although antimalarial drugs (Chloroquine and Primaquine) are helpful to treat patients infected with vivax malaria, at the same time these drugs cause several adverse effects mainly related to gastrointestinal leading to nonadherence of drug treatment. The authors further reported that these drugs also reduce the lack of appetite along with blurred vision, pruritus, insomnia, etc. Whereas, there is not any side effect reported by any scholar/patient or doctor/physician who used china off in a homeopathic way. The symptoms of COVID-19 are the same as compared to Cinchona Off symptoms. [61]

- **Lopinavir/Ritonavir and Other Antiretrovirals**
  The Food and Drug Administration (FDA), USA, recommended and certified lopinavir/ritonavir, an oral drug for HIV, with in vitro activity against other novel coronaviruses through the control of 3-chymotrypsin-like protease. [66] There is no in vitro study data for lopinavir/ritonavir against SARS-CoV-2 but a review on lopinavir/ritonavir was assessed for the treatment of SARS and MERS which showed clinical observations and analysis of SARS with less mortality rate and incubation rates, along with experimental research. The studies revealed that drugs should be used during the early stages of viral replication, i.e., beginning 7–10 days; otherwise, late initiation with lopinavir/ritonavir had no effect on clinical outcomes. [67]

- **Ribavirin**
  A guanine basic drug named ribavirin handles viral ribonucleic-subordinate and polymerase whose activity against various coronavirus makes it a challenger for the treatment of the COVID-19 outbreak. In vitro studies of this drug proved to show advancement against SARS-CoV by blocking the replication of the virus. This mechanism required a high dose of this drug, i.e., 1.2 to 2.4 g orally as expected along with blend treatment. Past
Studies told that the patients got either endogenous or enteral cooperation [68] and no data exists in its role with the respiratory syncytial disease in COVID-19. The trial on 30 patients confessed questionable results in which out of 30 examinations, 26 were re-evaluated, with 4 assessments exhibiting hematologic and liver toxicity. On the other hand, in the treatment of MERS, ribavirin was mixed with interferons and its clinical studies resulted in no observable and remarkable effect on viral clearance. Due to a lack of clinical data with ribavirin for SARS-CoV-2 strategies, its supportive occupation must be extrapolated from other nCoV data.

- **Remdesivir**

Remdesivir (other name GS-5734) is a prodrug monophosphate which helps in the absorption of C-adenosine nucleoside triphosphate. It was studied that the antimicrobial activity of this drug against RNA proved to be contagious especially in the family of Coronaviridae and Flaviviridae. Due to its low EC50 value, it proved to be therapeutic against the emergence of Ebola virus disease based on its selectivity against host polymerase of Ebola. Because of broad reach, presently, remdesivir and its in vitro studies against coronavirus help in treating SARS-CoV-2 with EC50 and EC90 estimations of 0.77 μM and 1.76 μM, respectively, and are proved to be a fruitful expected treatment for COVID-19. On the other hand, in murine lung defilement models accompanied by MERS-CoV, remdesivir drug prohibited the lung channel and lessened viral lung titers more than comparator agents. [69]

- **Dexamethasone**

Dexamethasone is a type of chemically derived corticosteroid which acts as an immunosuppressor. It abridged deaths by 1/3 in patients getting invasive mechanical ventilation and by 1/5 in patients being delivered oxygen without invasive mechanical ventilation. However, therapy did not decrease the death in patients not getting breathing support at randomization. Therefore, dexamethasone abridged 28-day mortality among those getting invasive mechanical ventilation. [70] Mechanistically, it inhibits the growth of the cytokines which cause infection and is therefore useful in this COVID-19-related hyperinflammation or cytokine storm. It has a high rate of activity and also lasts for a longer duration as compared to other cortisone. Studies have shown that it is only useful in those cases where the condition of the patient is critical and cannot be used for the generalized treatment of all patients. [71] The mode of action of various allopathic drugs is summarized in Fig. 2. These above-discussed drugs mainly inhibit angiotensin-converting enzyme 2 (ACE2), endocytosis, non-structural protein 3C-like protease, and non-structural proteins RNA-dependent RNA polymerase (RdRp) to stop viral infection and growth. All the information regarding the allopathic medicines used in COVID 19 are given below in Table 2. And the mechanism of actions of allopathic medicines shows in Figure 2.
Table 2: Allopathic medicines information for COVID 19. [79-87,96-98,101-110]

