



**International Journal of Biology, Pharmacy
and Allied Sciences (IJBPAS)**

'A Bridge Between Laboratory and Reader'

www.jibpas.com

A NOVEL TRADITIONAL APPROACHES FOR THE COVID 19 MANAGEMENT

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Received 14th Nov. 2023; Revised 15th Dec. 2023; Accepted 15th May 2024; Available online 1st March 2025

<https://doi.org/10.31032/IJBPAS/2025/14.3.8776>

ABSTRACT

A novel approach to COVID-19 management involves integrating traditional system of medicine, particularly in India. Ayurveda, Unani, Siddha, Homeopathy, Naturopathy and Yoga focus on holistic well-being, using natural and herbal remedies. Ayurveda, rooted in balance, suggests practices like gargling, steam inhalation, and herbal supplements. Clinical trials indicate potential benefits, but rigorous evaluation is essential. Ayush 64, an Ayurvedic formulation, shows promise in managing mild to moderate cases. Unani medicine, based on Hippocrates humoral theory, offers supportive therapy for COVID-19. Siddha medicine employs formulations like Kabasura Kudineer for antiviral effects. Homeopathy utilizes remedies like Arsenicum album. Naturopathy emphasizes preventive measures, supportive care, and stress reduction. Yoga complements treatment with physical postures, breath control, and meditation. Integrative approaches, combining allopathic and traditional systems, show positive outcomes in specific cases. Further research is needed to validate these methods in COVID-19 management. This review covers an overview of traditional drugs with its pharmacological activity, mechanism of action, drug interactions, dose and integrative therapy. Additionally, the review highlights the challenges and limitations of these approaches for COVID-19 management.

Keywords: Traditional Medicine, Covid-19 management, Approaches, Integrative therapy

INTRODUCTION

SARS-CoV-2 is a new coronavirus strain, is the source of COVID-19. In December 2019, the first COVID-19 case was reported in Wuhan, China. Though the source of the virus is still unknown, the majority of experts think that bats are the possible animal host via which it was transferred from bats to humans [1]. The primary way that the virus spreads among infected individuals is by respiratory droplets and contact with infected surfaces. By attaching itself to the angiotensin-converting enzyme 2 (ACE2) receptor, it can infect a variety of human cells, particularly those found in the lungs [2][3]. COVID-19 can cause a variety of mild to severe symptoms, including fever, coughing, shortness of breath, and loss of taste or smell. Serious side effects including pneumonia, organ failure, blood clots, and even death are possible for certain patients.

The World Health Organisation declared COVID-19 is a pandemic on March 11, 2020, as a result of its rapid dissemination across the globe. At the end of December 2023, there were over 300 million confirmed cases of the disease worldwide, and over 6 million deaths. To control and halt the COVID-19 pandemic, several strategies have been implemented, including vaccination, tracing, testing, mask wearers, lockdowns, and social distance. But

the pandemic is still running strong and presents a serious risk to both public health and the world economy [4].

The diagnosis of COVID-19 is based on the identification of viral RNA or antigens in respiratory specimens, using molecular or antigen-based tests. However, the accuracy and availability of these tests vary across regions and settings, and some cases may be missed or misdiagnosed [5].

Many people have turned to alternative and traditional medical systems, such as Homoeopathy, Naturopathy, Ayurveda, Siddha, and Unani, in the absence of conventional medicine to prevent or treat COVID-19. These programs are built on a holistic philosophy that seeks to achieve harmony between the mental, spiritual, and physical facets of well-being. Additionally, they employ age-old natural and herbal cures to both prevent and treat a wide range of illnesses [6]. They also have the potential to modulate the immune system, reduce inflammation, enhance antioxidant defense, and alleviate symptoms of COVID-19. During this pandemic, to strengthen their immunity and lessen the symptoms of the sickness, many Indians have resorted to these alternative medical practices. The Ministry of Ayush has released guidelines and

recommendations for COVID-19 prevention and treatment with traditional medicine, which is in charge of these systems development and promotion [7]. However, the evidence of its safety and efficacy for these systems of medicine towards COVID-19 is still limited and inconclusive, and there is a need for rigorous scientific evaluation and validation of their claims.

