

# Management of severe Covid-19 cases through Ayurveda: A Case series

## Case Report

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### Abstract

The rampant destruction due to COVID is going on. So far, in modern medical system, there is no proven cure for COVID-19. The only relevant literature on the treatment of corona virus disease comes from Traditional Chinese Medicine (TCM). TCM, which is widely used to control epidemics in China, is also composed of kinds of herbs similar to *Ayurveda*. There is reportedly a high death rate from severe COVID-19 infection requiring oxygen support. The chest severity score as assessed by computed tomography has predictive value for future outcomes in such situations. This paper is an observational (retrospective) study of COVID-19 condition of three patients receiving *Ayurvedic* treatment entirely without use of any allopathic drug. There is this case series of 3 patients, 32 years old male, 38 years old female and 70 years old female. These cases were managed on the principle of *Sannipatika Jwar* (type of fever) along with *Shwas* (type of respiratory illness) with administration of *Hirak bhasma*, *Trailokya chintamani ras*, *Maha lakshmi vilas ras*, *Abhrak bhasma*, *Shwaskas chintamani ras*, *Praval pishti*, *Chandramrita ras*, *Sitopladi churna*, *Mahalaxmivilas ras*, *Sameerpannag ras*, *Tab Shwas kalpa* and *Syp Whooping* for about 10 days in different combination in these patients. The treatment resulted in complete remission of almost all the signs and symptoms. The cases were followed up after next 15 days and there were no remnant symptoms. The cases also advocated for an early *Ayurvedic* intervention institution for COVID-19 in prevention, deterioration and complications.

**Key Words:** COVID-19, Corona Virus, Janpadodhwansa.

### Introduction

The world is going through a destructive change, and seems like it's not the end yet. The Corona virus disease (Covid19) caused by the infection with a severe acute respiratory syndrome Coronavirus2 (SARSCoV2), was identified at the end of 2019 in Wuhan, China. It has spread quickly all over the world, and was named Pandemic by WHO on 11 March 2020 (1). COVID-19, which is caused by SARS-CoV2, is a highly infectious disease which can cause severe breathlessness and serious complications in some patients (2). COVID-19 is a rapidly changing and evolving situation. The World Health Organization (WHO) monitored it and updated the information available on its transmission, mortality and morbidity. So far, no treatment for COVID-19 has been found in western medicine. There is an ample evidence of how Chinese medicines are used in China to contain COVID-19 (3).

The SARSCoV2 virus is a positive sense of the RNA unique sense, belongs to the kind of beta-corona virus. It is wrapped, spherical diameter, 60140 nm with

corona as spikes of about 912 nm. These spikes are responsible for attacking and starting infection in host cells (4).

It is interesting to note that COVID-19 seems to be a strangely and tragically selective disease. Only some infected people get sick severely. Although mostly the sick patients of Covid19 are older or have an underlying medical problems, such as cardiovascular disease, hypertension, diabetes mellitus or cancer, some of previously healthy and also relatively young individuals died from COVID-19 (5).

Epidemics like COVID-19 are not unknown *Ayurveda*. Classical textbooks clearly describe epidemics under the name "*Janapadodhwansa*" (epidemic). *Ayurveda* clearly describes all aspects of these types of epidemic, including its causes (*nidan*), effects, management and prevention. *Charaka Samhita* clearly stated that the manifestation of these epidemics is the result of decline of air, water, environment and season, which is common to all people. Therefore, this epidemic will affect people regardless of their physical fitness, and the intensity of pain will depend on the inherent weakness of people. *Pragyaparadha* (abuse of intelligence), the reason for all *dosha* failures, is also considered the main reason for '*Janapadodhwansa*' (epidemic) (6).

The symptoms of COVID-19 may not be entitled as a single disease entity as explained in *Ayurveda*, rather a spectrum of clinical entity such as mild illness (*jvara*), non severe pneumonia (*shwas poorvaroopa*),

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severe pneumonia (*shwasa roga*), acute respiratory distress syndrome (*pravridha shwas*) and sepsis or shock (*arisht lakshan*) (7).

## Case 1

### Place of Study

Shri Vishwadhyaasa Ayurveda & Panchakarma Center, G L – 10, Srishti Apartment, Kherapati Road, Phoolbagh, Gwalior, MP.

