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*(Special Issue)*

**“Impact and approach to pandemic covid-19 on various sectors”**

## **Efficacy of ayurvedic regimen in Covid 19 - A case study**

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### **Abstract**

COVID-19 which is detected in the year 2019 as a new Pandemic and declared by WHO as global emergency. It is caused by severe acute respiratory syndrome corona virus (SARS- CoV2) which is a type of RNA virus and belong to the family Coronaviridae. The disease is thought to originate from bats and was spread to people through an unknown medium in Wuhan, China. Ideally, the disease is spread by droplet or aerosol infection that have an incubation period between two and fourteen days. Clinical features of the disease may extend from asymptomatic to symptoms of fever, cough, sneezing, sore throat, difficulty breathing, Acute respiratory distress syndrome, pneumonia and even death. In second wave of Covid 19, evidences have suggested that inflammatory response play important role in progression of disease. For the diagnosis of the disease along with RT-PCR, chest X-rays and CT scan of thorax some inflammatory marker TLC, CRP, LDH and D- dimer are also included. However, no specific treatment is available till date. Preventive strategies includes isolation of the infected persons, proper ventilation, hand hygiene and use of personal protective equipment etc. Disease severity and unavailability of sure shot treatment have caused great threat and panic in public worldwide. Covid 19 which is an epidemic, in Ayurveda it can be correlated with Janapadodhwansa. In this article we will discuss about efficacy of Ayurvedic regimen in mild to moderate cases of Covid 19 patients.

**Keywords:** COVID-19, SARS-CoV2, Inflammatory marker, Janapadodhwansa, Pandemic.

### **Introduction**

We are facing Pandemic of Covid-19 and its deteriorating impact on body and mind. The outbreak of Corona virus started in late 2019 and developed as global pandemic in march 2020. Now deadly second wave of Corona virus has started again which has devastated huge population by all means. Moreover hospitals and crematorium have run out of space. Many small cities, towns and villages are firmly gripped by this 2nd wave of Corona virus. The virus that causes Covid-19 is a type of corona virus i.e. severe acute respiratory syndrome corona virus (SARS- CoV2) which is a type of RNA virus and belong to the family Coronaviridae. Corona viruses are named for crowned like spike protein present on its surface. As these viruses are constantly changing through mutation, and new variants of virus occur over time<sup>[1]</sup>, so it has become herculean task for scientist to find out exact treatment for the same. Also effectiveness of Vaccines and medicines so far available may change. Symptoms of second wave of Corona virus are more fatal which includes fever, cough, sore throat, loss of taste and smell, fatigue, dizziness, unexplained weakness along with some neurological problem. In its more severe form Pneumonia, ARDS and even death can occur<sup>[2]</sup>. However depending upon the degree of symptoms of Covid- 19, it can be classified into different stages. which can be stated as follows -

**Asymptomatic** – Individuals who test positive for SARS-CoV-2 using avirological test, but have no symptoms that are consistent with Covid-19.

**Mild illness**- Individuals with signs and symptoms of fever, cough, sore throat, malaise, headache, muscle pain, nausea, vomiting, diarrhoea, loss of taste and smell but who do not have shortness of breath, dyspnea or abnormal chest imaging.

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**Moderate illness** - Individual who show evidence of lower respiratory disease during clinical assessment or imaging and who have an oxygen saturation (SpO<sub>2</sub>) ≥ 94% on room air at sea level.

**Severe illness** - Individuals who have SpO<sub>2</sub> <94% on room air at sea level, a ratio of arterial partial pressure of oxygen to fraction of inspired oxygen <300mm Hg, respiratory frequency >30 breaths/min, or lung infiltrates >50%.

**Critical illness** - Individuals who have respiratory failure, septic shock, and/or multiple organ dysfunction [3].

#### Investigations-

Following radiological and laboratory investigation should be performed for people with SARS- CoV-19 infection. Lab investigation must include a complete blood count with ESR, renal and liver function tests, lipid profile, serum ferritin, lactate dehydrogenase, coagulation profile and blood sugar level. Inflammatory markers such as C- reactive protein, D-dimer and ferritin level are also included. X-ray chest PA view, ECG (electrocardiogram) should be evaluated. Oxygen saturation and temperature should be monitored at least two times a day [4].

