

Office of the Dean, Faculty of Ayurveda, IMS, BHU
13-5-19

To
The Secretary
Ministry of AYUSH, Govt of India

Through: Registrar, Banaras Hindu University

Sir,

It is in continuation to the recommendations of International seminar organized by us in collaboration with PSAIIF, QCI AND FICCI from April 27th to May 2nd on virtual platform. The recommendations of this seminar were named as “MAHAMANA DECLARATIONS ON PROMOTING AYUSH GLOBALLY”. A copy of that has already been sent your good self by Prof Bejon ~~Mishra~~, our consultant and co-organizer of this seminar.

Based on that, a committee of expert members of our Faculty was constituted and after thorough discussion on all the aspects of Astang Ayurveda, a guide line was prepared for qualified ayurvedic physicians to treat COVID patients. This “**draft of guideline for Ayurvedic Physicians**” is enclosed herewith for your kind perusal. It is further requested that it may be posted on your website on public domain for further comments and suggestions from subject-experts across the country. The suggestions from Ayurvedic physicians from public and private Institutions and also the private practicing Vaidyas of Ayurveda Maha Sammellan may be of great value in giving a final shape to this draft proposal.

You are further requested that based on suggestions from these experts, our guideline may be modified and a **National guideline may be issued** for all Ayurvedic physicians, so that they can give their services in precise and focused manner. It becomes more important, when it is expected that number of COVID-19 patients may increase significantly in the near future. The early steps, may be within a week, will be in the public interest at large.

With personal regards,

Yours Sincerely



(Prof Yamini Bhusan Tripathi)
Dean, faculty of Ayurveda, IMS, BHU

Copy to:
Vice Chancellor, BHU
All members of the committee
Prof Bejon Mishra, Consultant, IMS, BHU

**Guidelines for registered Ayurvedic physicians to treat
novel coronavirus, COVID-19 Patients**

https://new.bhu.ac.in/Site/NoticeDetail/1_52_1118_Faculty-of-Ayurveda-Home?3292



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Dear friends,

The management of patients of COVID-19 has separate guidelines as per conventional medicine. It has also been released by WHO and being followed all over the World. However different sets of alternative medicines, being practiced in different countries, as recognized system of health care, have their different principles and medicines. In India Ayurveda, an old and proven system of health care is covered under AYUSH ministry. Ayurveda is a science of life where advantageous and disadvantageous, happy and unhappy (states of) life along with what is good and bad for life, its measurement and life itself are described. It is in practice since centuries, known as “*Astanga Ayurveda*”, having 8 branches in different specialties. These are *kāyacikitsa*, *bālacikitsā* (*Kaumarbhritya*), *grahacikitsā* (*BhootVidya*), *śālākya tantra*, *śalya tantra*, *viśacikits* (*Agadtantra*), *rasāyana* and *vājīkaraṇa* (<http://namstp.ayush.gov.in/#/sat>). Regarding type of diseases, it could be *Nij* (indigenous), where pathogenesis starts within the body and then manifests as a disease and (2) *Agantuj* (exogenous), where the disease-symptoms get manifested then it disturbs all seven *dhatu*s results to other complications. The whole process is defined as *samprapti* (etio-pathogenesis), which has been further divided in to 6 stages (*shatkriyakal*). Thus for treatment it is important to know the stage of disease and then to decide the treatment, based on the genetic constitution (*prakrati*) and other factors of that person. This is now being defined as personal/customized medicine, in conventional system of health care. Regarding the aim of Ayurveda is to maintain the health of a healthy person and to treat a patient. स्वस्थस्य स्वास्थ्यरक्षणं आतुरस्यविकारप्रशमनं च ॥ (चरकसंहिता, सूत्रस्थान ३०२६/

Regarding treatment, four components have been described, who need to be properly educated and also trained for better success rate in treatment. These are (1) patient, (2) his attendant (Family members are paramedical staff), (3) physician and the (4) drug/procedures. When we talk of drug, then it includes both pharmacological and non-pharmacological approaches of treatment. The 2nd one is more important because it also includes diet and life style. Collectively, it has been described as 3 pillars of good health i.e (1) *aahara* (diet), (2) *Nidra* (sleep) and *brahmacharya* (code of conduct). The drugs include (1) animal products, (2) herbal products and (3) mineral products (*Rasa Aushadhi*), all in 5 types of *kalpanas* (formulations). Regarding health, it is described as maintenance of *ayu*, which consists of (1) *sharera*, (2) *indriya*, (3) *mana* and (4) *atma*. All the 4 have to be treated simultaneously to attain good health, which is wider than the WHO definition of health which is defined as: physical, mentally, socially and Spiritual wellbeing. For disease pathogenesis, 3 broad causes have been described, which are (1) *Asmatyaindriyasanjyoga*-असात्म्येन्द्रियार्थसंयोग (improper use of sense-organs), (2) *Pragyaparadha* - प्रज्ञापराध (knowingly doing wrong deeds) and (3) *Parinam*-परिणाम (time, place and season). Regarding treatment, there are 3 approaches, (1) *Daivyapasharya* (दैवव्यपाश्रय) (२) *Yuktivyapasharya* (युक्तिव्यपाश्रय), (३) *Satvavajaya* (सत्वावजय). All the three have their own importance and if applied together, can show wonders. However, in all the cases, the cause of disease must be removed at 1st stage. This also includes body purification, covering *langhan* and *panchkarma* therapy. Here in this document, the experts of *Astanga Ayurveda* have come together to debate on the etio-pathogenesis of COVID-19 and its line of treatment. They have divided the patients in to 3 groups (1) persons kept in quarantine, (2) positive cases and (3) patients discharged from the hospital (post treatment). The patients of 2nd group have also been divided in 3-stages as defined by ICMR guidelines. This is the 1st document of its kind where all the aspects of *Astanga ayurveda* have been considered in holistic manner for an adults, pregnant-women and also children. I am sure, a qualified Ayurvedic physician, having rights to treat any patient, under act of Parliament by following this guideline can successfully treat the COVID-19 patients. Although this approach is based on basic principles of Ayurveda, but it also needs scientific validation by interventional and observational clinical trial, which is only possible, if it is implemented practically by our learned Vaidyas and monitored by physicians of conventional medicine, under integrative approach, which is demand of time. I hope this document will prove to be a landmark to manage COVID-19.