TRADITIONAL SYSTEM OF MEDICINE

Indian traditional system of medicine (ITSM) refers to different indigenous medical traditions such as Ayurveda, Siddha, Unani, Yoga, Naturopathy, and Homoeopathy. For ages, millions of people in India and around the world have utilized this system to preserve their health and treat a variety of illnesses. It has become more well-known as a possible source of therapeutic and preventive actions during the Covid-19 epidemic. Ayush, the Ministry which focuses on Traditional Indian Medicine, has released a number of recommendations and guidelines about the application of this medical system to the treatment of COVID-19 [6].

Numerous clinical trials and studies have been conducted to examine the safety and effectiveness of ITSM therapies for Covid-19. According to some of the results, ITSM may be helpful in reducing the severity, length, and

death rate of COVID-19 while also enhancing the quality of life and immunity of patients.

Traditional Indian System of Medicine is a vast and diverse medical system that provides a holistic and personalized approach to health and wellness. In addition to traditional allopathic treatment and preventive measures including mask wearing, social distancing, and hygienic practices, it may be used as an adjunct or complimentary therapy for Covid-19.

AYURVEDIC SYSTEM OF MEDICINE

Ayurveda is an ancient system of medicine which is originated in India. It is based on the concept of equilibrium between the five elements: *Teja* (Fire), *Vayu* (Air), *Jala* (Water), *Aakash* (Space or Ether), and *Prithvi* (Earth). According to Ayurveda, illness results from an imbalance of these elements and health is attained when there is harmony among the body, mind, and soul. Ayurveda uses various methods to diagnose and treat diseases, such as pulse diagnosis, herbal medicines, dietary and lifestyle modifications, yoga, meditation, and detoxification therapies. Ayurveda has been used as a preventive and supportive measure to enhance immunity and reduce the severity of COVID-19 [8]. Infection Based on Ayurvedic principles and practices, the Ministry of Ayush has released instructions for both the general

public and COVID-19 patients. Some of the recommendations include:

- Gargling with salt and turmeric water or Triphala and Yashtimadhu (licorice) decoction.
- Inhalation of steam containing carom seeds (ajwain), eucalyptus oil, mint leaves.
- Sesame oil, cow's ghee, coconut oil or medicated oils applied in the nostrils.
- Consuming Ashwagandha, Guduchi, or Chyawanprasha to boost immunity [9] [10].

Consuming a nutritious, well-balanced diet that includes spices and herbs like holy basil, ginger, coriander, and curcumin. Ayurvedic medications may also be immune-modulatory, antiviral, and anti-inflammatory against COVID-19, according to some research. To prove the security and effectiveness of these measures, more thorough and scientific investigation is necessary [10]. Some of the ayurvedic drugs which are recommended by Ministry of Ayush during COVID-19 are listed in the **Table 1**.

Table 1: Ayurvedic drugs recommended by Ministry of Ayush [11,12,13]

Clinical severity	Medicines	Dose
Prophylactic Care	Ashwagandha (powder or aqueous extract of <i>Withania somnifera</i>)	Take 1-3 g powder or 500 mg extract twice a day with warm water for fifteen days or a month or as directed by Ayurveda doctor
Prophylactic Care	GuduchiGhanavati (Giloy Ghana vati or Samshamani vati having powder or aqueous extract of <i>Tinospora cordifolia</i>)	Take 1-3 g powder or 500 mg extract twice a day with warm water for fifteen days or a month or as directed by Ayurveda doctor
Prophylactic Care	Chyawanaprasha	Take 10 g with warm water / milk once a day

A number of clinical trials, observational studies, case reports, reviews, and other research have been done or are being done to assess the safety and effectiveness of Ayurvedic treatments for the management of COVID-19. Some of the key findings and implications are:

- A systematic review of 33 studies (including 18 observational studies, 8 case reports and 7 clinical trials) on

Ayurveda therapies for COVID-19 concluded that most of the studies showed favorable effects in terms of lowering symptoms, boosting immunity, and enhancing recovery. The evaluation did, however, also draw attention to the research, shortcomings, including their small sample size, lack of blinding, randomization, or control groups, as

well as their inadequate reporting of methods and results [14].