#### Covid 19 according to Ayurveda

First of all we should understand that Covid-19 is disease which is detected in the year 2019 as a new Pandemic and declared by WHO as global emergency. Till date scientist are trying their hard to understand nature of virus. This disease is completely new to world and not described our Ayurvedic samhita. So this type of disease is called as 'Anukta vyadhi' (undescribed disease). Acharya Charak has mentioned that, the diseases which are not mentioned here because of the enormous extent of names and forms are called as anukta vyadhi. Such diseases should be treated according to the consideration of dosha and dusya. It should be diagnosed according to prakopa lakshana and treated according to general principle for treatment of disease.

In Ayurveda natural calamities like epidemics and Pandemics can be included under 'Janpadodhwansa'<sup>5</sup> meaning destruction of states, kingdom or country. In janpadodhwansa death of large population occurs due to invasion of 'Bhuta' [6] In modern literature 'Bhuta' can be correlated with microbes (bacteria, viruses and microorganism). These are external causing factor which are responsible for Agantuja vyadhi [7]. Abhisanga means association or contagion with microbes [8]. Bhutabhisanga is a term mentioned in Ayurvedic classics in context with Jwara nidana which means association or contagion with microbes. Thus microbial disease in ayurveda can be considered as Bhutabhisangaj vyadhi. Further in Bhutabhisangaja jwara vitiation of all three doshas i.e. Vata, Pitta and Kapha occurs and it is a type of Agantuja jwara [9]. In Shushruta samhita some of the infectious disease are categorised as Aupasargic roga and Samsargaj roga (spreads from one person to another) [10]. It may further progress into Epidemic or Pandemic diseases and results in Janpadodhwansa. The hypothesis of pathophysiology of infection from Novel corona virus from Ayurvedic perspective can be correlated with Bhutabhisangaja jwara which is Samsargaja /Aupasargic in nature. In the disease of Covid 19 bhutabhisanga i.e. infection from Corona virus,

vitiate the tridosha and progresses into Nija vyadhi. So association of Jwara with features of Pranavaha srotodushti (Nija vyadhi) occurs with it.

#### Pathogenesis of Covid 19 as per Ayurveda -

Range of manifestation of symptoms in Covid 19 depends upon individual sharira bala (immunity). Similarly we can understand degree of vitiation of trishosha from magnitude of infection involved.

The affinity toward Pranavaha Srotasa can be attributed to Swabhava (nature) of the Bhuta (coronavirus). The Hridaya (heart), Mahasrotasa (alimentary canal), and Rasavahi Dhamani are Mulasthana (root or origination) of Pranavaha Srotasa [11]. In the recent literatures, it has been cited that Hridaya includes whole area adjacent to heart/thoracic cavity that includes lungs. This region is the seat of Prana and Udana Vayu (related to respiration), Sadhaka Pitta (facilitating cell biological functions), and Avalambaka Kapha (protection and maintenance of organs). For treatment of Pranavaha Srotasa dushti Shwasa chikitsa is recommended. The Shwasa Vyadhi is Pittasthana Samudbhava (originating from seat of Pitta) as mentioned in our literature. Sthana of Pitta is Amashaya [12] also it is sthana of Kledaka kapha as well [13].

