



AYURVEDIC DIET REGIMEN FOR IMMUNOMODULATION IN COVID-19 PANDEMIC - A REVIEW

Ayurveda

Dr. Geeta Parulkar*

M.D. (Chikitsa)(Mum), PhD (Mum), Professor (Chikitsa), R.A. Podar Medical College (Ayu), Attached to M.A. Podar Hospital (Govt), Worli, Mumbai, Maharashtra.
*Corresponding Author

Dr. Shraddha Lande

M.D. (Final year), R.A. Podar Medical College (Ayu), Attached to M.A. Podar Hospital (Govt), Worli, Mumbai, Maharashtra.

Dr. Manisha Ingle

M.D. (2nd Year), R.A. Podar Medical College (Ayu), Attached to M.A. Podar Hospital (Govt), Worli, Mumbai, Maharashtra.

KEYWORDS

COVID-19, SARS-CoV-2 - Ushnodaka, Takrarishtha, Ayurvedic Immunomodulators.

INTRODUCTION

SARS-CoV-2, the virus that causes COVID-19, has created a major impact on human health globally; infecting a large number of people; causing severe disease and associated long-term health sequelae; resulting in death and excess mortality, especially among older and vulnerable populations; interrupting routine healthcare services; disruptions to travel, trade, education and many other societal functions; and more broadly having a negative impact on peoples physical and mental health.

SARS-CoV-2-VARIANT

On 14th December 2020, authorities of the United Kingdom reported to WHO a variant referred by the United Kingdom as SARS-CoV-2 VOC 2020/12/01 (Variant of Concern, year 2020, month 12, variant 01). This variant contains 23 nucleotide substitutions and is not phylogenetically related to the SARS-CoV-2 virus circulating in the United Kingdom at the time the variant was detected. Preliminary epidemiologic, modelling, phylogenetic and clinical findings suggest that SARS-CoV-2 VOC 2020/12/01 has increased transmissibility. However, preliminary analysis also indicates that there is no change in disease severity (as measured by length of hospitalization and 28-day case fatality), or occurrence of reinfection between variant cases compared to other SARS-CoV-2 viruses circulating in the United Kingdom. As of 30th December, VOC-2020/12/01 variant has been reported in 31 other countries/territories/areas in five of the six WHO regions. On 18th December, national authorities in South Africa announced the detection of a new variant of SARS-CoV-2 that is rapidly spreading in three provinces of South Africa. South Africa has named this variant 501Y.V2, because of a N501Y mutation. While SARS-CoV-2 VOC 2020/12/01 from the UK also has the N501Y mutation, phylogenetic analysis has shown that 501Y.V2 from South Africa are different virus variants. preliminary studies suggest the variant is associated with a higher viral load, which may suggest potential for increased transmissibility, this, as well as other factors that influence transmissibility, are subject of further investigation. Moreover, at this stage, there is no clear evidence of the new variant being associated with more severe disease or worse outcomes. As of 30th December, the 501Y.V2 variant from South Africa has been reported from four other countries to date.

CLINICAL CHARACTERISTICS OF COVID-19

In patients with Coronavirus disease 2019 (COVID-19), the most common clinical symptoms are fever and cough, shortness of breath and other breathing difficulties. In addition to other nonspecific symptoms such as headache, dyspnea, fatigue and muscle pain. Moreover, some patients also report digestive symptoms such as Diarrhea and Vomiting.

THE CONCEPT OF PANDEMIC DISEASES IN AYURVEDA

Outbreaks, epidemics and pandemics of highly communicable diseases have afflicted mankind since the beginning of human history and were very well known to the ancient Ayurvedic scholars. In the Charaka samhita (one of the principle textbooks of Ayurveda) both epidemics and pandemics are clearly described together with preventive measures description. Epidemics are defined as sudden, unexpected outbreaks of a disease within a local area. Pandemics, in contrast, refer to a very widespread disease that affects an entire nation

or the world. In Ayurveda, epidemics and pandemics are called as 'Aupasargikarogas' (infectious diseases), as well as pandemics are called as 'Janapadodhvarsarogas'. Coronavirus disease is an example of the Aupasargikarogas as well as Janapadodhvarsarogas.

MODES OF TRANSMISSION (Ayurvedic Perspective)

According to Ayurveda, all pandemics spread via one of the following factors - all of which are capable of affecting the mass population: Vayu (Atmosphere), Udaka (Water), Desha (Land) or Kala (Season).