Study was done according to the protocols decided by the Ministry of AYUSH. Also, consent for the treatment was taken from the patient.

### Case Presentation

A 32 years old male patient came in the hospital on 18<sup>th</sup> April 2021 with complaint of severe breathlessness and fever. His SpO<sub>2</sub> on initial assessment was 70-72 % and he was positive on RT-PCR assessment.

### Chief complaints

- Fever from 7 days
- Breathlessness from 1 day

### History of present illness

A 32-years-old male patient visited the hospital having above said complaints. 7 days back the patient was apparently alright, gradually he developed fever, for which he took medicines on its own. He got symptomatic relief but as the effect of medicines weans off, the fever came back. 1 day back, he developed mild breathlessness which was initially on exertion only. On initial assessment his temp was found to be 102.2 F. He was undergone RT-PCR test for COVID which was later found to be positive. The next day breathlessness became severe in intensity. With these issues he visited our hospital for *Ayurvedic* management of the same.

### History of past illness

There was no any history of any major illness.

### Family History

There was no known history of COVID-19 positive cases in the family at that time.

### Drug history

Took paracetamol 500mg 2 times a day, irregularly, by him.

### Examinations

On initial assessment his SpO<sub>2</sub> was found to be 70-72% in resting state with pulse rate of 104 beats/min, his respiratory rate was found to be normal, initial temperature was 102.2°F.

### Chest

#### Inspection

On initial assessment

- Tachypnoea with respiratory rate of 30 breaths/ min.
- B/L chest rise equal, no scar marks, no oedema.

**CVS:** Normal shaped precordium, Apex beat at left 5<sup>th</sup> intercostal space medial to midclavicular line, S1S2 +, no murmurs found.

**GIT:** No discolouration, no oedema, Scaphoid shaped abdomen, soft non tender without any palpable organ.

**CNS:** Patient was well conscious and oriented w.r.t. time, person & place, all cranial nerves intact.

### Therapeutic Intervention

**Diet** - Following diet was given for first 3 days

- Day 1- Only lukewarm water was given for whole day.
- Day 2- Only *Moong dal* (green gram) soup was given 3 times a day.
- Day 3- Only *Moong dal* (green gram) + rice *khichdi* was given 3 times a day.

### Drugs

The patient was managed using *Ayurvedic* drugs from the first day of the disease. The following drugs were used during the management.

**Table 1 – Drugs given along with dosage**

Drug	Dose
<i>Hirak bhasma</i>	15 mg
<i>Trailokya chintamani ras</i>	80 mg
<i>Maha lakshmi vilas ras</i>	80 mg
<i>Abhrak bhasma</i>	80 mg
<i>Shwaskas chintamani ras</i>	80 mg
<i>Praval pishti</i>	400 mg
<i>Chandramrita ras</i>	500 mg
<i>Sitopladi churna</i>	1 g

The above said medication was given 4 times a day for initial 3 days, and then it was given 3 times a day for the next 3 days and lastly 2 times a day for last 4 days. Along with the combination Tab *Swash kalpa* 2 BD and Syp Whooping 5 ml BD was given for 10 days.

### Local application

- For external application, *lepa* of punarnava, *vacha*, *haridra*, *vansh patra* powder in equal quantity was mixed with *ghritkumari* pulp and applied on chest locally for 3 hours once a day for initial 7 days. The *lepa* was covered with cotton and bandage.
- Second *lepa* of *jaypal* powder mixed with castor oil was applied on chest for last 3 days once a day for 3 hours. The *lepa* was covered with cotton and bandage.

### Course of Treatment

As there was unavailability of beds in the hospital, patient stayed in home quarantine, due to the given reason and also the condition of the patient allowed for the same. He was taking the above said treatment only, no allopathic drugs were given along. The patient's condition was followed up daily by video conferencing and the condition of patient continued to improve with the medication. The patient reported no adverse events. His course stayed uneventful; there was no need of ICU admission or Oxygen supplementation. He gradually improved and his symptoms vanished off

over time. In total 10 days of treatment was given to him in above said manner (started on 18.04.2021 to 27.04.2021). In post recovery phase, there were no residual symptoms.