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Preamble

Covid-19- pandemic-Indian perspective

COVID -19 is a pandemic condition caused due to novel coronavirus (2019-nCoV), now called as Severe Acute Respiratory Syndrome Corona Virus -2 (SARS CoV 2). Since the report of the first case of the COVID-19 pandemic in India on 30th January 2020, originating from China, the Ministry of Health and Family Welfare have confirmed a total of 52,952 cases, 15,267 recoveries (including 1 migration) and 1783 deaths in the country as on dated 07.05.2020[1]. Following Hon'ble Prime Minister Narendra Modi's repeated push to the AYUSH ministry guidelines, which suggest a range of home remedies to boost immunity, many states have started mass distribution of Ayurvedic medicines and homeopathy medicines as immunity boosters[2]. Recently, the AYUSH Ministry in collaboration with the Health Ministry has launched clinical trials on Ayurveda as prophylaxis to COVID-19. Hon'ble Health Minister, Dr. Harshvardhan has announced the clinical trial on Ayurvedic drugs as a prophylactic measure in high risk persons involved with COVID -19 and also its direct role to fight against corona virus. This historic step is a joint initiative of Ministry of AYUSH, Ministry of Health and family welfare and the Ministry of Science and Technology through Council of Scientific & Industrial Research (CSIR) with technical support of ICMR [3].

COVID-19- An Ayurvedic view:

Acharya Sushruta[4] has narrated that diseases do not develop without the involvement of doshas (Humours). Hence an intelligent physician should treat the unmentioned diseases as per the symptom produced by doshas (humours). As per Charaka samhita[5],[6], there are several diseases which are not described in the texts with names and such diseases are to be treated after examining the doshas (humours) and other factors involved in their manifestation. As per Ayurvedic classics, the present Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2) may be considered as an Aupasargika Roga (Communicable disease) which is pandemic in nature. The involvement of virus is the primary event in terms of Upasarga and this Aupsargika Roga affects the susceptible host in whom Vyadhikshamatva (immune strength) is already compromised followed by involvement of other bio-factors[7]. Acharya Dalhana[8] has clearly stated the involvement of kapha in sankramaka roga that spreads especially through nasal cavity

causing kasa (cough), swasa (shortness of breath/dyspnoea) pratishayaya (rhinorrhea) etc. So, without making a debate on to the nomenclature of the disease, the management of Aagantuja vikaara should be done on the lines of nijavikaara[9], with the assessment of the dosha, dushya, adhishthana, avastha involved, and accordingly the management of the COVID-19 may be done.

Causes:

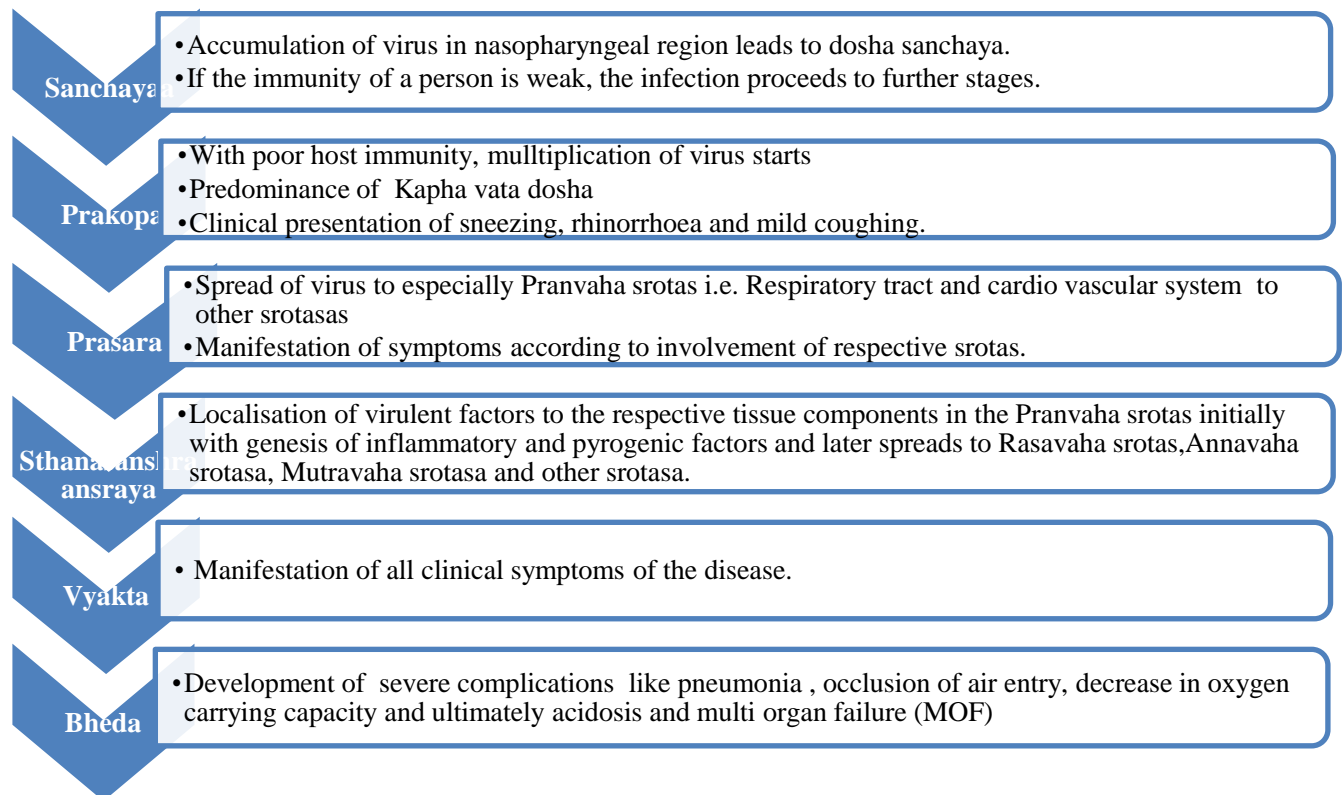
As of today infection with the new coronavirus (severe acute respiratory syndrome coronavirus 2, or SARS-CoV-2) causes coronavirus disease 2019 (COVID-19).The virus appears to spread easily from person to person among those in close contact (within about 6 feet, or 2 meters), respiratory droplets released when the infected person coughs, sneezes or talks, touches a surface with the virus on it and then touches his or her mouth, nose or eyes[10]. As per Ayurveda, this type of infection occurs due to Pragyaparadha (Intellectual blasphemy)[11], Asuchi[12] (Uncleanliness), Bhoota (afflictions of evil spirits)[13], Krimi (Microorganisms), close contact with the infected persons, consumption of denatured plants, polluted air and infected animals.

