

## Amalgamation of Ayurveda with Allopathy: A Synergistic Approach for Covid-19 Treatment

Ritesh<sup>1</sup>, Manjry Anshumala Barla<sup>2</sup> and Rakesh Roushan<sup>1,\*</sup>

<sup>1</sup>Department of Kriya Sharir, Ch. Brahm Prakash Ayurved Charak Sasnthan, India

<sup>2</sup>Directorate of Ayush, Government. of NCT of Delhi, India.

\*Corresponding author: Dr. Rakesh Roushan, Assistant Professor, P.G Department of Kriya Sharir, Ch. Brahm Prakash Ayurved Charak Sasnthan, (Government of NCT of Delhi), Khera Dabar, Najafgarh, New Delhi, India.

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### Abstract

A 47-year-old man with Covid like symptoms was admitted to the allopathic hospital, consulted telephonically for Ayurvedic treatment. Initially, he was in home isolation under the consultation of doctor and was taking modern medicine since 20th April 2021. His oxygen level (85-87%) was not maintained at room air in spite of medication. His HRCT chest findings were suggestive of Infective etiology likely atypical viral pneumonia with 50-75% of lung parenchymal involvement (CO-RADS IV), and Neutrophil/Lymphocyte Ratio was 8.5. He was not getting desirable improvement and willing to take Ayurveda treatment. Certain ayurvedic formulations were advised in total 10 doses, from 4th May 2021 to 8th May 2021. Significant improvement in symptoms was seen with Ayurvedic medication. His oxygen saturation level was maintained at 97-98% and X-ray findings were also significantly improved. So, Ayurvedic medication have significant role in improvement of patient's conditions.

**Keywords:** Ayurveda; Covid-19; *Sannipataj jwara*; *Shwasa roga*

### Introduction

Natural selection of the virus in an animal host followed by zoonotic transmission is the most likely source of SARS-CoV-2 [1]. On January 31, 2020, the first case of COVID-19 was reported in India[2]. Globally, as of 5:14pm CEST, 17 June 2021, there have been 176,693,988 confirmed cases of COVID-19, including 3,830,304 deaths, reported to WHO. A total of 2,377,780,590 vaccine doses have been administered till 16 June 2021[3]. Corona viruses, a large family of single-stranded RNA viruses, can infect animals and humans, causing respiratory, gastrointestinal, hepatic, and neurologic diseases [4].

Coronaviruses are split into four subgroups: alpha, beta, gamma, and delta, according to scientist. These viruses can infect humans in seven different ways. MERS-CoV, a beta virus that causes Middle East respiratory syndrome (MERS), SARS-CoV, a beta virus that causes severe acute respiratory syndrome (SARS), SARS-CoV-2, which causes COVID-19, 229E (alpha), NL63 (alpha), OC43 (beta), HKU1 (beta), MERS- CoV, a beta virus that causes Middle East respiratory syndrome (MERS), and SARS-CoV [5]. Traditional medicine, according to the World Health Organization, might be a significant option for balancing curative services with preventative care, which might assist meet the specific health concerns of the twenty-first century if properly integrated [6].

On March 6, 2020, the Ministry of Agriculture issued an advi-

sory to the public for the maintenance of general health and well-being during the COVID- 19 pandemic, based on the current situation and the penetration of the AYUSH system into mainstream health care system in India for preventive and curative purposes [7]. Research as well as Health care delivery is challenging in times of natural disasters and epidemics or pandemics [8]. Coronavirus disease (COVID-19) is an infectious disease. The incubation period for COVID-19 range from 1-14 days generally, most commonly around five days [9]. SARS-CoV-2 infection causes mild symptoms in the initial two weeks usually but has the potential to build up into severe illness, including a systemic inflammatory response syndrome, acute respiratory distress syndrome (ARDS), multiple- organ involvement and shock [10]. Patients with advanced age and male sex, and have underlying health issues, such as cardiovascular disease (CVD), obesity or diabetes mellitus (DM) are at high risk of severe COVID-19 or death [11]. The presence of comorbidities such as diabetes mellitus (DM), hypertension (HTN), chronic obstructive pulmonary disease (COPD) or old age leads to poorer clinical outcomes in COVID-19 patients, and presents additional challenges in the management of the illness. In humans, elevated glucose levels directly increase SARS- CoV-2 replication [12]. Understanding COVID-19 patho-physiology is basic prerequisite for deciding Ayurveda preventive and curative strategies. One cannot aptly bridge Ayurveda with evidence based modern medicine without understanding epistemology of Ayurveda [13]. Ayurveda is one among the world's oldest holistic healing systems. Acharya

