

Alternative Medicines in Covid 19 – A Review

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Abstract

Emerging in China in late 2019, the coronavirus disease-2019 (COVID-19) infection epidemic is growing rapidly and new cases are reported around the world. The first cases were linked to a wet market, and subsequently, the virus has spread rapidly in China through human-to-human transmission, and the universal impact of the COVID-19 virus is now spreading worldwide. The disease originated from COVID19 is a type of viral pneumonia that is caused by Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2). Currently, no clinically approved antiviral drugs have been introduced for SARS-CoV-2 infection. Identifying the mechanism of action of the virus and its interaction with the immune system will help prevent and treat the disease. There are various researches and studies reporting the use and effect of AYUSH in SARS-CoV treatment. This review article gives a detailed overview of alternative treatment modalities for COVID 19.

Keywords: AYUSH, COVID 19, Pandemic, alternative medicine, SARS – coV 2

Introduction

At the end of December 2019, the coronavirus outbreak triggered by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) occurred in Wuhan, Hubei, China, leading to the rapid spread of 2019 novel coronavirus (COVID-19) into a pandemic responsible for the current global health crisis¹. Coronaviruses are well known animal and human pathogenic organisms that cause a wide range of respiratory, gastrointestinal, neurological, and systemic diseases^{2,3}. Actively no clinically approved antiviral drugs for SARS-CoV-2 infection were introduced¹.

No effective management to treat or avoid this infection has existed till date. COVID-19's most common symptoms include fever, exhaustion and dry cough⁴. Some patients may experience aches and pains, nasal congestion, runny nose, sore throat, or diarrhoea. Typically these symptoms are mild, and gradually start⁴. Some people get sick but have no symptoms, and they don't feel unwell⁴. The best ways to avoid COVID19 infection known today as WHO & National Health protocols are to break the spread chain (social distancing,

hand hygiene, respiratory hygiene), improve the body immunity of a person, recognise early and appropriate medical treatment for the infection⁴.

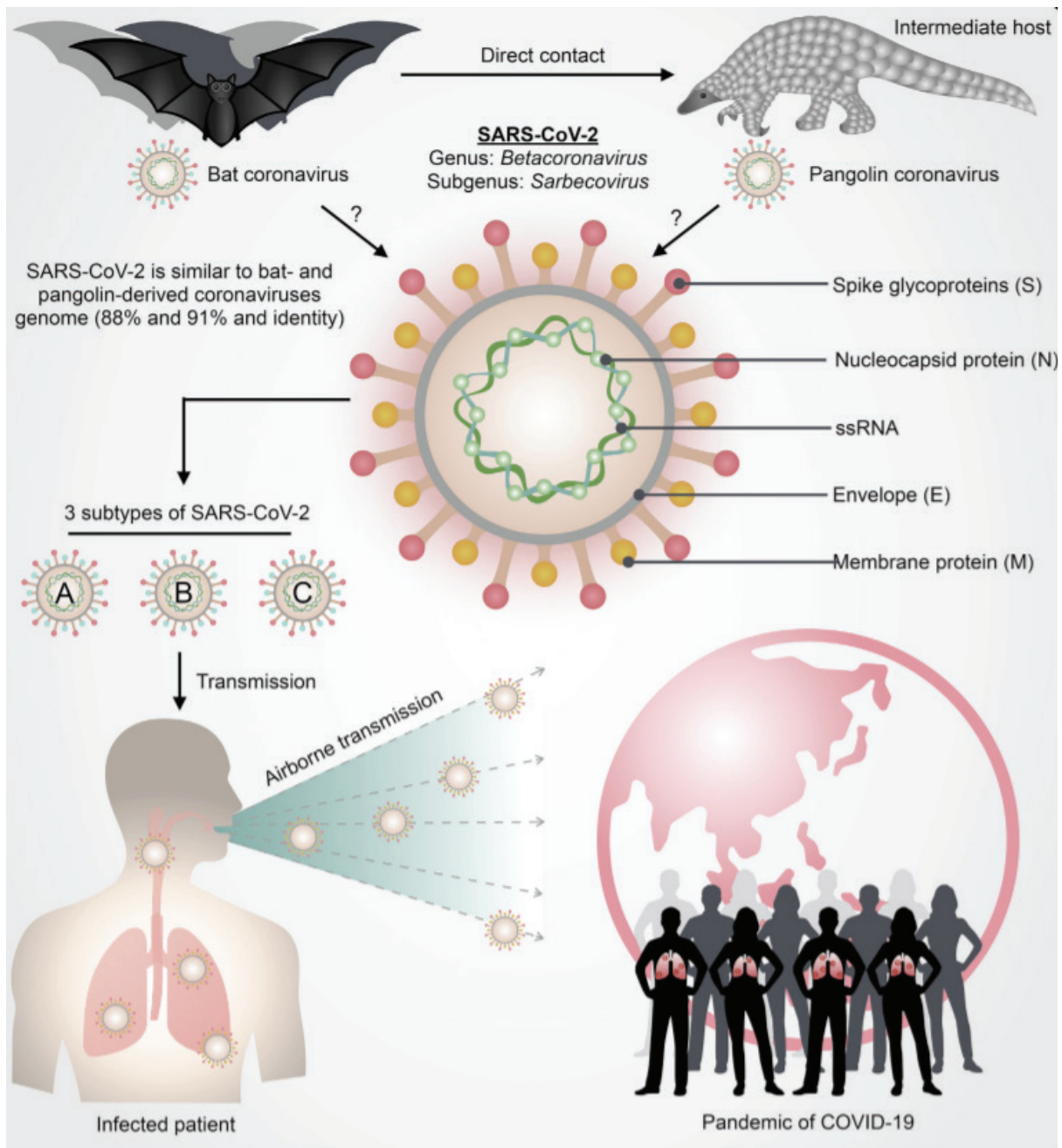
To handle the COVID-19 threat we need successful preventive, promotional, curative and rehabilitative approaches⁵. There is very little modern medicine to give for treating COVID-19 patients. Ayurveda and yoga, ancient health systems have a great deal to say in this current SARS-CoV-2 infection pandemic⁵. Not only can it fill the differences in modern medicine, but it will also complement modern medicine to reduce the burden of COVID-19⁵.