Pathogenesis of SARS-CoV-2, infection:

As per Ayurveda the Pathological probability of severe acute respiratory syndrome coronavirus 2 infection may be due to accumulation and aggravation of Kapha Vata (some opines that Vata Kapha) followed by involvement of Pitta within the Pranavaha srotasa. Later on, other srotasa viz. Rasavaha, Raktavaha, Annavaha srotas, Purishavaha srotas etc are also get affected. In this infection dushya are initially rasa and rakta (Components of blood) followed by the involvement of all other dhatus in the advanced condition. Due to mandagni (hypo functioning of bio-fire), there is a derange digestion and metabolic activities leading to development of Ama (undigested and improperly processed outcome of digestion and metabolism) causing the obstruction in the pranavaha srotas and bring abnormality in the Kapha-Vata dosha to a greater extent. Asymptomatic state (initial 1–2 days of infection) that is the sanchaya stage, the inhaled virus SARS-CoV-2 enters into the body. In the prakopa stage, it binds to epithelial cells in the nasal and buccal cavity producing symptoms like sneezing, rhinorrhoea, mild coughing. In this stage, replication starts and local propagation of the virus can be detected by nasal swabs. In the Prasara stage, the virus multiplication is further enhanced with spread causing the development of symptoms like fever, myalgia, malaise etc. In the next few days the virus propagates and migrates down the respiratory tract along the communicating airways and localizes there (sthanasamshraya). A complete or partial loss of the sense of smell (anosmia) has been reported

in few cases of COVID-19 in this stage. Once the infection localizes in the Pranavaha srotas (respiratory Tract), development of vyaktavastha of the disease takes place with the manifestation of symptoms like Fever, Cough, Myalgia, Fatigue, Headache, Sputum production, Diarrhea, Malaise, Shortness of breath/dyspnea and Respiratory distress etc. In this stage it will affect the other systems and large number of viral particles is released causing viremia affecting Gastro intestinal & urinary system as well. If proper care and therapeutics are not administered in the vyaktavastha it leads to the progression of next stage of the disease i.e. bhedavastha and produces complications like severe pneumonia, septic shock, acute respiratory distress syndrome (ARDS), and multiorgan failure, resulting in death.

Schematic representation of Upasarga of Virus followed by involvement of doshas



1. **Stage I**-First three stages of Shatkriyakala, viz. Sanchaya, Prakopa & Prasara, mentioned above, represents the incubation period of virus i.e. generally 2 -14 days, depending on the immune status of the host with predominance of Kapha & Vata dosha including pitta.

2. **Stage II**-It is the Sthana samshraya stage of Shatkriyakala, in this stage there is an amalgamation of dosha dushya in the pranavaha srotas leading to development of prodromal symptoms.

3. **Stage III**- This is the vyaktavastha stage of Shatkriyakala, and here stable clinical features associated with Tridosha are visualised. Depending on the immune status there will be an appearance of the complete symptoms or partial symptomatology.

4. **Stage IV-Bhedavastha** stage of Shatkriyakala, at this stage, dhatupaka and specific complications are visualized along with above constitutional symptoms based on Tridoshaja dominance as in case of

- **Kapha predominant Sannipata:** Acute Respiratory Distress Syndrome/Respiratory failure.
- **Vata predominant Sannipata:** Cardiac arrest, Cardiomyopathy, Myocardial infarction.
- **Pitta predominant Sannipata:** Alteration of Hepatic & Renal functions & finally leads to Hepato-renal syndrome and vascular coagulopathy.
- **Sannipata:** Multi organ failure (MOF) and finally death.

Samprapti ghataka (Component of Pathogenesis)

- **Nidana-** Aupsargika/Sankramaka/ Aagantuja nidan
- **Dosha-** Kapha-Vata - Pitta.
- **Dushya-** Primary – Rasa, Rakta & secondary involvement of other dhatus, malas and ultimately Ojas.
- **Srotas** –Pranavaha, Rasavaha, Raktavaha, Annavaha, Purishavaha.
- **Srotodusti Lakshana-** Atipravritti, Sangha and Vimargagamana
- **Udhhavasthana-**Nasa, Kantha,Uras.
- **Vyaktasthana** –Nasa, Kantha,Uras, Sarvasharira.
- **Agni-**Jatharagnimandya+ dhatvagnivaishamya
- **Swabhava-**Daruna and Aashukari
- **Prabhava-**Sadhya, Krichrasadhya or Asadhya depending upon Aturabala and Vyadhi bala.

Symptomatology of Covid-19 infection:

The signs and symptoms of COVID-19 infection varies from asymptomatic to symptomatic, depending upon immune power of a person and other associated co-morbid clinical conditions. It is categorized into given clinical forms ranging from mild forms to complications.

Mild Clinical presentation: This form includes the incubation period. In this stage majority of the patients exhibit Flue like symptoms such as

- Dry cough
- Running nose or stuffy nose
- Sneezing
- Sore throat
- Fever
- Headache
- Fatigue
- Chills
- Body ache

Signs and symptoms of COVID-19 may appear between 2 to 14 days after its exposure.

Moderate clinical presentation: The common signs and symptoms of COVID-19 infection is categorized into-

- Cough
- Fever
- Difficulty in breathing

Other symptoms may include:

- Tiredness
- Aches
- Chills
- Sore throat
- Loss of sense of smell
- Loss of taste sensation
- Headache

- Diarrhea
- Severe vomiting

Severe clinical presentation: People who are older or who have pre-existing co morbid clinical conditions, such as heart disease, lung disease, diabetes, severe obesity, chronic kidney or liver disease, or who have compromised immune systems may be at higher risk of serious illness. This is similar to what is seen with other respiratory illnesses, such as influenza. Along with cough and fever, following signs and symptoms seeks special attention and medical care and therapeutic intervention with immediate effect.

- Breathing difficulty
- Persistent chest pain
- State of confusion
- Blue lips or face
- Petechial hemorrhage and blister formation

Severe clinical presentation associated with Complications: Majority of patients with COVID-19 have mild to moderate symptoms. In some patients it may lead to sever forms and lead to death. Older adults or people with existing co-morbid conditions are at greater risk of becoming seriously ill with this disease. Following complications may be incorporated in COVID-19:

- Bilateral Pneumonia
- Respiratory failure
- Cardiac problems- Arrhythmia, MI, cardiomyopathy, Cardiac failure etc.
- Acute kidney injury
- Vascular-coagulopathy
- Chances of other viral and bacterial infections
- Multi organ failure leading to death

Ayurvedic Management of COVID-19

About 80% of COVID-19 cases present with mild symptoms requiring only primary medical care. Of the rest 20% cases, 15% require urgent medical attention at secondary health care centers. Remaining 5% are critical cases requiring an intensive care and hence require a transfer

to tertiary health care units equipped with ICU [14].Notwithstanding the fact that no system of medicine has any evidence-based treatment for COVID-19 as yet, clinical interventions are being done worldwide. Similar strategy is required to be implemented by Ayurveda system of medicine. Implementing proper intervention plan within AYUSH healthcare facilities by Ayurveda workforce may benefit the nation greatly. Here we propose the line of Ayurvedic management of COVID-19 on the following grounds-