This Kledaka kapha has influence over other Kapha sthana, Urah (thoracic cavity) being one of them [14]. Thus, it also plays an important role in pathology of Pranavaha Srotasa Vyadhi. Since Mahasrotasa (alimentary canal) is Mulasthana for Pranavaha Srotasa, any disturbance in Gastrointestinal system will affect Pranavaha srotasa. Amashaya is the common seat of Kapha and Pitta [15] Dosha. Therefore, Dushti of Sthana (abode) leads to Pitta Dushti. Vitiation of Kledaka Kapha in Amashaya also vitiates the Prakrit Pitta Dosha due to amalgamation [16]. The vitiated Pitta and Kapha Dosha trigger Rakta Dushti causing Daha, Raga, Paka, and Shopha (inflammation) in the body [17]. These are Analogous symptoms with Covid 19 which may be observed when Pranavaha Srotasa is vitiated by Dushta Rakta Dhatu. In mild stage of COVID-19 when virus invades in to the Pranavaha Srotasa, Shopha (inflammation) might develop. The Shopha (inflammation) is the initial stage of Vrana/Kshata (injury) [18]. Therefore, it can be rationalized that the subsequent phase of Shopha of Pranavaha Srotasa is the damage to this Srotasa, which may be the initial process for pulmonary tissue injury (may be Urakshata). Urakshata which is subsequent phase of pulmonary tissue injury and no prodromal symptoms (Avyakta Lakshana) are observed prior to full manifestation of disease [19]. This can be correlated with asymptomatic phase of COVID-19 where test is positive but patients are asymptomatic. Jwara (fever) may be observed in prior stages of Shopha or as a manifestation of Rakta Dushti. The symptoms of Jwara related to specific Dosha are not observed at this point as it is an Agantuja Jwara [20]. Vata Prakopa along with Pitta Dushti may cause Kapha Udirana (excess increase), thereby amplifying unctuous Dosha in head resulting in Pratishyaya (rhinitis) [21]. Kapha Prakopa along with Pitta Dushti cause Srotorodha (blockage of respiratory channels), thereby reversing the course of Prana Vayu resulting in Kasa (cough). It is typically in this stage, irregular breathing manifests due to preliminary vitiation of Pranavaha Sroto Mulasthana. The other symptoms like Chhardi (vomiting), Avipaka (indigestion), Atisara (diarrhea), and Udarshoola (pain in abdomen) are also

exhibited due to involvement of Mahasrotasa. The Mahasrotasa mainly comprises of Amashaya to Pakwashaya. The vitiated Samana Vayu circulating throughout Amashaya and Pakwashaya produces gastrointestinal symptoms. The vitiation of Dosha is minimal in the occurrence of Jwara, Pratishtaya, and Kasa. At this stage, Pranavaha Srotasa Dushti symptoms are mild in nature and easy to treat. It is analogous with symptoms of acute upper respiratory tract infection in mild stage of COVID-19.

### Objectives

1. To understand etiology and pathogenesis of Covid 19 as per recent guidelines given by WHO.
2. To establish analogy in pathogenesis of Covid 19 according to Ayurveda.
3. To understand effectiveness of Ayurvedic regimen specially Rasa preparation in the treatment of Covid 19.

### Materials and method

Informations in this article are collected from different Ayurvedic literatures including their commentaries. Covid related information are collected from different websites including WHO, Ministry of health and family welfare. Also we have explored various articles from Google scholar, Pubmed etc.

### Case report

A 48 years old male patient of 60 kg body weight came to emergency OPD of Gov. P.G. Ayurvedic college and hospital with following symptoms- fever since, sore throat, dry cough, body ache - since 3 days temperature was -100.6°F and SpO<sub>2</sub> - 95%.

There was not any chest congestion and difficulty in breathing.

We advised him to get tested for Covid 19 as per his clinical signs and symptoms. By the time symptomatic treatment was given including both allopathic and Ayurvedic.

After 3 days his RT-PCR came positive. This time he was feeling sortness of breath with some sort of chest congestion. Though he got satisfactory relief in previous symptoms but there was frequent relapse in fever. Further he was advised for X-ray. X-ray was showing haziness in right lower side of lung. All these symptoms were suggestive of moderate illness of Covid -19. He was strictly kept on Covid-19 treatment protocol as mentioned by WHO and MHFW which are as follows-

1. Tab Paracetamol 500mg TDS
2. Anti tussive Syrup SOS
3. Tab Vit C 500 BD
4. Tab Zinc 50 mg BD
5. Cap Omeprazole 20mg BD
6. Tab Azithromycin 500mg OD for 5 days
7. Tab Amoxiclav 625 mg BD for 7 days along with adequate hydration, pranayam, steam inhalation with dashmool kwath, tulsi leaves and karpooora.