- The potential for 31 phytoconstituents from three Ayurvedic plants (Ashwagandha, Guduchi, and Shatavari) to bind to the spike protein, main protease, and RNA dependent RNA polymerase of SARS-CoV-23 as well as modulate multiple targets in immune pathways was predicted by a network pharmacology and docking study. According to the study, these plants may have antiviral and immunomodulatory properties, making them potential COVID-19 medicinal adjuvants. Before being used in a clinical setting, the study did advise experimental validation of the in silico results [15].

Drug interactions of ayurvedic drugs with the conventional medicines

- *St John's wort*, a herb used to treat depression may reduce the effectiveness of several antiviral drugs used to treat COVID-19, such as lopinavir/ritonavir and remdesivir [16].
- *Baicalin*, *Scutellarin*, and *Hesperetin* may interact with drugs that are metabolized by the liver enzyme CYP3A4, such as statins, calcium

channel blockers, and macrolide antibiotics, and affect their levels or actions [16].

- *Nicotianamine* may interact with drugs that affect the iron metabolism, such as iron supplements, erythropoietin, and desferrioxamine, and affect their absorption or efficacy [16].
- *Glycyrrhizin* may interact with drugs that affect the potassium levels, such as diuretics, angiotensin-converting enzyme inhibitors, and potassium supplements, and cause hypokalemia or low potassium levels [16].

These are some of the possible interactions that may occur between ayurvedic herbs, formulations, and interventions and conventional drugs and vaccines for COVID-19 management.

In summary, Ayurveda has been widely used and studied for COVID-19 management in India and abroad. Based on current research, Ayurveda may be helpful in treating and preventing COVID-19, particularly in mild and asymptomatic cases. To validate the findings and implications of Ayurveda for COVID-19 management, more thorough and rigorous research is required as the quality and rigor of the current studies are inconsistent [17]. Some of the Ayurvedic drugs which are

used for the management of COVID-19 are listed in the **Table 2**.

Table 2: Ayurvedic drugs and their mechanism of action, dose and constituents [18-21]

Name of Drug	Dose	Constituents	Treatment	Mechanism of action
AYUSH 64	Adults: 4 tablets, 500 mg each; children: 5–12 years old 2 pills Young Children (Under 5 Years Old) Take one pill three times a day for five to seven days with honey, or as prescribed by a doctor.	<i>Alstonia cholaris</i> , <i>Picrorhiza kurroa</i> , <i>Swertia chirata</i> , <i>Caesalpinia crista</i>	Mild to Moderate COVID-19 Patients	inflammatory responses
Agnikumara Rasa	1mg	<i>Piper nigrum</i>	Gastro-intestinal conditions	Osteoarthritis of knee
Amalaki churna	5-10 mg	<i>Phyllanthus emblica</i>	Diarrhea, jaundice	Anti-inflammatory properties
Arogya Kashayam-20	100g	<i>Zingiber officinale</i> , <i>Phyllanthus niruri</i> , <i>Glycyrrhiza glabra</i> , <i>Tinospora cordifolia</i> , <i>Terminalia chebula</i> , <i>Piper nigrum</i> and <i>Piper longum</i>	indigestion, cough and common cold	mild symptomatic action
Dashamula Kwatha	Take 3–6 g, steeped in warm water, twice daily, following meals	<i>Premna mucronate</i> , <i>Aegle marmelos</i> , <i>Oroxylum indicum</i> , <i>Gmelina afborea</i> , <i>Stereospermum suaveolens</i> , <i>Solanum xanthocarpum</i> , <i>Solanum indicum</i> , <i>Tribulus terrestris</i> , <i>Uraria picta</i> , and <i>Desmodium gangeticum</i>	treating intermittent and high fevers	Relieves Arthritis pain, swelling & inflammation
Kantakaryavaleha	Children under five: 1-2 grams, once or twice daily	There are 14 ingredients total, including <i>Zingiber officinale</i> , <i>Piper nigrum</i> , <i>Piper longum</i> , and <i>Tinospora cordifolia</i> .	primarily used for the treatment of Cough, Bronchitis	Airway hyperresponsiveness.
Bresol	10ml	Ingredients like <i>Ocimum sativum</i> , <i>Curcuma longa</i> , <i>Zingiber Officinale</i> <i>Adathoda vasica</i> are present.	respiratory disorders.	Inhibits the expression of the phosphodiesterase 4 gene and modifies the concentrations of certain inflammatory mediators in human monocytic cells.