1. Avoidance of the causative factors
2. Prophylactic management
3. Treatment of COVID-19 positive patients based on severity of the symptoms
4. Management of convalescence / avoidance of recurrence

Apart from that, in view of susceptibility of different population to the infection, the management may be planned. Holistic approach of Ayurveda in terms of Daivavyapashraya chikitsa and Sattvavajaya chikitsa for Confidence building and Yuktivyapashraya chikitsa[15]. with inclusion of three pillars of body i.e. Ahara (Dietary regimen), Nidra (Sleep behaviour) and Brahmacharya (abstinence) [16]may be used aiming at improvement of status of Agni (digestive enzymes), Ojas (boosting immune power), Improvement of Sattvabala i.e. Mental strength (Confidence building) and finally attainment of Dhatusamyata (maintenance of homeostasis). For Yukti vyapashraya chikitsa, Avasthiki chikitsa[17] and Harshini Chikitsa[18] as mentioned in kshaya roga; Ojovardhaka/Rasayana treatment; Krimigna drugs Vishanashaka treatment and shodhana treatment on the basis of Ayurvedic principles may be adopted.

Segmentation of subjects

Target Groups and their management principle

S. N.	Target groups	Treatment
1.	Target Group 1(A): Quarantine-Home/ general population	General Preventive measures
2.	Target Group 1(B): For Quarantine Centre	General Preventive measures
3.	Target Group 1(C): Health workers, Sanitation workers, Police cops, Media person	Extensive preventive measures (along with psychological counseling where ever required)

4.	Target Group 2(A): Asymptomatic COVID19 +ve cases	Ojovardhak Dravya (Immunity boosters) + Vishaghna dravya specific to viral infection. + Krimigna Drugs
5.	Target Group 2(B): COVID19 +ve Subjects with Mild symptoms	Curative and Symptomatic treatment and Mridu Virechana if required. *Annexure-I-for Shodhana procedure
6.	Target Group 2(c): COVID19 +ve Subjects with Moderate symptoms	Curative and Symptomatic treatment and Mridu Virechana if required. *Annexure-I-for Shodhana procedure
7.	Target Group 2(D): COVID19 +ve patients with comorbidity/Patients above 60 years of age.	Condition specific + Curative and Symptomatic treatment
8.	Target Group 2(E): Pregnant women and Children	As per Annexure-II and III
9.	Target Group 3: Post treatment restorative	Treatment for recovery and Rejuvenation, prevent recurrence

Ayurvedic Protocol

1. Target Group 1 (A):Quarantine -Home/ General population

Key symptoms: Nil

Key issues: May have features of Anxiety & stress

Aim of Ayurvedic Medicine and Therapy

I. Management of Anxiety and stress through :

- Counselling
- Education about disease and its management.
- To follow daily routine as per guidelines of Ayurveda.

- Good sanitary and sleep practices
- Diet should be healthy and balanced and at right time
- Exercise as per sharira bala and season
 - Yama, Niyama, Pranayama, Dhyana with Japa -Mantra chanting (according to one's own religion and belief)

II. General measures/Atura Bala vriddhi (Immunity Boosting) :

- Daily intake of Go-dugdha (cow milk), Go-ghrita (cow ghee) or medicated Ghrita.
- Intake of medicated drinking water –Shadanga paniya or drink made with Yavani, Lavanga, Pippali and Tulsi or administration of boiled luke warm water
- Daily intake of **Kwatha / Phanta** of Sunthi (Sonth), Dalchini, Maricha, Yavani, Guduchi, Parijata, Papita, Tulasi Trikatu etc.
- **Use of Single drugs:** Guduchi, Tulasi, Haridra, Haritaki, Manjistha, Amalaki, Ashwagandha, Yashtimadhu, Draksha, Kharjura etc. or herbs that possess Vishaghna, Krimighna, Rakshoghna and Bhutaghna action may be prescribed.
- **Use of Formulation:** Guduchi Ghana vati or Sanshamani vati, Chyavanprasha, Brahma rasayana, Amalaki Rasayana, Haritaki Rasayana etc.

III. Other measures

- **Dhoopan Karma (Fumigation):** Haridra, Ativisha, Haritaki, Badi-ela, Ela, Tagara, Kushtha, Priyangu, Loban, Laksha, Rakshoghna dhupana, or with Guggulu, Raal, Karpura, Jatamansi, Yavani etc as per the availability of the drugs.
- Use of **disinfectants** prepared out of Vishagna dravyas like Haridra, Nimba, Madayantika, Shirisha, Punarnava etc.
- Use of **sanitizers** prepared out of Vishagna dravyas like Haridra, Nimba, Madayantika, Koshataki, Shirisha, Punarnava, Ghritakumari, etc or with available drugs.
- **Kavala/Gandusha** with kwatha of Haridra, Vidanga, Patha, Manjishta, Ela, Brihati, Indravaruni, Tagara, Kushta, Triphala, Vasa, Kantakari, Shirisha etc as per availability of drugs. Yavakshara and lavana mixed with Ghee / taila or simple saline gargle may be used.
- **Nasya/ Pratimarsha Nasya** with Anutaila, Narikela taila, Sarshapa taila, Goghrita, Shadabindu taila, etc.

NOTE: Protocol mentioned in 1 (A) should also be followed in all other groups

2. Target Group 1(B): For Quarantine Centre

Key issues

- I. Patients having mild symptoms with history of Contact.
- II. Result of corona test still awaited.

Key Symptoms

- I. Anxiety & stress of being quarantined from normal life.
- II. May have mild symptoms of Flu.

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Same as 1 (A) with more emphasis on psychological counselling

3. Target Group 1(C): Health workers, Sanitation workers, Police cops, Media person

Key issues

- I. Persons are most vulnerable to get infected.
- II. Health workers are directly or indirectly in contact with corona positive patients.

Key Symptoms

- I. Asymptomatic

Aim of Ayurvedic Medicine and Therapy –

Same as 1 (A) with extensive preventive measures.

Single drug: Guduchi, Pippali, Tulsi, Haridra, Manjistha, Amalaki, Ashwagandha, Yashtimadhu etc.

Formulations: Guduchi ghan vati / Sanshamani vati, Bramha rasayana, Amalaki rasayana Shirishadi kwatha, Bilwadi gutika, Vyaghriharitaki, Vasaavleha etc.

4. Target Group 2(A): Asymptomatic COVID-19 +ve cases

Key issues

- I. Corona test positive.

Key Symptoms

- I. Patients with no symptoms.

