

Medicinal plant against covid-19

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ABSTRACT

Even a year after its first incidence in Wuhan, China, COVID-19 instances are still increasing day by day around the world. SARS-CoV-2 infection spreads quickly and differs from other SARS-Cove infections, possibly due to structural differences in S proteins. Various epidemiology and path physiology literatures were released during this time period, indicating that its major and largest single-strand RNA virus was affecting the respiratory system in people. World is currently dealing with the corona virus disease (COVID-19) pandemic, which is caused by the coronavirus 2 (severe acute respiratory syndrome) (SARS-CoV-2). Fever, a dry cough, tiredness, severe pneumonia, respiratory distress syndrome, and, in some cases, death are all symptoms of the infection. Since ancient times, humans have been aware of the therapeutic benefits of natural plants and herbs.

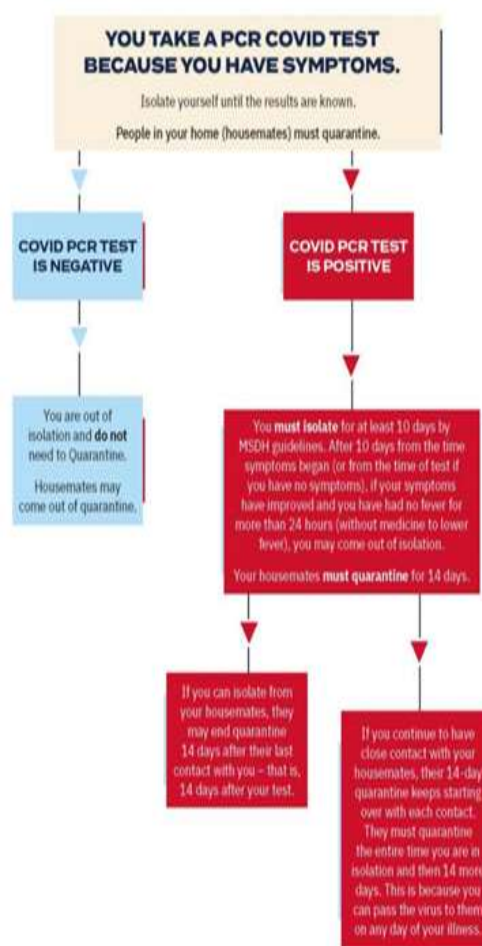
Due to the presence of phytochemicals and bioactive substances, medicinal plants play an essential role in healing human ailments.

On March 12, 2020, the World Health Organization declared a pandemic due to the global spread of SARS-CoV-2 and thousands of deaths caused by coronavirus illness (COVID-19).

Keywords:-Ayurvedic Medicinal plant, covid 19, immunomodulators antiviral agents.

I. INTRODUCTION

The development of a new coronavirus known as SARS-CoV-2 has triggered COVID-19 pandemic (World Health Organization, 2020b). By September 23, 2020, more than 31 million illnesses have been documented, with at least 960,000 COVID-19-related deaths (World Health Organization, 2020c). Since the first case was reported in Wuhan, China in December 2019 (World Health Organization, 2020c), additional evidence obtained by doctors and researchers throughout the world has helped shed light on the disease aetiology and the virus nature.



Corona virus are a broad family of viruses that cause illnesses ranging from the common cold to more serious conditions like Middle East Respiratory Syndrome (MERS) and Severe Acute Respiratory Syndrome.

COVID-19 has spread to over 150 countries, including China, prompting the World Health Organization to declare the disease a worldwide pandemic.

Symptoms

COVID-19 has a variety of effects on humans. The majority of persons who are infected will

experience mild to moderate symptoms and recover without the need for hospitalization.

The following most common indications and symptoms of covid-19

Fever ,Cough, Tiredness

loss of taste or smell one of the first signs of COVID-19.

Other signs and symptoms

❖ Less commonsymptoms

- Sore throat
 - Headache
 - Aches & pain
 - Diarrhoea
 - A rash or discoloration of finger to toes
 - Red or irritate eyes.
- ❖ Serious symptoms
- Difficulty breathing or shortness of breath
 - Loss of speech or mobility or confusions
 - Chest pain

➤ **Causes:-**

Coronavirus disease is caused by infection with the severe acute respiratory syndrome coronavirus 2, or SARS-CoV-2

COVID-19 is distributed quickly by the virus that causes it.