charak has described the pathophysiology of epidemic diseases, under the heading Janpadodhawansh. In Janpadodhawansh, there is mention of an epidemic fever with respiratory system presentation (fever, cough, breathing difficulty, rhinorrhoea, headache and even anosmia) caused by entry of pathogenic agent through the nasal passages [14]. Acharya sushruta has discussed the mode of transmission of contagious diseases. It spreads through, physical contact, inhalation, eating together, sleeping, sitting together and sharing used linens and garlands are well. These texts proffer precise guidelines with regard to the treatment of diseases that affect people during Janapadodhvasa [15]. According to the Ayurvedic system of medicine, a healthy person should have a stable equilibrium state of Doshas (Vata, Pitta, Kapha), Dhatu (body elements that provide nourishment), Agni (metabolism/digestion), Mala (excreta) and the welfare of senses, mind and soul [16]. Any inequity in this equilibrium causes disease and the Ayurvedic system of medicine seeks to get rid of this imbalance to get back to healthy state. Covid-19 presents with asymptomatic to variety of symptoms. It is found Covid-19 causes involvement of pranavaha srotas, leads to sannipataj jwara and shwasa roga. Symptoms are pricking pain in throat, drowsiness, delusion, delirium, cough, breathlessness, anorexia and giddiness, excessive fatigue, spitting of blood mixed with sputum, urticaria and bluish – black or reddish circular patches appear on the skin, constant cooing sound, heaviness in abdomen and inflammation of srotasa in later stage. Sign and symptoms of COVID-19 can be related to the disease under the name of sannipataj jwara that develops due to vitiation of tridosha in body tissue. Based on the pathological factor and the body tissue involved, eighteen types of sannipataj jwara have been explained in Ayurvedic texts. Covid 19 can be managed according to the principle of Samprapti Vighatana (to break the pathogenesis). Here we present a case that was successfully treated on the line of Ayurvedic management of sannipataj jwara [17].

## Case Presentation

### Case Description

A 47-year-old Indian, nonsmoking, nonalcoholic man consulted through online consultation, with a complaint of difficulty in breathing for 5 days. He was associated with intermittent high degree fever, cough, and generalized weakness. Patient was in home isolation since 20th of April, when he got fever for the first time. Patient took antipyretic medicines but did not recover so he visited the hospital and got tested for COVID on 25th April. The RTPCR report was found negative. He was in consultation with a general physician of modern medicine, and he was advised for antibiotics and antipyretic medicines. The patient was not getting much relief from the prescribed treatment and his Spo2 was falling gradually in between 85-87% on room air. Patient was not getting any oxygen therapy at home. Further patient consulted us for ayurvedic treatment through online consultation on 30th April 2021. After taking proper history telephonically, the patient was found to be anxious about his gradually falling spo2 level, disturbed sleep because of coughing and difficulty in breathing. Patient had a known case of diabetes for 5 years, not on medication. The tongue was slightly coated as per the image over the phone. Patient had Madhyam (medium) Sara (purest body tissue), Samhanana (medium body built), Satmya (homologation), Satva (mental strength), Vyayamshakti (least capability to carry on physical activities), Aharshakti and Jaranshakti (least food intake and digestive power), and Sama Pramana (normal body propor-

tion). Vata, pitta and Kapha doshas were affected in the patient with all the symptoms pertaining to COVID19 disease. Patient's condition was not improving in spite of regular medication. So, he was advised for HRCT scan of chest on 30th April, 2021. Patient underwent HRCT chest on 1st May 2021, the findings were suggestive of Infective etiology likely atypical viral pneumonia with 50-75% of lung parenchymal involvement (CO-RADS IV). CT severity score was 20/25 indicative of severe infection. On 1st MAY, 2021, Patient was admitted to the nearby hospital for further management. Desirable improvement was not recorded in spo2 level and other symptoms till 04th May, 2021. Spo2 level was 90% on room air, pulse rate 88/min, and patient was asked for Inj REMDESIVIR 100 mg 6 vials. But the patient refused this medication. On 04th May, 2021, patient contacted for consultation and patient was willing to take Ayurveda treatment as an integrative therapy. We reviewed all investigations and scanning reports done earlier and ayurvedic medication was advised accordingly

### Treatment Schedule

The pathology of COVID 19 can be compared primarily with sannipata jwara and Vata-Kapha dominating Tridosha are involved. The aggravated vayu along with vitiated kapha obstructs the channels (of prana, udaka and annavaha) and spreads throughout the body and produces shwas [18]. Hence Vata-Kaphahara medications were planned and advised. External causative agents like viruses may result in sannipata jwara because of provocation of tridosha that govern major physiological activities in the human body. With this understanding of COVID-19, the following oral Ayurvedic medicines were advised to the patient Heerak Bhasm 60 mg, Sameerpannag Rasa 60 mg, Sahastra Puti Abhrak Bhasam 125 mg, Shring Bhasm 125 mg, Svasakaschintamani Rasa 125 mg, Mahalaxmivilas Rasa 125 mg, Maha-Sudarshan Ghan Vati 500 mg. Timeline of medicines is depicted in Table 1.