Same as 1 (A) with more emphasis on psychological counseling

Single drug: Guduchi, Tulsi, Haridra, Manjistha, Ashwagandha, Yashtimadhu, Nimba, Bhumyamalaki, Mustaka, Kalamegha, Chirayata etc.

Formulations: Guduchighan vati or Sanshamani vati, Bramha rasayana, Shirishadi kwatha, Guduchyadi kwatha, Ashtadashang kwatha etc.

5. Target Group 2(B):COVID-19 +Ve Subjects with Mild symptoms

Key issues

- II. Corona test positive.
- III. Patients having mild symptoms.
- IV. May have features of Anxiety & stress

Key Symptoms

Varying from person to person including Common cold, Mild fever, headache, Dry cough, sore throat, Shortness of breath, Malaise /Body ache, Features of allergy

Aim of Ayurvedic Medicine and Therapy

Same as 1 (A) with symptomatic treatment

Shamana treatment

- **For Common cold** - Laxmivilasa rasa, Gojihwadi kwatha, Chitrakharitaki avaleha etc.
- **For Mild fever, headache** -Tribhuvankirti rasa, Godanti bhasma, Mahasudarshana Ghana vati, Godanti bhasma, Sanjeevani vati, Guduchi satva, Shankh bhasma, AYUSH-64 etc.
- **For Dry cough, Sore throat** –Sitopaladi churna, Vyoshadi vati, Sameerpannaga rasa, Mallasindura etc.
- **For Shortness of breath** - Vasa / Bharangyadi churna, Vasavleha /Drakshavaleha, Svaskuthar rasa, Kanakasava, Lavangadi vati, Yavakshara, Apamarga Kshara etc.
- **For Malaise/Bodyache-** Godanti bhashma, Ashwagandharishta, Balarishta, Vatavidhvansaka rasa etc.
- **For Features of allergy**-Sutashekhara rasa, Haridra khanda, Shirishadi Kwatha etc.
- **For Diarrhea** – -Kutajadi vishesha yoga, Kutaja GhanVati etc.
- **Other Ojovardhaka /Rasayana (immunity boosting formulations):** Rasa sindura, Swarna bhasma, Makardhwaja, Rasaraja rasa, Abhraka Bhasma etc.
- **Shodhana therapy***

It may be given for seven days, as per SOP regimen including Snehapana and Virechana karma.

6. Target Group 2(c): COVID19 +Ve Subjects with Moderate symptoms

Key issues

- I. Corona test positive.
- II. Patients having moderate symptoms.
- III. Anxiety & stress factor is more pronounced

Key Symptoms

Varying from person to person including Moderate/high fever, Productive cough, Moderate to severe dyspnoea

Aim of Ayurvedic Medicine and Therapy

Same as 1 (A) with symptomatic treatment

Shamana treatment

- **For Moderate/high fever:** Punravartaka kwatha, Putpakwa vishamajwarantaka lauha, SwarnaVasantamalti rasa, Mrityunjaya rasa, Guduchi satva, Amritarishta, Bilwadi gutika, Mallachandrodaya, Laghuamalini basanta rasa, Chaushatha prahari pippali, Parijata patra kwatha, Amritabhallataka, Punarnava mandura, AYUSH-64 etc.
- **For Productive cough** -Vyaghriharitaki, Kantakaryavaleha, Talishadi churna, Trikatu churna, Yashtimadhu ghana vati, Abhraka bhasma, Tankana bhasma/ Suddha Navasagara, Mallachandrodaya, Sringyadi churna etc.
- **For Moderate to severe dyspnoea** Swasakasachintamani rasa, Agastyaharitaki rasayana, Vyaghriharitaki rasayana, Chandramrita rasa / Shringarabhra rasa, Dashmoolkwatha+Pippalichurna(prakshepa) , Mallachandrodaya, Mallasindura, Swarna bhasma, Palashamuladi kwatha, Pushkarmula kwatha etc..

Shodhana therapy*

It should be given with Sadyah snehana and Virechana karma.

Other Ojovardhaka /Rasayana (immunity boosting formulations): Rasasindura, Swarna bhasma, Makaradhwaja, Abhraka Bhasma etc.

7. Target Group 2(D): COVID19 +ve patients with comorbidity/ Patients above 60 years of age

Key issues

- I. Corona test positive.
- II. Patients having moderate symptoms.
- III. Anxiety & stress factor is more pronounced
- IV. Presence of co morbidities viz. Hypertension, Diabetes mellitus, Obesity, CAD, Hepato-renal compromised status etc.
- V. While prescribing all preparations any untoward effects over co morbidities should be considered.

Key Symptoms

Varies from person to person including Moderate/high fever, Productive cough, Moderate to severe dyspnoea and specific symptoms of co morbid condition.

Aim of Ayurvedic Medicine and Therapy

- Same as 1 (A) with symptomatic treatment
- Treatment as per the protocol Target Group 2(C)
- Specific Treatment of co morbid conditions and consultation with the respective specialist
- Close monitoring of the clinical conditions and referral to the higher COVID -19 centers, if required.

8. Target Group 2(E):Pregnant women and Children

Annexed as annexure II and III

9. Target Group 3: Post treatment restorative healthcare

Key issues

- I. Corona test negative.
- II. Susceptible to recurrence.

Key Symptoms

- I. No symptoms
- II. Psychological impact is present.

Aim of Ayurvedic Medicine and Therapy

Same as 1 (A) with symptomatic treatment

- Dooshivishari gutika, Guduchi ghan vati or Sanshamani vati, Chyavanaprasha etc.
- Samshodhan chikitsa as per expert advice.
- Symptomatic treatment if required

Other Ojovardhaka /Rasayana (immunity boosting formulations): Rasasindura, Swarna bhasma, Makardwaja etc.

Note:

- 1. Protocol should be followed under the guidance of registered Ayurvedic medical practitioners.**
- 2. General measures mentioned for prophylaxis in terms of ahara (dietary regimen) vihara (lifestyle management) and sadavritta should also be followed in treatment and convalescent phase.**
- 3. Dose should be based on individual and should be based on Kala, Agni, Vayah, Bala, Prakriti, Dosh, Desha etc.[19]**

*** Annexure-I-for Shodhana procedure**

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PLAN OF SHODHANA CHIKITSA FOR COVID-19 PATIENTS

Method of Shodhana therapy for Mild cases:

Schedule for Shodhan therapy, before Shamana treatment.