COVID-19 passes mostly from person to person among people in close proximity, according to data (within about 6 feet, or 2 meters). When someone with the virus coughs, sneezes, breathes, sings, or talks, respiratory droplets are released into the air. These droplets can be inhaled, or they can land in someone's mouth, nose, or eyes.

When a person is exposed to very small droplets or aerosols that remain in the air for several minutes or hours, the COVID-19 virus can spread. This is referred to as airborne transmission. If you touch a virus-infected surface and then touch your mouth, nose, or eyes, the infection will spread.

The current pandemic instils dread in people who are looking for ways to prevent or lessen sickness symptoms, believing that self-help, self-care, and self-medicate is their only option.

Various therapeutic approaches, including traditional medicine, which has been widely used during previous epidemic outbreaks, have been well-considered in light of the current scenario, including Influenza viruses SARS and H1N1

The incubation period could be 14 days or longer; the disease could still be contagious during

this time and transmit from person to person via respiratory droplets, close contact, and even fomites..

Antibodies against SARS-CoV-2, the virus that causes COVID-19, can be found in the blood of COVID-19 survivors and vaccine recipients.

It Is safer to acquire a vaccine than to contract COVID-19, therefore vaccination against COVID-19 is suggested for everybody aged 5 and up. If someone has already been exposed to COVID-19, vaccination against it boosts their body's antibody response.

The pandemic has prompted researchers from a wide range of disciplines to investigate the virus's origins, structure, the sickness it causes, diagnostic techniques, and therapeutic alternatives. Treatment has been the most sought-after component of the condition, along with the other equally vital aspects.

• **Potential Traditional Indian/Ayush Formulas For Covid-19 Management.**

There is a lot of evidence to back up the effectiveness of herbs. The treatment of a viral infection For example, if you're in charge of the In the Chinese province of Guangdong, an infectious sickness has spread. During the SARS outbreak in China in 2003, There is compelling evidence to support this claim. TCM (Traditional Chinese Medicine) has a beneficial effect in the SARS treatment or prevention. A combination of modern and traditional therapy may help to reduce the number of people who need to be treated. The disease's severity, the severity of symptoms, the death rate, and Negative consequences Observations for Shuanghuanglian (A) are similar. A liquid made up of honeysuckle, yarrow, and other herbs used in Chinese medicine. **Ayurveda** is the Sanskrit word for "life science." It gives you everything you need to live a long and healthy life. It's based on the principles of "**Dinacharya**" (daily regimes) and "**Ritucharya**" (seasonal regimes). To have a long and healthy life Immunity boosting and maintenance. The classical scriptures of Ayurveda place a strong emphasis on this. Greco-Arab medicine is based on the Unani school of medicine. Medicine is based on the four circumstances of life (hot, wet, and cold). Hippocratic hypothesis proposes four humours (frosty, dry, and frosty) as well as Blood, yellow bile, dark bile, and mucous, to name a few. Epidemics. In the Unani system of medicine, these are known as Waba.

Ayurvedic Medicinal Plants for COVID-19

giloe, ashwagandha,gralic, turmaric, cumin, black pepper tulsi, amla, cinnamonginger, and flax seeds are some of the spices that have been used. Traditionally, they've been utilised as natural cures for a variety of ailments. Since the dawn of time These herbs have been used in the preparation of food. Several countries have traditional medicines and preparations. However, in India, they are widely used in cooking. In every home, they are a component of the kitchen. Likewise, there are Chyawanprash, for example, is a traditional Indian concoction. Triphala, RoohAfza, and other regularly used spices. As part of daily dietary supplements, Indian territory is employed. These plants and formulas are fairly widespread, and at least one of them can be found in your home. Every Indian, regardless of age, uses one of them on a daily basis.

[1] *Allium sativum* (Garlic)

Extract. TNF- and ICAM-1 levels in the blood were found to be lower. and immunoglobulin (G and M) levels, indicating that the diagnosis is correct. Immune system activity is improved. Aqueous garlic extract as a pre-treatment. Exhibited strong antiviral effects, primarily through a decrease in Virus infectivity and titer against a velogenic strain. The Newcastle disease virus (Arify) was found in embryonated chicken eggs. *A. sativum* has also been shown to have antiviral properties. Vero cells infected with H9N2 avian influenza virus. Its anti-inflammatory properties in the face of allergen-induced airway irritation. Inflammatory cells were significantly reduced in a rodent model. Serum IgE modulation, eosinophil invasion, and count.