COVID-19 as a Agantuj Vyadhi - There are basically two types of diseases namely, Nija (Endogenous) and Agantuja (Exogenous) diseases. Agantuja Vyadhis are those where the vitiation of Doshas occurs due to external source followed by development of symptoms whereas in Nija Vyadhi, symptoms are developed after vitiation of Doshas due to internal factors. According to Acharya Charaka, Agantuja Jwara (infectious diseases) is caused by Abhigata (trauma), Abhishanga (close contact), Kama (Sex), Abhichara (association with evil) and Abhishapa (wrath of the wise and the elders) etc. In the commentary by Acharya Chakrapani, he states that, apart from these, Bhutabhishanga (Contact with invisible organisms) is also a cause of the disease (Parauha, A., & S., 2016). This proves role of infectious microorganisms in pathogenesis of Agantuja Jwara.

COVID 19, follow a pathogenesis where the virus enters the body, then vitiates the Doshas leading to development of the symptoms. So, the disease COVID-19 can be placed in Agantuja Vyadhi.

Understanding the Origin and Pathology of Coronavirus through Ayurveda

SAMPRAPTI GHATAKAS (ETIOPATHOGENESIS)

Dosha: Predominantly Kapha, with both Vata and Pitta secondarily affected to varying degrees

Dushya: Dushita Rasa dhatu (after effect of poor digestion).

Agni: Mandagni

Aama: Samaroga, affecting digestion and metabolism.

Strotasa: Pranavahastrotta and Rasavahastrotta (different channels in the body)

Strotodushti Prakaras: Atipravritti (excessive flow) and Sanga (obstruction)

Sthana: Agantuja Roga (related to virus)

Vyakta: Manifests in the upper body primarily related to Kapha regions (can correlate to sinuses, lungs and blood)

TREATMENT STRATEGIES IN AYURVEDA

As transmission of Corona virus is affected by multiple factors, including environmental factor, host behavior, host defense mechanisms and virus infectivity. All these factors should be taken into consideration while deciding prevention & treatment plan of conditions. Among them, only host behavior and host defense mechanisms lie within boundaries of human efforts. Three types of strategies i. e. Daivavyapashraya, Yuktivyapashraya & Satvavajaya are advised by Ancient Acharyas for management of such communicable diseases under their different components. However, it is noteworthy thing that most strategies among them are preventive in nature.

Acharya Vagbhata has mentioned that generally all diseases are produced by 'mandagni' in Ashtanga Hrudaya, Nidanasthana, Adhya 12, Shloka No-1. So, preserving the Jatharagni to its normal state will be helpful in preventing diseases. In order to improve 'Jatharagni' many strategies can be adopted. Two of which are described as follows.

IJUSHNODAKA

Ushnodaka refers not only to warm water, but according to the classics reduction of water after boiling to one half of its quantity is called 'Ushnodaka'. Digestive fire is stimulated by Ushnodaka due to its Deepana and Pachana properties, it disintegrates Kapha, carries Pitta and Vata in their normal courses, and proves to be wholesome for those suffering from Jwara caused by Kapha and Vata doshas.

Indications

Ayurveda says the fact that taking Ushnodaka prior to bed time relieves Kapha, Vata, Aama and Medas. It acts as a Bastishodhana and Deepana. It Relieves Kasa (Cough), Shwasa (Dyspnea) and Jwara (Fever). Sipping warm water stimulates digestion, improves circulation and cleanses the bowels. It also leads to process of sweating which cleanses the lymphatic system and improves complexion. Warm water flushes the urinary tract, helping the body get rid of unwanted toxins.

Good for cold and cough- Sipping warm water reduces irritation and pain in the throat. It helps in liquefying thick cough/ phlegm and aids in getting it out of your system. Salt mixed with warm water is used for gargling in case of throat pain.

Promotes digestion- According to Ayurvedic medicine, drinking warm water in the morning stimulates digestion. Having cold water with food can actually lead to an adverse impact on the digestive system. This means that it takes a longer time for the body to digest and assimilate the food.

The importance of Ushnodaka is available in literature of Ayurveda. Jwara is considered as Amashaya Samutha Vyadhi, there is need of pachana for Amashaya samutha Vyadhi due to the Anubandha of Aama. For that purpose, Ushnodaka can be taken for Pachana and Vatanulomana. It is considered as best for relieving the thirst. Also, Ushnodaka helps to increase the digestive fire by which fever subsides and Kapha shoshana occur.