1. **Deepana-pachana-** (1 day) With Trikatu powder 2 gm BD, before meal and Chitrakadi vati 2 tab BD after meal with warm water.
2. **Snehapana-** (4 days) Vasa ghrita/ Cow ghee with warm water in increasing manner from 50 ml to 200 ml per day and ensure for proper symptoms of Snehapana.
3. **Svedana karma-**(1 day) Niragni methods of Svedana, like Guru Pravarana (Blanket), Vyayama (Exercise), Atap sevan (Sun bath) etc.
4. **Virechana karma-** On 7th day in the morning, Virechan drugs (Trivrit leham) 50 gm will be advised with warm water, to induce diarrhoea. After proper signs of Virechan karma (Gut cleaning) rice gruel for lunch and rice porridge with Yusha for dinner will be given.
5. **Follow up-** Thereafter, conservative treatment is given with light diet.

Method of Shodhan therapy for Moderate cases:

As the doshas are flourishing very fast, Shodhana therapy will be done for short duration with utmost caution

1. **Sadyah Sneha- (1 day)**

Administration of sneha (Medicated and non-medicated) is done for only one day in combination with dietary preparations. It is indicated in Bala, Vriddha and those who cannot perform parihara kramas of Acchapanana, but require shodhana therapies.

Preparation and administration of peya-

Rice 100 gms cooked with 1500 ml of water in a vessel and added with ghrita (50-100 gm) and Saindhava lavana (2to5gm). Patient should be given hot peya and advised to take before it cools down. Observe the symptoms of proper Snehapana.

2. **Svedana- (1 day)** Patient is advised for rest overnight and has to undergo for Niragni sveda methods like Guru pravaraana (Blanket), Vyayama (Exercise), Atapa sevana (Sun bath) etc. for one day only.

3. **Virechana karma- (1 day)** On 3rd day morning Virechana drugs (Trivrit leham) 50 gm will be advised with warm water, to induce diarrhoea. After proper signs of Virechan karma (Gut cleaning) give him or her rice gruel for lunch and rice porridge with Yusha for dinner.
4. **Follow up**-Thereafter; conservative treatment is given with light diet.

ANNEXURE II

MANAGEMENT OF COVID-19 DURING PREGNANCY

Pregnancy is a physiological state in which biochemical and behavioural changes take place. During pregnancy, pregnant woman should be treated as pot filled with oil¹ because of less immunity and changes in her body. There is no difference in Physical and psychological disorders of pregnant woman and other individual because of same doshas and dushyas in both, but treatment modalities are different during pregnancy than other common adults. The course of COVID-19 infection or any other infection in pregnant women is similar that of common individuals. Due to immunocompromised status and adaptive changes during pregnancy, pregnant women are more susceptible to major symptoms (cough, hyperthermia, pneumonia, other respiratory infections, headache, muscular pain , malaise etc.) of COVID-19 than general population. In some cases, acute respiratory infection and hyperthermia can lead to birth complication i.e preterm labour, premature rupture of membranes, abnormal heart pattern in both mother and foetus² . Pregnant women with heart disease, hypertension, diabetes, severe asthma, severe anaemia, excessive uterine distension due to multiple gestation and severe polyhydramnios³, are at higher risk for COVID-19. Pregnant women who are hospitalized, additional foeto-maternal issues should be monitored ,i.e. fetal monitoring, monitoring for preterm labour, maternal oxygen level and monitoring of venous thrombo-embolism and its prophylaxis^{4,5}.The potential risk of vertical transmission is unclear⁶.

Management of COVID-19:

- Moderate and severe symptomatic pregnant women need emergency treatment. Hence, an ayurvedic management should be done only in those women who are stable or negative for SARS -COV-2 test after taken emergency treatment. The management and fetal safety are major concern. Thus, integrated approach supports the pregnant woman during her prenatal period.

- A detailed description of ahara and vihara of garbhini is mentioned under the Garbhini Paricharya in the Ayurvedic classics involving the do's and dont's for a pregnant lady. All these have to be strictly emphasised by a pregnant woman with COVID-19.

Preventive measures for all healthy, asymptomatic and mild symptomatic pregnant women:

Life Style modification (DO's- Pathya Vihar)

- Pregnant woman should be cheerful and divout with positive thinking.
- Avoid those people who are sick or who have been exposed to the corona virus and avoid touching of eyes,nose and mouth.
- Use of clean disposable mask/ cloth mask or layered cloth to cover the mouth and nose. After using wash the cloth mask or layered cloth daily and dipped it into boiled water of haridra (haldi), neem leaves and then dry it.
- Maintaining of social distance (at least 6 feet) and clean, disinfect frequently touched surfaces.

Personal hygiene (Shuchyalankrita)^{7,8}:

- Proper cleaning of hands with neem soap, paste of aloe vera (ghrita kumari) gel, haridra (haldi), nimb (neem) leaves and wash with running water.
- Daily bath with cooled or slightly warm decoction of haldi, neem and rose petals. She should wear clean, loose, light coloured cotton clothes.
- Dental hygiene should be maintained with herbal tooth paste or cleaning with rock salt and mustard oil .Oral / Throat hygiene should be maintained with gargles of hot saline decoctions of tulsi/ neem/ guduchi (giloy)/ pippali/ khadira.
- Good posture during sitting and standing position and she should take sound sleep at least 8 hours at night and 2 hours rest at day time on soft, regular and comfortable mattress.
- Reading of holy books, literatures of great people ,worship and listening of soft music.
- Timely bowel and urinal habits.
- Residence of pregnant woman should be ventilated and fumigated (dhoopan karma) with yava (Jau- Hordeum vulgare), Guggulu (Commiphora mukul), Sarshap beeja (Brassica campestris), Ajwain (Hyoscyamus niger), Haldi (Curcuma longa), Neem leaves, Saral (cheer- Pinus roxburghii) and Ghrita .

- Aerobic Exercises and Deep Breathing*

*If any pain in chest or breathlessness is felt during deep breathing, consult to doctor immediately.

Isolation⁹

- Pregnant patient with an epidemiologic history of contact with a person with confirmed, probable, or suspected COVID-19 should be self- isolated upto incubation period of 14 days for monitoring of symptoms and testing should be performed. If pregnant patient is found positive for SARS COV-2 and remain asymptomatic, she can continue isolation for 7 days after the date of their 1st positive SARS COV-2 test. Further evaluation and management of patient who become symptomatic depend on illness severity and her clinical status.

Don'ts (Apathya Vihara)¹⁰,

- Visit in crowded places and friends, family gathering and travelling on jerky, speeding vehicles and broken, rough roads should be avoided.
- Violent, extreme activities and high heeled shoes.
- Sleeping in day, awakening in night and suppression of natural urges.
- Smoking, use of alcohol, sedatives and self medication.
- Coitus should be avoided strictly in cases of recurrent pregnancy loss/ abortions, previous preterm deliveries, low lying placenta and in any vaginal infection.