<table>
<thead>
<tr>
<th>Drugs</th>
<th>MOA</th>
<th>Uses</th>
<th>Composition</th>
<th>Dosage</th>
<th>Brand name</th>
<th>Mfd. Company</th>
<th>Side effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Remdesivir</td>
<td>It is a prodrug of ATP and constrained the RNA-dependent RNA polymerase enzyme which is essential for viral replication.</td>
<td>Antiviral (for IV infusion only), also known as anticoronavirus medicine.</td>
<td>IV for 5-10 days.</td>
<td>Remdac, Cipremi</td>
<td>Zydus Cadila Healthcare Ltd., Cipla Ltd.</td>
<td>Respiratory disorders, failure of functioning in various body organs.</td>
<td></td>
</tr>
<tr>
<td>COVIFOR 100 mg injection</td>
<td>Remdesiviris broad-spectrum antiviral medicine by interfering with RNA polymerase enzyme.</td>
<td>Approved by: DCGI, FDA, EUA. Remdesivir 100mg per 20ml.</td>
<td>1st day: 2 doses of remdesivir injection. 2nd-5th day: 1 dose of 100mg /day.</td>
<td>HETERO, Desrem</td>
<td>HETERO HEALTHCARE Ltd., Mylan Pharmaceuticals Pvt. Ltd.</td>
<td>Low B.P., renal damage, temp. increase, low RBCs count, etc.</td>
<td></td>
</tr>
<tr>
<td>Chloroquine and hydroxychloroquine</td>
<td>By interfering with the production of hemezoin to the heme by releasing the digestion of Hb.</td>
<td>Antimalarial, autoimmune disorders, For treating the hospitalized patients for emergency</td>
<td>500mg, B/d (oral route).</td>
<td>Aralen phosphate</td>
<td>USFDA.</td>
<td>Hepatic and renal failure, hypoglycaemia, nerve cell damage which leads to the brain problems.</td>
<td></td>
</tr>
<tr>
<td>Corticosteroids</td>
<td>They interfere with the protein receptors in the cytoplasm by forming the steroid-receptor complex.</td>
<td>Treating inflammation only.</td>
<td>Dexamethasone</td>
<td>Dexamethasone: 20mg o/d (1-5 days); Methyl prednisolone: 10mg o/d (6-10 days). Hydrocortisone: oral or iv 160mg/d or q/d, methyl prednisolone: 32mg b/d.</td>
<td>Neutec, Cortef, Methyl pred- DP.</td>
<td>Shivansh Enterprises, Agra, Pfizer</td>
<td>Psychiatric problems, high blood sugar level(hyperglycaemia), etc.</td>
</tr>
<tr>
<td>Ribavirin</td>
<td>It belongs to the guanosine nucleoside antimetabolite, antiviral drugs which inhibit the replication of viral genetic material (RNA) and the capping of mRNA.</td>
<td>Antiviral drug, hepatitis C</td>
<td>Ribavirin: 15mg/kg day b/d, 0.1g/1 ml iv.</td>
<td></td>
<td>Rebetol</td>
<td></td>
<td>Diarrhoea, abnormal heart rhythm, etc.</td>
</tr>
<tr>
<td>Drug Combination</td>
<td>Description</td>
<td>Dose</td>
<td>Administration</td>
<td>Side Effects</td>
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<tr>
<td>Lopinavir + Ritonavir</td>
<td>It belongs to the protease inhibitor class of antiviral medication which is used to treat HIV (Human immune deficiency virus) by acting on Cyt. P4503A4 enzyme.</td>
<td>Kaletra: lopinavir(200 mg/1) + ritonavir(50 mg/1).</td>
<td>Oral administration</td>
<td>Oral medications increase lactic acid production, heart problems, etc.</td>
<td></td>
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<tr>
<td>Paxlovid</td>
<td>It is the protease inhibitor of SARS-CoV-2 betacoronavirus from preventing the transmission of coronavirus.</td>
<td>Nirmatrelvir + ritonavir.</td>
<td>3 tablets b/d for 5 days orally administration.</td>
<td>Pfizer Dark colouration of urine, liver problems, yellowing of skin i.e jaundice like symptoms.</td>
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<tr>
<td>Product</td>
<td>Description</td>
<td>Dosage/Usage</td>
<td>Manufacturer</td>
<td>Side Effects</td>
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<tr>
<td>Sotrovimab</td>
<td>It is recombinant monoclonal antibody helps in restricting the entry of virus in human cells.</td>
<td>One 8ml single dose vial.</td>
<td>GSK’s India</td>
<td>Hypertension, hypotension, respiratory problems, headache, muscular pain, etc.</td>
<td></td>
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<tr>
<td>Molnupiravir</td>
<td>It is investigational drug inhibit reproduction of SARS-CoV-2 virus RNA which is the cause of covid-19 infection.</td>
<td>5 days oral course.</td>
<td>Merck and Ridgeback Company.</td>
<td>Cause teratogenic and mutagenic effect.</td>
<td></td>
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<tr>
<td>Casirivimab - imdevimab</td>
<td>It is the combination of IgG1 monoclonal antibody</td>
<td>600mg/600mg per 10 ml given by single Intravenous infusion.</td>
<td>Regeneron and Roche</td>
<td>Pruritis, respiratory problems, hives, etc.</td>