### Investigations

#### CT Scan thorax (19.04.2021)

- Multiple focal ground glass opacities with crazy paving patterns with patchy consolidations in both lungs with fibrosis with nodular lesion.
- CT severity scoring system – 23/25

#### HRCT Chest (07.05.2021)

- Few small patches of subtle ground glass density seen in the bilateral lower lobes and left upper lobe, possibility of covid pneumonitis should be ruled out.
- Fibroatelectatic bands seen in the right middle lobe.
- CORADS CT score – 3/25
- CORADS grade – 3

**Table 2 – Investigation pre and post treatment**

Indices	Value Before Treatment (20.04.2021)	Value After Treatment (17.05.2021)	Unit
CRP	7.18 (20.04.2021)	0.29 (17.05.2021)	Mg/dL
D Dimer	0.39 (21.04.2021)	-	ugFibE q/mL
CT severity score	23/25 (19.04.2021)	03/25 (07.05.2021)	
S. Ferritin	54.7 (21.04.2021)	-	Ng/mL

### Vitals

**Table 3 – Vitals during the period of treatment**

Date	SpO2 (%)	Pulse Rate (beats/min)
18.04.2021	70-72	104
22.04.2021	85	94
25.04.2021	95-96	90
29.04.2021	98-99	84
07.05.2021	98-99	76

## Case 2

### Place of Study

Shri Vishwadhya Ayurveda & Panchakarma Center, G L – 10, Srishti Apartment, Kherapati Road, Phoolbagh, Gwalior, MP.

Study was done according to the protocols decided by the Ministry of AYUSH. Also, consent for the treatment was taken from the patient's attendant.

### Case Presentation

#### Case Report

A 70 years old female patient came in the hospital on 21st November 2020 with complaint of fever, generalized weakness, cough and mild breathlessness. Her SpO<sub>2</sub> on initial assessment was 86 % and she was positive on RT-PCR assessment and CT scan.

#### Chief complaints

1. Fever from 5 days
2. Generalized weakness from 4 days

3. Cough from 4 days
4. Mild breathlessness from 2 days

### History of present illness

A 70-years-old female patient visited the hospital having above said complaints 5 days back the patient was apparently alright, gradually she developed fever, for which she took treatment from general practitioner nearby, also got relieved from fever but that was momentary in nature. The next day she also felt generalized weakness and cough, also she developed mild breathlessness specially walking after 2 days, with all these complaints she visited hospital where she was advised to undergo RT-PCR test for COVID which was later found to be positive. For getting treatment for the same she visited allopathy hospital but got no relief. Then later on she visited our hospital for *Ayurvedic* management of the same.

### History of past illness

There was no any history of any major illness.

### Family History

There was no known history of COVID-19 positive cases in the family at that time.

### Drug history

Allopathic medicines were prescribed to the patient by general practitioner, details of that are not available.

### Examinations

On initial assessment her SpO<sub>2</sub> was found to be 86 % in resting state with pulse rate of 110 beats/min, her respiratory rate was found to be normal, initial temperature was 100.5° F.

### Chest

On initial assessment - Tachypnoea with respiratory rate of 30 breaths/ min.

B/L chest rise equal, no scar marks, no oedema.

**CVS:** Normal shaped pericardium, Apex beat at left 5th intercostal space medial to midclavicular line, S1S2- +, no murmurs found.

**GIT:** No discoloration, no oedema, Scaphoid shaped abdomen, soft non tender without any palpable organ.

**CNS:** Patient was well conscious and oriented w.r.t time, person & place, all cranial nerves intact.

### Therapeutic Intervention

The patient was managed using *Ayurvedic* drugs from the first day of the disease. The following drugs were used during the management.

**Table 4 – Drugs given along with dosage**

Drug	Dose
<i>Trilokya chintamani ras</i>	125 mg
<i>Maha lakshmi vilas ras</i>	125 mg
<i>Maha Sudarshan ghanvati</i>	500 mg

The above said medication was given for 3 times a day for 10 days. Along with this steam and gargle with salt and turmeric was advised twice or thrice daily.

**Course of Treatment**

Patient got admitted in our hospital, where she was taking the above said treatment only, no allopathic drugs were given along. The patient's condition continued to improve with the medication. On 27.11.2020, her SpO2 got down to 80%, to manage that oxygen therapy was given @2lt/hr for next 12 hours.

Next day she recovered and there was no need of oxygen supplementation. The patient reported no major adverse events. There was no need of ICU admission. She gradually improved and her symptoms vanished off over time. In total 12 days of treatment was given to her in above said manner (started on 27.11.2020 to 08.12.2020).