Do's and Don't for working pregnant women:

- Follow all the above preventive measures.
- Prefer work from home ,take intermittent rest during working hours and change of posture or walk for 5-10 minutes after every 2 hours and avoid stress full and excessive work .
- Take heavy breakfast daily before leaving the home and lunch box should be packed .

Dietary regimen (Ahara) for all healthy pregnant women, asymptomatic and mild symptomatic pregnant women with COVID-19 infection:

According to satmya and agni (digestive power) of garbhini, the diet should be frequent liquid, semisolid, sweet, congenial, nutritious and pleasant to heart and mind..A wholesome diet leads to pratiraksha abhivrriddhi (immunity booster), stanya nirmana (formation of breast milk), Garbh

vikas (development of fetus) and garbhini poshan (nourishment to pregnant woman).

Requirements of calories for pregnant woman: A pregnant woman of normal weight should consume an additional 300 kcal/day. Total calorie intake varies based on BMI, but the average recommendation is 2500 kcal/day.

Pathya Ahara (Wholesome dietary regimen)

Choice of meal in early morning (6-7 AM), mid morning (8-9 AM), evening (3-4 PM) and late evening (5-6 PM):

- Herbal tea with mint (pudina), Adrak (ginger) / Coconut water, Shikanji, fresh fruit juice. Mudag yush (mung beans soup) or vegetable soup with 1tsf of butter.
- Cow's milk and milk products i.e. pudding (sweet kheer) of rice or ragi/ halwa of wheat flour or suji /daliya of crushed wheat & Parched paddy (laja) with ghee, laja mand (Parched paddy's starch)
- Seasonal Fruits and Dry fruits (soaked) in numbers , i.e. Almond (2-3), walnut (1), fig (3-4), Black raisins (3-4) , Dates or Chuhara (2).

Regular lunch(12 noon-1 PM) and dinner (8-9 PM), Quantity in each :

- Mung khichadi (1 katori, 60-70 gm) / Rice (1 katori, 60-70 gm) / Roti or chapati (2 in nos.), Dal (1 katori 30-40 gm), green vegetables (½ or ¾ cup, 100-150 gm, Butter milk (½ or ¾ cup, 100-150 ml), coriander chutney (1tsf,5gm), Fresh Salad (9-10 slices) of carrot, tomato, cucumber and lemon (1/2 or 1) etc. In 5th to 9th months- Preference should be given to protein and minerals rich diet i.e. soya- milk/ paneer/ cheese /tofu/ rajma/ black gram and eggs, meat (in non-vegetarian pregnant woman)

Bed time (2 hours before sleep)

- Milk (1 cup, 200ml) with 5 gm jaggery.

Note- Pregnant women who are suffering from diabetes, should avoid sweet food articles.

Apathya Ahara¹¹ (Harmful effects on mother and foetus):

- Fasting (upvaas) for a long time and excessive and frequent eating.
- Excessive tea, coffee and cold drinks.
- Excessive sweet, spicy, oily, sour, salty, bitter, pungent and stale, heavy, vishtambhi (hard to digest), fermented , fast or junk foods .
- Clay, garlic, surana (jimikand), and excessive use of onion, radish, papaya etc. and excessive meat or meat soup.

Aushadh (Safe and easily available ayurvedic drugs) for all healthy pregnant women, asymptomatic and mild symptomatic pregnant women with COVID-19 infection:

Aushadhis (Ayurvedic drugs) should have immunoboosting, kaphvata-shamak, kaphanissarak (mucolytic), deepan –pachan (appetizing and carminatives) , mutral (diuretic), Branhan (anabolic), krimighn or jantughn (antiviral, antiseptic, antimicrobial), shothhar (anti-inflammatory), vedna har (analgesic), jwaraghn (antipyretic) properties.

Hence, so many drugs may be helpful to increase the immunity, maintenance of pregnancy and relief in mild symptoms of COVID-19 and also. These drugs should be used only after consultation of an ayurvedic physician.

- Gargles with lukewarm decoction of neem patra (*Azadirachta indica*), haridra (*Curcuma longa*) Tulsi (*Ocimum Sanctum*) and saindhav lavan (rock salt).
- Lavangadi vati 250 mg to be chewed 6 hrly .
- Sitopladi churna 3gm with honey in morning and evening
- Decoction of Guduchi (*Tinospora cordifolia*) and jaggery 10-20 ml twice in a day.
- Nimba kalka with jaggery/sugar , 5 gm twice in a day.
- Patol (parval rich in nutrients and best drug for fever) patra swaras 10 ml twice in a day
- Madhuyashti* churna 3gm twice in a day ,mixed with honey and sugar

*** Madhuyashti should not be used in those pregnant women who have gestational hypertension, oedema .**

❖ **Shatavari^{12,13}(*Asparagus racemosus*) From 1st to 9th months**

- Shatavari powder, 3-6 gm / Shatavari rasayan 10 gm with milk/ goghrita, twice in a day.

❖ **Punarnava¹⁴. (*Boerhavia diffusa*) From 4th to 9th months**

- Punarnava mandur 250 mg , twice in a day
- Punarnava kwath (decoction) 20-40 ml twice in a day (preferably in oedema, spasmodic pain in abdomen) .

❖ **Amalki or Dhatri (*Aanvla*)¹⁵ (*Embelia ribes*) From 4th to 9th months**

- Amalki powder (3-6 gm) with sugar and water /Murabba of Amalki (1 piece,) in a day.
- Dhatri lauh 250 mg twice in a day.

❖ **Draksha (munakka)¹⁶ (Vitis vinifera) From 1st to 9th months**

- Draksha avleh 10 gm/ Draksha ghrita 10 ml twice in a day.

❖ **Guduchi (giloy)^{17,18}(Tinospora cordifolia) in 1st to 9th months**

- Guduchi (Giloy, Tinospora cordifolia) swaras/ Medicated milk with guduchi or Guduchi rasayan 10 gm 10 ml twice in a day.
- Guduchi ghan vati / satva 250 mg twice in a day.

❖ **Gokshur¹⁹ (Tribulus terrestris) preferably in 6th month & 7th to 9th months as per requirement-**

- Gokshur powder 3gm twice in a day / Gokshur rasayan 5-10 gm twice in a day..

Preparations of Sudha varga:

- Praval pishti 125-250 mg twice in a day / Godanti bhasma 125-250 mg twice in a day / Mukta pishti/ muktashukti pishti 125-250 mg twice in a day.

Yogasanas :

Yogasanas should be done for proper oxygen supply, relieving mental and physical strain.

These should be done from 1st month to 9th months, preferably in morning on empty stomach.

- Lower limb relaxation- Padanguli naman, Gulph naman and Gulph chakra
- Upper limb relaxation- Mushtika bandhan, Mani bandh naman, Skandha chakra .
- Bhramari and Nadi shodhan pranayam
- Vajrasana, Shavasana and Meditation

Mantra Chanting:

- Chanting for 3-5 minutes according to their rituals.