### Diet and lifestyle modifications

After consultation the patient was asked to take boiled water processed with ginger, black pepper, cloves, turmeric and cinnamon on the first day, moong daal (yellow lentil) soup on second day and Khichri or daliya were advised on the third day. After that, the patient was advised to take cooked food. Along with this, certain breathing techniques like Anuloma-viloma pranayama, bhastrika pranayama, and straw breathing were also advised.

### Discussion

The case was treated on the line of management of sannipata jwara and svasa roga. Ayurveda treatment was planned as an integrative therapy. As mainly Vata and Kapha Doshahara drugs were prescribed because of predominance of Vata and Kapha Dosha in Covid-19. Heerak Bhasm 60 mg, Sameerpannag Rasa 60 mg, Sahastra Puti Abhrak Bhasam 125 mg, Shring Bhasm 125 mg, Svasakaschintamani Rasa 125 mg, Mahalaxmivilas Rasa 125 mg, Maha-Sudarshan Ghan Vati 500 mg was advised to the patient. Heerak bhasam provides strength to the mind and body and increases immunity. Heerak Bhasma has all six tastes, pacifies all three Dosha (tridosha) and increases the potency of other medicines. Clinically, its main action appears on dominance of pitta-dosha in the body. The second action is observable on an increase of kapha-dosha in the body. It improves overall metabolism in the body. Main component of Sameer pannag rasa are purified sankhiya (As4O6), hartal

Table 1: Timeline of case.