Ayurveda and Yoga share the concept of improving the human body and mind, and preserving good health by preventive, educational, curative, and rehabilitative approaches⁵. The convergence of these methods with modern medicine will not only complement one another, but will also provide a novel and efficient way of treating the emerging COVID-19 pandemic⁵. The Government of India has also taken a bold move to undertake this by establishing the 'Interdisciplinary AYUSH Research and Development Task Force' with the aim of reducing

COVID-19-related misery and deaths in India⁵.

ETIOLOGY, STRUCTURE AND TRANSMISSION OF COVID-19¹:

Pictorial representation of etiology, structure and transmission of COVID-19¹:



SIGNS AND SYMPTOMS:

The signs and symptoms of SARS-coV 2 include¹:

fever (83%), cough (82%), and shortness of breath (31%), which are often accompanied by muscle ache (10%), confusion (9%), headache (8%), and sore throat (5%) (Fig. 2).¹⁴

Approximately 75% of these patients also presented with bilateral pneumonia (75%), 17% of them had acute respiratory distress syndrome, and 11% died over a short time span, owing to multi-organ failure¹.

COMPLEMENTARY MEDICINE:

Since the advent of human race, plants have been the source of numerous compounds with medicinal properties and led to the discovery of medicines². Since ancient times, Indian Ayurveda, Traditional Chinese Medicine Literature, ancient Egyptian Ebers Papyrus all mentions various plants and herbs with medicinal properties that are still used in the world today for different health benefits². Different plant compounds serve as immune boosters and can serve as antibacterial, antiviral, and antifungals².

The coronaviruses encode different proteins which allow their functioning². Many plants generate compounds that interact with these proteins, and may become a drug development target². Since the gene sequence of COVID-19 has very strong similarities between the man proteins of COVID-19 and in SARS or MERS, anti-SARS or anti-MERS natural compounds previously mentioned may become a valuable guide for finding the affective anti-COVID-19 herbal plants². There are more than a dozen proteins that have coronavirus encoding². Some of these proteins are important for entry and replication of viruses². The well-studied proteins so far are papain-like protease (PLpro), 3C-like protease (3CLpro), and spike protein. These three proteins all make drug production for attractive targets².

Until now, many established allopathic medications are still being constantly evaluated which can avoid a deterioration of the patient's clinical condition and provide early relief. Some patients are given remdesivir, lopinavir, chloroquine, or hydroxychloroquine, and interferon beta-1a². Recently, there has been trial of convalescent plasma therapy². But all these drugs have many potentially harmful side effects thus limiting their

use only to vital patients². Furthermore, the effectiveness of these drugs has not yet been confirmed, and is therefore limited to compassionate use only².

Continuously, randomised clinical trials are conducted to see and show the effectiveness of these medications and to find an appropriate successful treatment². WHO is performing one of the largest multinational clinical trials called "Solidarity"². In view of the urgency of the need for successful COVID-19 therapy, this trial is said to reduce the usual time taken by 80%. Remdesivir, lopinavir with ritonavir, chloroquine or hydroxychloroquine, and lopinavir with interferon beta-1a2 are commonly used in four regimens².

While the same applies to complementary medicinal products and their use depends on their reported effects in the treatment of SARS and MERS and the numerous limited clinical trials and their efficacy against COVID-19 has not yet been proven, the lack of potentially serious side effects provides us with a possible and much-needed window for their use in the treatment of COVID-19 not only in critical patients².