Only mild generalized weakness was there after full course of treatment, no other symptom was remaining.

**Investigations**

**Table 5 – Investigation pre and post treatment**

Indices	21.11.2020	23.11.2020	25.11.2020	29.11.2020	06.12.2020	Unit
WBC	4.78	4.20	3.94	8.34	5.40	10 <sup>3</sup> /uL
Neutrophill count	3.31		2.58	6.88	3.58	10 <sup>3</sup> /uL
Lymphocyte count	1.20		0.88	1.00	1.32	10 <sup>3</sup> /uL
Monocytes count	0.22		0.32	0.44	0.35	10 <sup>3</sup> /uL
Eosnophill count	0.05		0.16	0.00	0.14	10 <sup>3</sup> /uL
Baspophill count	0.00		0.00	0.02	0.01	10 <sup>3</sup> /uL
Neutrophill %	69.3	<b>74</b>	65.5	82.5	66.3	%
Lymphocyte %	25.0	<b>18</b>	22.2	12.0	24.4	%
Monocytes %	4.4	<b>1</b>	8.1	5.3	6.6	%
Eosnophill %	1.2	<b>7</b>	4.0	0.0	2.6	%
Baspophill %	0.1	<b>0</b>	0.2	0.2	0.1	%
RBC	4.65		4.29	4.34	4.41	10 <sup>6</sup> /uL
Haemoglobin	12.2		11.4	11.7	11.7	g/dL
HCT	37.8		35.2	35.7	36.2	%
MCV	81.2		82.0	82.1	82.1	fL
MCH	26.2		26.6	26.9	26.6	Pg
MCHC	32.3		32.5	32.7	32.4	g/dL
RDW-CV	13.0		13.2	12.9	13.2	%
RDW-SD	41.2		41.8	40.2	41.4	fL
Platelet count	188	133	175	197	193	10 <sup>3</sup> /uL
CRP	3.9	<b>16.72</b>	<b>16.3</b>	1.6	1.8	
Blood urea		40.4				mg/dL
S. Creatinine		<b>0.54</b>	0.6	0.7		mg/dL
SGPT		28.0		44.9		U/L
D-Dimer		<b>1.20</b>				ug/mL
Random B.S.	<b>162.7</b>		91.3	<b>248.9</b>	<b>184.7</b>	mg/dL

**Chest X-rays**

**21.11.2020**

- Haziness in right and left lower lobes
- Features of consolidation in bilateral lobes (left>right)
- Costophrenic angles obliterated
- Impression – **S/O Bilateral Pneumonitis**

**25.11.2020**

- Haziness ++ in left lower lobes and prominent bronchovascular markings
- Haziness + in right lower lobe (less compared to previous X-ray)

**29.11.2020**

- Significant improvement in both lung fields. Right lung almost normal except slight haziness in lower lobe.
- Left lower lobe shows improvement in features of pneumonitis.
- Impression – **Resolving Pneumonitis**

**06.12.2020**

- Significant improvement in left lower lobe consolidation
- Right lobe almost normal. CP angle visible.

**CECT Chest (25.11.2020)**

- Study reveals multi focal air space opacity with GGO haziness involving few segments of B/L kungs lobes S/O Infective etiology (Atypical viral pneumonia / very high possibility of COVID - 19) moderate (20-25%) lung involved CORADS – 5
- CT Severity Score – 12/25

SpO<sub>2</sub> before treatment (21.11.2020) – 86 % and after Treatment (06.12.2020) – 95 %.

**Case 3**

**Place of Study**

Shri Vishwadhya Ayurveda & Panchakarma Center, G L – 10, Srishti Apartment, Kherapati Road, Phoolbagh, Gwalior, MP.



Study was done according to the protocols decided by the Ministry of AYUSH. Also, consent for the treatment was taken from the patient.

### Case Presentation

#### Case Report

A 38 year old female patient came to the hospital on 05th May 2021 with complaints of generalized weakness, cough and mild breathlessness on walking her SpO<sub>2</sub> on initial assessment was 93 % and she was positive on RT-PCR assessment.

