



## IMPORTANCE OF PANCHAKARMA IN COVID-19 MANAGEMENT

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## ABSTRACT

Corona virus disease (COVID-19) is an infectious disease. Majority of persons who have infected with COVID 19 virus having mild to moderate symptoms and will recover without any medical attention, but some other cases have required emergency treatment. COVID is updated on a regular basis with new information. Although there is no specific treatment for COVID-19, but prevention, management, and supportive healthcare may help in the COVID-19. During and after COVID-19 illness patients may continue to report wide variety of signs and symptoms including fever fatigue, chronic cough, nasal congestion, body pain, sore throat, difficulty in breathing, loss of taste and smell. In *Ayurveda*, there are no direct references about COVID. On the basis of symptoms, it correlates with *Nava Jawara* or *Nava Pratishyaya*. Various *Panchakarma* procedures such as *Kavala*, *Gandusha*, *Nasya*, *Dhumapana*, Steam inhalation etc., can be used in the management of covid-19. These procedures are *kapha*, *vata hara* and removes *Srotorodha*. It opens the channels and improves digestive *Agni*. Herbal drugs are inhaled through the nostrils, absorbed by the blood vessels, and supplied to the nervous system. They have a

relaxing impact on the nerves, reducing stress. *Vaman*, gargle and *Dhumpan* etc., have effective in loss of taste, nasal congestion sore throat, difficulty in breathing etc.

**Keywords:** *Panchakarma*, COVID-19 Management

## INTRODUCTION

The SARS-CoV-2 virus causes Corona virus Disease [1]. It is crown shape, single-stranded RNA virus. [2] SARS-CoV-2 is a recently discovered virus that was discovered in Wuhan, China, in December 2019[3]. Corona virus Disease is a pandemic disease [4] when an infected person coughs, sneezes or speaks the virus can spread in healthy person [5]. *Panchakarma* is a branch of *Ayurvedic* Medicine that focuses on *Shodhan* therapies. There is no particular, effective therapy for COVID-19. In modern system of medicine, management of COVID-19 is supportive care, fluid therapy, oxygen support and prone positioning as needed, and medications to support other affected vital organs [6]. When treating COVID-19 with *Panchakarma*, we can plan it according to different *Kriyakaal* of the disease. Internally and externally medications can be use in *Panchakarma*. *Nasa*, *Karna*, *Akshi*, *basti*, *Twak*, *Mukha* etc. routes can be uses for drug administration.

### COVID 19 Treatments with Panchakarma

COVID 19 can be preventing by using various methods.

- Gargle with turmeric, salt, *Triphala* or *Yasthimadhu*, boiled water can be used.
- Nasal instillation, such as *Anutaila*, *Goghrita* especially before and after an outing.
- Inhale steam once or twice a day.
- Water boiled with ginger, coriander, for drinking.
- *Shodhana* could be a treatment for the host to treat the virus.

### The Role of Panchakarma in COVID Pathogenesis

#### Nasal epithelium:

*Pratimarsha nasya* with medicated oil like *Anu taila*, *Shadbindu Taila*, *Mahamasha Taila Goghrita* etc act as a barrier on the nasal epithelium [7]. *Sneihik* (*Vasa*, *Ghrita*), *Virechanika* (*Jyotishmati*, *agru*, *aprajita*)

and *Kasahara* (*Yasthimadhu*) *Dhumpan* also can be used to keep the virus out of the nasal epithelium [8].

#### Upper respiratory tract -

*Kaval* with warm oil or warm water added with a pinch of turmeric and salt. Water boiled with *Triphala* or *Yasthimadhu* can be used for gargling. It promotes dental hygiene and protects against subsequent infections. *Taila Gandusa* also beneficial for loss of smell. Steam inhalation and *Dhumpan* also helpful in symptom. It helps in the preservation of oral hygiene [9].