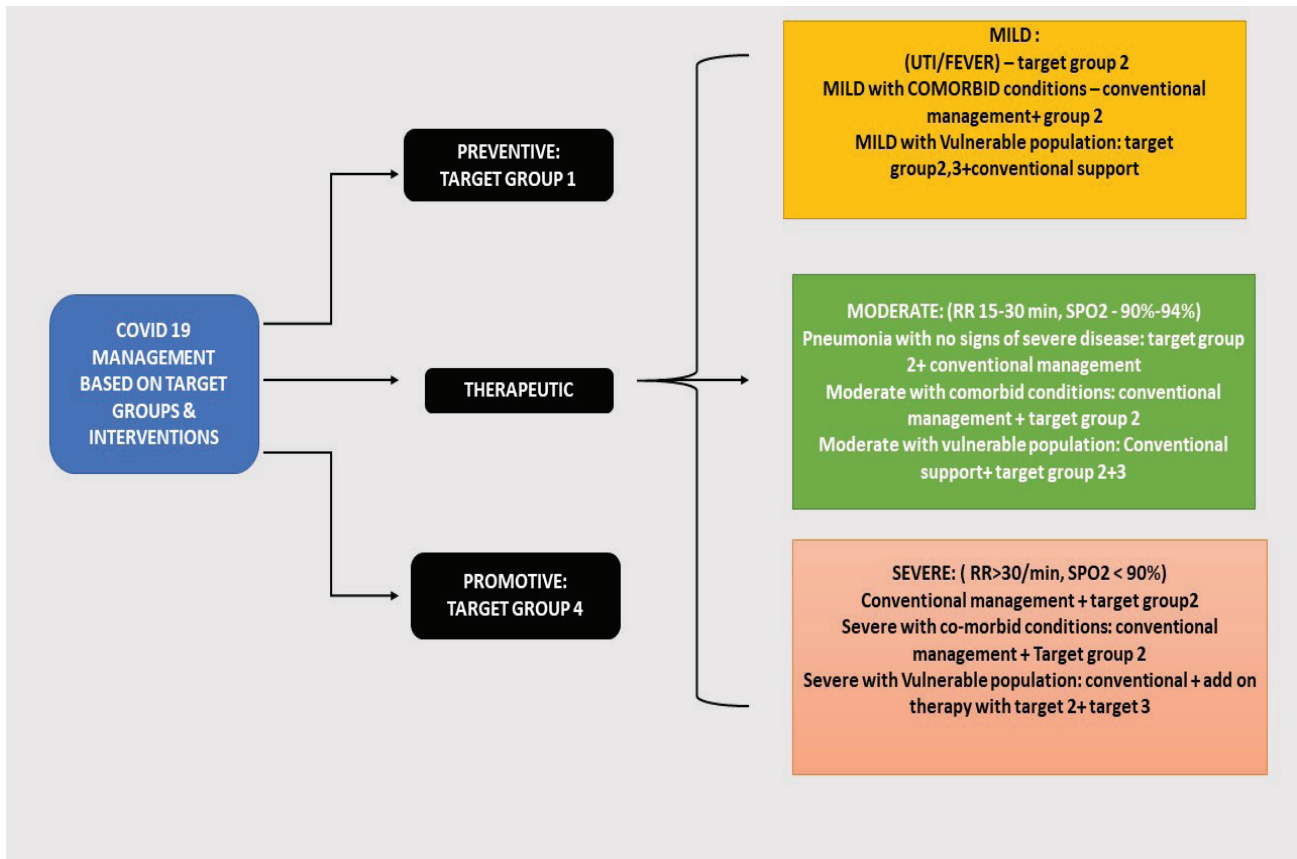
Role of Ayurveda In Covid19

TARGET GROUP 1: Subjects of quarantine and home isolation with or without corona positive test and health care workers⁶.

TARGET GROUP 2: Patients with mild, severe symptoms comorbid and immuno-compromised conditions⁶.

TARGET GROUP 3: Vulnerable group (pregnant and lactating women, pediatric and geriatric patients⁶)

TARGET GROUP 4: Post treatment restorative health care⁶.



TARGET GROUPS AND MANAGEMENT PRINCIPLES⁶:

1. PREVENTIVE TREATMENT– Target group 1
2. SYMPTOMATIC TREATMENT – Target group 2
3. INTEGRATED CARE – Target group 3
4. TREATMENT FOR RECOVERY AND REJUVENATION – Target group 4.

TARGET GROUP 1:

- Stay aware
- Wash your hands frequently with alcohol based hand rub or soap,
- physical touch should be avoided, Frequent touching of eyes, nose and mouth that can pick up viruses is to be avoided⁶.
- Usage of gloves can be encouraged, Spitting in the public is discouraged, Practicing good respiratory hygiene is to be encouraged⁶.
- Maintain social distancing⁶.
- Adequate nutrition should be assured by means of freshly cooked hot foods considering digestive capacity for individuals⁶.
- Extra care should be taken in the case of elderly people, infants, immunocompromised people or women with comorbidities before and after childbirth⁶.

- Intake of warm fluids boiled with medicinal herbs should be used as a regular drink to avoid dehydration⁶.

- Restrict intake of sweet and food which is hard to digest. Also not advised to take chilled, fried, oily, fermented food items, and beverages⁶.

- Cope up with stress⁶.

- Do exercise and meditation regularly⁶.

- 7-8 hours of adequate sleep is mandatory⁶.

- Avoid self – medication if any comorbidities exist; medicines as prescribed are to be encouraged to be taken under supervision⁶.

IMMUNITY ENHANCERS⁶:

Guduchi, amla, haridra, tulasi, ashwagandha will help to increase our immunity⁶.

These are the medications can be used under the supervision of a qualified ayurvedic physician⁶.