<td></td>
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<tr>
<td>Vaccine</td>
<td>Description</td>
<td>Dose</td>
<td>Storage</td>
<td>Manufacturer</td>
<td>Side Effects</td>
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<tr>
<td>Bamlanivimab</td>
<td>They are monoclonal antibodies which are artificially prepare in laboratory proteins to boost up the immune system and effective against coronavirus.</td>
<td>700mg/20ml+1400mg/20ml given by single IV infusion only.</td>
<td>2-8°C</td>
<td>Eli Lily and Company.</td>
<td>Nausea, pruritis, sleepiness, hypersensitivity reactions.</td>
<td></td>
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</tr>
<tr>
<td>Covaxin, CoronaVac, Sinopharm</td>
<td>These vaccines are covered by the complete virus to treat as inactivation of SARS-CoV-2 infection.</td>
<td></td>
<td></td>
<td>Bharat Biotech Ltd., Sinovac Biotech Co. Ltd., Sinopharm</td>
<td>Headache, pain or swelling at injection site irritation, fever.</td>
<td></td>
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<tr>
<td>AZD1222,</td>
<td>These vaccines are obtained from the non-replicating</td>
<td></td>
<td></td>
<td>Oxford / AstraZeneca,</td>
<td>Nausea, vomiting, headache, cold, muscle or joint pain.</td>
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<td></td>
<td>Investigational vaccine for Intramuscular</td>
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<tr>
<td>Vaccine</td>
<td>Description</td>
<td>Formula</td>
<td>Manufacturer</td>
<td>Side Effects</td>
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<tr>
<td>Covishield,</td>
<td>These vaccines are obtained from the non-replicating viral vector to reduce the spreading of Covid-19 infection.</td>
<td>Treatment of Coronavirus infection in emergency use.</td>
<td>AstraZeneca</td>
<td>Pain, headache, tiredness, fever, cold, etc.</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Sputnik V,</td>
<td></td>
<td>L- Histidine, L- Histidine hydrochloride monohydrate, magnesium chloride hexahydrate, polysorbate 80, ethanol, sucrose, NaCl, EDTA, water for injection.</td>
<td>Serum Institute of India. Oxford, Gamaleya Research Institute,</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>HGCO19,</td>
<td>These vaccines are obtained from RNA of virus.</td>
<td>Covid-19 Treatment.</td>
<td>Gennova Biopharmaceuticals Limited</td>
<td>Fever, pain, stomach ache.</td>
<td></td>
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<tr>
<td>BioNTech,</td>
<td></td>
<td>Require 2 doses of Vaccines.</td>
<td>Pfizer</td>
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<tr>
<td>mRNA-1273.</td>
<td></td>
<td>Stored at -80°-60°C,</td>
<td>Moderna.</td>
<td></td>
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<tr>
<td>Vaccine</td>
<td>Description</td>
<td>Dose</td>
<td>Manufacturer</td>
<td>Side Effects</td>
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<tr>
<td>ZyCoV-D</td>
<td>It acts on DNA plasmid of virus to stop the growth of coronavirus infection.</td>
<td>3 doses</td>
<td>Zydus Cadila.</td>
<td>Fever, pain at the site of injection, fatigue, etc.</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>BECOV2A</td>
<td>These vaccines are obtained from the protein subunit of coronavirus.</td>
<td></td>
<td>Biological E Limited</td>
<td>Fever, pain at the site of injection.</td>
<td></td>
<td></td>
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<tr>
<td>BECOV2B</td>
<td></td>
<td></td>
<td>Biological E Limited</td>
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<tr>
<td>BECOV2C</td>
<td></td>
<td></td>
<td>Biological E Limited</td>
<td></td>
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<tr>
<td>BECOV2D</td>
<td></td>
<td></td>
<td>Biological E Limited</td>
<td></td>
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<tr>
<td>AKS-452</td>
<td></td>
<td></td>
<td>University Medical Center Groningen</td>
<td></td>
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<tr>
<td>COVOVAX</td>
<td></td>
<td></td>
<td>Novavax formulation</td>
<td>Serum Institute of India,</td>
<td></td>
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</tbody>
</table>
8.2. HOMEOPATHY: Homeopathy, or homeopathic medicine, is a medical philosophy and practice based on the idea that the body has the ability to heal itself. Homeopathy was founded in the late 1700s in Germany and has been widely practiced throughout Europe. Homeopathic medicine views symptoms of illness as normal responses of the body as it attempts to regain health.