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ANNEXURE III

AYURVEDIC MANAGEMENT OF COVID-19 IN CHILDREN

Upper respiratory tract infection (URTI) occurs commonly in children and is a major cause of mild morbidity and sometimes leads to a severe form of Pneumonia in some children who are generally immuno-compromised. Boosting immunity in children by increasing their Ojasa is the prime aim of the treatment by means of Rasayana, Nutrition, Yoga etc. But it should always be kept in our mind that children are different from adults in many ways; they have different choices, behaviors, and palatability problems in drug intake etc.

Measures to develop Immunity in children:

1. Swarnaprashana: (0 to 16 years)

Administration of a small amount of gold (in Bhasma form), ghrita and honey to children modulates the immunity and enhance their intellectual performance. Swarna bhasma should be given in a dose of 2mg to 15mg per day or per week or per month as required.

2. Yoga-Pranayam: (above 7 years)

Pranayama is "Control of Breath." Better oxygenation of our respiratory and nervous system leads to prevention of diseases, increases stamina in children, removal of toxins and provides energy.

3. Surya Namaskar (above 4 years)

It makes children healthier, focused and induces a positive attitude.

4. Sun Bath (all age group)

Sunrays have the potency to kill micro-organisms, boosts immunity pacifies diseases and supplies vitamin D. At least 1,000 different genes governing virtually every the tissue in the body are now thought to be regulated by 1,25-dihydroxyvitamin D₃ (1,25[OH]D), the active

form of the vitamin, including several involved in calcium metabolism and neuromuscular and immune system functioning. So, daily exposure of Sun is advocated for at least 15 to 20 minutes.

4. Desi Cow's Milk and Cow ghee (above 1 year)

Cows milk is very close to mother's milk and provides important nutrients including protein, carbohydrates, essential minerals and vitamins. Cow Milk contains nutrients like probiotics, vitamin D and immunoglobulin that boosts the immune system and in turn, reduces the risk of allergies. Cow Ghee has been used in Ayurveda in the treatment of many diseases and is an important vehicle for the delivery of drugs. It is called as Yogvahi, which increases the potency and efficacy of other drugs too.

5. Haldi Dhoodh {Golden milk}- (above 1year)

Haldi Dhoodh has anti-microbial, anti-allergic, anti-inflammatory, anti-cancerous and many other properties. Curcumin has the ability to neutralize free radicals and harmful chemicals, thereby provide immunity.

6. Tulsi kwath (all age group)

Tulsi kwath, made by Tulsi, Sunthi, Maricha and jaggery or sugar. Modern research has revealed that Tulsi has anti-bacterial, anti-viral and anti-fungal activities.

7. Raksha karma {protective measures}-(all age group)

Drugs like Sarshapa, Vacha, Lahsuna, Hingu, Karpura should be put in clothes and then tied over in the neck or hand. This has been used in our tradition for the safety of our children.

8.Chyavanprash: (above 2 years)

This is one of the best Rasayana that should be used in all children above 2 years to boost up their immunity or Bala. It is a rich source of Vitamin-C. Regular consumption of Chyavanprash significantly improves immunity, energy levels, physical fitness, strength, stamina and quality of life in children.

9. Sanitization: (above 2 year)

Children should be encouraged and given training for proper hand washing so that no organisms enter the body. Soap that contains Neem can also be used for hand washing.

So in a nutshell giving 5 yellow things to your child will boost energy and prepare them in fighting with infections along with other said regimens.

1. Suwarnaprashana

2. Sun bath.
3. Haldi Dhooth (Golden milk)
4. Desi Cow milk and ghee,
5. Suryanamaskar (yoga)

Treatment for mild symptoms:

Mild symptoms of COVID-19 in children:

It includes low grade fever, dry cough, fatigue, sore throat, irritability, reduced feeding.

It can be considered as vata-kaphaja vyadhi and may be treated with:

<u>Syrup</u>	<u>Churna</u>	<u>Vati</u>
<ol style="list-style-type: none"> 1. Haldi based syrup 2. Tulsi based Syrup 3. Madhuyasti based syrurp 4. Balchaturbadhra (Mustaka, Pippali, Ativisha, Karkatashringi). 	<ol style="list-style-type: none"> 1. Sitopladi churna + Madhuyasti churna 	<ol style="list-style-type: none"> 1. Giloyghan vati 2. Khadiradi vati 3. Sudarshana ghan vati

Moderate symptoms of COVID-19 :

It includes, Increased fever>101-102 chills, Deep cough, Bodyache, Muscle pain, Cold, Unwell feeling, Increased irritability, Decreased feeding, Vomiting, Crying.

Treatment:

Syrup mentioned for mild symptoms can be used in Moderate condition also with increase in doses.

<u>Churna</u>	<u>Vati</u>	<u>Kwatha</u>	<u>Rasaushadhi</u>
<ol style="list-style-type: none"> 1. Talishadi churna + Madhuyasti churna 2. Balchaturbhadr 	<ol style="list-style-type: none"> 1. Sanjeevanivati. 2. Sudarshanghan vati. 3. Giloy ghan vati 	<ol style="list-style-type: none"> 1. Shirisadi kwatha 2. Gojivadi kwatha 3. Aswagandhadi 	<ol style="list-style-type: none"> 1. Kumarkalyanka rasa 2. Swasakasachinta mani rasa with Ginger, garlic

a churna		ksheerapaka	and honey 3. Naradiya laxmivilasa rasa
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Nasya : Anu tail, coconut oil, mustard oil

Aasava: Arvindasava

Gargle: (above 8 years) Saline gargles or gargle of Haridra / Triphala churna are recommended in both mild and moderate cases.

Dose:

- **Churna:** 50mg to 100mg /kg/day in two to three divided doses
- **Syrup:** 0.5 to 2 ml/year starting with 2.5 ml from 1st year of child
- (Infants are been given even less amount of the syrup and children above 8 can be given tab or churna) {Dosing of syrup also depends upon the concentration of herbs in them.}
- **Vati:** 10 to 25 mg /kg/day in two divided doses (in small children below 8 years, Vati should be crushed and then mix with honey before use)
- **Rasausadhi:** 4 to 8 mg /kg/dose in two divided doses along with honey.
- **Kwatha:** 10 to 20 ml with sugar or jaggery.
- **Aasava:** 5 to 10ml per day

Note:

- All medication should be prescribed under the supervision of registered Ayurvedic practitioner.
- Medicines should be given with anupana of honey or as per requirement.
- If condition worsens or in case of severe symptoms they should directly be referred to COVID hospitals nearby.