1. CHYAWANPRASH AVALEHA - 10 - 12 gm / 1 Spoon,

2. DRAKSHAVALEHA - 10 - 12 gm / 1 Spoon,

3. INDUKANTAM GRUTHAM - 10 - 12 gm twice daily before food, when hungry,

4. ARAVINDASAVA - 15 - 20 ml with equal quantity of warm water after food,

5. BALACHATURBHADRA CHURNA - 1 - 2 gm with honey,

6. HARIDRA KHANDA - 3 - 5 gm intermittently with honey/ warm water.

LIFE STYLE FOR BOOSTING IMMUNITY:

Early Morning Regime:

- Wake up early in the morning .Drink 1-3 glasses of warm water Gandusha / Kavala (Oil Pulling) 1 tablespoon of sesame or coconut oil for followed by warm water rinse⁶.

- Gargle with warm water added turmeric and salt, Triphala, and Yashtimadhu. ShuddhaTanka, Madhoodaka also can be used for Kavala graha⁶.

- Nasal Health – PratimarshaNasya (2 drops of sesame / coconut oil each nostril)⁶.

- Daily practice of Yogasana, Pranayama and meditation for at least 30 minutes⁶.

- Warm water bath⁶.

After Noon Regimen:

Don't sleep during the daytime⁶.

Involve in Work⁶.

Evening Regimen:

Meditation / Pranayama – 30 minutes⁶.

Night regimen:

- Eat easily digestible foods. Eat a night meal 2- 3 hours after sunset or till 8 pm.

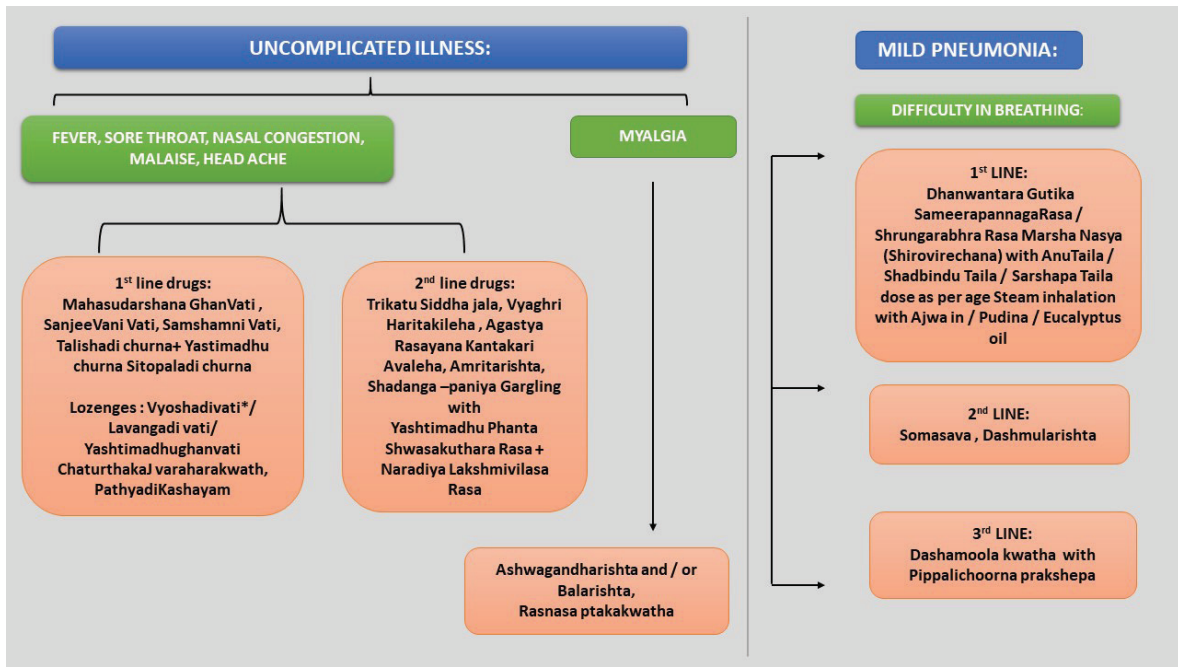
- Sleep atleast 2-3 hours after dinner. Adequate sleep is necessary⁶.

GENERAL MEASURES:

Dhupana - (fumigation) of the house every evening with antimicrobials such as Neem leaf, Sarshapa (Brassica campestris L), Loban (gum bezamin/benzoin - StyraxbezoinDryand), Karpura (Cinnamomumcamphora (L) J.Presl.), Ghee etc. Also usage of AparajitaDhoomaChoorana (A.h.JwaraChikitsa) as per availability can be adopted⁶.

GROUP 2:

This flowchart represents the symptoms and 1st and 2nd line drug of choices for group 2 patients⁶:



MANAGEMENT GUIDELINES FOR SEVERE SYMPTOMS:

These are the medications can be used under the supervision of a qualified ayurvedic physician⁶.