#### Lower Respiratory Tract:

*Deepan Pachan* drugs (*chitrkadi vati*, *sunthi Churna* etc.), *Snehapan* (*Go Ghrita* mixed with *Saindhav*, *Panchakola Churnan* etc. *Snigdha Sweda* (*taila*, *lawan*), *vaman* (*pipali saindhav*, *honey*), *Dhumapana* (*Jatamamsi Laksha*, *Manahsila*, *Devadaru*), *Mridu virecan*, *nasya* (*gharitm manda*, *saindhav*), *Asthamahadosha Virjaniya Bhava* (*Ucchabhasana*, *Rathakshoba*, *Atichankrama*, *Aatiyasana*, *Ajeerna* or *Adhyasana*, *Dwivaswapna*, *Ahitabhojana* and *Maithun*) *Pashchat karma* (*Peya*, *Vilepi*, *Yusha* etc.) mixed with medicines like *Surasadi* and *Vidarigandhadi ganas* (*Sati*, *Puskaramoola*, *Abhaya*, *Trikatu*, *Brihati*, *Kantakari*, *Tulasi* etc). These can be used to treat COVID 19's lower respiratory tract symptoms.

#### Categories of COVID-19

COVID-19 can be divided into two categories: A)

**COVID-19 with moderate symptoms:** COVID-19 patients with moderate symptoms the most frequent symptoms include fever, cough, chills, exhaustion, body aches, loss of smell, sore throat, shortness of breath, headache, and *diarrhoea* and rash on skin, red or irritated eyes etc. is Less common symptoms. In these condition patients can take food and medicines orally but, they usually present with tasteless-

ness, loss of appetite etc. we should choose a different route of drug administration, such as topical (*Lepa*), intra mucosal (*Kaval*, *Gndush*, *Anjan*, etc.), trans-dermal (*Abhyanga*, *Mardana*, etc.), per nasal (*Nasya*, *Dhumpaana*, etc.), per rectal (*Basti*) etc. Patients are recommended for proper rest and take lot of water and liquid diet. (B) **COVID-19 with severe symptoms:** COVID 19 people who are on oxygen or require ventilation support have trouble breathing, chest pain, and other symptoms. In this situation, other than oral administration, other routes of medication administration may be effective. Depending on the symptoms we should use topical, intra mucosal, trans-dermal, per nasal and rectal routes for medicine delivery in *Panchakarma* for serious patients.

#### **Panchakarma's Role in different Symptoms of COVID-19**

**Respiratory Tract symptoms:** *Snigdha Sweda*, *Nadi*, *Prastara*, *shannkar swedan* can be use with oil, mixed salt. This *Snigdha Sweda* dissolves granular and twisted *Kapha*. It is separate the *Kapha* from the *Srotas*. By removing obstructions, it relaxes channels and allows *Vata Dosha* to move freely<sup>[10]</sup>. *Aparajitha dhoompana*, *Kavala* or *gandusha* with lukewarm water mixed with *Saindhav Lavan* or other *Kwath* like *Khadira*, *Kshirivrikshas* (*Nyagrodha*, *Udumbara*) etc. It is having antiviral property and it helpful in the respiratory symptoms such as Sore throat, Dry/wet cough, breathing difficulty etc. *Vaman* with *pipali saindhav* honey can be use in COVID patients. The patient gets relief after the vitiated *Kapha* is removed and channels are made clear. Other *Deepan-Pachan* medicines, *Rasayana* and *Yavagu* for *Pranavaha Srota* can be used to treat COVID-19 respiratory symptoms. Steam inhalation can help COVID patients recover their sense of smell during or after treatment<sup>[11]</sup>

**G.I.T. symptoms-** *Deepan*, *Pachan*, *Langhan* drugs, *Gandusa* with *Irimedadi Taila*, Sesame, mustard, or sunflower oil can be used, or any other medicated oil can be used in case of loss of taste. It is clear nasal and oral route and decrease *Kapha* and avoids favorable conditions to get infection. *Manda*, *Peya*, *Vilepi*, and *Yavagu* improve *Agni*. It can be helping in GIT

symptoms such indigestion, loss of appetite, and constipation, Diarrhea<sup>[12]</sup>.

#### **Neuropsychological symptoms:**

Some patients have neuropsychological symptoms such as sleeplessness, restlessness, anxiety, depression, schizophrenia, mental retardation and so on. *Agni Deepan*, *pachan Shirodhara*, *Ksheera Dhara*, *Nasya*, *Karma*; *Kala*; *Yoga Basti*, *Shiro basti*, *Abhyang* etc. can be used in these symptoms.

#### **Cardiac condition:**

*Langan*, *pachan*, *virechan*, *pradeha*, *parisheka*, *Urah Basti*, *Lepa* with *Hridya drugs* (*Arjuna*, *Pushkarmoola*, *Lasuna*, *Amalaki* and *Jatamansi*) is helpful to the patients with cardiac symptoms in COVID-19.

