



Role of Panchakarma Modalities in Post Covid Complications

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Abstract

COVID-19 is a respiratory illness global epidemic caused by “Severe Acute Respiratory Syndrome Coronavirus 2”. It was a pandemic disease of recent outbreak which affected almost all age group worldwide. It was First detected in 2019 in Wuhan, China and quickly spread to the countries worldwide resulting in millions of deaths, affecting one’s Social, physical and mental health. Although, the fresh Corona virus Infections are decreasing in number but the Post Covid complications are still a major cause of worry. COVID-19 has resulted in prolonged illness and persistent symptoms, even in young adults and persons with no underlying medical conditions who were not hospitalized. The common post-COVID manifestations are Fatigue, *dyspnoea*, low-grade fever, cough, tastelessness, *anosmia*, chest pain, *myalgia*, and sleep and mental disturbances. Ayurveda and *Panchakarma* can certainly play a major role in treating the post covid complications. According to Ayurveda concepts, the symptoms of COVID-19 are similar to *Vatakapha pradhan Sannipataj Jwara* and there will be *Dhatu-Kshaya & Agnimandya Avastha* in Post-COVID 19 infections. Hence in this condition *Agnideepana, Amapachana, Shodhana (Panchakarma), Brimhana* and *Rasayana Chikitsa* is indicated. Panchakarma is a branch of Ayurvedic medicine that deals with both Purification and palliative care. It has different treatment modalities that can improve systemic illness and immunity as well as mental health, which can help with post covid Symptoms. Depending on the severity of the complications, we have recommended various Panchakarma therapies such as *Kavala, Nasya, Dhoompana, Shirodhara, Udvartana, Basti, Vamana, Virechana* etc as it will help in the management of the symptoms in a better way.

Keywords: Covid 19; Post Covid Complications; *Panchakarma*; *Ayurveda*

Introduction

COVID-19 is a respiratory illness global epidemic caused by “Severe Acute Respiratory Syndrome Coronavirus 2”, which was noticed in Wuhan, China, in 2019 following a respiratory illness outbreak [1]. Covid 19 pandemic has led

to a dramatic loss of human life worldwide. It has affected numerous countries physically, mentally, socially and financially and has further affected the day-to-day life of thousands of people. Although the vast majority of COVID-19 patients recover and return to normal health, some may experience symptoms for weeks and even months after the

acute illness has passed.

All over the world, medical professionals are alarmed by this new clinical condition. Some people may develop medical complications that can have an impact on their medical health, even if they are only minorly ill and are not admitted to the hospital. This Chronic State of declining health is referred to as "Post COVID Condition". Greenhalgh et al. first defined it as Acute COVID-19-associated sickness that lasts longer than 3 weeks after the onset and chronic COVID-19 if the symptoms last longer than 12 weeks after the onset of symptoms [2]. The rate of occurrence varies between 10% to 35% [3-4]. It's estimated that up to 20% of SARS-CoV-2 infected people will develop post-COVID syndrome [5]. Post-COVID signs and symptoms include fatigue, dyspnoea, Worsening of Asthma, Low-grade fever, cough, tastelessness, anosmia, chest discomfort, myalgia, and sleep and mental problems.

The exact cause of this Syndrome is Unknown. According to research, Chronic Inflammation appears to play a role in the aetiology of this disorder. The pathogenesis is multifaceted and involves multiple systems, but persistent inflammation, as well as immune-induced vascular dysfunction, thromboembolism, and nervous system dysfunction, all of which are linked to the disease's origin, play a key role. Recurrence or Reinfection, Inflammatory and other immunological reactions, viraemia caused by a low or non-existent antibody response, deconditioning, and mental factors such as post-traumatic stress disorder may all contribute to how long some patients take to recover.

In *Ayurveda*, no direct Correlation of COVID 19 is described. According to *Acharya Sushruta*, Diseases cannot exist without the involvement of *doshas*; therefore a good physician should treat the unnamed illnesses based on the symptoms of these *doshas* [6]. Although the *Samhita* does not provide nomenclature for many ailments, *Acharya Charaka* believes that many ailments can be treated by considering the casual factors, *doshas and dhatus*, and other elements involved in their manifestation [7-8]. According to *Acharya Charaka*, the Epidemic is known as *Janapadodpchwasa vyadhi* [9]. According to *Acharya Sushruta*, the current COVID 19 is an *Aupasargika Roga* (Communicable disease) with Pandemic Characteristics. For any Epidemic/ Pandemic, *Panchakarma* (Five procedures of Purification), *Rasayana Therapy* (Immune-modulators therapy), *Sadvritta* are the leading treatments in *Ayurveda* [10].

Chapter Content

- Definition of Post Covid Complications
- Post Covid Symptoms
- Ayurvedic concept of Post Covid Symptoms

- Understanding Post Covid Complications along with role of different *Panchakarma* modalities within it.