FEVER⁶:

1. MahaSudarshanghanVati- 500 mg TDS with lukewarm water
2. Amritarista 15-20 ml tid with water after food
3. Amritottara Kashaya 15 ml tid with water before food
4. Vishamajwarantakalauha with gold - 125 mg bid with water - High fever with debility
5. Mrityunjaya rasa - 125 mg tid with water - Uncontrolled fever with myalgia
6. Samshamanivati 500 mg. 2 tab BD after food
7. ArkaYavani - 10 – 25 ml QID with water - DeepanapachanaJwara, Aruchi
8. Pathyadi /Guduchyadi / BharangyadiKashayam- 30 – 40 ml BD before food
9. ChaturthakaJvaraharakwatha
10. Tribhuvanakirti rasa 125 mg BD after food with shunthijala or water

11. Bilwadivati 1 TDS

SORE THROAT⁶:

1. Vyoshadivati/ LavangadiVati/ Khadiradivati-2 tab TDS
2. Laxmivilasa rasa 125 mg tid with tamboolaswarasa after food

NASAL CONGESTION⁶:

1. Haridrakhand- 3 - 5 gm BD with lukewarm water/ milk
2. Laxmivilasa rasa 125 – 250 mg BD with tamboolaswarasa after food.

MYALGIA⁶:

1. Rasnasaptak- Kwath- 30 - 40ml BD before food
2. Ashwagandharista 15 – 20 ml BD with water
3. Balarishta 15 – 20 ml BD with water
4. Devadaryadikwatha30 - 40 ml BD before food
5. Dashamoolakwath30 - 40 ml BD before food
6. Godantibhasma 500 mg – 1 gm BD/TDS daily with ghee, sugar, warm milk or water.

COUGH⁶:

1. TalisadiChurna (4 g)+Madhuyashtichurna (2 g) BD with honey/ lukewarm water

2. Sitopaladichurna 3-6 gm with honey BD/ TDS or as required

3. Tankanabhasma– 250 – 500 mg BD

4. Dashamoolakatutrayadi Kashaya- 20 – 30 ml TDS with water before food

DEHYDRATION⁶:

1. Shadanganeeya 40 ml tid/as per requirement.

PREFERABLE DIET⁶:

· Eat freshly prepared warm food⁶.

· Liquids – Instead of Tea, we can use either of the following are advised:

· Herbal tea prepared from half inch ginger + two Black pepper + ¼ cinnamon or lemon grass, tulsi leaves in 2 cups boiled water reduce it to one Cup & add honey 1 teaspoon⁶.

· 1 cup hot cow's milk + dry Ginger powder/ Haridra half teaspoon

· Cereals – Shalishashtika (Old Rice) / Laja/ Godhuma (Wheat) / Yava (Barley)

· Pulses - Mudga (Phaseolus radiatus Linn), Masur (Lens culinaris Medic), Kulattha (Dolichos biflorus Linn.), Chanaka, Moth

· Fruits - Draksha (Vitis vinifera L.), Kapittha (Feronia limonia (Linn.)), Dadima (Punicagranatum Linn) can be taken.

· Condiments and spices: Cardamom/dry ginger/ black pepper/ long pepper/ garlic

GROUP 3: Vulnerable Group (Pregnant & Lactating women, Children & Geriatric subjects):

These are the medications can be used under the supervision of a qualified ayurvedic physician⁶:

PREGNANT AND LACTATING WOMEN:

· PhalaSarpis - 10 - 12gm in two divided doses with warm water

· KalyanakaGhrita - 10 - 12gm in two divided doses with warm water

· Ashwagandha - 10 -12 gm twice daily with warm milk.

· SoubhagyaShuntiLeha - 10 - 12 gm twice daily with warm milk in empty stomach

· Daily use of Milk with Ghee (cup of milk with a teaspoon of ghee).

CHILDREN⁶:

Drug of choice for children and drug dosage given below⁶:

· IndukantaGhritam– 5 – 10 ml in two divided doses with warm milk

· KalyanakaGhrita 5 – 10 ml in two divided doses with warm milk

· Aravindasavam - 5 – 15 ml in two divided doses with warm water after food.

· BalachaturbhadraChurna - 1-2 gm dose with honey two times a day

Dose of medicines in Children⁶:

Specific Dose calculation: Child dose = (Adult Dose /16) X Age of Child.

· Above 15 years - Adult dose

· Between 10-15 years - ¾ of Adult dose

· Between 5-10 years - ½ of Adult dose

· Below 5 years - ¼ of Adult dose

GERIATRIC PATIENTS⁶:

· ChayvanaprashaAvaleha - 10 - 12 gm twice daily with warm milk.

· Ashwagandha Avaleha - 10 - 12 gm twice daily with warm milk.

· Brahma Rasayana - 10 - 12 gm twice daily with warm milk.

· Daily use of Milk with Ghee (cup of milk with a teaspoon of ghee)

· Shilajeet Rasayana, Khadiradi Rasayana, Shatavari Siddha Ghrita.

GROUP 4: Post treatment restorative healthcare.

According to Ayurveda, there will be Dhatu-Kshaya & Agnimandya Avastha for Post COVID 19 infection⁶.