Date And Year	Clinical Events and Intervention
20 <sup>th</sup> April, 2021	<ul style="list-style-type: none"> <li>• Patient had fever, cough and throat pain.</li> <li>• He consulted modern medicine doctor and started medication as per his advice in home isolation.</li> </ul>
25 <sup>th</sup> April, 2021	<ul style="list-style-type: none"> <li>• Patient was not getting relief in his symptoms.</li> <li>• Patient was tested for RTPCR.</li> <li>• RTPCR test found negative.</li> </ul>
30 <sup>th</sup> April, 2021	<ul style="list-style-type: none"> <li>• Patient condition was not improving. So, he decided to take ayurvedic medicine.</li> <li>• Patient consulted online for ayurvedic treatment.</li> <li>• Proper history was taken, he was on allopathic medications</li> </ul> <p>Since 21<sup>st</sup> April 2021-</p> <ul style="list-style-type: none"> <li>• Patient's oxygen saturation level was fluctuating from 85-87 % at room air.</li> <li>• He was advised for HRCT chest</li> <li>• Patient was advised to continue with his allopathy treatment</li> </ul>
04 <sup>th</sup> May, 2021	<ul style="list-style-type: none"> <li>• Patient was admitted to nearby allopathic hospital.</li> <li>• Patient contacted telephonically and he was willing to take Ayurvedic medication.</li> <li>• We reviewed all investigations and scanning reports done earlier, his findings were as under-</li> </ul> <p>On 01<sup>st</sup> May, 2021</p> <ul style="list-style-type: none"> <li>• Patient underwent HRCT chest.</li> <li>• The HRCT chest findings were suggestive of Infective etiology likely</li> <li>• Atypical viral pneumonia with 50-75% of lung parenchymal involvement (CO-RADS IV).</li> <li>• CT severity score was 20/25 indicative of severe infection.</li> </ul> <p>On 02<sup>nd</sup> May, 2021</p> <ul style="list-style-type: none"> <li>• Glycosylated hemoglobin (HbA1c)* - 9.6%,</li> <li>• Random Blood sugar - 206mg/dl</li> <li>• Average blood glucose concentration - 228.8 mg/dl.</li> <li>• Neutrophil/Lymphocyte Ratio- 8.5</li> <li>• SGPT – 76 IU/L</li> <li>• LDH Serum – 532 U/L</li> <li>• Ferritin – 1097.4 ng/ml</li> <li>• IL-6 – 91 pg/ml</li> </ul> <p>On 03<sup>rd</sup> May, 2021</p> <ul style="list-style-type: none"> <li>• CRP (Quantitative) – 64.4mgm/l</li> <li>• Procalcitonin – 0.03ng/ml</li> <li>• Spo2 was 90% on room air.</li> </ul> <p>Inj. Remdesivir 100mg 6 vials were advised by the physician. But patient refused for this medication.</p> <p>The following ayurvedic medication was advised accordingly</p> <ol style="list-style-type: none"> <li>1. Heerak Bhasm- 60 mg</li> <li>2. Sameerpannag Rasa- 60 mg</li> <li>3. Sahastra Puti Abhrak Bhasam-125 mg</li> <li>4. Shring Bhasm- 125 mg</li> <li>5. Swasakaschintamani Rasa- 125 mg</li> <li>6. Mahalaxmivilas Rasa- 125 mg</li> <li>7. Maha-Sudarshan Ghan Vati- 500 mg</li> </ol> <p>This combination was given together as a single dose with white butter as vehicle.</p> <ul style="list-style-type: none"> <li>• Total such five doses was administrated</li> <li>• First dose of Ayurveda treatment was given at 10:45 PM along with his ongoing treatment.</li> </ul>
05 <sup>th</sup> May, 2021	<p>Follow up -</p> <ul style="list-style-type: none"> <li>• After 3<sup>rd</sup> dose of medicine—patient got relief of cough, sleep was improved.</li> <li>• Spo2 - 91% on air.</li> </ul>
06 <sup>th</sup> May, 2021	<p>Follow up -</p> <ul style="list-style-type: none"> <li>• Patient had a complaint of nasal bleeding and feeling hot.</li> <li>• Praval pisti 250 mg was added along with the previous medicine.</li> <li>• Total such five doses was administered further along with modern medicines</li> <li>• Spo2 was 92% on room air after 5<sup>th</sup> dose of Ayurveda medicine.</li> </ul>
07 <sup>th</sup> May, 2021	<p>Follow up -</p> <ul style="list-style-type: none"> <li>• After 7<sup>th</sup> dose, Spo2 was 93% on room air.</li> <li>• No breathing difficulty.</li> </ul>
08 <sup>th</sup> May, 2021	<ul style="list-style-type: none"> <li>• Patient was discharged from the hospital.</li> <li>• After 10<sup>th</sup> dose, Spo2 was maintained at 97-98% on room air at the time of discharge.</li> </ul>
10 <sup>th</sup> May, 2021	<p>Follow up -</p> <ul style="list-style-type: none"> <li>• Treatment continued</li> <li>• Spo2 was stable at 98% on room air.</li> </ul>
15 <sup>th</sup> May, 2021	<p>Treatment continued</p> <ul style="list-style-type: none"> <li>• Neutrophil/Lymphocyte Ratio- 6</li> <li>• CRP – 8.0 mgm/l</li> <li>• Chest X-ray was done and finding suggested significant improvement in pneumonia.</li> </ul>