#### **Musculoskeletal system:**

*Abhyanga*, *Swedana*, *Upanaha sweda*, *Greevas basti*, *Janu basti* etc. procedure are helpful in musculoskeletal symptoms like body ache, stiffness, Muscle pain etc.

**Hyper-pyrexia:** *Langhana*, *Shadang Paniya*, *Vamana* with *Mulethi fant*, *Yavagu* and *Manda Pana*. Milk boiled with *Panchmul*, Turmeric, ginger *Tulsi*, *Kalinalgaka*, *patola*, *kiratatikta*, *Guduchi*) etc used during the course of management of the COVID patient. *Tarpana*, *Danta Dhawana*, *Administration of light diet*, *Virechana* and *Basti*, *Nasya* in *Jwara*, *Abhyanga* (*Chandanadya Taila*, *Aguruvadya Taila*), *Dhumapana*, *Anjana*, *Niruha basti* *Snehabasti* *Shiro Virechana* etc can be use in fever.

#### **Fatigue:**

*Manda*, *Peya*, *Vilepi* and *Yavagu* with various *Shukadhanya* and *Simbidhanya* can help in weakness and pain in the different parts of body. In sever tiredness, *Abhyanga* *Svedana*, Medicated Enemas can be administered.

#### **Psychological symptoms:**

Isolation, Changes in daily routine, financial problems, lack of physical activity etc. common causes for psychological problems. These Symptoms noticed in the patients during or after COVID attack. Anxiety, loss of sleep, depression, poor appetite, tiredness, and gradual reduction in work output are common psychological symptoms and *Shirobhyanga*, *Shirodhara*, *Nasya*, *Anjan*, *Dumpan*, *Abhyanga*, *Pa-*

*dabhyanga*, and other procedures can be use in these symptoms. All of these methods reduce anxiety, decrease risk of a panic attack.

### **Panchakarma in Post COVID-19 symptoms –**

In Post COVID patients most common symptoms are tiredness, headache, dizziness, chest pain, shortness of breath, cough, joint or muscle pain, depression or anxiety, lack of concentration, Symptoms that get worse after physical or mental activities, Difficulty thinking or concentrating, Cough, headache, loss of smell or taste, Diarrhea, Sleep problems, Mood changes etc. According to *Ayurveda* concepts, there will be *Dusty of Agni*, *Pranavaha Srotas* and *Rasa Dhatu* which initiates formation of *Ama* which effects *Dhatvagni* by causing *Srotoavrodha* and *Dhatukshaya* in post COVID-19 symptoms. As a reason, *Deepan pachan*, *Shodhan* and *Dhatu Poshan*, *Samsarjana Krama* and *Asthamahadosha Varjaniya Bhava* may be helpful at this stage. For this, *Abhyanga*, *Samvahana*, *Sirodhara*, *Vaspa Sweda*, *Nasya*, *Kavala*, *dhumpan*, *Gandusha*, *kunjala*, *Basti*, *karan puran*, *Dant dhavan* should be used.

## **DISCUSSION**

### ***Vaspa Sweda***

It is a type of fomentation with medicated decoction. It is efficient in reducing viral load in the nasal cavity, which is the virus's major route of entry. Medicated decoctions help to stimulate oxygen flow throughout the body. 70°C to 80°C and above the unstable temperature for SARS-CoV-2<sup>[13]</sup>. Steam is a natural sweating process, which is essential for releasing accumulated toxins, improves ciliary functions, helps in decongestion and reduces the cough. Steam inhalation can be used as adjuvant therapy in the management of COVID-19. Heat in the steam destroyed the SARS-CoV-2 virion's protein capsid<sup>[14]</sup>. The *Ushna Guna* of *Swedana Karma* leads to stimulate the sympathetic nervous system & produces vasodilatation

### ***Nadi Swedan***

COVID-19 patient has suffering chest pain, cough, and difficulty in breathing. Patients also complain of muscle pain and Joint pain. *Nadi Swedan* relaxes skeletal muscles, Improves the process of blood cir-

ulation. It Acts as bronchodilator and helps in pain, breathing and cough<sup>[15]</sup>.