Hence, Dhatuposhana and Rasayanasevana with drugs like Draksha (*Vitis vinifera* L.) & Vasa (*Justicia adhatoda* L.) for at-least 45 days and to combat the residual effects of the virus on the body – Vishagnachikitsa with Shirisha (*Albizialebeck* (L.) Benth.) or Haridrachurna (*Curcuma longa*) are suggested after clinical recovery⁶.

For diarrhoea, vomiting or loss of appetite - Deepana Pachana drugs like Shadanga Paneeya may be used in case of Diarrhoea, vomiting or loss of appetite⁶.

For Fecal shedding - Kriminashaka therapy with Vidanga Churna, Vilwadigutika, Neelithulasyadi Kashayam may be used.⁶

These are the medications can be used under the supervision of a qualified ayurvedic physician⁶:

INITIAL STAGE:

· INDUKANTHAM KASHAYAM 15ml + 45 ml warm water twice before food 2 along with MAHASUDARSHAN GHAN VATI twice before food OR AMRITARISHTAM - 15 - 20 ml with equal quantity warm water twice after food along with AGNITUNDI VATI 01 Tab BID with Lukewarm water⁶.

· Once Agni - Digestive capacity is regained - INDUKANTAM GHRITAM 10 - 12 gm twice daily whenever hungry. Rasayana and other immune boosting drugs in group 1 can be also be utilized judiciously as per the discretion⁶.

RASAYANA:

· DRAKSHARISHTA 15 - 20 ml thrice a day with equal volume of water after meal or

DRAKSHADI LEHA 10 - 12gm thrice a day 1 hour before meal (Draksha is having specific potential to

rejuvenate lungs) OR

· VASAVALEHA/ KANTAKARYAVLEHA - 10 - 12 gm thrice a day 1 hour before meal (Vasa/kantakari is a very useful drug for jvara, kasa, pitta vriddha conditions; so it would be helpful in removing the residual khavaigunya in srotasas)⁶.

· CHYAWANPRASH 10 - 12 gm/ ASHWAGANDHA LEHA 10 - 12 gm thrice a day before meal VARDHAMANA PIPPALI RASAYANA, VASANTA KALPA⁶.

DURATION OF INTAKE OF MEDICINES:

The above said medications alike Dhatu Poshana and Rasayana be provided for a time period of 45 days as per the discretion of physician Other groups of drugs which are protective in nature can be provided for 45-60 days as per discretion of the practitioner⁶.

DIET:

· Chew a piece of ginger with a pinch of rock salt (Lavanadrak) 15 to 20 minutes before food it helps to improves the appetite.

· Easy digesting foods like Tarpanalajasaktu (powder of roasted grains) mixed with honey, sugar and fruit juices, moong dal or lentil, Soups of vegetables, Meat soup, Khichadi of rice and mung dal (Green Gram), Phulka with cow's ghee, Vegetables like gheya, turai, bhindi, sitaphal etc. should be taken⁶.

· Spices like jeera, black pepper, garlic, coriander, ginger, Ajwain should be used in cooking⁶.

YOGA:

Yoga may play important role in the psychological care and rehabilitation of COVID-19 patients in quarantine and isolation⁷. They are particularly useful to avoid their fears and anxiety⁷.

Forty-Five-minute module: The Common Yoga Protocol of IDY that was developed by a team of leading Yoga experts / Yoga Masters include safe practices to improve physical, mental, emotional and spiritual health⁷. Regular practice on empty stomach is recommended to improve immune response⁷.

ASANAS include:

Tadasana (The Palm tree posture), Vrikshasana (The Tree posture), Pada-hastasana (The Hands to the feet posture), ArdhaChakrasana (The Half wheel posture), Trikonasana (The Triangle posture), Bhadrasana (The Firm/auspicious posture), Vajrasana (The Thunderbolt/diamond posture) ArdhaUshtrasana (The Half camel posture), Ushtrasana (The Camel posture), Sasakasana (The Hare posture), UtthanaMandukasana (The Stretched up-frog posture), Vakrasana (The Seated twist posture), Makarasana (The Crocodile posture), Bhujangasana (The Cobra posture) Shalabhasana (The Locust posture), Setubandhasana (The Bridge posture) Utthanapadasana (The Raised leg posture) 0.5 ArdhaHalasana (The Half plough posture) 0.5 back PawanaMuktasana (The Wind releasing posture) 2 Shavasana (The Corpse posture) Kaphalabhati (The Shining skull practice) Pranayama AnulomaViloma Pranayama (The Alternate nostril breathing Ujjayee Pranayama (The Hissing breathing) (Bhramari Pranayama) (BhramariRechaka) The Bee sound breathing and meditation⁷.

Twenty and ten minutes modules are recommended for children, adults, Youths and the elderly population to be repeated twice a day (morning and evening).

20 MINS module ASANAS include:

- Tadasana (The Palm tree posture)- 1 minute⁷.
- PadaHatasana (The Hands to the feet posture)/ ArdhaChakrāsana (The Half wheel posture) - 2 minutes⁷.
- Trikonāsana (The Triangle posture), Bhadrāsana (The Firm/Auspicious posture) - 1 minute⁷. ArdhaUshtrāsana (The Half camel posture) 1 minute Sasakāsana (The Hare posture) 1 minute⁷.
- Vagrāsana (The Seated twist posture), Bhujangāsana (The Cobra posture), PawanaMuktāsana (The Wind releasing posture), Kaphalabhati (The Shining skull practice) - 1 rounds, 30 cycles each⁷.
- AnulomaViloma Pranayama (The Alternate nostril breathing) (5 rounds) - 2 minutes⁷.
- BhramariPranayama (BhramariRechaka) (The Bee sound breathing) (3 rounds) and meditation⁷.