Definition of Post Covid Complications: According to National Institute for Health and Care Excellence (NICE), Post Covid Can be defined as Signs and symptoms that develop during or after an infection consistent with COVID-19 continue for more than 12 weeks and are not explained by an alternative diagnosis. It usually presents with clusters of symptoms, often overlapping, which can fluctuate and change over time [11]. Acute post-COVID syndrome lasts for more than three weeks after the original infection, whereas chronic post-COVID syndrome lasts for more than twelve weeks after the main infection.

Post Covid Symptoms: The post covid symptoms can be divided into two categories as common symptoms and less common symptoms. Common symptoms include fatigue, dyspnoea, joint pain, chest pain, cough, change in sense of smell or taste and less common symptoms includes insomnia, low-grade fevers, headaches, cognitive difficulties, myalgia and weakness, gastrointestinal symptoms, rash and depression [12]. Depending on the severity of the acute infection and the time of observation, the frequency of distinct symptoms varies. The most prevalent post-COVID symptom is fatigue, affecting 17.5 % to 72% of hospitalized patients. It can last for up to seven months after an illness begins, producing considerable damage. Dyspnoea and reduced exercise tolerance were found in 10-40% of COVID-19 hospitalized patients for 2-4 months after discharge, while 65.6% of patients confined to the intensive care unit experienced new or worsening dyspnoea. Sense of smell and taste impairment can remain for more than a month, in upto 11% and 9% of patients six months after discharge, correspondingly, and upto to 7% and 3.7% of cases eight months after moderate COVID-19, respectively, were affected. Acute COVID-19 has also been associated to heart arrhythmias and elevated blood pressure that persists. Sleep and mental difficulties like nervousness and anxiety may affect roughly 26% and 40% of patients 6 months after receiving COVID-19, respectively [13].

Ayurvedic Concept of Post Covid Symptoms: According to *Ayurvedic* Concepts, COVID-19 symptoms are similar to *Vata kapha Pradhan Sannipataja Jwara*, and there will be *Dhatu-Kshaya & Agnimandhya Avastha* in post-COVID 19 infections [14]. Post Covid Problems are manifestations of *Vata Prakopa*. According to the classics, *Vata Vyadhi* can be caused by *Dhatu kshaya* or *Avarana*. As a result, Post COVID symptoms can be linked to *Dhatu kshaya* and *Avarana*. *Dhatu kshaya* occurs in chronic *Sannipataja jwara* as a result of inappropriate *Chaya upchaya*, and all *Sapta Dhatus* are lost to some extent. Finally, *dhatu kshaya* decreases immunity (*Oja kshaya*). When

Dhatvagni decreases, the formation of the next Dhatu may be hampered. *Agnimandhya* also causes the formation of *Ama* (undigested and improperly formed food), which further causes *Srotoavrodha*. In COVID 19, the *Pranavaha Srotas* are obstructed, resulting in vitiation of *Kapha- Vatadosha*, which disrupts the normal physiology of breathing.

Understanding Post Covid Complications along with role of different Panchakarma modalities within it: *Purva Karma, Pradhan Karma* and *Paschat Karma* of *Panchakarma* are used in the management of post COVID complications. For this, *Abhyanga, Samvahana, Shirodhara, Vaspa Sweda, Nasya, Kavala, Gandusha, Basti* are used.

Fatigue

Due to home quarantine, an individual's activity level decrease, which in turn lowers their metabolic rate and makes them feel lethargic. Latent infection triggers an active immune response, which consumes energy and releases free radicals, which build up and lead to fatigue. In such condition *Manda, Peya, Vilepi* and *Yavagu* with various *Shukadhanya* and *Simbidhanya* help in reliving symptoms like weakness and pain in the different parts of body. *Ama Pachana, Deepana, Abhyanga* and *Anuvasana Basti* are also done in extreme tiredness.

Respiratory Tract Symptoms

Continuous Use of mask, Chronic Inflammation of the Upper respiratory tract because of COVID causes Fibrosis or narrowing of Alveoli thus resulting in airflow obstruction. *Swedana* can be used as the main line of treatment for respiratory tract symptoms. The *Ushna Guna* of *Swedana Karma* leads to stimulate the sympathetic nervous system & produces vasodilatation. *Nadi Sweda, Shankara Sweda, Prasatar Sweda* and *Salavana Sweda* are used for breathing difficulty. *Kavala* with *Bharangi Kwath* and *Gojihwadi Kwath, Nasya* with *Nasika Choorna* and *Dhoompana* with *Satyadi varti* are used for Sore throat, shortness of breath, dry cough and loss of smell. *Ksheerdhooma Nasya, Dhamapana Nasya* with *Vacha* and *Jyotishmati Choorna, Jihwa lepa* with *Kalnayaka Avleha Choorna* and *Vacha Choorna* is helpful in regaining sense of smell and taste during Covid or in post COVID patients. Use of *Deepana- Pachana Aushadi, Snehapana, Mridu Snaihik Virechana* and *Vamana* are also used to manage the symptoms of lower respiratory tract infections.