#### Chief complaints -

1. Fever from 11 days
2. Generalized weakness from 4 days
3. Cough from 4 days
4. Pain in the throat from 4 days
5. Mild breathlessness on walking from 4 day

#### History of present illness

A 38-years-old female patient visited the hospital having above said complaints. 11 days back the patient was apparently alright, gradually she developed fever, for which she took treatment from general practitioner in her village, also got relieved from fever but after 3-4 days she again developed fever, the next day she also felt generalized weakness and cough, pain in throat and mild breathlessness on walking was also there; with all these complaints she visited hospital where she was advised to undergo RT-PCR test for COVID which was later found to be positive. For getting treatment for the same she visited allopathic hospital but got no relief. Later on she visited our hospital for *Ayurvedic* management of the same.

#### History of past illness

There was no any history of any major illness.

#### Family History

There was no known history of COVID-19 positive cases in the family at that time.

#### Drug history

Allopathic medicines were prescribed to the patient by general practitioner, details of that are not available.

#### Examinations

On initial assessment her SpO<sub>2</sub> was found to be 93 % in resting state with pulse rate of 80 beats/min, her respiratory rate was found to be normal, initial temperature was 98.8 F.

**Chest:** On initial assessment - Respiratory rate of 18 breaths/ min. B/L chest rise equal, no scar marks, no oedema.

**CVS:** Normal shaped precordium, Apex beat at left 5th intercostal space medial to midclavicular line, S1S2 +, no murmurs found.

**GIT:** No discolouration, no oedema, Scaphoid shaped abdomen, soft non tender without any palpable organ.

**CNS:** Patient was well conscious and oriented w.r.t time, person & place, all cranial nerves intact.

#### Therapeutic Intervention

The patient was managed using *Ayurvedic* drugs from the first day of the disease. The following drugs were used during the management.

**Table 6 – Drugs given, along with dosage**

Drug	Dose
<i>Hirak bhasma</i>	10 mg
<i>Sameer pannag ras</i>	40 mg
<i>Maha lakshmi vilas ras</i>	40 mg
<i>Abhrak bhasma</i>	40 mg
<i>Shwaskas chintamani ras</i>	40 mg
<i>Praval pishti</i>	240 mg
<i>Chandramrita ras</i>	80 mg
<i>Sitopladi churna</i>	500 mg

The above said medication was given for 8 times a day along with Tab *Swash kalpa* 2 BD and Syp Koflet SF and 5 ml BD for initial 2 days then QID for next 2 days and then again BD for next 8 days.

#### Course of Treatment

As there was unavailability of beds in the hospital, patient stayed in home quarantine, due to the said reason and also the condition of the patient allowed for the same. She was taking the above said treatment only; no allopathic drugs were given along. The patient's condition was followed up daily by video conferencing and the condition of patient continued to improve with the medication. The patient reported no adverse events. Her course stayed uneventful; there was no need of ICU admission or Oxygen supplementation. She gradually improved and her symptoms vanished off over time. In total 12 days of treatment was given to her in above said manner (started on 05.09.2021 to 16.09.2021).

Only mild generalized bodyache was there after full course of treatment, no other symptom was remaining.

#### Investigations –

**Table 7 – Investigation pre and post treatment**

Indices	Value Before Treatment (30.04.2021)	Value After Treatment (18.05.2021)	Unit
CRP	41.5	2.65	Mg/L
Haemoglobin	8.0	8.8	Gm%
TLC	8400	6500	/cumm
Neutrophils	68	52	%
Lymphocytes	28	44	%
Eosinophils	2	3	%
Monocytes	2	1	%
Basophils	0	0	%
Total RBC count	2.96	4.70	Mil/cumm
Platelets Count	151000	291000	/cumm
PCV	26.3	29.5	%
MCV	59.9	62.8	Fl
MCH	18.2	18.7	Pg
MCHC	30.4	29.8	Gm/dl

## Chest X-rays –

Initial X-ray (04.05.2021)

- Consolidation changes (?Post inflammatory process) in bilateral lower and middle lobes
- Both CP angles not visualized
- Fest sided hilar lymphadenopathy.
- Impression – **Bilateral Pneumonitis**

Later X-ray (18.05.2021)

- Few prominent bronchovascular markings in lower lobes (Bilateral)
- Otherwise, lung fields bilaterally clear.

SpO<sub>2</sub> before treatment (03.05.2021) – 93% and after Treatment (18.05.2021) – 98%.