10 MINS module ASANAS include:

- Tadāsana (The Palm tree posture)- 1 minute⁷.
- ArdhaChakrāsana (The Half wheel posture), Sasakāsana (The Hare posture), Bhujangāsana (The Cobra posture), PawanaMuktāsana (The Wind releasing posture), (AnulomaViloma /Nadiswhodhana Pranayama) The Alternate nostril breathing (2 rounds) and meditation⁷.
- Apart from CYP; Jalaneti, Sutrani and Bhastrika Kriyas are advised once or twice in a week and Yoga nidra for 20-30 minutes twice or thrice a week⁷.

UNANI:

Unani Medicine recognizes the influence of surroundings and ecological conditions on the state of health of human being⁸. As per Unani, improving our immunity with immune boosters is one of the major key approaches for maintenance of health and prevention of disease⁸.

ANTI-VIRALS:

These are the medications can be used under the supervision of a qualified Unani physician⁸.

- Kalonji (Nigella sativa): 1-2 gm,
- Seer (Allium sativum): 2-3 gm,
- Zanjabeel (Zingiber officinale): 5 gm,
- Aslassus (Glycyrrhiza glabra): 5-10 gm,
- Afsanteen (Artemisia absinthium): 3-5 gm.
- Tukhm-e-Kasoos (Cuscutareflexa): 15 gm (seeds),
- Khayarshamber (Cassia fistula): 10-20 gm (pulp) for gargle,
- Gilo (Tinosporacordifolia): 5-10 gm.

Immunity Enhancers:

- KhameeraMarwareed: 3-5 g (Not advised for diabetics)⁸,
- Asgandh (Safoof): 5 g⁸.

SYMPTOM SPECIFIC APPROACH:

DRY COUGH:

- Habb-e-Surfa (125-250 mg)⁸,
- Khamira-e-Banafsha (10-20 gm) (Not advised for diabetics)⁸,
- Laooq-e-Sapistan (10-20 gm) (Not recommended for diabetics)⁸,
- Sharbat-e-Sadr (20-40 ml) (Not recommended for diabetics)⁸.

HIGH FEVER:

- Habb-e-Bukhar (250-500 mg)⁸,
- Habb-e-Mubarak (1-2 gm)⁸.

SORE THROAT:

Sharbat-e-Toot Siyah (20-40 ml) (Not advised for diabetics)⁸.

BREATHING DIFFICULTY:

Laooq-e-Katan (10-20 gm) (Not advised for diabetics)⁸,

Habb-e-Hindi Zeeqi (125-250 mg)⁸.

STRESS:

Stress relieving measures are equally necessary to follow. Certain Unani drugs like Sa'dKoofi

(Cyperusrotundus), OodSaleeb (Paeonia emodi)and Jadwar (Delphinium denudatum)may be helpful⁸.

FUMIGATION:

Fumigation (Bakhoor) of the house at frequent intervals with combination of Sandal (Santalum album) and Kafoor (Cinnamomumcamphora)⁸.


SIDDHA⁹:

These are the medications can be used under the supervision of a qualified siddha physician⁹:

ANTI-VIRALS:

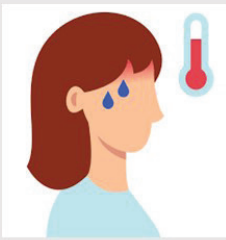
- Kaba Sura Kudineer - 60 ml twice a day after food⁹,
- NilaVembuKudineer- 60 ml twice a day after food⁹,
- Visha Sura Kudineer- 60 ml Twice a day after food⁹,
- PavalaParpam -100 mg twice a day with Honey⁹,
- Velliparpam - 50 to 100 mg twice a day with Honey⁹.

INTERVENTIONS FOR MILD- MODERATE SYMPTOMS:



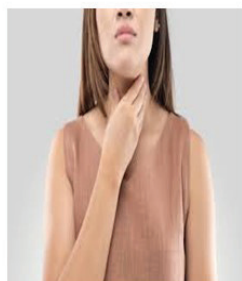
INTERVENTION:	PAEDIATRIC AGE (<5YRS)	PAEDIATRIC AGE (5-12 YRS)	ADOLESCENT (13-18 YRS)	ADULT (19-65 YRS)	GERIATRIC (>65 YRS)
Kaba Sura Kudineer	5 ml	10ml	30ml	60-90 ml	60ml
Adathodai Manapagu	2ml	5ml	10ml	10-20ml	10-15ml
Nellikkaillagam	1-2gm	3gm	5gm	5-10gm	5gm
VasanthaKusumakaram	-	1 Nos	1Nos	1-2Nos	1Nos