### ***Upanah***

*Upanah* should be prepared with leman, salt, *Jivanti*, *Kushta*, wheat; barley mixed with Oil etc. Action of the *Upanaha* depends on the drug, temperature, duration, and thickness of the applied paste etc. The sour or fermented materials used in the *Upanaha* application help to permeate the active principles from one layer to another. The acid character of liquids allows the active ingredients to permeate the skin for absorption. *Upanah Swedan* delivers local heat in a particular part for a specific time period and anti-inflammatory or strengthening effect based on the drug used<sup>[16]</sup>. It can be used in headache, chest pain, tightness of the chest, arthralgia, myelgia etc. conditions.

### ***Lepa***

*Lepa* with anti-inflammatory drugs like *sunthi*, Garlic, Turmeric, *Kushta* etc can be use in COVID and Post COVID patients. In *Ayurveda* application of *Ushna*, *Ruksha*, *Vata*, *Kapha nashak lepa* is reduce pain and swelling. Drugs are absorbed through the skin. *Lepa* should be used in the conditions like dry cough, breathing difficulty, chest and body ache, sinusitis, sore throat etc. The action of the *lepa* depends on the drug used for the application.

### ***Niragni Sweda***

*Niragni Swedan* helps in improving body metabolism and properly eliminating waste products, hence reducing various symptoms such as fever, anorexia body pain. These are *Vyayama* (Exercise), *Ushnasadana* (Residing in a warm chamber), *Gurupravaranam* (Wearing of heavy clothing), *Kshudha* (Hunger), *Bahupanam* (Excessive drinking), *Bhaya* (Fear), *Upanaha* (Application of poultice), *Krodha* (Enrangement), *Aahata* (Wresting), *Aatapa* (Exposure to sun's rays) etc.

### ***Murdhni Taila***

*Murdhni taila* is highly beneficial for the brain, sense organs, nerve. It controls *Vayu* and *Pitta* in the head<sup>[17]</sup>. It is both a prophylactic and curative measure. The brain and nervous system are responsible for all bodily activities. During or after the disease, many

COVID patients suffer psychological distress. *Murdhni Tailas* like *Sirobhyanga*, *Shiroseka*, *Siropicchu* and *Shirobasti* can be helpful in anxiety and stress management. According to *Acharya Charaka*, it keeps sense organ in healthy condition. In many situations, sleep disturbances are also visible. *Murdhni Taila* can induce good sleep and relieves stress.

#### **Nasya**

*Nasal Rhinase* clears viral colony at its initial stages of infection. Between the virus and the nasal epithelium, it acts as a barrier. *Nasya* with *Anutaila* (Anti-inflammatory, Anti-pyretic, Anti-viral properties) improves local immunity and fights viruses [18]. Different type of *Nasya* e.g., *Churna*, *Kneha*, *kvātha* etc. acts through various mechanisms i.e., by vascular and neural pathway in the body. It has local and systemic effects because it effects on higher brain areas that control various neurological, endocrine, and circulatory activities [19]. It helps with nasal congestion, headaches and other nasal problems.

#### **Kavala / Gandush**

In COVID-19 patients, gargling with antimicrobial/antiviral medicines (*Tankana Bhasma*, salt water, Turmeric water, *Triphala* powder) reduces intraoral viral load. Reduction in the viral replication through surface debridement could aid the better immune response in the Reducing viral replication through surface debridement may help patients have a better immune response and improve their overall symptoms of the COVID patients [20]. COVID-19 patients have the largest salivary viremia in the saliva swab sample in the first week; especially on the fourth day [21]. The severity of the disease is related to the load of SARS-CoV-2 RNA in the *Naso pharynx* [22]. Reducing the amount of virus in body tissue during the initial stages of infection may have a positive effect on the disease's outcome. Thus, gargling could be potentially useful in controlling the COVID-19 symptoms. Chloride ions in hypertonic saline water help to control virus replication and are used by cells to make hypochlorous acid to exert antiviral activity [23]. In COVID-19 patients, gargling acts as an early viral clearance method. In Post COVID treatment,

gargling with turmeric and salt is recommended [24]. *Gandusha* has been used to prevent decay, loss of appetite, bad taste, dirt and excess salivation from the mouth. Decoction of *Khadira*, *Kshirivrikshas* like *Nyagrodha*, *Udumbara* etc. may be used daily for *Kaval* [25].