## Discussion

The present cases of COVID-19 can be correlated with the *Kapha Pradhan Sannipata Jvara* (type of fever) (8) or the *Swashnak Jvara* (type of fever). The Pathogenesis of the condition can be supposed as *Avrodha* (obstruction) caused due to *Kapha Dosha* which leads to *Vata Vriddhi* (aggregation of *Vata*) and at last results into *Vataj Kasa* (*Vataj cough* ; as there is dry cough in covid). Since the pathogenesis mainly involves *Kapha* and *Vata*, the treatment part involves *Vata-Kapha Shamak Chikitsa* (*Vata- Kapha* pacifying treatment) as mucolysis, expectoration to drain out *Kapha* and hence *Vata Shaman* (pacification of *Vata*).

As in the initial 8-9 days viral replication is going on in pace (9). Hence, viral multiplication needs to be stopped in these days, but patient came in later stage to us in the phase of cytokine storm, management was needed for the same along with immunomodulation and emergency management of disease was needed. For the *Ashukari Chikitsa* (emergency treatment) and anti inflammatory medication, *Rasa Aushadis* (drugs containing *Rasa*) are used over herbal drugs considering the fatal nature of disease. For example the *Swarna* (gold) (10) and *Hiraka* (diamond) *bhasma* (11) have immunomodulative effects and hence they causes *Oja vriddhi* (increasing the immunity).

The condition was managed taking into account the line of management of *Sannipatik Jvara* (type of fever) and *Shwas* (type of respiratory illness). In *Jvara* basic pathology lies in the *agnimandya* (metabolic disturbance), and hence the line of treatment is *Aam pachana* (digestion of the unfinished digested products).

The drugs been used in the treatment are as follows (12), (13)

### Hirak Bhasma

It is *Kashaya* (astringent) and *madhura* (sweet) in *rasa* (taste), *Sheeta virya*, *Brihana*, *balya* and *saarak* in *guna* (action). It is *Vrishya*, *ayurvedhak*, *balvardhak*, *tridoshanashak*, *varnya*, *medhavardhak* and *kamuttejak* in *karma* (action) and it is indicated in *Kshya*, *bhram*, *shotha*, *prameha*, *bhaganda* and *pandu*. According to *Bhaishajya Ratnavali* it is *ayushya*, *sadguna vardhak*, *vrishya*, *tridoshaghna*, *sakal*

*rogaghna*, *agni deepak*, *mrityu nashak* and properties like *amrita*.

### Trailokya chintamani ras

It contains *swarna bhasma*, *ropya bhasma*, *loha bhasma*, *abhrak bhasma*, *moktik bhasma*, *praval bhasma* and *ras sindoor*. According to *Bhaishajya ratnavali*, it is indicated in *kshya*, *kasa*, *gulma*, *prameha*, *jeerna jvara*, *unmada* and *vaari dosha nivananarth*.

### Maha Sudarshangan vati

It contains *chirayata*, *triphala*, *trikatu*, *haridra*, *daruharidra*, *brihati*, *kantakari*, *kachura*, *pippalimoola*, *murcha*, *guduchi*, *dhamasa*, *kutki*, *pitpapra*, *kutaj*, *yashtimadhu*, *mustak*, *trayamana*, *netrabala*, *pushkarmoola*, *nimb*, *ajwain*, *indrayava*, *bharangi*, *shigru*, *sphatika*, *vacha*, *twak*, *padmaka*, *shweta chandan*, *ativisha*, *bala*, *shalparni*, *prishnaparni*, *vidanga*, *tagara*, *chitrakmool*, *devdaru*, *chavya*, *patol*, *shweta kamal*, *kakoli*, *jivaka*, *rishbhak*, *ushira*, *lavang*, *vanshlochana*, *patra*, *javitri* and *talishpatra*.

### Abhrak Bhasma

It is *virya vardhak* in *karma* and indicated in *Rajyakshma*, *kapha kshaya*, *kasa*, *urah kshata*, *shwasa*, *madhumeha*, *bahumutra*, *karshya*, *pandu*, *daha*, *jirna jvara*, *sangrahani*, *shoola*, *gulma*, *aruchi*, *agnimandya*, *amlapitta*, *raktapitta*, *kamala*, *arsha*, *hridroga*, *unmad* and *apasmara*. According to *Bhaishajya ratnavali*, it is *tridosha nashak*, *kshya nashak*, *buddhi prabodhak*, *vrishya*, *ayushya*, *balya*, *snigdha*, *ruchikar*, *deepan* and *sheeta virya*.