After following this protocol patient got satisfactory relief in fever and sore throat within 5 days. Though there was not much relief in chest congestion and shortness of breath. So we advised some Ayurvedic rasa aushadi preparations. Antibiotics was stopped after 7 days. Ayurvedic preparations were as follows-

1. Sahasrabhraka bhasma	30 mg
Nardiya laxmi vilas rasa	10mg
Talishadi churna	2gm
Tankan bhasma	250mg
Yastimadhhu churna	1gm
Sutshekhar rasa	60mg
	<hr/> 1xBD with honey

2. Agastya haritaki rasayan 2tsp BD with luke warm water

### Follow up and outcome

After 5 days of treatment he noticed improvement in chest congestion and shortness of breath. Till 10th day all symptoms were subsided. Though treatment was continued for another 5 days. Follow up was taken after 7 days. He was completely recovered from his illness and his vitals were stable. During follow up period Yoga, Pranayam, steam inhalation and adequate hydration was strictly followed by patient. After 15 days of complete ayurvedic treatment he tested negative for Covid -19.

### Discussion

Considering the above symptoms of Covid-19, in Ayurvedic point of view this case was treated as Vata kaphaj type of sannipataj jwara with alpa pitta. Secondly respiratory system was also involved so Pranavaha sroto dushti chikitsa is performed. Here we will understand mode of action of Ayurvedic herbo-mineral preparation in case of Covid 19 according to dosa and dushya involved.

### Sahasrabhraka bhasm

Bhasma are a type of herbometallic Ayurvedic preparations that involve repeated incineration of various metals/ or their ores mixed with decoction of various herbal products in a puta (repeated cycles) system of incineration. These preparations are often considered as nano medicine. These bhasma are typically prepared through Shodhana, Bhavana and Marana process so free from toxicity at therapeutic doses. It shows Rasayana properties because of their ability to penetrate into the smallest units in the body and have therapeutic benefit when administered correctly [22].

Abhraka bhasma is a type of bhasma prepared from repeated incineration of mineral mica with decoction of about 72 herbs. The particle size of Abhraka bhasma has been shown to be in the range of 29-88 nanometers and Fe, Ca, Se, Mg and K are found to be as major constituent. These metals in trace amount are needed to maintain metabolic activity in human. The quality of Abhraka bhasma differs as the number of puta performed. The Shahasraputi Abhraka bhasma that undergoes 1000 puta is considered to be of finest quality. It is blessed with ability of pacifying the tridoshas i.e. Vata, Pitta and Kapha. Owing to its intrinsic anti-inflammatory, anti biotic and anti asthematic properties it holds significant in treatnig cough, chest congestion and shortness of breath. It also acts as a Rasayan (immuno modulator) [23].

### Laxmivilas rasa

It is a type of khalviya rasayan as mentioned in Rasashastra. To understand the pharmacological action of Laxmi vilas rasa we will see list of ingredients present in it along with their properties. As there was chest congestion and shortness of breath, to combat that condition we will follow Kasa-Shwas line of treatment in Ayurveda. In Shwas roga mainly

dosha involved are Vata and Kapha. So choice of drug will be like that which have Vata Kapha shamak property. In Nardiya laxmi vilas rasa most of the ingredients have their action on Vata and Kapha doshas. Also it is mainly indicated in respiratory tract disorders. As it is a herbomineral preparation, this drug can swiftly undergo various pharmacodynamics and pharmacokinetics in our body called sanskar. Also this drug reaches to various minute channel of body because of their micronised preparation and are therapeutically effective in low doses [24].

#### **Talishadi churna**

Talishadi churna is mainly effective in Vata and Kapha imbalance disease therefore indicated in Kasa ans Shwas. It is very effective in patients of viral fever associated with cough and cold symptoms. It is effective in treating gastrointestinal disorder specially vatanulomaka in action. In Covid 19, disease of origin is pranavaha srota (Respiratory symptoms) and its moolasthan is mahasrotas (GIT). So Talishadi churna is selected as it has effect on both Pranavaha and Mahasrotas [25].