Ayush 64

India's Central Council for Research in Ayurvedic Sciences (CCRAS) created the Ayurvedic medication Ayush 64. Due to its

possible application in the treatment of mild to moderate COVID-19 patients, it attracted attention. It is significant to remember that the drug is currently being used to treat COVID-

19, but it was first developed in 1980 to treat malaria. Recently, the Ministry of Ayush and the Council of Scientific and Industrial Research (CSIR) cooperation conducted a thorough multi-center clinical trial to evaluate the safety and efficacy of AYUSH 64 in the treatment of mild to moderate COVID-19 patients. Ayurvedic principles inform the precise ingredients and production of Ayush 64, a polyherbal compound. *Swertia chirata* (Kiratatikta, aqueous extract of whole plant), *Picrorhiza kurroa* (Kutaki, aqueous rhizome extract), *Alstonia scholaris* (Saptaparna, aqueous bark extract), and *Caesalpinia crista* (Latakaranja, fine-powdered seed pulp) are the ingredients of AYUSH 64. It is a well-researched, scientifically created, secure, and potent Ayurvedic formula [22, 23].

PHYTOCHEMICALS - TRADITIONAL MEDICINE

In the pursuit of effective treatments for viral infections, especially amid the global COVID-19 pandemic, researchers are exploring traditional Chinese herbal decoctions like *Qing-Fei-Pai-Du*, *Shiwei Qingwen*, and *Jiedu Huoxue*. Scientific investigations reveal bioactive compounds such as quercetin, kaempferol, and luteolin within these remedies, showcasing their potential in modulating biological pathways and influencing immune response genes [24].

In silico and in vitro studies, phytochemical components such as baicalin from *Scutellaria* species, *curcumin* from turmeric, and *quercetin* from fruits and vegetables have been shown to exhibit anti-SARS-CoV-2 action. Additional substances derived from different plants, including *glycyrrhizin*, *cannabidiol*, *resveratrol*, and *artemisinin*, have also demonstrated potential against the virus [25]. Even if preclinical data suggests that they have anti-SARS-CoV-2 activity, clinical trials must follow lab results in order to confirm both safety and efficacy. The pharmacological potential of phytochemicals underlines the need for patient-involved investigations, stressing the critical bridge from laboratory findings to clinical applications in the effort to harness plant-derived molecules for treatment of COVID-19 [26, 27].

UNANI SYSTEM OF MEDICINE

The traditional medical practice known as unani, which started in ancient Greece and eventually spread to Persia and India, is based on the humoral theory of Hippocrates [28]. It places a great emphasis on how environmental variables and environmental situations affect human health, emphasizing disease prevention as well as well-being promotion. This strategy satisfies the criteria for ensuring the purity of the air, water, and food [29].

Researchers and medical professionals are currently looking into a range of therapeutic options because the COVID-19 pandemic has created a previously unheard-of worldwide health issue. One such area of study is the efficacy of unani medication in combating COVID-19 [28].