### Shwaskas chintamani ras

It contains *parad*, *gandhak*, *lauha bhasma*, *abhrak bhasma*, *swarna makshika*, *moktik bhasma* and *swarna bhasma*. According to *Bhaishajya ratnavali*, it is used specifically in *shwasa* and *kasa roga*.

### Sameer Pannag ras (14)

It contains *parad*, *gandhak*, *malla*, *hartal* and *manashila* and it is indicated for *sannipatik rogas*, *kaphonmada*, *kaphajasandhibandha*, *jvara*, *shvasa* and *kasa*.

### Praval pishti

According to *bhaishajya ratnavali*, it is *kshariya in ras*, *sheeta* and *laghu in guna*, *madhur vipaki*, *deepan*, *pachan*, *vrishya*, *balya*, *vishaghna*, *bhootaghna* and *shukral in nature*. It is also *kapha vata nashak* and indicated in *kshya*, *kasa* and *raktapitta*.

### Chandramrita ras

According to *bhaishajya ratnavali*, it contains *trikatu*, *triphala*, *chavya*, *dhanyak*, *shweta jeerak*, *saindhav*, *parad*, *gandhak*, *lauha bhasma*, *tankan* and *maricha churna*. It is indicated in all types of *kasa*, specifically in *vata pittaj*, *vata kaphaj* and *pitta vataj kasa*. It is also indicated in *kshya*, *kasa* along with

*jvara* and *shwasa*, *trishna*, *daha*, *bhram*, *gulma*, *udarroga*, *pleeha roga*, *anaha*, *krimi*, *pandu* and *jeerna jwar*. It is *agnideepak*, *balkar* and *varnakar* in *karma*.

### Sitopladi churna

According to *bhaishajya ratnavali*, it contains *sita*, *vanshlochan*, *pippali*, *ela* and *twak*. It is indicated in *sputa jiwaha*, *aruchi*, *mandagni*, *parshwashoola*, *hast pad ansa daha*, *jvara* and *urdhvag raktapitta*.

### Syrup Koflet

It is a patent drug from *Himalya* pharmaceuticals. It contains *madhu* and *guggulu* as its base and extract of *draksha*, *Vishnu priya*, *jufa*, *guduchi*, *vasaka*, *jaatipatree*, *yashtimadhu*, *gojiha*, *neelapushpa*, *trifala*, *trikatu*, *vidanga*, *kantakari*, *taja* and *navsagar*. It is indicated in cough associated with acute and chronic upper and lower respiratory tract infections, smoker's cough and cough due to COPD (15), (16).

### Tab Shwasa Kalpa

It is a patent drug from *Baidyanath* pharmaceuticals. It contains *somlatha*, *pippalimoola* and *ras sindoor*. It is used in smoker's cough, allergic cough, asthma and tropic eosinophilia (17), (18).

For external application, *lepa* of *punarnava*, *vacha*, *haridra*, *vansh patra* powder in equal quantity was mixed with *ghritkumari* pulp and applied on chest locally for initial 7 days. The purpose of application of this *lepa* was *kapha shoshan*, as most of the drugs used here are *ushna* in *virya* (potency).

The second *lepa* of *jaypal* powder mixed with castor oil was applied on chest for last 3 days. The purpose of this *lepa* is to create *mardavta* (softness) in chest where cough is lodged.

### Conclusion

The above said *Ayurvedic* medicines which were used in these cases, showed appreciable results, despite them being challenging cases. Not only symptomatically, but by virtue of diagnostic and prognostic tests also, it was seen that these drugs worked in different COVID cases. This opens up the door for further exploration of working of these as well as other *Ayurveda* drugs to be used in COVID as a disease in *Ayurvedic* classical literature, but such diseases can be correlated with already existing clinical entities available in the text and can be treated accordingly, which was also done in the presented cases. By looking for the rationale, dosha, dushya, kala, rogi bala, roga bala, prakriti, vikriti etc. the judgment for drug selection was made, and such rationale can be applied for any subject and also for any new pandemics whether be it COVID or any other new pandemic which we might face in the future.

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