8.2.1. PRINCIPLE: Homeopathy is based on the idea that "like cures like." That is, if a substance causes a symptom in a healthy person, giving the person a very small amount of the same substance may cure the illness. In theory, a homeopathic dose enhances the body's normal healing and self-regulatory processes. [54]

8.2.2. ROLE OF HOMEOPATHY IN COVID 19

Homeopathic drugs were confirmed by Homeopathic Materia Medica which was written by Boericke and Allen. Single medicine was prescribed as per the Law of Similia.[79] A total of 60 species of medicinal plants from 36 families and 54 genera were documented as being perceived. Among them, the most common families were Apiaceae (6 species), Zingiberaceae (4 species), Amaryllidaceae (4 species) and Lamiaceae (4 species). And most common genus were Allium (3 species), Terminalia (2 species), Mentha (2 species), Cinnamomum
(2 species), and Syzygium. Likewise, the most perceived species was Zingiber officinale (39.79%) followed by Curcuma angustifolia (34.11%). The habit analysis showed that the medicinal plants belonging to herb, shrub, climber, and tree species were 56.67%, 11.67%, 6.67%, and 25% respectively. Leaves (33.68%) were the most predominantly used parts, followed by seeds (23.33%), fruits (21.67%), roots (13.33%), rhizomes (11.67%), whole plant (8.33%), bark (6.67%), stem (1.67%), and bulb (1.67%). The most commonly used method of preparations was to grind the parts, boil with hot water or milk, and drink. [78]

From the last 200 years in the late 1700s, a German physician named Dr. Samuel Hahnemann founded the homeopathy as a therapeutic medicine which helped to treat many epidemics, fearful, and severe diseases like cholera, fever, chikungunya, hepatitis, and malaria. The preventive measures of homeopathy are eminent and undeniable; as homeopathic medicines act remarkably on a health condition and cure the diseases. The scientific literature related to homeopathy is highly witnessed [72-74]. There are numerous confirmations that in the year 1918–1919, when Spanish flu emerged, homeopathy had shown amazing results, during which around about 21 million patients died around the world and about 5,00,000 in the USA alone.

A study revealed that there was a difference in the mortality rate among the patients which were treated by homeopathy and physicians, i.e., 1–2% appeared differently as they were treated by homeopathy as compare to 50–60% of patients who were treated by allopathic. In homeopathic treatment, every patient after being fully diagnosed and analyzed received medicines. The medical grounds of homeopathy have a clear protocol of sanitation, antibiotics, and vaccinations to control the infections. The name of the homeopathic therapies was previously reported to prevent viral infections that are presented henceforth. [75] Arsenicum album is formed when for continuously 2–3 days arsenic is heated with distilled water. On the basis of the fact sheet released by the CCRH (Central Council for Research in Homeopathy), Arsenicum album 30 can be considered as “prophylactic medicine” COVID-19.

[76] The inflammatory symptoms shown by COVID-19, Arsenic toxicity, and HIV infection are the same and there is a definite synergy between them and may have the suitable potential to aggravate each other. Therefore, Arsenicum album may be considered as a suitable remedy for COVID-19 treatment. Arsenic is one of the constituents in it which showed its enumerating impact on the different macrophage cells as well on tumour cells. Also, it showed decreased NF-κβ hyperactivity (nuclear factor kappa-light-chain-enhancer of activated B cells; diminished verbalization of reporter quality of green fluorescent protein (GFP) in transfect HT29 cells) and decreased TNF-α (tumor necrosis factor-alpha) release in macrophages. Arsenicum album-30 was advised to be taken once in a day for 3 days. The tincture of album-20 is arsenic trioxide which is highly diluted and it works to prevent disease. [77] The use of medicinal plants has increased during the COVID-19 pandemic as a private behaviour (not under the control of government). A lot of misinterpretations of the use of medicinal plants to treat or prevent COVID-19 have been spreading throughout Nepal which need to be managed proactively. [78]
8.2.3. Some Clinical Trials of Homeopathy

- **Hong Kong trial**: A homeopathic clinical trial data was available from Homeopathy Research Institute, Hong Kong. The trial was conducted on 18 people of 6 different clusters. All of them were treated successfully with homeopathic medication.