In COVID-19 patients, although no unani medication has been demonstrated to directly fight the SARS-CoV-2 virus, unani regimens may be beneficial as adjuvant therapy. A clinical study carried out in India assessed the effects of *Tiryaaq-e-Arba* and *Unani Joshanda* in managing mild to moderate COVID-19

cases [30]. The study showed promising results, with patients in the Unani add-on arm experiencing clinical recovery, shorter hospitalization duration, and a faster reduction of symptoms. In the midst of the COVID-19 pandemic, traditional medicines such as Unani medicine, were widely employed globally to offer supportive therapy for alleviating symptoms. This highlights the interest and potential of Unani system of medicine in contributing to the COVID-19 management [31]. Some of the Unani drugs which shows activity towards COVID-19 are listed in the **Table 3**.

Table 3: Unani drugs with its pharmacological activity and its dose

Drug name	Pharmacological Activity	Dose
Kalonji (<i>Nigella sativa</i>)	Anti-Viral [32] And Acts against COVID 19 [33]	1-2 gm
Mulethi Aslassus (<i>Glycyrrhiza glabra</i>)	Anti-viral activity [32] Licorice possesses several important features that are particularly important for COVID-19 patients, including antiviral potency, anti-inflammatory effects, and induction of the autophagy mechanism in cells [34] Anti coronavirus activity, antiviral, antimicrobial, antioxidant, anti-inflammatory activities [28]	5-10 gm
Unnab <i>Zizyphus jujuba</i> (Ursonic acid)	Anti-influenza, immunomodulatory, Antioxidant [32] Acts against SARS-CoV-2 - Molecular dynamics analysis (study) and In-silico docking studies (SwissDock server) [31]	5 pcs
<i>Laurus nobilis</i> Habb ul Ghar	Shows activity on SARS-CoV-2 – Molecular Docking [28,35]	
<i>Behi dana</i> (<i>Cydonia oblonga</i>) [32]	Immunomodulator, Antioxidant, Anti-influenza, Antiallergic properties	powder (3-5 g) or as a decoction (50 ml) twice a day
<i>Sapistan</i> (<i>Cordia myxa</i>) [32]	Immunomodulator, Antioxidant and smooth muscle relaxant in the trachea	Decoction (50 ml) twice a day
<i>Karanjwa</i> (<i>Caesalpinia bonducella</i>) [36]	Antipyretic, antimicrobial, anti-inflammatory and immunomodulator properties, covid 19	powder (3-5 g) or as a decoction (50 ml) twice daily

Unani Drugs for management of Corona virus

Several Unani medicines have been suggested by Government of India are:

- The following supplements should be taken twice daily with lukewarm water: Tiryaaq Nazla (5 g), Sharbat Unnab (10–20 ml), Sharbat Nazla (10 ml), Tiryaaq Arba (3–5 g), Qurs e Suaal

(2 tablets) and Habb e Ikseer Bukhar (2 pills) [37, 38].

- For improved illness control, Khamira Marwareed (3–5 g) and Arq Ajeeb (4–8 drops) once daily are also recommended [37, 38].
- In the same way, medications such as Roghan Mom, Roghan Baboona, and Kafoori Balm are advised for use as a massage oil on the scalp and chest when an infection occurs [37, 38].
- Moreover, the Arq extracted from individual Unani medications such as SharbatKhaksi, *Cyperus scariosus* R. Br. (cypriol), *Artemisia absinthium* Linn. (common sagewort), *Cichorium intybus* Linn. (common chicory), *Swertiachirata karst* (Indian Gentian), *Trachyspermum ammi sprague* (ajowan), and *Borage officinalis* Linn. (Borage) and *Cichorium intybus* Linn. (common chicory) may also be utilised to fight the infection [37].
- Similarly, for ailments like sore throat during infection, decoctions of unani medicines are advised. These include decoctions from *Papaver somniferum* (khashkhash), *Cydonia oblonga* (Quince), *Cinnamomum zeylanicum* (cinnamon), *Cordia myxa* Linn.

(Assyrian plum), *Viola odorata* Linn. (sweet violet), *Zizyphus Jujube* Linn. (jujubi), *Borago Officinalis* Linn. (borage), *Rosa damascene* (GuleSurkh), *Myrtus communis* (Barg e Moard), *Hyoscyamus niger* (bazrulbanj) and *Lactuca sativa* (Tukhm e kahuMukashar) [37].