#### **Tankan bhasma**

It has Vata and Kapha shamaka property. Due to ushna virya it is Kapha nissarak (expectorant) in action i.e. It melts the thick mucus and help flushing it out from the lungs [26].

#### **Yastimadhu churna**

In the disease of Covid 19, modality of treatment is according to Shwas vyadhi which is pitta sthan samudbhav (originated in pitta sthan). Sthana of pitta is adho Amashaya. Also type of jwara present in it is a Vata kapha pradhan Sannipataj jwara. Hence it should be understand along with Vata and Kapha there is vitiation of Pitta dosha also. So we should also focus on pitta shamak chikitsa. Yastimadhu has Madhur rasa, Madhur vipaka and shita virya. Owing to these property it has excellent pitta shamak action. Also it has very good role on Shwas roga. Saponin which is active ingredient present in it has mast cell inhibitory action. This confirms antiasthmatic action of Yastimadhu. Glycyrrhizin like active component of medicinal herbs potentially inhibit viral replication and bear antiviral property [27].

#### **Sutshekhhar rasa**

It is pitta shamak in action so used in the disease of Covid 19 to nullify the vitiation of pitta.

Since it a herbo mineral preparation, it has ability of greater absorption in the body tissue. It reaches the micro channels of the body and shows its action [28].

#### **Agastya haritaki raayan**

It improves respiratory strength. useful in many acute and chronic respiratory disorders. Excellent in all type of Asthma and also avts as a rasayan [29].

From above discussion it is clear that Rasa aushadhi plays vital role in curbing disease progression and is very effective in acute condition of disease. Most of the above mentioned drugs are immunomodulatory in action which have pivotal role for combating Covid 19 [28].

Innate quality of Rasaushadhies like quick action, lesser dose, tastelessness, better palatability have helped conquer the demand of patient. We report this case to show the effectiveness of ayurvedic medicine specially herbo mineral

compound in case of Covid 19. It has been observed that above mentioned treatment helped patient to recover from the existing illness and not turning critically ill. Thus Ayurvedic medicines are not only used for prophylactic treatment but have therapeutic role also in combating Covid 19 infection.

#### **Conclusion**

Bringing Ayurveda protocol for the management of Covid 19 is a step leap towards progress. Unlike microbial etiology in modern medicine Ayurveda undertakes Covid 19 on the basis of Dosha, Dhatu, Mala etc. and deploys management accordingly. All the symptoms of Covid 19 can be correlated with Vata Kaphaj sannipataj jwara with Pitta association. Samprapti bhanga (breaking of pathophysiology) is chikitsa of any disease so more emphasis should be given to understand pathophysiology. Before treating any patient of Covid 19 focus should be given to prognosis of disease and advise for timely referrals in critically ill patient. India is the country where the world's oldest living health care system originated. Therefore it's time to show potential of our ancient Ayurvedic system of medicine during this pandemic crisis.