Chest Pain

Chest pain, Tightness, a squeezing sensation, pressure in the chest, and compression in the chest region are very common complaints by post COVID patients. Recurring coughing reflex and inflammatory pathology in the lower

respiratory tract create a spasm of the thoracic muscles. *Upanaha, Virechana, pradeha, Parisheka, Uro Basti, Choorna Pinda Sweda, Lepa, Dhara* with *Vata- kaphahar* drugs are helpful in patients with cardiac symptoms in post covid condition.

Gastro Intestinal Tract Symptoms

Due to intake of oral antibiotics which destroy the gut flora and decreases absorption, improper intake of food due to loss of taste and stress decreases functioning of gut cells, all these ends up in abdominal discomfort which results in gastrointestinal upset, loss of appetite and long-term diarrhoea. In such Conditions, *Manda, Peya, Vilepi* and *Atisaragna Yavagu (Panchkol Yavagu)* are helpful. Moreover, *Panchakarma* manifestations like *Chakra Basti, Udara Lepa, Takra Basti, Pichha Basti* and *Shirodhara* are beneficial. For post COVID patients who experience *Aruchi, Gandusha* with *Irimedadadi Taila* can be used.

Headache, Anxiety, Depression & Insomnia

Conditions like Quarantine, Fear of death during Covid caused stress which led to Anxiety, depression, Insomnia, Migraine, Cluster Headache and panic attacks as the long-term disease. Post Covid Uncontrolled Hypertension was also seen. *Murdhni Taila* is highly beneficial for the brain, sense organs, nerve. It controls *Vayu* and *Pitta* in the head. It is both a prophylactic and curative measure. The brain and nervous system are responsible for all bodily activities. *Murdhni Tailas* like *Shirobhyanga, Shiroseka, Siropicchu* and *Shirobasti* are helpful in anxiety and stress management. *Swedana* in the form of *Nadi sweda, Upanaha, Kapala Lepam* with *Karutmarmadi Gulika (KM Lepam), Shirodhara* with *Brahmi & Jyotishmati Taila, Talapodichilla, Talam* with *Rasnadi Choorna, Abhyanga, Ksheera Dhara, Padabhyanga, Navana nasya* are used in relieving the symptoms.

Musculoskeletal System

Muscle pain resulting from a viral infection is caused by the damage to the muscle fibres from the Virus. *Samvahana, Abhyanga, Patra Pinda Sweda, Shastika Shali Pinda Sweda, Dhanyamla Dhara*, and other type of *Snehana* and *Swedana karma* along with *Different type of Basti* like *Vaitaran Basti, Kshaar Basti, Choorna Basti*, are beneficial for musculoskeletal symptoms like bodyache and joint pain.

Endocrinological System

The Endocrinological System has also been affected by the Covid 19. Hyper & Hypothyroidism, Uncontrolled Diabetes Mellitus, PCOD & PCOS, Early Menopause, Low testosterone levels had been observed in some patients

post Covid. *Vamana, Virechana, Shirodhara, Udvartana*, Different types of *Basti* and *Nasya* was seen beneficial in such conditions.

Auto Immune Skin Disorder

Although the Covid 19 Vaccines has reduced the risk of hospitalization and death but it resulted in severe complications including Worsening of Auto immune Skin Disorders like Psoriasis, Scleroderma, Systemic Lupus Erythematosus etc. In such Conditions, *Kaya Lepa, Takra Dhara, Utsadana, Vamana* and *Virechana* were seen very effective.

Hepatic Symptoms

In Covid 19 Patients, a Long term use of Antibiotics and Steroids has resulted in Low platelet count and Hepatotoxicity. Fatty Liver had been seen in most of the patients as a post covid Complication. Rapid loss of weight, Liver Cirrhosis, Hepatitis, Elevated levels of Liver Enzymes had also been observed in some cases which indicate some amount of Liver damage caused by internal inflammation. It can also be because of the adverse effect of covid vaccine. In such Conditions, *Udara Lepa, Chakra Basti, Erandamuladi Niruha Basti, Punarnavadi Niruha Basti* were seen effective.

Renal Symptoms

Some People who suffered from severe cases of COVID 19 showed signs of Kidney damage, even those who had no underlying kidney problems before they were infected with Corona virus. A sign of Kidney problems post covid includes High level of Protein in urine and abnormal blood work. This resulted in increased rate of Dialysis. In Kidney related problems, *Virechana, Basti, Dhanyamla Dhara* etc had shown a tremendous improvement. *Sankara Sweda* and *Pada Lepa* were done in Pedal Edema.

Conclusion

Based on this review and various research studies on *Ayurveda* therapy, it is possible to conclude that Post covid symptoms can be effectively managed by using Different Panchakarma modalities. So, Panchakarma should be used as the primary treatment modality for health restoration and prevention of Post Covid Symptoms and recurrence.

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