SIDDHA SYSTEM OF MEDICINE

Siddha is an ancient system of medicine that began in Tamil Nadu, India. Its foundations are the ideas of the eight vital substances (*saram, cheneer, oon, kozhuppu, enbu, moolam, sukkilam, and elumbu*), the five elements (earth, water, fire, air, and space), and the three humors (*vata, pitta, and kapha*). Siddha practitioners use various methods of diagnosis, such as pulse reading, urine examination, and tongue observation, and prescribe herbal, mineral, and animal-based medicines, as well as diet, lifestyle, and yoga interventions [39].

During public health emergencies like the dengue outbreak in 2017 and the chikungunya outbreak in 2006, siddha medication has helped to reduce the illness burden. These medications could be used to treat COVID-19, a virus that affects the respiratory system and is brought on by a new coronavirus called SARS-CoV-2. In the COVID-19 management, however, there is limited

evidence to support the integrated therapy strategy (standard care and siddha medicine added to allopathic treatment) [40]. Some of

the Siddha drugs with its pharmacological activity are listed in the **Table 4**.

Table 4: Siddha drugs with its pharmacological activity [39,41,42]

Siddha Drugs with formulation	Pharmacological Activity
Adathodai manapagu	Antipyretic, antiviral, antioxidant, anti-inflammatory and hepatoprotective effects
Kubasura kudineer	Antipyretic, antiviral, expectorant, immunomodulatory, antispasmodic, anti-asthmatic, hepatoprotective and antioxidant activities
Thontha sura kudineer	Hepatoprotective, immunomodulatory, antiviral, anti-inflammatory, and anti-asthmatic effects
Visha sura kudineer	Hepatoprotective, anti-inflammatory, antipyretic, anti-asthmatic, antiviral, antioxidant, and immunostimulant properties
Nilavembu kudineer	Immunostimulant, neuroprotective, antiviral, anti-inflammatory, antipyretic, hepatoprotective, immunomodulatory, and antioxidant properties

HOMEOPATHY SYSTEM OF MEDICINE

The word “homeopathy” was coined by Dr. Hahnemann, who combined the ideas of Hippocrates’ “like cures like” and “minimum number of medicine” with new ideas including minimal dosage, customized treatment, the vital force, and the dynamization of medicinal ingredients. Many countries’ healthcare systems, including those in Bangladesh, India, Brazil, Chile, Mexico, and Switzerland, have used this strategy. At the moment, hospital-based emergency care and symptom management are the main priorities of COVID-19 treatment, with its foundation in symptomatic treatment, homeopathy is a medical approach with great potential to help alleviate this worldwide issue [43].

For COVID-19 patients, a range of homeopathic treatments are available. *Antimonium tartaricum*, *Bryonia alba*, *Arsenicum album*, *Atropa belladonna*, *Gelsemium sempervirens*, *Phosphorus flavus*, *Pulsatilla nigricans*, *Eupatorium perfoliatum*, and *Phosphoricum acidum* are recognised as potential candidates based on frequency in a review and repertorization of common symptoms Basic remedy for unidentified patient, consists of *Gelsemium sempervirens*, *Ignatia amara*, *Spongia tosta*, *Ferrum Phosphoricum*, *Ruta graveolens*, *Causticum hahnemanni*, *Thuya occidentalis*, *Streptococcinum*, *Lycopodium clavatum*, *Hepar sulphur*, and *Kalium phosphoricum*, *Spigelia anthelmia*, *Solanum dulcamara*, and *Mercurius solubilis* (once each) will [44, 45]. A homeopathic practitioner can choose remedies with knowledge by customizing the

treatment to each patient's particular symptoms. Notably, the homeopathic medication "Arsenic albumin 30" has been suggested by India's Ministry of AYUSH as a preventative measure against infection with COVID-19 (AYUSH, 2020). *Liga Medicorum*

Homeopathi Internationalis (LMHI) Prime General Secretary an esteemed organization of homeopathic physicians, has endorsed this proposal [46]. Some of the Homeopathic medicines used for COVID-19 management are listed in the **Table 5**.