- **New York trial**: A disorder similar to flu has appeared in New York at the starting of 2020. Later in February 2020, it was clear that the flue was due to the novel coronavirus (SARS-CoV-2). A data was recorded in New York which indicates that several patients were responding well to homeopathy.

- **Italian Trial**: In Italy, 50 cases examined consisted of 29 females, 20 males and in one case the gender was not specified. There were 4 paediatric cases out of 50. They were treated with homeopathy and the hospitalization rate in this group of 50 patients treated homeopathically for COVID-19 was 0 though hospitalization rate was 20.4% in Italy regardless of their symptomatological status.

8.2.4. EFFECTIVE HOMEOPATHIC MEDICINES USED IN COVID-19: The effective homeopathic medicines which are generally used in covid-19 treatment are as given below in table 3 and the mechanism of action of homeopathic medicines is given below in Figure 3.

**Fig. 3**: Schematic representation of mechanistic insight of Arsenicum via downregulation of NF-κβ and TNF-α in macrophages. [72]
Table 3: Effective homeopathic medicines used to treat COVID-19. [79, 88-95,99-100]

<table>
<thead>
<tr>
<th>DRUGS</th>
<th>USES</th>
<th>FAMILY</th>
<th>EFFICIENT DOSAGE</th>
<th>BRAND NAME</th>
<th>MANUFACTURING COMPANY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arsenicum album 30C</td>
<td>Anti-inflammatory</td>
<td>Arsenic</td>
<td>O/d in starved stomach for 3 days.</td>
<td>MediLexicon</td>
<td>MediLexicon Healthcare India Ltd.</td>
</tr>
<tr>
<td>Bryonia alba 30</td>
<td>Anti-inflammatory and antinociceptive</td>
<td>Cucurbitaceae</td>
<td>Adults: 5 granules T/d. Child: 3 granules T/d.</td>
<td>Dr Willmar Schwabe India Pvt. Ltd.</td>
<td></td>
</tr>
<tr>
<td>Rhus toxico dendron</td>
<td>Antiviral and antiarthritis medicine</td>
<td>Anacardiaceae</td>
<td></td>
<td>SBL Pvt. Ltd.</td>
<td></td>
</tr>
<tr>
<td>Belladona</td>
<td>Antispasmotic and anticonvulsant</td>
<td>Solanaceae</td>
<td></td>
<td>Butibel</td>
<td>Similia Homoeo Laboratory, Kerala, India.</td>
</tr>
<tr>
<td>Carolina Jasmine 30</td>
<td>Antianxiety and painkiller</td>
<td>Loganiaceae</td>
<td>Adults: dissolve 4 tablets sublingually Q/d.</td>
<td>Standard Homeopathic Company, USA</td>
<td></td>
</tr>
<tr>
<td>Vitamin C tablets</td>
<td>Immunity booster</td>
<td>Rutaceae</td>
<td></td>
<td>Eucee</td>
<td>Quixotic Pharma Pvt. Ltd.</td>
</tr>
<tr>
<td>Nux vomica 30</td>
<td>Antidepressant, GIT disorders treatment</td>
<td>Loganiaceae</td>
<td></td>
<td>SBL Homeopathy.</td>
<td>SBL PVT. LTD.</td>
</tr>
<tr>
<td>Pulsatilla nigricans</td>
<td>Food poisoning, migraine, respiratory disorders</td>
<td>Ranunculaceae</td>
<td></td>
<td>SBL Homeopathy.</td>
<td>Exportdeals.</td>
</tr>
<tr>
<td>Coast redwood</td>
<td>Antiseptic, antipyretic, antirheumatic, anthelmintic, etc.</td>
<td>Cupressaceae</td>
<td></td>
<td>Hill Natural Extract LLP, Greater Noida.</td>
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</table>
improves the vital force/immune system against the symptoms.

Most of the elderly patients died because of poor immune system. So, the Homeopathy system is more suitable for COVID 19 disease treatment according to increasing the no. of coronavirus infectious patients and their less immune power.

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