#### **References**

1. www.cdc.gov
2. www.timesofindia.com
3. covid19treatmentguidelines.nih.gov
4. www.medscape.com/www.cdc.gov.in
5. Shastri AD, ed. Sushrutasamhita of Sushruta, Sutra Sthana, Ch. 1.6, Ver. 19-21, Varanasi: Chaukhamba Sanskrit Sansthan; 2007;1:22.
6. Monnier William S, Leumann E, Capellar C. Bhuta (Internet). Monnier William Sanskrit-English dictionary. Oxford: The Clarendon Press; Available from, 1899. <https://www.sanskrit-lexicon.uni-koeln.de/monier/> [Cited on 2020 Jun 28].)
7. Acharya YT, ed. Caraka Samhita of Agnivesa, Sutra Sthana, Ch. 7, Ver. 51, Varanasi: Chaukhamba Surbharti Prakashan; 2009, 54.
8. Acharya YT, ed. Caraka Samhita of Agnivesa, Vimana Sthana, Ch. 5, Ver. 8., Varanasi: Chaukhamba Surbharti Prakashan; 2009, 250.
9. Acharya YT, ed. Caraka Samhita of Agnivesa, Nidana Sthana, Ch. 1, Ver. 6-30, Varanasi: Chaukhamba Surbharti Prakashan; 2009;194:202.6.
10. Acharya YT, ed. Susruta Samhita of Susruta, Nidana Sthana, Ch. 5, Ver. 33-34, Varanasi: Chaukhamba Surbharti Prakashan; 2008;289:24.
11. Acharya YT, ed. Caraka Samhita of Agnivesa, Vimana Sthana, Ch. 5, Ver. 26., Varanasi: Chaukhamba Surbharti Prakashan; 2009, 252.
12. Acharya YT, ed. Caraka Samhita of Agnivesa, Chikitsa Sthana, Ch. 17, Ver. 8. Varanasi: Chaukhamba Surbharti Prakashan; 2009, 533.
13. Acharya YT, ed. Susruta Samhita of Susruta, Sutra Sthana, Ch. 21, Ver. 13-35, Varanasi: Chaukhamba Surbharti Prakashan; 2008, 102-106.
14. Acharya YT, ed. Caraka Samhita of Agnivesa, Sutra Sthana, Ch. 20, Ver. 8., Varanasi: Chaukhamba Surbharti Prakashan; 2009, 113.

15. Acharya YT, ed. Caraka Samhita of Agnivesa, Sutra Sthana, Ch. 20, Ver. 8., Varanasi: Chaukhamba Surbharti Prakashan; 2009, 113.
16. Acharya YT, ed. Caraka Samhita of Agnivesa, Sutra Sthana, Ch. 17, Ver. 58., Varanasi: Chaukhamba Surbharti Prakashan; 2009, 102.
17. Paradkara HS, ed. Ashtanghrdaya of Vagbhata, Sutra Sthana, Ch. 27, Ver. 2-3., Varanasi: Chaukhamba Surbharti Prakashan; 2010, 326.
18. Acharya YT, ed. Caraka Samhita of Agnivesa, Chikitsa Sthana, Ch. 11, Ver. 8-12., Varanasi: Chaukhamba Surbharti Prakashan; 2009, 478.
19. Acharya YT, ed. Susruta Samhita of Susruta, Sutra Sthana, Ch. 17, Ver. 5., Varanasi: Chaukhamba Surbharti Prakashan; 2008, 82.
20. Acharya (YT, ed. Susruta Samhita of Susruta, Uttara Sthana, Ch. 39, Ver. 81-82., Varanasi: Chaukhamba Surbharti Prakashan; 2008, 677-678.
21. Paradkara HS, ed. Ashtanghrdaya of Vagbhata, Uttara Sthana, Ch. 19, Ver. 2., Varanasi: Chaukhamba Surbharti Prakashan; 2010, 841.
22. Mishra LC, Adra T, Batchu SV, Bhatt HA. LLC Bora raton, Florida, Press Scientific basis for Ayurvedic therapies, 2004, 84-99.
23. Rambahadur *et al.*, study of general properties of abhrak bhasma: a nanomedicine, Int. J. Pharm. Sci. Rev. Res 2017;44(2):238-242.
24. Shrikant N *et al.*, J Ayurveda Integr Med 2019;10(4):20,262-268.
25. [www.easyayurveda.com](http://www.easyayurveda.com)
26. [www.ayumedinfo.com](http://www.ayumedinfo.com)
27. [www.ayush.gov.in/Joshi](http://www.ayush.gov.in/Joshi) *et al.* Review of Glycirrhiza glabra (Yastimadhu)- A broad spectrum herbal drug, An international journal of pharmaceutical sciences, 2012, 3171-3195.
28. Jyoti thakur, Pooja Sisodiya. A review on the role of Sutshekhar rasa An effective Ayurvedic formulation for Amlapitta. IAMJ, 2018, 2538-2540.
29. Acharya YT, ed. Caraka Samhita of Agnivesa, Chikitsa Sthana, Kasa chikitsa, Ch. 17, Ver. 57-62., Varanasi: Chaukhamba Surbharti Prakashan, 2009.