Table 5: Homeopathic medicine for COVID 19 management [47, 48, 49]

Medication	COVID 19 Associate symptoms	Recommended Dosage
Arsenic 30C	When faced with respiratory challenges, such as difficulties in breathing or asthma, individuals may experience symptoms like anxiety, weakness, and fatigue in conjunction with COVID like symptoms	Take three times daily
Aconite 30C	In the early stages of cold or flu symptoms	Take three times daily
Belladonna 30C	Intense pulsating head ache, heightened sensitivity to sound, light and physical contact. congestion and inflammation	Take three times daily
Bryonia 30C	Fever along with sore muscles, possibly accompanied by a cough	Take three times daily
Eupatorium 30C	Severe pain, high temperature, and flu-like symptoms.	Take three times daily
Wyethia 30C	Breathing difficulties, sore throat with dryness.	Take three times daily
Gelsemium 30	Profound illness with flu like manifestations	Take three times daily
Antimonium tartaricum	pronounced mucus production and a cough that ends in choking, this remedy is recommended, especially for advanced-stage pneumonia	Take three times daily
Phosphorus flavus	Breathing, Thirst and fatigue alongside symptoms of a cold and the flu	Take hourly one dose
Natrum muriaticum	Antiviral, anti-inflammatory and immunomodulatory	LM2 potency, one dose daily for 14 days

Arsenic album 30

Arsenic album has been demonstrated to impact HT29 cells, causing a drop in NF- κ B activity (as seen by a decrease in GFP reporter gene expression in transfect HT29 cells) and a release of TNF- α in macrophages [50]. *Bryonia alba*, *Calendula*, *Passiflora incarnata*, and *Zingiber officinale* are additional homeopathic remedies that have been applied to address various health issues. Considering The characteristics of their source materials, there is a possibility that these remedies could Exhibit inhibitory

effects on ribosome-inactivating proteins, proteases, and ACE-2 [51].

Therefore, It is worth exploring the possible function of these drugs in relation to COVID-19 treatment. The preparation of homeopathic remedies involves a series of dilutions and violent shaking, or succussion. In homeopathy, it is thought that a substance's effectiveness increases with dilution. However, the extreme dilution often means that there are no molecules of the Original substance left in the final product. As a result, there should be no toxic effects from The

substances used in homeopathic remedies [52].

NATUROPATHY

Naturopathy is a form of lifestyle medicine that functions by enhancing immunity or boosting vitality. It is based on the principles of using natural methods and substances to support the body's inherent healing properties. Naturopathy include nutrition, fasting, hydrotherapy, aromatherapy, yoga, mindfulness, and herbal medicine [53].

Naturopathy may be relevant to COVID-19 management in the following ways:

- It can be used as a preventive approach to enhance mucosal and innate immunity, reduce stress, improve sleep, and improve fitness and respiratory health. Some of the measures suggested by naturopathy practitioners for COVID-19 prevention include gargling with salt water or neem oil, nasal irrigation with saline water, neti kriya, aromatherapy, yoga and mindfulness exercises, and a balanced diet with plenty of fruits and vegetables [54].
- It can also be used as a supportive care to ease symptoms and support recovery In those infected with COVID-19. Some of the measures suggested by naturopathy practitioners

for COVID-19 symptom management include steam inhalation, warm water drinking, ginger and turmeric tea, lemon and honey water, vegetable soup, and hot and cold fomentation [55].

- It can help reduce the anxiety and stress of isolation and lockdown that can impair immune responses and increase the severity of COVID-19. Naturopathy can offer psychological support and counseling to patients and health service providers, as well as promote positive emotions and coping skills through relaxation techniques, meditation, and gratitude practices.
- Two to three times a day, inhale steam containing one pinch of ajwain and two drops of eucalyptus oil.
- Five minutes before retiring to bed, apply eucalyptus oil to the back and chest area and inhale the same fragrance.
- Self-acupressure (the patients learned how to self-apply manual pressure over the acupressure sites with their thumbs) [56].