[2] *Cinnamomum verum*

Newcastle disease immunostimulant and antiviral action.

Viruses in chickens are mostly controlled by modifying total protein, globulin, and other proteins.

Total antioxidant capacity and lysozyme activity, as well as a considerable increase in total antioxidant capacity and lysozyme activity. Phagocytic activity increased. Another research was conducted.

C. zeylanicum essential oil, when mixed with other essential oils, was found to be effective.

Essential oils were found to have antiviral properties against the H1N1 virus.

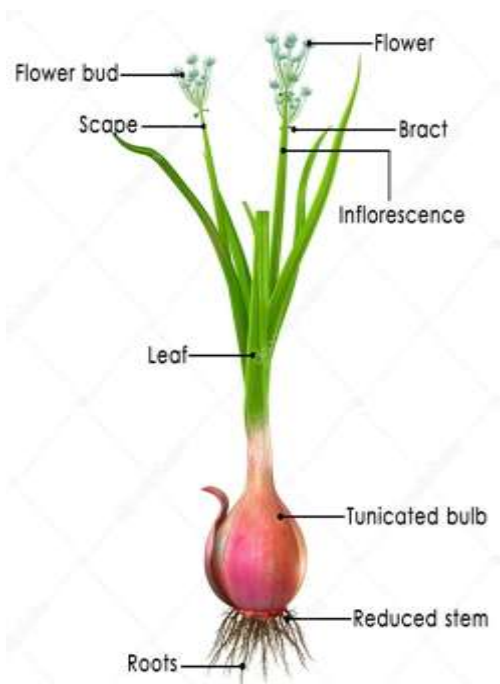


With the HSV1 virus There has been a decrease in virus infectivity.

99 percent at 60 minutes of touch time and more than Both H1N1 and HSV1 viruses had a 99.99 percent success rate after 60 minutes. Its bark extract was found to have Immunomodulatory action, as well as a considerable rise in serum Phagocytic index, neutrophil adhesion, and immunoglobulin Titer of antibodies Polyphenols.

[3] *Allium cepa* (onion):

The most significant raw ingredient in salads, known for its flavour and taste. Isorhamnetin can lower blood pressure and prevent angiotensin-II-induced endothelial damage, according to a previous study. As a result of the enhanced superoxide generation, nitric oxide bioavailability was increased. Onion is high in viral compounds such flavanoids and organophosphates.



Sulfur compounds that may have antioxidant properties. Onions also contain fructans, which aid in the prevention of bacteria. Numerous onions have been discovered to have antiviral properties, including against respiratory viruses, according to research. The effectiveness of antiviral drugs in the treatment of respiratory viruses. Onion infection can be efficiently employed via nebulization or inhalation, which could improve the drug's antiviral efficacy. Flavanoids.

[4] *azartica Indicia*/(neem)

is a type of medicinal plant that is widely utilised in the cosmetic and herbal industries. Neem is a popular medicinal herb in communities, and it's also used for a variety of religious purposes. Many people in India use onion and neem leaves to keep their homes safe and sanitary since they repel mosquitos and have antimicrobial properties. Many people believe that neem leaves also have medicinal properties.



Toran is suspended in mid-air, allowing fresh oxygen to pass through. Previous research has shown that neem has antibacterial, anti-inflammatory, antifungal, antipyretic, and immune-stimulant properties.

[5] *Tinospora Cordifolia* (giloy) is a popular herbal supplement in Ayurveda, an Indian alternative medicine system. In India, this plant has been advertised to the general population as an immunity booster for preventing the new coronavirus sickness of 2019. However, modest studies have lately found a link between giloy use and the development of herb-induced liver damage (HILI) in some people with autoimmune symptoms. The goal of this large retrospective Indian multicenter investigation, which included 13 facilities in nine different locations, was to identify symptoms and outcomes of HILI that were temporally linked to giloy use.

Chemical and toxicological examinations of obtained Giloy samples were also carried out using cutting-edge technologies. We present the results of 43 patients, more than half of whom were female, with a median time from starting Giloy intake of 18 months.



[6] Withania somnifera

Withania somnifera has long been used as an immune booster, antiviral, and for a variety of other therapeutic applications. The withanolides were studied as immune boosters and antiviral agents against the coronavirus-19 in this investigation.

For its multimodal effects, it is one of the most commonly prescribed botanicals in Ayurvedic medicine. Researchers have explored a wide range of pharmacological actions, including immunomodulatory, anti-inflammatory, antioxidant, anti-stress, antihypertensive, and antidiabetic benefits, as well as organ-protective properties.