#### **Urah Basti**

Chest pain, Tightness, a squeezing sensation, pressure in the chest, and compression in the chest region are very common complaints by COVID 19 patients. Recurring coughing reflex and inflammatory pathology in the lower respiratory tract create a spasm of the thoracic muscles. Subcutaneous absorption of drugs facilitates decrease the inflammatory responses. *UrahBasti* soothes the nerves supplying these organs, enhances local blood circulation and relieves muscle tension, relaxes and strengthens the local musculature, alleviates pain. Anti-inflammatory drugs can be use.

#### **Vaman**

In *Ayurveda* the disease may be correlated with *Nava-Jwara* or *Dushta-Pratishyaya* (nasal congestion) because of the symptoms is same [26]. For *Nava-Jwara* and *Pratishyaya*, *Vamana Karma* has been advised classically owing to the involvement of *Kapha Dosha*. It also gives some relief heaviness of abdomen, loss of appetite, nausea, abdominal, pain distension, belching.

#### **Rasayana**

*Rasayana* herbs are *Amla*, *Gduchi*, *Shatavari*, *Brahmi*, *Ashwagandha*, and others [27]. These drugs have immune modulation, restoration and rejuvenation of the body tissues. *Brahmarasayana*, *Amalak Rasayana*, *Chawanprash Rasayana* and *Vajikarana* medicines like *Madhuyasthi Yoga*, *Amalak Yoga*, *Pippali rasayana* etc. These are immune-modulator, Immuno-stimulant, Immuno-potentiating and good source of macro and micronutrients, acts as antioxidant [28].

#### **Dhoomapana**

Medicated smoke inhalation from the nose and mouth known as *Dhumapana*. *Dhumapana* is indicated nasal pathologies like heaviness in the head, headache, rhinitis, migraine, ear and eyes pain, cough, breathing



problems, obstruction of the throat, weakness of the teeth, discharge from the ear, nose and eyes, anorexia, lockjaw, worms, pallor of the face, mucoid discharge from the mouth, impaired voice. Medicated smoke inhalation reduces sneezing, excessive drowsiness, loss of consciousness and hypersomnia. *Shweta*, *Jyotishmati*, *Haritala*, *Manashila*, animal fat, ghee, *Harenuka*, *priyangu* and other aromatic drugs like *Aguru* etc can be used in *Dhumapana* [29]. Drugs which are *Katu-tikta rasa*, *Ushna virya* and *Vata-kapha shamaka* can be used in *Dhumapana Kalpa*. These drugs are having anti-inflammatory, analgesic, bronchodilator activity. The nasal cavity is protected by a thin mucosa. *Dhumapana* is best way for treating nasal pathologies in COVID patients [30].

#### **Samsarjana Krma**

*Peyadi Krama* is advised to the patients after *Panchakarma*. Its main goal is *Agni-Raksha*. *Agni* is considered as *Prana* in Ayurveda. *Samsarjana Krama* is the sequential diet regimen followed after *Panchakarma* [31]. After *Samshodhana* we can use *Samsarjana Krma* for normalizes the *Jatharagni*, *Vayu*, body tissues and nutrition. In case of COVID-19, plenty of water, high rich protein, vitamin and minerals are required. We can take Various *Yavagu* as per the need of the patient's complaints [32]. Balanced nutritious diet, with *Shadrasa* is helpful in increasing body immunity.

#### **Asthamahadosha Varjaniya Bhava**

In the pathogenesis of COVID-19, there is hyper expression of immune system. It is a crucial time in which proper rest is very important. *Astha Maha Doshakara Bhava* is mentioned in *Pashyad Karma* which should be avoided by the patients. These factors are *Uchabhasana*, *Rathakshoba*, *Atichankrama*, *Aatyasana*, *Ajeerna* or *Adhyasana*, *Athya Ahara Dwivaswapna*, *Ahitabhojana* and *Maithuna* [33]. Avoidance of these elements provides adequate physical and mental rest in COVID patient. Proper sleep and rest decrease the severity of disease.

## **CONCLUSION**

Indications and contraindications of any procedure are not final; Physician can decide it as per

the need of the disease and patient condition. In emergency situation *Panchakarma* can be performed in any season. Goal of treatment should be preventive and promotive in treating COVID patients. *Panchakarma* can be quite beneficial in both pre and post COVID 19 treatments. *Panchakarma* therapies can be administered independently and as a preoperative measure of *Rasayana* following workplace guidelines in the healthy individuals and in asymptomatic or mild symptomatic patients of COVID-19.

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