YOGA

Yoga is a holistic practice that originated in ancient India, involving physical postures, breath control, meditation, and ethical

principles. It aims to promote physical and mental well-being, as well as spiritual growth [57].

Yoga treatment

Exercises for loosening

Hand in and out breathing for five rounds in one minute; Hand stretch breathing for ten rounds Two minutes.

- *Skanda Chalasana* (Shoulder rotation): 5 rounds in 3 minutes
- *Gomukhasana* (Cow Face Pose): 1 round, 1 minute
- *Makarasana* (Crocodile pose): 1 minute, 1 round [56].

Pranayama

- *Vibhagiya Pranayama*: 5 rounds in 3 minutes

- *Nadishuddhi*: 10 to 15 rounds (five seconds of internal breath holding)
- *Bhramari pranayama*: ten to fifteen rounds [54,56].

Method of relaxation

- Deep relaxation methods or guided meditation [56].

INTEGRATIVE TREATMENT PLAN (ALLOPATHIC AND SIDDHA)

Integrative medicine, is the practice of medicine that combines well established traditional methods of diagnosis and treatment with carefully chosen components of complementary and alternative medicine to create comprehensive treatment programmes [58]. Some of the Allopathic and Siddha drugs used as an integrative treatment to a patient are listed in the **Table 6**.

Table 6: List of Allopathic and Siddha drugs used as an Integrative treatment to a patient

Allopathic Medicine	Siddha drugs	Dosage and adjuvant	Time of administration
Antipyretics	KabaSura kudineer	60 ml	Twice a day
Antihistamines	Brammanandhabairavam 100 mg	2 pills + honey	Twice a day
Antibiotics	Thalisadhivadagam	1 chewable tablet	Thrice a day
	Amukkarachooranam	2g with milk	Twice a day

An integrative treatment plan comprising Siddha and allopathic components was effective in treating a 49-year-old female resident of New Delhi who tested positive for COVID-19 and co-occurring hypothyroidism, as per government-mandated guidelines.

Among the symptoms the patient had were a fever, cold, sore throat, expectoration in the cough, dyspnea, chest congestion, and body aches. The patient was initially given Western medicine (WM) for five days, but the symptoms persisted. After five days, the

Safdarjung Hospital inpatient unit started an integrated treatment program that involved the use of both internal and external Siddha medicine. Within three days, the patient's condition improved, and ten days later, all of her problems disappeared. After treatment, she assessed the reverse transcription-polymerase chain (RT-PCR) and found it to be negative on the fourteenth day [59].

CONCLUSION

In India, Ayurveda, Siddha, Unani, Homeopathy, Naturopathy and Yoga are all widely practiced, and the COVID-19 pandemic has sparked research into complementary therapies. Holistic health and natural remedies are given priority in these systems. The Indian Ministry of Ayush has released guidelines for managing and preventing COVID-19, which include lifestyle modifications and herbal remedies based on Ayurvedic principles. Clinical research suggests that it might be useful in lowering COVID-19 intensity and mortality. Unani medicine, which has its origins in classical Greece, emphasizes the impact of the environment on health and has shown promise as an adjuvant treatment for COVID-19. Siddha medicine, originating in Tamil Nadu, offers polyherbal formulations like Kabasura Kudineer. Homeopathy, which is well known for offering individualized treatment, suggests

drugs like arsenicum album. The aim is to improve immunity and reduce symptoms by using natural medicines. Positive results have been observed in the management of COVID-19 with integrative treatments that combine allopathy with conventional systems. Therefore, traditional drugs are useful and effective in complementing the modern medical approach and enhancing the overall well-being of the patients, but a thorough investigation is necessary to provide definitive proof regarding safety and effectiveness.

Conflict of interest: The authors declare that there are no conflicts of interest.

Author Contributions: All authors contributed to the preparation of the manuscript. Professor G. Rajitha contributed equally to the editing.

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