COUGH



INTERVENTION:	PAEDIATRIC AGE (<5YRS)	PAEDIATRIC AGE (5-12 YRS)	ADOLESCENT (13-18 YRS)	ADULT (19-65 YRS)	GERIATRIC (>65 YRS)
NilaVembu / Kaba Sura Kudineer	5ml	10ml	30ml	60-90ml	60ml
Bramananda Bairavam	-	1Nos	1Nos	1-2Nos	1Nos
Adathodai Manapagu	2ml	5ml	10ml	10-20ml	10-15ml
Thirithoda Mathirai	-	1Nos	1Nos	1-2Nos	1Nos

FEVER



INTERVENTION:	PAEDIATRIC AGE (<5YRS)	PAEDIATRIC AGE(5-12YRS)	ADOLESCENT (19-65 YRS)	ADULT (19-65YRS)	GERIATRIC (>65 YRS)
Thalisathi Vadagam	1/4Nos	1/2Nos	1/2Nos	1Nos	1Nos
Kaba Sura Kudineer	5ml	10ml	30ml	60-90ml	60ml
AdathodaiNei	1ml	5ml	10ml	10-15ml	5-10ml



INTERVENTION:	PAEDIATRIC AGE (<5YRS)	PAEDIATRIC AGE (5-12YRS)	ADOLESCENT (19-65 YRS)	ADULT (19-65YRS)	GERIATRIC (>65 YRS)
Nila vembu/kaba sura kudineer	5ml	10ml	30ml	60-90ml	60ml
Seenthil chooranam	200mg	500mg	1gm	1-2gm	1-2gm
Pachai karpooa mathirai	-	½ nos	1 nos	1-2nos	1 nos
Swasakudori	-	½ nos	1 nos	1-2nos	1 nos

ANTIVIRAL SIDDHA HERBS:

These are the medications can be used under the supervision of a qualified siddha physician⁹:

Inji (Zingiber officinale), Thulasi (Ocimum sanctum), Milaku (Piper nigrum), Karunjeerakam (Nigella sativa), Keezhanelli (Phyllanthus niruri),

Athimadhuram (Glycyrrhiza glabra) Vellaipoondu (Allium sativum), Cittramutti (Sidacordifolia), Seenthil (Tinosporacordifolia), Manjal (Curcuma longa) Elumitchai (Citrus limonia) , Vembu (Azadirachta indica)⁹.

Note: Antiviral activity of the above mentioned drugs and formulations against COVID 19 is not

established and not being claimed

HOMEOPATHY:

In case of epidemics or pandemics:

1st approach - Follow preventive measures and educate the people about general measures to do and to provide such interventions which will keep their immunity enhanced¹⁰.

2nd approach - Provide homoeopathic symptomatic mitigation to infected persons.

Homoeopathic medicines are also useful in the treatment of communicable diseases like Influenza, dengue, acute encephalitis syndrome¹⁰.

REMEDIES:

Mild Disease (Symptomatic Amelioration and Mitigation Approach): Medicines like Aconite napellus, Arsenicum album, Bryonia alba, Gelsemium sempervirens, Rhus tox. Eupatorium perfoliatum, Ipecacacunha, Belladonna, Camphora, may be used depending upon the symptoms similarities¹⁰.

NATUROPATHY:

Naturopathy is a system of lifestyle medicine that works in modulating these factors that improve body’s innate immunity¹¹. This may be useful in this current scenario where we are facing a Covid 19 pandemic¹¹. These are the medications can be used under the supervision of a qualified naturopathic physician¹¹:

SYMPTOMS:	MANAGEMENT:
Cold, Running nose, Nasal Congestion	Steam Inhalation with Tulsi, peppermint and Eucalyptus oil. Nasal Irrigation with warm saline water
Sore throat	Hot saline water gargle. Gargling with neem water and honey. Coriander and turmeric Kashayam with black pepper
Dry Cough	Ginger Kashayam with honey, cloves, cinnamon, turmeric and pepper for dry cough in milk
Fever	Cold chest pack, cold sponging for pyrexia
Malaise and Fatigue	Nutrition rich in Plant proteins, Natural Vitamin C, glucose and Vitamin D Lemon water with honey to boost immunity
Stress, Anxiety Depression	Aroma therapy with lavender, Basil or lemon grass oils (Inhalation/steam inhalation) and yoga and meditation for relaxation.
Headaches	Hot foot Immersion for headaches with cold compress on head (16), Aromatherapy with Tulsi or lavender oils.

Conclusion

Although modern medicine came over traditional medicine especially in developed countries, it is still being used widely by much of the population especially in developing countries. Although the ancient traditional medicine seriously lacks validation and standardization, but the increasing tilt of the society towards the alternative medicine source due to widespread increasing rate of chronic diseases as well as lack of modern allopathic medicine in treating various

infectious diseases due to antimicrobial resistance, has lead to various researches and studies which proves their efficacy and safety in various advanced clinical trials. Currently, there are limited number of allopathic medicines considered effective against COVID-19. The design and development of drugs and vaccines require elucidation of the mechanism of SARS-CoV-2. A lot of researches are being done to find the potential candidates from the conventional herbal pool which can prevent the spread and stop the effect of the virus.

Ethical Clearance – Not required since it is a review article

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