Scientific evidence supports the role of WS in maintaining immunological homeostasis in inflammatory and viral diseases.

Chemicals in ashwagandha may aid to relax the brain, reduce edoema, lower blood pressure, and change the immune system.



[7] *Ocimum sanctum* (Tulsi) hydro-alcoholic extract inhibited virus proliferation within cells. In the H9N2 virus, it also prevents nonspecific interference with viral-cell interactions.

Pathogens Immunosuppressive drugs At an IC50 value of 73.3 g/mL, the potential of alcoholic leaf extracts MI resulted in a decrease in liver parasites and a skewing of the data.



Tulsi is one of the most well-known examples of Ayurveda's holistic approach to wellness. Tulsi is a spicy,

bitter herb that is claimed to enter deep tissues, dry tissue secretions, and balance kapha and vata. Tulsi is supposed to help with disease prevention, general health, wellbeing, and longevity, as well as dealing with the demands of daily life.

[8] *Piper longum*

Herbal medicine most important essential spice and bioavailability booster. Piper has been shown to be useful in the treatment of asthma and has the ability to alter immunological responses. Piperine acts as a stimulant by counteracting respiratory depression, which could aid in recovery.

Overcome the problem of breathing difficulty among people who have respiratory disorders. Its combination with black pepper and ginger aids in the prevention of heart disease. A variety of respiratory and hepatic issues.



[9] Zingiber officinale (Ginger)

Fresh ginger aqueous extract showed antiviral activity against human respiratory syncytial virus in human respiratory tract cells. Plaque counts in a human cell line (HEp-2 and A549) and in a mouse cell line (HEp-2 and A549) A dose-dependent way It also boosted the production of interferon-gamma (IFN-gamma). That helps in the fight against viral infection. It also had antiviral properties against avian influenza. In a dose-dependent manner, the influenza virus H9N2 infects Vero cells. Mannerisms Soft gels are used orally. Capsules containing a Z. officinale and a Z. officinale in combination Anti-inflammatory and immunomodulatory effects go hand in hand.



Compared to those exerted by positive controls, and data on gene expression Overall, the same transcriptional remodelling was emphasised According to a study on ginger essential oil, Immunomodulatory actions through enhancing humoral immunity.

[10] Curcuma longa L. (Turmeric)

Traditional herbal remedies appear to be a potential choice for COVID-19 treatment. The rhizome of Curcuma longa, also known as turmeric root, is one popular alternative with antiviral characteristics. Curcumin (75%), demethoxycurcumin (20–25%), and bisdemethoxycurcumin (5–15%) are the active components, and they all exhibit a wide range of bioactivities, including antioxidant, anti-inflammatory, antibacterial, antiviral, anticancer, and hepatoprotective characteristic. Curcumin has been shown to have antiviral effect against a range of viruses, including the human immunodeficiency virus (HIV), hepatitis C virus (HCV), influenza A, and the coronavirus 1 that causes severe acute respiratory syndrome (SARS-CoV-1). Its role in COVID-19 patients is also being investigated in a few trials.



II. RESULT:-

The usage of medical plants has increased during COVID-19, according to the study, and the majority of respondents suggested medicinal plants to avoid COVID-19. A total of 60 plants from 36 families were identified in this investigation. The most commonly used plant parts were the leaves. The most referenced species was Zingiber officinale, with a citation frequency of 0.398. The majority of persons (45.61 percent) obtained therapeutic herbs from their own gardens. The medicinal plants found were connected with education level, household location, primary treatment style, gender, and age class in a significant way. During the COVID-19 lockout, education, gender, treatment technique, occupation, living with family, and house location were all substantially linked to plant information sources.

III. CONCLUSION

The current study found a link between the usage of 17 medicinal herbs and the treatment or prevention of COVID-19-related respiratory

symptoms, with eucalyptus, ginger, hot pepper, chamomile, and garlic being the most commonly utilized. Furthermore, it was discovered that when the respondent was older and if they or a friend or family member had contracted COVID-19, they employed a greater number of plants for illness prevention. Respondents with a technical or higher level of education likewise utilised fewer plants for treatment. The potential use of medicinal plants for respiratory disorders has been recognised, but further research is needed to establish solid proof of their efficacy and isolate substances with pharmacological potential. More research is needed to find out.

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