(AS2S3) and manashil (AS2S2). It is ushna veerya and very acting drug. It absorbs fluidity of alveoli and prevents mucus and serous secretions. It is recommended in pneumonia and sannipataj jwara. Abhrak Bhasma mainly acts on lungs, pleura, airways, pericardium, and blood vessels. It can be used in any disease in which the heart becomes weak or a patient suffers from restlessness and irregular heartbeat. Usually, it is prescribed to strengthen the heart and lungs. It has potent cardio-protective properties, which also help to prevent secondary cardiac complications that may occur due to any disease. Abhrak bhasm is used in shvasa roga, urah kshata and kasa and jwara. It works in dhatu kshaya too. Abhrak bhasm is kasaya-madhur rasa, sheet in nature. It improves metabolism and gives strength to the body. Shring bhasm was used because of its vata-kapha dosahara, pitta shamak, dhatu-paushtik and balavardhak properties, which are significant findings in severe COVID19. Shwasakas-chintamani rasa was prescribed as 125mg thrice a day. The main ingredients Shwasakas chintamani rasa are purified parad, suvarna bhasm and abhrak bhasm. The therapeutic efficacy of medicine is enhanced due to Yogvahi property of the Parad and abhrak bhasm, promotes fast action of drug. It carries nano particles of the bhasm to the minute srotas (channels) of the body system. Suvarna bhasm promotes blood flow to the tissues by cleansing and detoxification action and reduces inflammation in the cells. It gives strength to lungs and heart. It balances Vata, Pitta, and Kapha due to its powerful medicinal properties. It nourishes the whole body and has Anti-arrhythmic Cardio protective, Anti-inflammatory effects. This medicine is indicated in the treatment of respiratory disorders, shvasa roga [20]. Maha Lakshmi Vilas Rasa, main ingredients are abhrak bhasm, suvarna bhasm, rajata bhasm, tamra bhasm and swarna makshik. Rajata bhasm has snigdha, guru and sara property. It removes the waste materials from the cells thus promote cleansing action in the lung alveoli and improvement in oxygen saturation level. Swaran-makshik is yogvahi in nature and pacifies tridosha. Vata and kapha are the main doshas involved in covid 19. Maha Laxmi Vilas Rasa mainly acts on Vata and kapha dosha and has a great role in tridoshaj shvasa and kasa roga. It gives overall strength to the body and improves immunity [21]. Mahasudarshan ghan vati is beneficial for lowering fever. It has digestive action and is known as a bitter tonic. It improves appetite and reduces indigestion. Therefore, it is also advantageous for treating loss of appetite and digestive disturbances occurring in fever. It is helpful for treating mild headaches and body pains linked with fever. All these medicines were used in combination form with white butter as anupana. Ayurveda treatment was started from 4th May, 2021. Following medicines were used in combination form; Heerak Bhasm 60 mg, Sameerpannag Rasa 60 mg, Sahastra Puti Abhrak Bhasm 125 mg, Shring Bhasm 125 mg, Swasakaschintamani Rasa 125 mg, Mahalaxmivilas Rasa 125 mg, Maha-Sudarshan Ghan Vati 500 mg thrice a day with white butter as anupana. 1st dose of medicine was given on 4th May, 2021 at night. 2nd dose was given on 5th May, 2021 at morning and 3rd dose was given on 5th May, 2021 at evening. After 3rd dose, cough was reduced, sleep quality was improved and spo2 was 92% on room air. The 4th dose of medicine was given on 5th May at night. 5th dose was given on 6th May, 2021 at morning and 6th dose at evening. After 5th dose, Patient had complaint of nasal bleeding and feeling hot. Praval

pisti 250 mg was added along with the previous medicine. Praval pishti is madhura and amla in rasa and madhura vipaka. It pacifies the tikshanta, ushanta and amalata therefore, it is highly recommended in paittik diseases[]. After 6th dose of medicine, spo2 recorded 93% and general condition was also improved. 7th dose of medicine was given on 6th May, 2021 at night and 8th dose of medicine was given at morning on 7th May and 9th dose was at afternoon. Oxygen saturation started to improved and maintained at 96-97%. Patient was discharged on 8th May, 2021. Certain dietary habits were also advised such as to avoid junk, oily, spicy, raw and refrigerated food. Only cooked and light food like moong dal soup, daliya, khichri etc was advised to the patient. All the symptoms of Covid19 were improved by using Ayurveda treatment as an integrative therapy along with ongoing modern medicine. There is no recurrence of any symptoms and signs until now. This is an important finding, considering the prognosis and substandard treatment in modern medicine.

### Conclusion

The above-mentioned oral Ayurvedic drugs were helpful in treating the patient with Covid-19. This approach may be taken into consideration for further treatment and research work for Covid-19 disease.

### Patient Perspective

The patient was satisfied with the improvement. His investigation reports showed significant change with improvement in chest X-ray, Spo2 level was improved, and he was completely cured from Ayurvedic medicines used as an integrative therapy.

### Clinical significance

In modern medicine, treatment protocol has been changing after interval of time. Many people are terrified of Inj. Remdesivir or plasma therapy or do not want to go for these therapies. Chances of recurrence of Covid-19 are still there. In Ayurvedic science, availability of medicine is a chance for patients to avoid certain modern therapy and to get cure without much undesirable effects.

### Authorship Criteria:

#### Contribution of Authors:

1. Conception and design of study: Dr. Manjry Anshumala Barla, Dr. Rakesh Roushan
2. Acquisition of data: Dr. Ritesh, Dr. Rakesh Roushan
3. Analysis and/or interpretation of data: Dr. Ritesh, Dr. Manjry Anshumala Barla, Dr. Rakesh Roushan
4. Drafting the manuscript: Dr. Ritesh, Dr. Manjry Anshumala Barla, Dr. Rakesh Roushan
5. Revising the manuscript critically for important intellectual content:

Dr. Ritesh, Dr. Manjry Anshumala Barla, Dr. Rakesh Roushan

6. Approval of the version of the manuscript to be published (the names of all authors must be listed): Dr. Ritesh, Dr. Manjry Anshumala Barla, Dr. Rakesh Roushan

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