II) TAKRARISHTA

The ingredients of Takrarishta with proportion as follows:

S. No	Ingredients	Botanical/ Chemical Name	Quantity As Per Classical Text	Equivalent weight	% of weight
1	Hapusha	Juniperus communis Linn	1 Pala	48 Grams	1.32
2	Kunchika	Nigella sativa Linn	1 Pala	48 Grams	1.32
3	Dhanyaka	Coriander sativum Linn	1 Pala	48 Grams	1.32
4	Ajaji	Cuminum cyminum Linn	1 Pala	48 Grams	1.32
5	Karavi	Carum carvi Linn	1 Pala	48 Grams	1.32
6	Shati	Hedychium spicatum Linn	1 Pala	48 Grams	1.32
7	Pippali	Piper longum Linn	1 Pala	48 Grams	1.32
8	Pippalimula	Piper longum Linn	1 Pala	48 Grams	1.32
9	Chitraka	Plumbago zeylanica Linn	1 Pala	48 Grams	1.32
10	Gajapippali	Pothos scandens Linn	1 Pala	48 Grams	1.32
11	Yavani	Tachyspermum ammi Linn.	1 Pala	48 Grams	1.32
12	Ajamoda	roxburghianum Benth.	1 Pala	48 Grams	1.32
13	Takra	Buttermilk	1 Adhaka	3.072 litres	84.21

Dose – 15 to 20 ml Once or Twice a Day

Anupana – Equal quantity of water (With which To Be Given)

Indications

Takrarishta is having Deepana, Ruchya, Varnya and Anulomana

properties. Acharya Charaka has indicated this medicine in Guda Roga (Like Piles in Ano etc.), Shotha (Inflammation or Swelling) and in Kantha Roga (Throat disorders).

Action and uses

According to Phalaprapti, because of Deepana quality this formulation is useful in Shotha, Arsha, Krimi, Meha and Udara etc. As it is mentioned under Grahani Adhikara, it is a best medicine in said disease. Similarly, Patients suffering from Atisara, Pravahika, Ajeerna, Agnimandya and other Udara vikaras can be relieved by its use.

Karmas

- Agnideepaka (Improves digestive fire)
- Rochaka (Increases Palatability)
- Balakaraka (Boosts Strength)
- Kapha-Vatanulomana (Corrects direction of Doshas)

Thus, both Ushnodaka and Takrarishta help in increasing immunity by improving digestion by Deepana and Pachana karmas.

REFERENCES

- 1) www.who.int/csr/don/31-december-2020-sars-cov2-variants/en
- 2) John Hopkins University. Coronavirus Resource Center 2020, Available from: <https://coronavirus.jhu.edu/map.html> accessed April 27 2020.
- 3) Cytel. Global Coronavirus COVID-19 Clinical Trial Tracker. 2020, Available from: <https://www.covid19-trials.org/> accessed May 2, 2020.
- 4) Djulbegovic B, Guyatt G. Evidence-based medicine in times of crisis. J Clin Epidemiol 2020; doi: 10.1016/j.jclinepi.2020.07.002 [published Online First: 2020/07/14]
- 5) W. Wang, J. Tang, and F. Wei. "Updated understanding of the outbreak of 2019 novel coronavirus (2019-nCoV) in Wuhan, China," Journal of Medical Virology, vol. 92, no. 4, pp. 441–447, 2020.
- 6) Vaidya Yadavji Trikamji editor, commentary Nibandhsangraha on Shushrut samhita, Sutrashtan chapter, 45 verse no 40.
- 7) Acharya Agnivesha, Acharya Charaka, Acharya Dridhabala, Charaka samhita with Ayurved Dipika commentary of Chakrapanidatta, Chikitsasthana, Jwarachikitsa Adhyaya 3/113-114, edited by Vaidya Yadavji Trikamji Acharya, Prologued by Prof. R.H. Singh, ed. Varanasi: Chaukhamba Surbharati Prakashana, 2011, p.87.
- 8) Vagabhata Sutrashtana, Ashtanga sangraha, saroj hindi commentry, reprinted ed. Chaukhamba Varanasi, 2001; 97.
- 9) Shastry Kashinath, Gorakanath Chaturvedi, Vidyotini Hindi Commentary, Charaka Samhita. Edited by Rajeshwaradatta Shastry, Published by Chowkhamba Bharati Academy Varanasi. 18th Edition Part-II, Pg.No 483.
- 10) Acharya Agnivesha, Acharya Charaka, Acharya Dridhabala, Charaka samhita with Ayurved Dipika commentary of Chakrapanidatta, Chikitsasthana, Arshachikitsa Adhyaya 14/72-75, edited by Vaidya Yadavji Trikamji Acharya, Prologued by Prof. R.H. Singh, ed. Varanasi: Chaukhamba Surbharati Prakashana, 2011, p.332.
- 11) Dr. J.L.N. Sastry, Illustrated Dravyaguna Vijnana, Forwarded by Prof. K.C. Chuneekar, ed. Varanasi: Chaukhamba Orientalia, 2010.
- 12) Acharya Vagbhata, Ashtangahridaya with commentaries of Arunadatta and Hemadri, Nidanasthana, Udarandana Adhyaya 12/1, edited by Pt. H. S. Sastri Paradkar, ed. Varanasi: Chaukhamba Sanskrit Sansthan, 2011.